Leading Change

Best Practices in Technical Assistance for Rural and Frontier Health-Care in an Era of Transformation

UNM HEALTH SCIENCES CENTER | Office for Community Health

national center for frontier communities

NOSORH National Organization of State Offices of Rural Health

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Susan Wilger, *MPAff, Director of Programs*
National Center for Frontier Communities
Silver City, NM

Teryl Eisinger, *MA, Executive Director*
National Organization for State Offices of Rural Health
Sterling Heights, MI

Stephanie Hansen, *Education and Services Director*
National Organization for State Offices of Rural Health
Meridian, ID

Molly Bleecker, *MA, Research Scientist*
University of New Mexico
Office of Community Health
Albuquerque, NM

R. Scott Daniels, *PhD, Performance Improvement/Flex Coordinator*
Hawaii State Department of Health
State Office of Primary Care & Rural Health
Hilo, HI

Lisa Davis, *MHA, Director and Outreach Associate Professor of Health Policy and Administration*
Pennsylvania Office of Rural Health
University Park, PA

Graham Adams, *PhD, Chief Executive Officer*
South Carolina Office of Rural Health
Lexington, SC

Tina L. Turner, *Rural Health Administrator/SORH Director*
Ohio State Office of Rural Health Primary Care and Rural Health Program
Ohio Department of Health
Columbus, OH

Natalie Claiborne, *MPH, Assistant Director*
Montana State Office of Rural Health
Bozeman, MT

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Section I
Introduction

Leading Change: Best Practices in Technical Assistance for Rural and Frontier Health-Care Organizations in a Time of Transformation has been developed for State Offices of Rural Health (SORH) and their partners, non-profit organizations, government agencies and other entities dedicated to building the capacity of rural and frontier Health Service Organizations (HSOs). The toolkit includes resources and best practices to develop or enhance technical assistance and consultation offerings. It includes lessons learned from SORH staff on the front lines of local, state, and tribal organizations that are working to promote practice transformation. The toolkit utilizes creative approaches to broaden the scope of technical assistance offerings and provides tools and examples of how to develop and implement these services.

This toolkit was developed by the National Network for Rural and Frontier Capacity (the Network). The Network is comprised of the National Center for Frontier Communities, the University of New Mexico Office of Community Health, the National Organization of State Offices of Rural Health, and the State Offices of Rural Health in Hawaii, South Carolina, Pennsylvania, Ohio, and Montana. The Network was formed in 2013 with support through a Network Development Planning Grant from the Federal Office of Rural Health Policy.

The current trend to move from volume-based to value-based payment systems will require rural and frontier HSOs to be more accountable, adaptable, innovative, and collaborative. Frontier and rural HSOs, however, often lack capacity and/or resources to develop or transform systems to create more accessible, community-driven, coordinated, integrated, and cost-effective services and positive health outcomes. Increasingly rural and frontier healthcare providers are seeking resources to assist with integral and/or transformational changes. Yet few resources exist that are affordable and accessible to rural/frontier providers and that are based in a clear understanding of the unique environments in which those providers operate.

This toolkit is designed to meet the specific needs of rural and frontier HSOs, as well as the SORH and other capacity builders that offer technical assistance to them. Before developing the toolkit content, the Network surveyed more than 180 rural and frontier HSOs to assess their needs. Survey questions asked respondents to identify major factors that contribute to successful or unsuccessful change in 11 systemic areas common to both practice transformation and patient-centered medical home models. The Network also surveyed SORH to assess their capacity to provide technical assistance and to identify what information, skills, and resources would help to further develop their capacity to provide technical assistance and consultation.

The 11 systemic areas are:

- Access to Care and Information
- Organization-Based Services
- Care Management
- Clinical Care Coordination
- Non-Clinical Care Coordination
- Organization-Based Team Care
- Quality
- Safety
- Health Information Technology
- Management
- Insurance Enrollment Assistance

The Network envisions that this toolkit will expand and a network of technical assistance providers will grow over time. We welcome feedback on the toolkit content including suggestions for improvement or the addition of information, resources and tools. Feedback can be submitted to: Susan Wilger at swilger@hmsn.org or call 575-313-4720. Most of all, we hope that this toolkit is valuable and helpful to your community.

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Toolkit Purpose

State Offices of Rural Health (SORH) are funded by the Federal Office of Rural Health Policy to coordinate, disseminate information, and provide technical assistance to improve rural and frontier health care delivery and the health status of the residents. Every SORH accomplishes these activities using methods appropriate to their state, their organizational structure, available resources, and partnerships. Most importantly, SORH technical assistance services are provided to meet the needs of rural and frontier communities, their residents, and their health-care providers. This toolkit offers a framework for SORH and other capacity building organizations to provide quality consulting and technical assistance services.

SORH technical assistance (TA) efforts vary widely. Some SORH refer communities to federal, state or other resources; others provide direct TA for specific topic areas such as health care workforce recruitment and retention, or assistance with grant writing; and still others provide direct assistance with a wide range of offerings that may include fee-for-service consulting, products, or specific services such as billing.

- This toolkit offers SORH and other TA providers and capacity building organizations:
- A step-by-step process to assess internal capacity to grow TA offerings to serve rural and frontier HSOs.
- Support to develop core competencies of staff who provide TA.
- Information and tools to facilitate systems change in 11 topic areas related to improving care and reducing cost.
- Access to trusted rural and frontier consultants.
- Access to best practices for the delivery of TA services developed by SORH, their partners, and national experts.

The Toolkit consists of three main sections

Section I

Getting Started: What to Know and Do Before Committing to Increasing Technical Assistance Services. This section describes essential criteria for offering appropriate and high-quality services. It provides self-assessment tools for SORH or other TA providers to use to ensure they have the capacity to provide those services. This section also contains an explanation of the steps involved in strategic marketing and the development of strong business and marketing plans.

Section II

Implementation: What to Know and Do for Successful Technical Assistance Service Delivery. This section covers the core principles and best practices of TA delivery. It also provides in-depth information about 11 topic areas at the heart of health-care transformation. These topic areas were chosen based on financial incentives originating in the Patient Protection and Affordable Care Act of 2010 (ACA) and on evidence-based practices showing positive results in improving patient care and/or reducing cost, including the practice transformation and Patient Centered Medical Home (PCMH) models.

Section III

Collaboration and Expertise: How to Build Partnerships and Use Experts to Enhance Technical Assistance Services. This section identifies potential partners and experts – including experienced SORH staff, state and national organizations, and other nonprofit technical assistance experts – available to enhance TA services. These experts and partners are available to guide and coach, and to help SORH build internal staff capacity and expertise. They can be called upon for advice, at no charge, when issues emerge that extend beyond the capacity of SORH staff.

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Section I
Getting Started

What to Know and Do Before Committing to Increasing Technical Assistance Services

This section offers an in-depth view of items and actions necessary to ensure that the technical assistance (TA) services offered are of interest to and needed by rural and frontier health- services organizations (HSOs) and the communities they serve. This section also explores ways to ensure the TA organization has the internal capacity to provide quality services. Components that are critical to the development of strong business and marketing plans are described. Finally, tips, tools, and resources are presented to assist in the development of successful and sustainable TA services.

Preparing to Increase Technical Assistance Capacity

A clearly defined mission/purpose statement will give the organization a starting point for long-range planning and for major decision-making. When considering how to improve and/or expand TA programs and services, management and leadership should review the organization's vision, mission, and purpose statements to ensure they will support and guide these efforts. If the vision and mission statements do not support the expansion of technical assistance capacity, consider revising them so that they do.

A strategic marketing plan can serve as a road map to improve or expand TA services. The process of strategic marketing is not linear; it is an ongoing, continuous quality improvement process that becomes a way of doing business in which each cycle leads to further improvement. The following sections describe in detail the key concepts needed to create and implement an effective strategic marketing plan for TA services.

Market Analysis: Find and Define Your Customers and their Needs

A market analysis informs the planning and development of the TA services to be offered. The goal is to define the target market or the customers to whom services will be provided. The market analysis includes an assessment of the specific behaviors and needs of the target market and the extent to which these needs are or are not being met. These needs and how well they are met vary from community to community and can be determined by gathering data.

Market research is absolutely necessary in the start-up phase. Conducting thorough market surveys is the foundation of any successful business. In fact, strategies such as market segmentation (identifying specific segments within a market) and product differentiation (creating an identity for the product or service that separates it from competitors) would be impossible to develop without market research.

There are many ways to evaluate the demand for TA services. Areas subject to evaluation include:

- *Type of provider or HSO.* Provider and HSO types commonly found rural communities include Critical Access Hospitals, Community Health Centers, Rural Health Clinics, Rural Hospitals, etc.
- *Geography.* For example, services may be limited to certain rural counties or regions.
- *Population.* This may be the HSO patient population or a targeted community population. For example, an analysis of health needs by gender, diagnosis, health outcome, age, ethnicity, or payer source.
- *HSO service or priority areas.* Examples of HSO priorities may include patient access and enrollment; care coordination; patient centered medical home recognition; establishing

electronic health records (EHR); patient and staff safety; and quality of care.

- *Policies and regulations.* Local, state, and federal requirements, incentives and/or avoidance of penalties, can inform services. For example, assessment could focus on HSOs that desire to implement or improve meaningful use (MU), EHR, pay for performance, safety requirements, or decrease the number of hospital readmissions and number of emergency room visits.

Different services and types of activities may appeal to different customers at different times and under different circumstances. Therefore, the TA provider must have an overall sense of the needs among rural and frontier HSOs and the communities they serve.

To evaluate the need for TA services, staff can collect data from current or potential HSO customers and/or from the communities they serve. More valid conclusions can be drawn if more than one source of data is used to answer the market questions.

Methods and Strategies for Market Analysis

The first step in a market assessment is to formulate questions and decide which methods you will use to collect information to answer those questions.

Questions to consider include:

- Who are your current customers? Why do they currently use your TA services? Are they the customers you intended to serve? What do they like about your TA services and what changes would they like to see? What TA services do they buy and how much do they spend?
- Who are the potential customers you have not yet reached? Why do they not access your TA services? Where do they currently go for TA services? What would it take to bring them to your organization?
- What specific health problems do your rural/frontier communities face?
- What do rural/frontier community members voice as their biggest health problems and/or concerns?
- What kinds of services would address the identified needs?
- What community and health resources already exist?
- Which rural/frontier health facilities are used the most and why?
- Is the community satisfied with available health services?
- How well are services coordinated? How might coordination of services be improved?
- What service gaps exist?
- What barriers do individuals and families experience in accessing the services they need, such as hours of operation, transportation, language barriers, and available appointment times?
- In what ways do language, age, race, and culture influence people's views about health issues in the community?
- Would TA services be used by these HSOs and providers?

Following are ways to tailor the information-gathering methods to meet specific needs:

Start with Secondary Data

A great deal of information is already available to help you understand the needs of your targeted customers. This information is known as *secondary data* because it has been gathered by other, or secondary, sources such as government agencies, industry and trade associations, universities, media sources, chambers of commerce, etc. This information can be found in the form of pamphlets, newsletters, professional journals, newspapers, and so on. The benefits of using secondary data are that the data is already collected and in some cases, analyzed and summarized.

Secondary data sources are useful in assessing the health conditions and environment of targeted communities and the extent to which health-care services meet the health-care needs of a population. For example, if a state is seeing a growing percentage of older adults in rural and frontier counties, and health-care services in these counties lack the systems and staff to treat common conditions and improve care coordination, this may be an opportunity for TA services.

Secondary sources are divided into three main categories: public, commercial, and educational (Small Business Association, n.d.)

Public Data Sources

Public information sources are usually free and can offer a plethora of high-quality information. Government statistics are among the most plentiful and wide-ranging public sources of information. Commonly used public data sources include:

State Health Departments

Most state health departments compile county or sub-county health data from national and state sources. County level public health departments, health councils, or community coalitions may other good sources of data. Often, state department epidemiologists, statisticians, evaluators, and GIS mappers can be contacted directly for information requests.

County Health Rankings and Roadmaps

http://www.countyhealthrankings.org/

The Rankings are based on a model of population health, called social determinants of health, that emphasizes the many factors that, if improved, can help make communities healthier places to live, learn, work, and play.

Rural Assistance Center

http://www.raconline.org/

The Rural Assistance Center online library is updated daily with news, resources, and opportunities from a variety of online sources. It provides useful tools such as topic guides, state guides, maps, webinars, and publications.

Health Resources Services Administration (HRSA), Bureau of Primary Health Care

Health Center Data & Reporting

http://bphc.hrsa.gov/datareporting/index.html

Health center data are collected and published at national, state, and regional levels and are available through the HRSA website. This website allows individuals to conduct basic data comparisons to better understand trends such as how a state compares to the national averages or how one state compares to another. Data sets include health center data (e.g. health center program grantee profiles, the Uniform Data System [UDS], etc.), special populations (e.g. homeless, migrant health, public housing) and data tools (e.g. data warehouse, data snapshot, and data comparisons).

U.S. Census Bureau

Online Library

http://www.census.gov/library.html

The U.S. Census Bureau's online library includes a collection of data available in a variety of formats, including audio, video, mobile apps, images, and downloadable print publications. Other government publications that are helpful include:

- Statistical and Metropolitan Area Data Book https://www.census.gov/compendia/databooks/ Offers statistics for metropolitan areas, central cities, and counties.
- Statistical Abstract of the United Statehttp://www.census.gov/compendia/statab/ Data books with statistics from numerous sources, government to private.

Other Public Sources

Almost every county government publishes population density and distribution figures for accessible census tracts. These tracts show the number of people living in specific areas, such as precincts, water districts, or school districts. Other public sources include municipal or regional planning departments, city chambers of commerce, and business/economic development departments. They may supply information on population trends, community income characteristics, payrolls, industrial development, and more.

Commercial Data Sources

Commercial data sources are equally valuable but usually involve costs such as subscription and association fees. However, it is generally much less expensive than hiring a research team to collect the data. The research gathered by health-related associations or intermediaries (e.g. hospital associations or primary care associations) is usually thorough, accurate, and current, and worth the cost of membership.

The HSO itself can be a source of data if you are focusing in on a particular geographic area or sub-population. This approach may work well in rural and frontier areas where state level data are not available or sufficient due to small sample size. Excellent resources to help you locate reports on HSOs are primary care associations, hospital associations, quality improvement organizations, and community foundations.

Direct mail and telephone surveys are other sources of primary data. There may be a cost to obtain member contact information (i.e. addresses, emails, or telephone numbers).

Educational institutions are very good sources of data, and researchers can often help with analysis and interpretation. More research is conducted in colleges, universities, and polytechnic institutes than in virtually any sector of the business community. Educational research ranges from faculty-based projects often published under professors' bylines to student projects, theses, and assignments. Consulting services may be offered either for free or at a cost negotiated with the appropriate faculty members. Using students who welcome the professional experience either as interns or for special credit can be an excellent way to gather data (primary or secondary) at little or no cost.

While most research institutes are affiliated with universities, some are independent organizations. Key independent research organizations include the Rural Health Research Gateway, which is an excellent resource for rural health research, publications, policy briefs and information from the Rural Health Research Centers, funded by the Federal Office of Rural Health Policy. The Rural Assistance Center (RAC) is a rural health and human services information portal. RAC helps rural communities and other rural stakeholders access a full range of information and data. RAC has librarians on staff who can help you find data or data sources.

Decide What Else You Need to Know

The initial assessment based on available data may point to themes, questions, or topics that need further research. For example, early research may indicate customers' interest in a new approach or model, such as patient centered medical homes, practice transformation, or care coordination. You may find that you need to learn more about current customers' impressions of your current TA offerings, including location, cost, frequency of service, quality of service, etc.

Collect Primary Data

Information that you cannot find in your search of secondary data may need to be collected directly. Primary data are data that are directly observed and measured by the researcher. If primary data are needed, consider

- The methods to use (e.g. interview, survey, focus groups, patient data, etc.)
- What data collection tools will be used (e.g. EMR, customer satisfaction surveys, online survey software, etc.)
- Timeframes (e.g. past 12 months, past 10 years)

Surveys or interviews are often used to investigate customers' interest in new products or services. For a more accurate picture of the demand for a product or service, information could be collected using an electronically-administered survey. Surveys or interviews are also good options if the goal is to learn about customers' impressions of current or future TA offerings. Questions can focus on factors that affect whether they would use such services.

To obtain the most useful results, carefully choose evaluation strategies based on the goals of your TA service offerings. For example, is the intent to expand an existing TA service to a new target audience or geographic location? Alternatively, is the intent to introduce a new service line, such as practice facilitation?

Assessment Methodology

When conducting primary research, it is important to decide how to question the targeted group of individuals. Common avenues include direct mail, phone interviews, personal interviews, electronic surveys/evaluations, and in-person written surveys or evaluations. If the research involves human subjects, includes sensitive questions, identifies respondents and/or results will be shared outside of the organization, the project and methodology may require review and approval by an Institutional Review Board.

Direct Mail or E-Mail

The Total Design Method (TDM), developed by D.A. Dillman, is commonly used for direct mail or e-mail data collection. TDM is based on sound research principles and guarantees survey response rates of up to 80 percent if specific steps are followed faithfully (Dillman, 1978). The method consists of a series of precise steps beginning with the initial mailing, followed by a series of reminders sent at specific intervals to non-responders. The TDM methodology has been successful in both mail and tele-

phone surveys.

Here are some key actions to take in order to increase response rate, according to the TDM:

- Make sure questions are short and to the point.
- Make sure questionnaires are addressed to specific individuals and that they are of interest to the respondent.
- Limit the questionnaire's length to no more than two pages.
- Enclose a professionally prepared cover letter (direct mail) or introduction (e-mail) that adequately explains who you are, the purpose of the survey, and what you need.
- Send reminders, beginning the first week after the initial mail out and about every two weeks thereafter, up to 8 weeks (if time allows).
- For direct mail, include a postage-paid self-addressed envelope.

Telephone Surveys

Telephone surveys are generally the most cost-effective, considering overall response rates. They cost about one-third as much as personal interviews, which have, on average, a 10 percent response rate. Following are some phone survey guidelines:

- At the beginning of the conversation, the interviewer should confirm the name of the respondent, provide a description of the service, determine interest in participating, and acknowledge consent.
- Pauses should be avoided, as respondent interest can quickly drop.
- Make sure that a follow-up call is possible if additional information is required.
- Make sure that interviewers do not divulge details about the poll until the respondent is reached.
- Not only are telephone interviews cost-effective, their speed is another big advantage. Some more experienced interviewers can conduct five to ten calls per hour. Telephone interviews also allow researchers to reach a wide geographic range relatively inexpensively.

Personal Interviews

There are two main types of personal interviews:

- *Focus groups*. Focus groups can be useful as brainstorming tools resulting in product modifications and new product ideas. They also provide insight into service preferences and purchasing decisions among the targeted populations.
- *In-depth interviews*. This method involves one-on-one interviews guided by questions of interest to the researcher. In-depth interviews are either focused or non-directive. Non-directive interviews encourage respondents to address certain topics with minimal questioning. The respondent, in essence, leads the interview. The focused interview, on the other hand, is based on pre-set questions or a checklist.

Choosing a Tool

When considering which type of data collection tool to use, keep the following cost factors in mind:

- Staff or evaluator time to design questionnaires and cover letters
- Staff time to invite potential respondents to participate (including acquiring contact information, if necessary, which may also incur a cost [e.g., purchasing an email or phone list])
- Staff or evaluator time to evaluate and present results
- Costs for incentives, as well as staff time to purchase, deliver, and track them

Additional costs specific to certain types of data gathering techniques include the following:

- *Electronic Surveys*. There may be a subscription fee for the survey service.
- *Direct Mail*. The cost of envelopes and postage should be considered. There may be a fee to obtain a mailing list of the targeted respondents.
- *Telephone*. Consider the costs of the interviewer's time and phone charges, as well as any fees associated with obtaining telephone numbers for targeted respondents.
- *Personal interviews*. The main costs include the interviewer's time, travel expenses, equipment (e.g. digital recorder), and transcription.
- *Group discussions*. The main costs are the interviewer's time, staff time to secure a meeting room, and the cost of recording media and transcription services, if any are used. In some cases, translation may be needed.

Using Results

Once all data are collected and a preliminary analysis has been completed, findings should be summarized in written and presentation forms so that they can be shared with stakeholders, including poten-

tial customers. Sharing the findings can help gain approval to establish new or enhance existing TA services, build awareness and support, clarify plans for implementation, build enthusiasm among stakeholders, cement cooperation from partner agencies, and identify next steps.

Determine What Type and Level of TA to Offer

Short-term services

Many TA services involve responding to requests for short-term assistance. In general, these services require a limited time commitment and do not include a systematic needs assessment or action plan to bring about systemic change over time.

Examples of short-term TA offerings:

- Offering workshops that develop individual skills and knowledge in specific topic areas.
- Delivering informational presentations, in person or via webinar, so that participants can make more informed decisions.
- Facilitating meetings to build collaboration among stakeholders, divisions, entities, and systems.
- Convening representatives of multiple sectors to develop a network or coalition to address specific issues.

Long-Term Services

These services engage the customer organization over time to ensure system change, practice transformation, and/or capacity improvement. Long-term services usually involve a specific goal determined by the customer organization, but the means to achieving the goal is derived from the experience, skills, and guidance of the TA provider.

Examples of long-term TA services offerings:

- Hospital analytical techniques
- PCMH recognition
- Technology implementation
- Rural Health Clinic operational improvement (e.g. reduced no-shows, decreased billing denial rates, improved time for provider credential approvals, improved documentation in client EMR, etc.)
- Community health needs assessments

Assess the Competition

Almost every SORH will compete with other local, state, or national entities for customers. Competitors may offer special expertise, convenient locations, promotions, or regular and consistent TA events. On the other hand, SORH might have competitive advantages, including lower pricing, rural and frontier expertise, and customized service. These factors only function to the advantage of SORH, however, if customers know about them.

Readily identifiable competitors may include hospital associations, primary health associations, and quality assurance management companies. Other competitors may include state nonprofit associations, universities, small business development centers, community foundations, and others. To analyze these competitors thoroughly, start with in-depth research on each competitor using the competitive strategy worksheet found in Tools and Resources at the end of Section I.

- From a health-systems perspective, however, those organizations identified need not be seen only as competitors, but as potential partners. Providing assistance to rural and frontier HSOs is not a zero-sum game. Multiple organizations may be able to work together to meet different needs. Consider ways in which identified competitors' capacities might complement your organization's capacities. Determine if there are other organizations or agencies to partner with to provide comprehensive, cost-effective, quality TA services. [See Section III: Collaboration and Expertise for more information]

Assess Internal Capacity to Provide TA Services

It is important to determine the internal capacity and level of expertise needed for current and future TA offerings. If there is a high level of staff expertise, even in only one area of interest to HSOs, determine if it is feasible and desirable to enter into the contracting business.

Staff capacity

- Determine staffs' current workloads and availability.
- Identify areas of expertise required to meet the demand for TA services and whether special certifications and training are needed.

- Assess the core competencies and skill level of existing staff (e.g. facilitation, analysis, and problem solving skills). Determine what additional training or professional development may be needed to carry out the work. (See Worksheet: Assessing Skill Level – Novice to Mastery)

Organizational capacity

- Financial viability
- Determine if TA services will be provided at no cost to customers or if customers will be charged a fee. If there is a fee, how will pricing be determined? Do fees include all costs, such as travel, printing, and staff time?
- Determine whether project income is allowable.
- Assess administrative capacity, including how payments and contracts for TA services will be processed, how receipt of payments will be tracked, and whether contracts can be processed efficiently.
- Examine how TA service offerings fit into the mission of the organization, state plans, and priorities.
- Identify any restrictions to providing TA services (e.g. authority to enter into contracts, limited staff capacity, or budget restrictions for travel).

Determine What "Success" Looks Like and How it Will be Measured

As with any program or service, it is important to determine how to evaluate the success and value of TA service offerings. Some reasons to measure TA success and outcomes include the following:

- *Know the effectiveness of a TA intervention.* It is important to know whether or not TA services and programs are effective and what accounts for their effectiveness. Likewise, it is important to know if the TA services offered and processes used are achieving the desired results. Therefore, data need to be collected (how often? what type? etc.)
- *Identify effective practices.* The data collected can help to determine which TA activities to continue and build upon and which to let go. Certain TA practices might be modified, expanded, or replicated for certain initiatives based on the results.
- *Identify practices that need improvement.* Some TA activities may need to change in order to improve their effectiveness, efficiency, and impact.
- *Prove value to existing and potential TA funders and customers.* It is important to show the qualitative and quantitative results of TA services provided and the value to HSOs and the communities they serve. How do TA offerings lead to actions and measurable results for the organizations and communities served? Do TA services provide data for policy makers and other stakeholders?
- *Get clarity and consensus around the purpose of your TA offerings.* Everyone in the organization, from board members to senior management to staff, should understand what the TA services are intended to achieve. Outcome measurement helps to clarify what these services are attempting to accomplish.

Outcome Chain

Outcome chains can help organize thinking about what is hoped to be achieved. They require the provider to examine how TA activities will bring about the intended impacts in the customer HSO. Outcome chains create a logical progression of the short-term, intermediate, and long-term outcomes that lead to your goals. Figure 1 provides an example.

TA services can also be evaluated as illustrated in Figure 2, another example of an outcome chain.

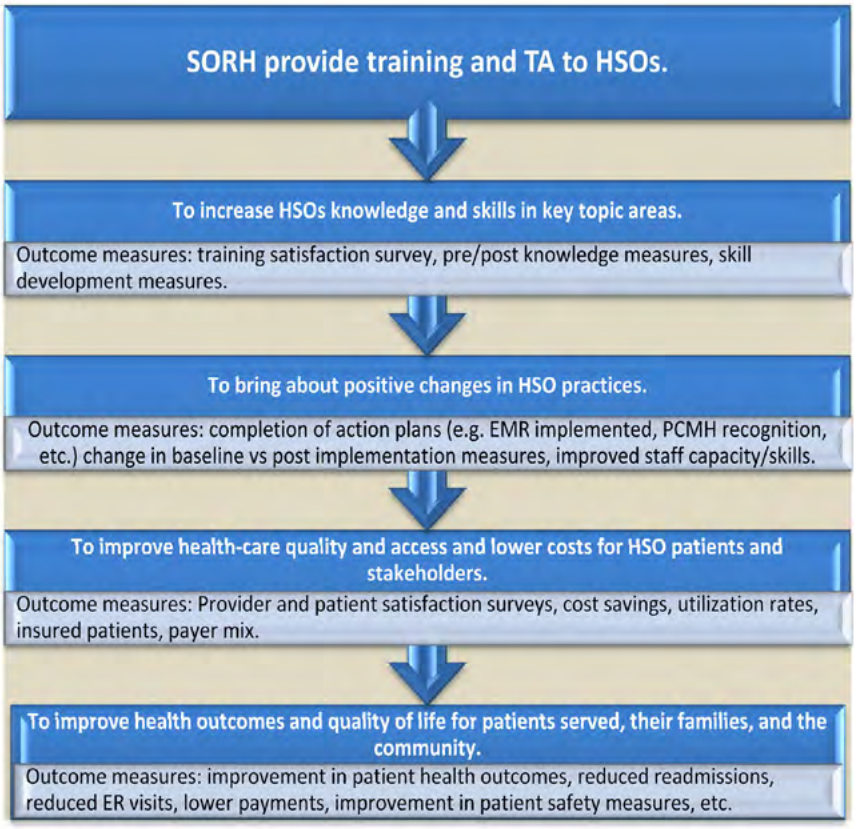

Figure 1: Outcome Chain
Adapted from Strengthening Nonprofits: A Capacity Builder's Resource Library
Capital Compassion Fund National Resource Center

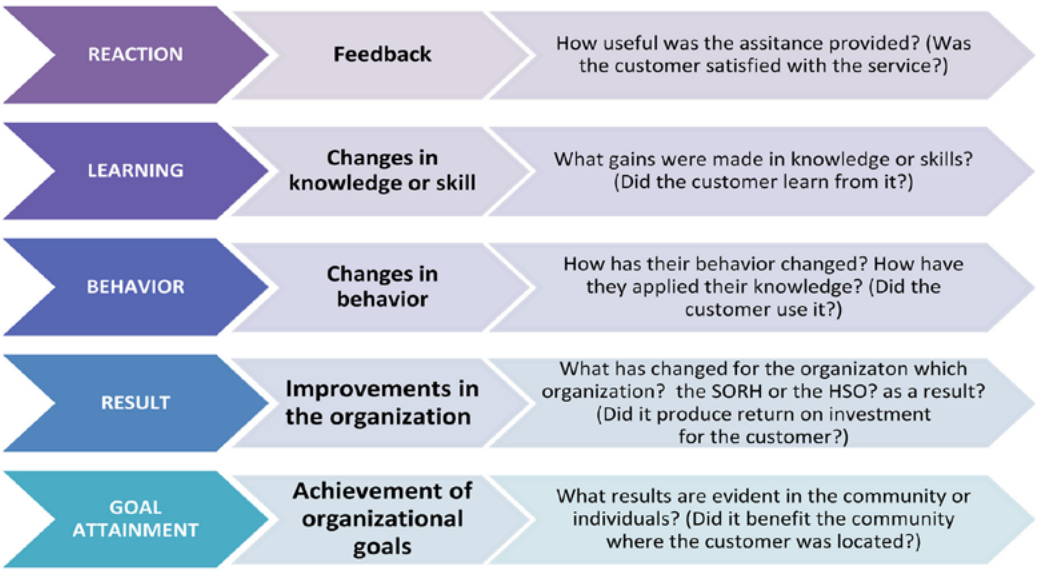

Figure 2: Outcome Measures. Adapted from Strengthening Nonprofits: A Capacity Builder's Resource Library
Capital Compassion Fund National Resource Center.

Logic Models

A logic model can provide a more complete picture of the outcomes of TA activities and inputs. The logic model is a representation of the links between TA activities and the changes those activities will produce. It helps to determine whether there is "logic" to the program—i.e. whether the connections between the TA services provided and the ultimate goals and outcomes make sense.

The logic model describes the resources needed for TA services, the TA activities carried out, the products of the activities and the resulting impacts. It is often helpful to use the logic model as a program planning or design tool to think through what it will take to achieve the desired outcomes.

In designing effective TA activities, it is important to think about how to build research-based practices into the services offered. A great deal of research describes effective methods for disseminating knowledge and skills. For instance, this research reveals that the more complex the information being transferred, the more important in-person training and coaching become. So a complex training – for instance, a workshop on statistical analysis – would be better delivered in-person than via a self-study module.

Table 1 shows a sample logic model for a TA service program designed to increase a customer's organizational capacity for safety compliance.

Table 1: Sample Logic Model

Resources available	The technical assistance methods carried out by staff	The product delivered or unit of technical assistance provided	The changes that occur for HSOs, as a result of TA provided
Funding Staff expertise on best practices Training methods and materials HSO customers	Provide one-on-one coaching to team leaders Conduct staff development training workshops Assist in development of safety-specific policies and procedures Provide phone and e-mail follow-up after training to team leaders	# of one-on-one coaching sessions # of hours of coaching # of training workshops # of staff trained # of hours of training # of manuals # of follow-up phone calls	Increased HSO compliance with safety requirements Decrease in safety violations and incidents

TA Goal = Increase HSO Organizational Capacity for Safety Compliance

See Worksheet: Developing a Logic Model for a step-by-step guide to developing a logic model specific to the needs of your organization.

Choose Your Competitive Advantage

The method by which a business achieves a competitive advantage in the market is known as competitive strategy. Typically, three types of competitive strategies are used: cost leadership, differentiation, and focus.

- *Cost leadership.* Organizations that use a cost leadership strategy offer services at no or low cost compared to their competitors. They achieve this through several means, such as developing contracts with government or state associations that cover all or most of the cost of providing TA services. These TA services are

often limited or directed towards a specific market or client (e.g. hospitals). TA providers must be careful that the value of the service is not compromised if it is offered at no or low cost.

- *Differentiation.* Organizations that adopt a differentiation strategy seek to develop a competitive advantage by offering TA services that differ from their competitors' offerings. If used well, this strategy can help organizations develop a loyal customer base and demonstrate their unique expertise, customer service, and skills.
- *Focus strategy.* TA providers that use a focus strategy channel their marketing efforts toward specific market segments. That is, the TA provider identifies the needs, wants, and interests of a targeted customer base or market and customizes marketing techniques to reflect the unique characteristics of that market.

To identify your competitive advantage, it may be helpful to have a group brainstorming session during which you answer the following questions:

- What is our organization's specialty? What makes us unique from others?
- Should we focus on a small number of topic/issue areas, or will we be an expert organization that can help customers with most of their challenges and projects?
- Will we work with a particular type of rural health service organization (CAH, CHC, RHC, etc.) or offer our services to any HSO in need of assistance?
- Do we have any geographic limitations or focus?
- Do we have any political or funding limitations?

Strategic Marketing

Marketing is integral to the success of providing TA service. A strategic marketing or communications plan is a major component of the business plan. The results of the market analysis and identification of a specific competitive advantage will guide the marketing strategy.

It is important to be aware of available marketing strategies and to determine which ones are most suited to your target customers. Asking yourself the following questions can help you define your marketing goals:

- How will our TA services be remarkable and stand out from others?

> ***"Folks leading health and public health programs in rural areas do not need research skills—they need simple, basic evaluation skills," she said. "They really need a basic logic model to guide them through good program planning, implementation, and evaluation."***
>
> - Lynda Bergsma
> SORH Program Director (Retired)
> AZ SORH, 2013

- How will we build and maintain connections, rapport, and trust with the targeted audience?
- What marketing techniques will we use (traditional only, or combine traditional and Internet/social media marketing)?
- Which of the available marketing techniques will bring the best results?
- How many resources (time and money) will be invested in marketing?
- What are the goals of our marketing efforts?
- How will marketing materials state the value of our products?

The Four Ps of Marketing

A strong marketing strategy focuses on quality, consumer value and customer satisfaction. One commonly used marketing strategy is the "Marketing Mix" (Small Biz Connect, n.d.), which is comprised of four variables known as the "Four P's" of marketing: Product, Price, Place and Promotion. The marketing mix blends these variables together to produce a strategic position of a product or service within a specific marketplace.

Product

Product/Services Offered. Are customers offered a variety of services and products to meet their needs? Are the TA services offered appropriate to the complexity of information being transferred? For example, TA services offered for least to most complex information transfer would range from webinars, to in-person training, to individualized strategic consulting, to coaching.

Customer service is in itself a service. TA providers should ensure there is a central point of contact where customers can easily access service information and answers to questions they might have. There must be an established procedure for handling complaints so that the customer feels that the SORH is responsive to his or her needs.

Place: Location and Schedule

Location and scheduling of services a key components of a marketing strategy. TA services should be offered in the most attractive and convenient location possible. Likewise, services must be provided in a timely manner or at a frequency that is suitable to customers. Is the atmosphere and attractiveness of the TA site welcoming and comfortable? Are the hours convenient for the customers you want to attract?

Price/Value

Value includes quality, convenience, and pricing. Quality assurance measures can include developing a common definition of quality, instituting procedures for assessing the quality of services offered by all staff, and adhering to good customer service practices (customer satisfaction surveys). Pricing methods vary, but high-value services are priced at a level that customers expect, can afford, and are willing to pay.

Promotion

- *Sales Promotions.* Promotions can include a discount or reward once the customer has spent a certain amount or has used a certain number of service units or hours. Promotions can reward current customers for referring a new customer.
- *Annual Events*. Regularly scheduled and annual events help to build customers' familiarity, which can eventually evolve into a tradition and loyalty. Effective collaboration with other organizations can also help to bring in new customers. For example, co-sponsoring an event with the state hospital association or primary care association can help to boost exposure and credibility.
- *Advertising.* From low-cost to expensive, from broadly appealing to narrowly targeted, paid advertising can increase the number of customers at the market. Choose advertising media only after a careful evaluation of cost-effectiveness compared to other marketing strategies to grow the customer base. Advertising can be defined as communication intended to raise awareness of, increase attendance at, and influence purchasing of TA services. SORH can advertise through a variety of media, including newspapers, newsletters, radio, and television, social media, and websites.

  Tailor advertising messages to the targeted audience and use competitive advantages to guide advertising efforts. Messages should communicate how the SORH can serve the targeted group of customers and how TA services are different and better than any competitor that also serves this group. To reach more HSOs, consider what has been learned about why they do or do not seek current TA services.
- *Publicity.* Publicity is free media coverage that raises awareness of services, successes, and goals. Publicity may attract new customers. It is helpful to compile a media list of reporters, producers and editors (print, television and radio) who have been or are likely interested in health care and/or rural stories and events. Remember to include business editors from local and regional papers. Stories will need to be tailored for different areas of interest. For example, a business editor/producer may carry a story about how your TA services are a vehicle for small business or rural development.

Some businesses recognize a fifth "P," which stands for "partnerships." Community and state partnerships can be invaluable for structural support (such as providing meeting space and referrals) and in creating joint events such as training or information sessions on certain topic areas. For more about partnerships, see Section III of this toolkit.

Marketing Goals, Strategies, and Actions for TA Services

Each TA provider organization must ask themselves: "What marketing objectives do we want to achieve over the course of the plan?" Each identified marketing objective should include both a description

of what is intended to be accomplished and quantifiable measures, which provides a concrete, measurable objective (Small Business Association, n.d.). For example, increasing the number of rural CAHs receiving TA services from 5 percent to 10 percent in two years is easy to understand and verifiable. If the goal is to use TA services to increase or diversify revenue, then a dollar figure or percentage of revenue from TA services could be used as a measurable and quantifiable goal.

Goals and Objectives

Goals reflect the purpose toward which an endeavor is directed or the potential achievements to be reached. The specific steps taken to reach those achievements are objectives. The language used in goals is more conceptual and useful in the planning process. Objectives are typically measurable and quantifiable and used to help measure success and progress towards the goal.

To set a quantifiable objective for TA services, first review past TA performance numbers, growth over the years in different markets, the number of new customers, and how new TA service offerings have fared. For example, if over the last five years the number of participants attending four annual in-person trainings have increased by 80 percent, projecting a 20 percent increase in the next year is reasonable; 45 percent is not. Make a reasonable projection for what can be accomplished with marketing support toward your new marketing objectives.

Limit the number of marketing objectives in a given year until there is a strong sense of the organization's capacity. Too much change can stress your organization's infrastructure and staff and sometimes even confuse the targeted market. It is important to keep objectives challenging but achievable.

Typically, marketing objectives fall into the following categories (Small Biz Connect, n.d.; Small Business Association, n.d.):

- Introduce a new TA service or product
- Extend or regain market for existing product or service
- Enter new territories
- Increase revenue from a particular TA product/service. Where will this business come from? Be specific
- Cross-sell (or bundle) one product/service with another
- Enter into long-term contracts with desirable customers
- Refine a product/service
- Enhance product/service delivery

The marketing plan should include perhaps a half dozen objectives, all clearly articulated with specific goals. Make the objectives simple, concrete, countable, ambitious, and achievable.

Here are some examples of specific objectives:

- Objective: Introduce TA services to Community Health Centers (CHCs). By the end of the first year, six new CHC customers will have received services.
- Objective: Within the next 12 months, offer two new training workshops in partnership with the state nonprofit association.

Putting Goals into Action

Each marketing objective should have goals and several objectives or specific strategies for achieving those goals. In the objectives section of the marketing plan, focus on the "what" and the "why" of the marketing tasks for the year ahead. In the implementation section, focus on the practical areas of whom, where, when, and how (Small Biz Connect, 2015).

The key task is to take each objective and lay out the steps needed to reach it. One of the proven ways to manage activity details is through an activity matrix that plots actions across time. A matrix provides a clear and usable framework for tracking activities associated with each objective, who is responsible, target dates, and the measurable outcome. See Worksheet: Action Plan Template in the tools at the end of this section for an example of an activity matrix.

Marketing Strategies

Here are specific marketing strategies to help reach the identified marketing goals and targeted customers.

Advertising, Promotions, and Publicity

One of the major ways to increase revenue and support is to recruit new customers. Advertising, promotion, and publicity efforts should appeal to those customers identified through market analysis.

Branding

Branding refers to the identity that is created in the mind of a consumer. It can include everything from the logo and tagline used in your marketing to the customer service and atmosphere that your customers experience. Your brand is what you want your customer to remember.

Logos and Identity

Logos are used to raise visibility and create awareness of your organization. Logos should reflect the image, value, or purpose you want targeted customers to remember. If several different types of TA services are offered within one organization, or its host organization, consider developing a style guide that identifies approved color palette, fonts, and ways to use the logo and tagline.

Target Markets

- Stay alert to local, state, and national trends that might impact the targeted market or promotion strategy.
- Read market research studies about health professions, industry, products, target market groups, etc.
- Collect competitors' ads and literature and study them for information about strategy, product features, benefits, etc.
- Ask customers why they use your services, and solicit suggestions for improvement.
- Identify a new market.
- Subscribe to a LinkedIn or other social media group or a list-serve (email group) that serves your target market.

Marketing Communications

- Publish a newsletter for customers and prospects.
- Develop an online brochure of services.
- Produce separate business cards and literature (brochures, media kits) for each of your target market segments (for example, hospitals vs. clinics).
- Create a poster or calendar to give away to customers and prospects.
- Print a slogan and one-sentence description of your TA service offerings to include on letterhead, emails, and other communication products. Get your organization and TA offerings out on the Internet.
- Create a signature file to be used for all your e-mail messages. It should contain contact details, including your website address, and key information about your organization that will make the reader want to contact you.
- Include testimonials from customers in your materials.
- Test a new mailing list. If it produces results, add it to your current direct mail lists or consider replacing a list that's not performing up to expectations.
- Announce free or special offers in your direct response pieces (direct responses may be direct mail, e-mail messages, etc.). Include the offer in the beginning of the message as well as on the outside of the envelope for direct mail.
- Use brochures to summarize information about the TA services offered, frequency of services, staff that provide the services, and contact information.

Media Relations

- Update your media list often to ensure press releases are sent to the right media outlets and person.
- Send timely and newsworthy press releases as often as needed.
- Write a column for local or statewide newspaper, business journal, or trade publication.
- Circulate reprints of published articles.
- Publicize your "nth" customer of the year (or other notable milestone).
- Create an annual award and publicize it.
- Get public relations and media training or read up on it.
- Appear on a radio or TV talk show
- Write a letter to the editor of your local newspaper or trade magazine.
- Take an editor to lunch to see what topics are of interest to him/her and explain how your business might fit in.
- Get a publicity photo taken and enclose with press releases.

- Consistently review newspapers and magazines for possible public relations opportunities.
- Conduct industry research and develop a press release or article to announce an important discovery in your field.
- Create a press kit and keep its contents current.

Networking and Word of Mouth

- Join a Chamber of Commerce or other organization.
- Join or organize a breakfast or lunch club with other professionals (not in your field) to discuss business and network referrals.
- Serve on a board or commission.
- Host or co-host a special event or Webinar
- Send letters to attendees after you host a conference or Webinar.
- Join a community list-serve on the Internet.

Special Events and Outreach

- Get a booth at a conference or other event attended by your target market.
- Sponsor or host a special event within your target service area in cooperation with a local HSO or non-profit organization. Describe how the organization helped you.
- Host or co-host a webinar.
- Appear on a panel at a professional seminar.
- Publish articles or manuscripts about your work.

Participate in Social Media

- Facebook
- LinkedIn
- Instagram
- Twitter
- Pinterest
- Websites

Build Positive Customer Relations

Customer service is crucial to engaging potential customers and retaining current customers. Most customers seek easy access, personal interaction, solutions for their problems, fast responses to their requests and needs, and genuine acknowledgement and appreciation. Therefore, it is important that TA service providers invest in customer service skill development and delivery, whether customer support is provided in person, by phone or via the internet (website, email, and social media).

Keep in mind that customers include both external customers as well as internal customers (your staff, other department members, etc.).

Here are some tips to maintain positive customer relations:

- Answer the phone/email in a manner that makes the customer feel welcome and attended to. Good practices include using a positive tone, providing a greeting, and identifying the organization and the person answering the phone by name.

> ***"Price is what you pay. Value is what you get."***
> ***- Warren Buffett***

- Listen carefully to customers. Let the customer talk and show that they are being listened to by using appropriate responses, such as suggesting how to solve the problem or setting up a follow-up meeting to discuss an issue or request in greater detail.
- Always follow up in a timely manner. Reliability is one of the keys to building trust with customers. If follow-up actions are agreed upon, be sure to schedule appointments or send information immediately, or within a reasonable amount of time. Don't make promises unless they will be kept. Be honest about what can or cannot be delivered.
- Ensure staff are well trained. All staff should be helpful, courteous and knowledgeable. All staff members should have enough information and authority to make small customer pleasing decisions. If the staffperson does not know the answer, she or he should respond by saying, "Let me find out for you," and then find out, rather than saying "I don't know." If a customer contacts your organization looking for help, it is important that the staff is not clueless. Anticipate questions that might come up and ensure that all staff members are is informed (e.g. details regarding upcoming events, such as trainings or webinars; types of TA services that are offered; contact information for staff that provide those services; staff whereabouts and when and how they can be reached; pricing, etc.).
- Provide easy access to the organization's website. Less clicks for the customer is best! According to The Chronicle of Philanthropy (Flandez,

2014), non-profit organizations fail to provide easy access, especially for mobile-users. Make the website easy to navigate and user-friendly.

- Be helpful and take the extra step. Go beyond the norm to make the customer feel acknowledged. For example, send thank-you emails or provide a link to training materials prior to or following a training or webinar. People will notice the extra effort and tell others.
- Ask for feedback. Ask customers if they are satisfied with the services offered. This can be done via a customer satisfaction survey, evaluation, or by asking the customer directly. Ask your customers what you can do to improve or to better assist them.
- Communicate. Share any news that might affect your customers and give plenty of notice. Use a voicemail system to catch after-hours phone calls. Include basic information in your outgoing email messages such as business hours, contact information, location, etc. If there has been a mistake on your end be sure to apologize. It shows you care about any inconveniences the mistake may have caused the customer.
- Deal with complaints. Properly dealt with, complaints can become opportunities (Sandro, n.d.). Let the customer know that you are willing to listen and, as appropriate, to correct the situation.

Determine Value, Quality, and Pricing of TA Services

Value is the customer's evaluation of the benefits and costs of one product or service when compared with others. Value may also be expressed as a relationship between perceived benefits and perceived costs: Value = Benefits/Cost (Boardman, 1996). Value is thus subjective (i.e., a function of consumers' estimation of benefit and cost) and relational (i.e., both benefits and cost must be positive values).

Value is measured relative to comparable services offered by TA providers. The customer's perceived value takes into account the "total market offering," which may include the reputation of the organization, staff representation, product/service benefits, and technological characteristics. The value in the marketplace varies from place to place as well as from market to market.

Value is also defined by both qualitative and quantitative measures. On the qualitative side, value is the perceived gain composed of the individual's emotional, mental, and physical condition plus various social, economic, cultural, and environmental factors. On the quantitative side, value is the actual gain measured in terms of financial numbers, percentages, and dollars.

For a TA provider organization to deliver value to a customer, it has to offer knowledge, skill sets, and customer service that result in a benefit to the customer. When it delivers high value at low price, the perceived value may be higher than when it delivers high value at a high price. The key to deliver high perceived value is attaching value to each individual customer or individual organization served—allowing the customer to solve a problem, produce results, and become more informed.

Whether or not a fee is charged for TA services, every organization should have a value statement that clearly states the value of its TA offerings over its competitors'. This value statement should discuss what value the customer will receive if TA services are used. A customer value analysis may be conducted to reveal the TA provider's strengths and weaknesses compared to other competitors. This analysis includes the following steps:

- Identify the major attributes and benefits that customers value and might lead them to choose your specific products or services.
- Assess the quantitative importance of the different attributes and benefits.
- Assess how your performance compares to competitors' performance on each attribute and benefit.
- Monitor customer perceived value over time.

Pricing

A fee-for-service strategy may help an organization offset its expenses and increase revenue. This section explores what to consider when deciding whether or not to charge for TA services. Whether to implement a fee-for-service strategy – and how much to charge – should be based on a thorough business plan, market analysis, the services offered, and targeted customers.

Nonprofit TA providers must have a clear understanding of current funding sources and the laws, rules, and regulations that apply to each. Some state, federal, or other funding sources may prohibit program income or may require that services be provided free of charge. It is important to discuss any

fee-for-service activities with your program office before implementation. Also, if the products or service for which a fee is charged are not directly aligned with the organization's mission, any payments collected could be subject to unrelated business income tax (UBIT).

If you determine fee-for-service is allowable and desirable, the next step is to determine the best pricing structure. Various pricing models include:

Segmentation is the strategy of dividing an organization's target market into specific characteristics to optimize the use of a service or product. Commonly, markets are segmented based on customer organizational income. This sliding-scale approach provides a deliberate and strategic method that requires customers to contribute based on their financial ability. Customers with more assets, as measured by operating budgets, are asked to pay more than those with less assets. Another approach is to charge more to those who value and are willing to pay a higher fee in order to offer discounts to those who face financial hardship. In the nonprofit world, it is okay—and sometimes necessary—to charge higher prices to some and use the extra revenue to subsidize others. This strategy may create controversy within an organization. Therefore, it is important to discuss and gain consensus amongst key employees on this pricing strategy.

Break-even pricing is defined as the level at which offering TA services results in neither a financial gain nor a loss. Pricing is based on the actual cost of providing services to the right number of people, at the right place, at the lowest cost possible. To identify the break-even point for your products or services, you must know the fixed and variable cost, the product or service's units of sale, and the price that will be charged for each product or service. To determine your organization's break-even point, first calculate all costs associated with providing the service, including staff time and benefits, travel, staff training, supplies, training materials, fees (e.g. internet webinar service and teleconferencing costs) and fixed costs (rent, utilities, etc.).

Cost-plus pricing is adding a certain percentage on top of the break-even price. While this strategy is easy to implement, the cost-plus prices bear no relation to the amount that consumers are willing to pay. As a result, many customers may not be served and funding opportunities may be missed.

Versioning is a pricing strategy that offers varying but closely-related versions of a product or service at different price points. For example, the same service may be priced differently depending on the location of the event or the target audience. Versioning can also be accomplished by providing value-added services and incremental service plans, where pricing varies from basic to full-service packages.

Develop a Business Plan

Addressing all the items addressed above sets the foundation for developing a business plan. A business plan is typically focused on the actions and investment necessary to generate business, and, in most cases, income, from a specific program or service (Mittenthal, 2002).

Both the "Tools" (Template: Business Plan) and "Resources" (Small Biz Connect, 2015) sections below contain templates to create a business plan consisting of the following components:

- Executive Summary
- Mission/Purpose
- Background and Structure
- Market Analysis
- Competitive Analysis
- Products and Services
- Marketing and Sales
- Operations
- Financials
- Evaluation and Assessment

Business plans typically address two different time frames: the short-term (one to 12 months) and the long-term (more than 12 months). Most of the document should focus on the coming year, which is the most important time for new and expanding businesses.

Long-term planning generally covers two to three years. Longer-term planning questions to consider include:

- Will revenue sources stay constant, decrease or increase?
- Will staff be active in local, regional or national trade groups/associations?
- How will market demographics affect TA services in the coming years?
- How many employees do you envision adding over the next few years?
- Will the need for office space stay the same?
- Are there specific training courses staff should attend? Are there certifications they should earn?

Tools

Template: Business Plan
Worksheet: Assessing Your Competitive Advantage
Worksheet: Assessing Staff Skills-Novice to Mastery
Worksheet: Creating a Logic Model
Worksheet: Change Readiness Self-Assessment
Worksheet: TA Intensity Assessment

Resources

U. S. Small Business Administration
https://www.sba.gov/content/marketing-101-basics

The Rural Health Research Gateway
http://www.ruralhealthresearch.org/about

Rural Assistance Center
http://www.raconline.org/Kellogg Logic Model Development Guide

National Resource Center (2010).
Strengthening Nonprofits: A Capacity Builder's Resource Library
Developing Your Marketing Strategy
Small Business Toolkit

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Section II
Implementation

What to Know and Do to Deliver Successful Technical Assistance Services

Section II of this toolkit covers the core principles and best practices of technical assistance (TA) delivery. It also provides in-depth information about 11 topics that are essential to health-services organizations (HSOs) operating in today's rapidly changing environment. These topic areas were chosen because they are linked to financial incentives originating in the Affordable Care Act and based on evidence-based practices that are showing positive results in improving patient care, health outcomes and/or reducing cost. Each topic area will discuss the following:

- What is it?
- Why it is important (including financial incentives)
- Challenges to improving capacity in this area
- Examples of how HSOs have increased capacity and resulting outcomes
- How to pay for it
- Things that SORH do to increase capacity in this area
- Tools
- Links and resources

Examples of SORH providing innovative TA services in these areas are described at the end of this section in an addendum, "Technical Assistance in Action"

Evidence Based Approaches to System Change

The 11 topics addressed in this section were identified by HSOs during the assessment phase as areas of interest and need. The topics are evidence-based and promising practices to improve patient care, health outcomes, and reduce costs. These 11 topics are also major elements of both the Patient Centered Medical Home (PCMH) and practice facilitation models. Practice transformation and PCMH models serve as frameworks for this section.

Practice Transformation is a supportive service provided to a primary care practice by a trained individual or team of individuals. These individuals use a range of organizational development, project management, quality and practice improvement approaches and methods to improve the internal capacity of a practice so it can reach its health-care improvement goals. Practice facilitators are skilled in project management, leadership development, facilitation, problem solving, systems change, and decision making. Practice transformation support may be provided on site, virtually (for example, through phone conferences or Webinars), or through a combination of onsite and virtual visits.

Patient Centered Medical Home

The PCMH is a model of primary care organization and delivery that seeks to provide the right care in the right place, at the right time, in a way that best fits the patient. It is not a specific place but a philosophy of health-care delivery that puts patients at the center of the process (Penchansky & Thomas, 1981). The Agency for Healthcare Research and Quality (AHRQ) describes five principles of the PCMH. In the PCMH, patients receive care that is:

- *Comprehensive.* The PCMH meets the large majority of the patient's physical and mental health-care needs, including prevention and wellness, acute care, and chronic care.
- *Patient-centered.* The PCMH sees patients as partners in their own care. The health-care team understands and respects each patient's needs, culture, values, and preferences and actively supports patients in learning to manage and organize their own care.

- *Coordinated.* Care is coordinated across the spectrum of the health-care system, including specialty care, hospitals, home health care, and community services and supports.
- *Accessible.* Services are accessible and waiting times are appropriate for the patient's condition. The PCMH provides short waiting times for urgent needs, offers extended in-person hours, around-the-clock telephone or electronic access to a member of the care team, and alternative methods of communication such as email and telephone care.
- *Of high quality and safe.* The PCMH uses demonstrates a system-level commitment to quality and patient safety. It uses evidence-based medicine and clinical decision-support tools to guide shared decision making with patients and families, engages in performance measurement and improvement, measures and responds to patient experiences and patient satisfaction, and practice population health management.

The PCMH must have the infrastructure to attain this level of care. According to AHRQ, three elements are necessary for the successful PCMH: health information technology, workforce development, and payment/finance reform (Agency for Healthcare Research and Quality, n.d.)

Financing and Payment Mechanisms for Practice Transformation

Practice transformation (including implementation of PCMH concepts) costs money and requires investment of human resources. Funding is also needed to support quality improvement efforts. HSOs are relying on new funding alternatives and grants to cover the costs of practice transformation. New payment models include capitation, bundled payment, shared savings, and pay for performance (PFP). Accountable care organizations and medical homes are two recently expanding practice and organizational models that are based on one or more of the alternative payment models (American Academy of Pediatrics, n.d.)

Risk-Based or Shared Savings Models

These payment models are predicated on an estimate of the expected costs to treat a particular condition or patient population. This model includes capitation, bundled payments, and shared savings arrangements. The onus is on the HSO to manage expected utilization and related practice expenses, so that the actual cost of care is below the budgeted cost. HSOs control utilization of services (particularly unnecessary services), as well as the quality and availability of services they provide. This payment model also is also intended to foster collaboration among multiple providers to coordinate services and control costs, thereby reducing unnecessary utilization. By coordinating care, providers and payers attempt to deliver quality care at a cost that is below currently budgeted amounts. The resulting savings is shared between the payer(s) and providers. The degree of shared savings between the entities—how the savings is calculated and distributed—is specified in negotiated contractual arrangements.

A drawback to this payment approach, however, is that practices generally have to invest in practice transformation before they can realize the full potential of cost savings.

Medicare Shared Savings

Section 3022 of the Patient Protection and Affordable Care Act of 2010 (ACA) created the Medicare Shared Savings Program (MSSP), which allows accountable care organizations to share savings (and risk) with Medicare. Under the MSSP, the shared savings arrangement is calculated by first setting the expenditure target for a performance year based on the historical expenditures during a base period for a prospectively defined cohort of beneficiaries. Savings is defined as the difference between a per capita expenditure benchmark for a performance year and the observed per capita expenditure of that year's aligned beneficiaries. (American Academy of Pediatrics)

Affordable Care Act and CMS Incentives: Since the implementation of the ACA, the Centers for Medicare and Medicaid Services (CMS) have launched numerous programs and models to help health-service providers achieve practice transformation. Programs and models such as the Hospital Value-Based Purchasing Program, Accountable Care Organizations, and the Partnership for Patients initiative with Hospital Engagement Networks help HSOs move from volume-based towards patient-centered quality health-care services. CMS and other federal agencies have offered payment incentives as well as grant programs to help HSOs finance clinic transformation initiatives.

Grants

Several public and foundation grant opportunities are available at the local, state, and federal levels to support practice transformation and PCMH initiatives. In addition to CMS, other federal agencies that fund health-care transformation efforts include, but are not limited to: the Health Resources Services Administration, the Substance Abuse and Mental Health Services Administration, the Agency for Healthcare Research and Quality, National Institutes of Health, Department of Veterans Affairs. Among the leading health foundation grant makers are: state health foundations (e.g. California Endowment, Missouri Foundation for Health, St. Luke's Health Initiatives, St. David's Health Foundation, etc.), Robert Wood Johnson Foundation, W. K. Kellogg Foundation, Kresge Foundation, Nemours, Kaiser Permanente, and the Bill and Melinda Gates Foundation.

Core Principles of Technical Assistance

While each TA engagement will vary in duration, topic, form, and structure, it should demonstrate several characteristics. The engagement should be:

- *Collaborative.* Work jointly with the organization's staff to identify underlying needs and long-term goals of the TA engagement.
- *Systematic.* Use a systematic approach when providing customized, longer-term TA services. A common approach includes four phases: request, analyze, implement, evaluate (detailed below).
- *Targeted.* Determine what areas of the HSO have the greatest need and where TA will have the greatest impact. Target efforts at those areas.
- *Adaptive.* As the TA provider, remain adaptive throughout the engagement. Be flexible according to the needs of the HSO.
- *Customized.* Respond to the unique needs of each client organization by designing and delivering tailored TA services—not by using a "one size fits all" approach.
- *Asset-based.* Every organization has its own unique pool of resources and relationships from which it can draw on to improve capacity. TA services should help the organization identify, engage, and leverage the assets that exist.
- *Accountable.* Create a mutual agreement such as a memorandum of understanding and draft a work plan that outlines specific actions, target due dates, responsibilities and measurable outcomes or products.
- *Results-driven.* Identify measures that indicate improvements in management practices or organizational performance and track those measures to prove that the TA had real, measurable results.

Systematic Approach to TA Consulting

Use of a systematic approach is a core principle of high-quality TA consulting, especially when providing TA over a period of time to create organizational or system change. Establishing a systematic approach ensures that all client organizations receive equal treatment and increases the likelihood of high-quality TA services and, in turn, measurable outcomes from that TA provision (The National Resource Center, 2010).

The four phases in a systematic approach to TA are: request, analyze & assess, implement, and evaluate

Request

First, the HSO should request TA. Key information that should be gleaned and documented during the request phase includes:

- Basic information, such as the organization's name, lead contact, and date of request.
- Narrative description of the presenting problem and requested assistance.
- Level of involvement and commitment from senior management.
- Preliminary analysis of underlying issues and needs contributing to the request.
- Perception of the TA action necessary to achieve the goals and objectives.

Analyze & Assess

Analysis is used to determine underlying issues behind the request to ensure that the TA provided is properly aligned with the needs of the HSO. When entering into a long-term TA engagement, the provider and HSO use the analysis phase to determine all needs that exist across the organization, as well as the goals of the TA services. The analysis phase is also an opportunity to build trust with the HSO so that challenges can be discussed honestly.

An organizational assessment is a helpful approach for this phase. An assessment will identify the most

pressing TA needs of the organization. The assessment should be done collaboratively with the HSO's work team or senior management, and results should be shared and compared to the original request for support. It may be necessary to clarify the focus of the TA engagement if the results of the assessment differ from the original request, or if action is needed to bring the HSO to a desired level of readiness prior to embarking on systems change.

Organizational Assessment and TA Needs

Several strategies for assessing an organization are listed below. By using these strategies, the TA provider can help the HSO identify its strengths and organizational gaps and build trust and accountability between the TA provider and the HSO.

- *Organizational Capacity Assessment.* An assessment of the organization's capacity for change is the most basic element of an organizational assessment. This is often completed as a self-assessment by one or more person(s) within the HSO, including the executive director and other senior management and project team members. This tool will help the TA provider identify the baseline performance of the HSO and provide initial data needed to measure progress through the TA engagement. A sample organizational capacity assessment is included in the appendices.
- *Document Review.* The TA provider can ask the HSO to make appropriate documents available for review, allowing the TA provider to assess the HSO capacity and learn about the systems and processes currently in place. Key information and documents to collect during the analysis phase may include:
  - Organizational profile. Includes name, contact information, budget, and number of staff and volunteers.
  - Mission and programs. Includes the mission statement, strategic plan, current priorities and initiatives, and the needs of the community.
  - Financial management. Includes accounting procedures, accounting software, financial reporting, and audits.
  - Funding. Includes diversity in income sources, payer sources, grants and contracts, and in-kind donations.
  - Legal. Includes awareness of legal requirements, contract compliance, and tax-exempt status.
  - Human resources. Includes staff specifically involved with the project, their skill and knowledge levels, and time allocated to the project by each staff member.
  - Leadership. Includes leadership commitment (time and resources), internal support of the project, and professional development opportunities.
  - Governance. Includes board support for the project and any responsibilities or involvement with the project.
  - Evaluation. Includes data collection processes, data analysis, program outcomes, and communication of results.
  - Planning. Includes strategic plan, operational plan, business plan, action plans, and organizational goals.
  - Collaboration. Includes establishing and managing partnerships, mergers, referrals, and shared services.
  - Outreach and marketing. Includes public relations, marketing materials, and media outreach.
- *Site Visit.* A site visit allows the TA provider to see the HSO facilities, identify the services and patients of the organization, and meet with key staff members of the project. This is a great opportunity to have informal conversations about the daily operations of the organization and make observations about organizational capacity.
- *Assessment Interview.* If the HSO lacks organizational awareness, the assessment can become skewed. TA providers often refer to this as "you don't know what you don't know." To address organizational awareness issues, the TA provider can conduct a facilitated interview addressing readiness issues to determine the current level of organizational capacity.

Leadership Assessment

The ability, skills, and attitude of the organization's leadership are leading contributors to TA success. Therefore, a TA provider should understand how to best support and coach the project leaders and team members. This can be done through a formal assessment, a quick checklist of questions, or an informal assessment.

The provision of TA is about meeting an organization "where it's at." With this, the TA provider must create an assessment process that accounts for such

factors as the organization's size, culture, years of operation, and leadership. If the HSO is an emerging organization that has little in place to assess, start by asking some critical defining questions about who they are, what they want to do, who they serve, and what they want to become.

If the TA engagement will continue for a long period of time, address several issues, or demand intensive amounts of time from the HSO or the TA provider, they should put in place a memorandum of understanding (MOU) and/or a work plan identifying each TA action, method of delivery, and person responsible. A sample MOU is available in the appendices.

Assessing Change Readiness

Organizational assessments can be used to reveal indicators of change readiness. Organizations that are be ready for change have the following indicators present:

- *Mission/Vision/Values.* The organization has clear values that define how it interacts with the community and within the organization.
- *Investment in change.* All key stakeholders are invested in change
- *Planning.* There is a clear plan for or goal related to the system change outlined in a strategic plan or other written document.
- *Committed, active leaders.* The executive director, board of directors, and other leaders are committed to and directly involved with change
- *Organizational alignment*
  - Leadership and staff recognize the need for change.
  - Leadership and staff mostly agree on what change is needed.
  - Leadership and staff are prepared to support the change.
  - There is cross-functional communication (i.e., leadership and direct service staff effectively communicate with each other).
- *Culture and infrastructure*
  - The mood of the organization is optimistic and positive.
  - Conflict is dealt with openly, with a focus on resolution.
  - Innovation within the organization is rewarded, and taking risks is allowed.
  - Infrastructure is flexible and easily adapted to possible role changes in the future.
  - Leadership is aware of trends in the nonprofit sector, particularly new and emerging practices
- *Past experiences*
  - The organization has had positive experiences with change in the past
- The organization is relatively comfortable with transitions

Implement

During the implementation phase, TA services are provided. At the onset of the implementation phase, it is important to outline a TA engagement through an MOU or work plan. This will ensure that everyone is operating with the same plan and priorities and understanding of what can realistically be accomplished within the agreed upon timeframe. The MOU and/or work plan will serve as the roadmap used by the TA provider and HSO for the length of the TA engagement.

If the engagement is short (lasting only a couple of days) or is around one key issue, a work plan may not be necessary. If the engagement is long-term and/or addresses several issues, a work plan is needed. Use the table below to determine if one or both is appropriate. For a sample MOU and work plan, see the appendices.

Elements of MOU	Elements of WORK PLAN
Goals for the TA	Goals for the TA
Role of the TA provider	Intended outcomes of the TA
Responsibilities of the organization receiving TA	TA activities broken down into actionable steps
Person from each organization who will be held accountable	Person responsible for each TA activity
Period of TA engagement	Due date for each TA activity

The implementation phase includes the actual delivery of the information and skills that will improve the performance of the organization. Implementation is generally divided into two phases:

Prepare

Depending on the nature of the TA, skill level of the TA provider, and familiarity with the HSO, the preparation could be limited or intensive. It could include a review of organizational files, a review of subject matter related to the TA topic, becoming familiar with the EMR, logistics for on-site meetings or trainings, and/or the creation of agendas, PowerPoint slides, handouts, and activities.

Deliver

If preparations are adequate, TA delivery should be straightforward. The work plan will serve as a guide throughout the delivery process. Begin by orienting and assessing the project team and introducing the project and its goal. Then assist by delivering the relevant knowledge and skills. Delivery may require a great deal of flexibility on the part of the TA provider. It is best to meet the organization at the phase of organizational development it is in and coach the project team to a place that works for them. Actively listening so that both individual and organizational needs can be met.

Evaluate

Evaluation is an essential part of delivering TA services for two reasons. First, evaluation results can show the effectiveness and impact of the TA services. Second, evaluation results can reveal ways to improve the quality of TA services.

One or more of several approaches can be used to effectively evaluate TA services. The TA provider can do a verbal "check-in" on-site immediately following the TA session. A web-based survey can be sent a few days following a TA session, or you can request that the HSO complete an evaluation form or interview periodically throughout a long-term engagement. Data should be documented, analyzed, and used to make adjustments to the overall TA plan if necessary.

Measuring a long-term TA engagement presents unique challenges. The goal of TA is to improve efficiency or management practices, which in turn allows for improved or enhanced operations or patient outcomes. Logic models or outcome chains (see Section I: Getting Started) are very useful in identifying the short- or long-term outcomes associated with the interventions provided.

Here are some sample indicators of TA success and how to document those indicators:

Short-term Results (one year or less). Short-term results can be realized at or near the point of execution of TA. Short-term results are often simply the outputs of a planned TA activity, such as a strategic plan or an installed financial system. Take care to consider only the indicators that describe a result of the TA activity, rather than the completion of the practice transformation efforts.

Examples of measurable short-term results include:

- The HSO has modified their electronic medical records (EMR) to capture care coordination efforts and is able to report on number and type of care coordination interventions and patient health outcomes (as a result of TA in information technology).
- The HSO has developed systems to forecast budget-based payment models and to manage the organization's finances more effectively (as a result of TA in accounting).
- The HSO implements a new outreach strategy targeted towards uninsured patients (as a result of TA in outreach).

Intermediate-term Results (one to two years). Intermediate-term results indicate progress toward the goal of improving sustainability of the HSO.

Examples of measurable intermediate-term results include:

- *The HSO increases the number of Medicaid insured patients.*
- *The HSO produces information on patient health indicators,* such as the number of pre-natal visits per patient.
- *The HSO increases the amount of funding resulting from shared savings.*
- *The HSO increases the number of community stakeholders (citizens,* community based organization, and government representatives) participating in meetings to coordinate activities.

Long-term Results (More than two years). Long-term results indicate successful achievement of

the ultimate goal of better care, better health outcomes, and lower health-care costs. Measurement of long-term results allows the TA provider and HSO to "keep their eyes on the prize." The indicators of these results need to be measured at the start and throughout the TA engagement. Evaluation starts at the beginning of the project with the selection of measurable indicators and easily accessible data, as well as establishment of a "baseline" measure or benchmark against which to measure future changes. Long-term results will be specific to the goals of the HSO.

Examples of measurable long-term result include:

- The HSO decreases the number of hospital readmissions by 40 percent.
- The HSO increases medication compliance by 50 percent.
- The HSO reduces the prevalence of diabetes among Hispanic patients by 25 percent.

Summary of Technical Assistance: Helpful Reminders

TA efforts will produce results if they are focused and well-organized. A good TA approach, a knowledgeable and skilled provider, and appropriate tools are core components of success in meeting the needs of the HSO. Consultation services should incorporate the core principles of TA, the four phases of a systematic approach, and use change management tools.

In summary, here are some TA dos and don'ts:

Do	DON'T
Approach TA in an orderly, strategic and professional way	Begin providing TA without adequate and trained staff, planning and/or a structured TA service system in place
Use the core principles of TA in designing your TA system	Tell people to call back in a few months "when you might know more"
Provide immediate TA during the request phase, when possible	Provide TA without first analyzing need and readiness
Try to refer and redirect rather than reject requests	Visit every organization that requests TA
Try to meet needs using both on- and off-site TA	Assume that indirect (remote) TA is inferior to direct TA
Begin on-site TA with a briefing and end with a debriefing	Try to serve every HSO with every need they might have
Define the change when providing TA and what success looks like	Think you have to do it all yourself
Manage and measure change as you provide TA	
Check back with organizations you serve after thirty days. Ask for feedback on TA service.	
Talk about your procedures and look for ways to improve what you do	

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Module 1
Access to Health Care Services and Information

What is Access to Health-Care Services and Information?

Access to health care is the ease with which individuals or communities can obtain medical services appropriate to their needs (Guilford et al, 2002; Levasque, Harris, & Russell, 2013; Wyszewianski, 2002). Medical services include a range of primary, acute, and specialty care, as well as oral and behavioral health care, public health, and emergency services.

Access to health *information* complements access to health *care* by ensuring that patients have the information they need to become engaged and empowered partners in assuring their health needs are met. Access to health information falls into two general categories: 1) access to one's own health records and 2) access to general information about health and medical issues. Both are key elements of patient empowerment and patient-centered care.

Access to Health-Care Services

More than three decades ago, Penchansky and Thomas (1981) developed a framework for understanding access to health care to that is still useful today. They proposed that access to care is the result of the "fit" between patient and provider characteristics. They divided these characteristics into five components, which are often referred to as the "5 A's" of access:

- *Affordability:* Health care is only accessible to those who can pay for it. Affordability is determined both by what the provider charges for care and by the patient's willingness and ability to pay for it. In the U.S. system, affordability is also determined by the costs and benefits of health insurance coverage.
- *Availability:* The provider must have the resources needed by the client, including equipment, expertise, personnel, and other tools.
- *Accessibility:* Accessibility is a measure of how easily the client can reach the provider. Penchansky and Thomas defined accessibility based on geographic distance; other challenges include proximity of parking, the size and design of the facility, clear directions to the facility, and signage inside the facility.
- *Accommodation:* Providers must accommodate the preferences and constraints of the patient. Common barriers to accommodation include hours of operation, time required to schedule an appointment, language, and handling telephone (and email) communications.
- *Acceptability:* To deliver acceptable care, providers must be sensitive to the patient's cultural background, health literacy status, sex, age, social class, and service needs.

(Penchansky & Thomas, 1981)

As Wsyzewianski and McLaughlin (2002) point out, access is defined by the weakest link among these five dimensions. For instance, even high-income individuals who have health-care coverage with generous benefits – i.e. for whom the barrier of *affordability* has been addressed – do not have adequate access to care if the services they need are not *available* in their communities; *accommodation* may be the limiting factor for a single mother working two low-wage jobs if she can schedule an appointment during her working hours; the need for childcare may be another

barrier of *accommodation*; or a female teen may feel uncomfortable seeking care from a male gynecologist, making *acceptability* the primary barrier.

Access to Care and the Patient Protection and Affordable Care Act

Overall, the United States fares poorly on measures of access to care. Among industrialized countries, the United States is the sole nation that does not provide universal health-care coverage to its resident population (Davis, Ballreich, States, & Kingdom, 2014). Out of 11 member countries of the *Organisation de Coopération et de Développement Économiques* (OECD), the United States consistently ranks eleventh in terms of affordability of care (Majerol, Newkirk, Gareld, & Family Foundation, 2015; "OECD Statistics," n.d.).

The Patient Protection and Affordable Care Act of 2010 ("the ACA") addresses this gap with a "no wrong door" approach to health-care coverage. The ACA created state and federal health insurance "marketplaces" where individuals and small business owners can purchase coverage. Individuals earning up to 400% of the federal poverty level (FPL) can receive subsidies to help them purchase marketplace plans. In 2015, the FPL was $24,250 for a family of four; that family could earn up to $97,000 and still receive help paying for health insurance premiums.

As passed by Congress and signed by the President, the ACA required states to expand Medicaid to all adults with incomes up to 138 percent of FPL, else risk losing all Medicaid funding. Assuming that this provision would provide coverage for all low-income adults, Congress did not provide subsidies for those making less than 138 percent of FPL. However, in 2012 the Supreme Court of the United States (SCOTUS) overruled this provision (National Federation of Independent Business v Sebelius) after having come to the conclusion that it was an overreach of Congress' spending powers, as it would coerce states to participate. The Supreme Court justices ruled that each state can choose whether to participate in the ACA's Medicaid expansion.

The result of the SCOTUS decision has been a patchwork of benefits to low-income residents that varies widely with geography and political ideology. As of July 2015, 20 states had elected not to expand Medicaid ("Status of State Action on the Medicaid Expansion Decision | The Henry J. Kaiser Family Foundation," n.d.). In these states, Medicaid eligibility for adults remains restrictive and is often limited only to extremely low-income parents. This leaves people who earn up to 138 percent of FPL in a "coverage gap" (Majerol et al., 2015), in which their incomes are too high for Medicaid but not high enough to qualify for a subsidized plan on the exchange.

Despite these limitations, the ACA has dramatically expanded the proportion of U.S. residents with health-care coverage. The proportion of the population with insurance climbed from 81.3 percent in 2009 to an estimated 88.5 percent by 2014 ("OECD Statistics," n.d.). According to estimates from the Kaiser Family Foundation, approximately 11 million nonelderly adults were newly insured in 2014 (Majerol et al., 2015). However, approximately 30 million Americans remain uninsured.

Access to Health-Care Information

In addition to access to health *care*, access to health *information* is a critical component of high-quality, patient-centered care. Health information includes both access to one's own health records and access to general information about health conditions, including prevention, treatment choices and their risks and benefits, and physician quality ratings.

Access to health records

The Health Information Privacy and Accountability Act (HIPAA) clarified patients' legal right to access their own health records, including all interactions with hospitals, physicians, and others that provide health services. These rights were extended with the American Recovery and Reinvestment Act (ARRA), which requires health-care providers who use electronic health records (EHRs) to provide patients with electronic copies of their medical records, for instance on a flash drive or DVD. Increasingly, however, organizations are providing records through online patient portals.

Access to electronic medical records is a "meaningful use" criteria established by the Centers for Medicare and Medicaid Services (CMS). These quality measures were established by CMS to help health-services organizations assess their implementation of EHRs. Meaningful use criteria encourage health-services organizations to provide patients with ready access to their information via a portal, within four

days of a request, and without charge. While HIPAA allows health-services organizations to charge a cost-based fee for providing electronic or print medical records to their patients, even a small fee may create a barrier to patients' access to those records (Murphy-Abdouch, 2015).

Yet many patients continue to have difficulty accessing their records. Despite widespread availability of EHRs and patient portals, a recent study showed low uptake: Nearly half of provider organizations reported that less than 5 percent of their patients used the portals (Murphy-Abdouch, 2015). Patients may not be comfortable using a patient portal because of computer literacy or privacy concerns. They may not have access to the internet at home, or they may face language or cultural barriers that prevent them from accessing and understanding their records (Goldzweig et al., 2013). Limited internet access and low computer literacy levels are greater problems in rural settings, where the population tends to be older and may have less experience with digital devices and the internet (Bailey, 2009; 2013).

Access to general health information

Health-services organizations must ensure that patients can obtain, understand, and act upon general health information. Access to health information has been shown to help people prevent disease, manage chronic illnesses, take medications effectively and safely, and choose more appropriate health resources (Abrams, Kurtz-Rossi, Riffenburgh, & Savage, 2014; Hernandez, 2012; US Department of Health and Human Services, 2010). Health services organizations can assist patients by providing information via clinical encounters, written materials, support with online searches, health education courses, and other strategies.

Access to health information depends not only on availability of information, but on the ability to obtain, understand, and act on that information, also called **health literacy**. Health literacy has been defined broadly to include the ability to read and write, listen, follow directions, fill out forms, use basic math, interact with professionals, and navigate health-care settings. Ultimately, health literacy is the ability to approach health using critical thinking skills (Abrams et al., 2014). Substantial evidence links low health literacy with poorer clinical outcomes, higher mortality, and poor use of health resources (Baker, 2006; Nancy D. Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011; Bostock & Steptoe, 2012; Sudore et al., 2006; Wolf, Feinglass, Thompson, & Baker, 2010). Conversely, health literacy interventions have been associated with improved clinical outcomes and health-care utilization (Nancy D Berkman et al., 2011; Dennis et al., 2012; Jacobs, Lou, Ownby, & Caballero, 2014; Taggart et al., 2012).

Traditionally, the focus of health literacy has been on the patient and his or her capacity to understand written and verbal communication about health. Increasingly, however, health literacy is being recognized as a systems issue that involves a continuum of patient, provider, and organization (Abrams et al., 2014; IOM, 2013). As members of the IOM Roundtable on Health Literacy observe:

> *"…health literacy does not depend on the skills of individuals alone. Health literacy is the product of the interaction between individuals' capacities and the health literacy–related demands and complexities of the health care system. System changes are needed to better align health care demands with the public's skills and abilities"*
> (IOM, 2014, p. 1).

In this context, not only patients but providers and organizations must be health literate. The concept of the health-literate health services organization is rapidly evolving. A discussion paper developed by the IOM Roundtable explored the attributes and characteristics that make a health-care organization health literate. Members adopted the definition of the health-literate health-care organization as "an organization that makes it easier for people to navigate, understand, and use information and services to take care of their health" (IOM, 2013). They identified 10 specific attributes of the health-literate health-care organization:

1. Has leadership that makes health literacy integral to its mission, structure, and operations.
2. Integrates health literacy into planning, evaluation measures, patient safety, and quality improvement.
3. Prepares the workforce to be health literate and monitors progress.
4. Includes populations served in the design, implementation, and evaluation of health information and services.

5. Meets the needs of populations with a range of health literacy skills while avoiding stigmatization.
6. Uses health literacy strategies in interpersonal communications and confirms understanding at all points of contact.
7. Provides easy access to health information and services and navigation assistance.
8. Designs and distributes print, audiovisual, and social media content that is easy to understand and act on.
9. Addresses health literacy in high-risk situations, including care transitions and communications about medicines.
10. Communicates clearly what health plans cover and what individuals will have to pay for services.

(IOM, 2013)

The health-literate health-care organization is prepared to help patients navigate the complex set of demands that patients and their families face as they seek care, especially when faced with an acute or chronic condition. This includes processes for scheduling appointments, forms, interactions with front desk staff, clinical support staff, and clinicians.

In the clinical encounter, the patient must feel confident and secure in communicating freely with the provider, trusting the provider's skill, knowledge, and confidentiality. Providers must be able to develop proper diagnoses, effectively communicate those diagnoses, along with treatment plans, and respect cultural beliefs and traditions. The patient should able to communicate effectively with the health-care team; likewise, the health-care team must be able to provide information that is clear, conveyed in plain language, and is culturally appropriate. The health-literate organization – and the providers who work there – must also be prepared to deal with the challenges of helping patients navigate multiple sources of health information, including newspapers, television, movies, books, family members and friends, and – increasingly – the internet.

The internet is growing in importance as a source of health information for both patients and providers. According to data from the Pew Research Internet Project ("Health Fact Sheet | Pew Research Center," 2013), 59 percent of U.S. adults said they had looked online for health information in 2012. Other data from the Pew survey show that one in three of all cell phone owners and more than half of smartphone owners had used their mobile phones to search for health information ("Mobile Health 2012 | Pew Research Center," n.d.). Demographically, the people most likely to gather health information using a cell phone were Latinos, African Americans, adults ages 18 to 49 years, and people with a college degree. Caregivers, people who recently faced a medical crisis, and those who experiences a recent, significant change in their physical health were also more frequent seekers of health information via cell phones ("Pew Survey of Americans' Online Health Habits," n.d.).

While a plethora of information is available online, not all consumers are able to access it, understand it, and use it to better their health. Studies show that consumers cannot find the health-care information they seek about 60 percent of the time ("Quick Guide to Health Literacy Quick Guide to Health Literacy," n.d.). The complexity and reliability of online health information varies widely, ranging from professional resources to evidence-based consumer health sites to downright quackery. Consumers may find it difficult to evaluate websites for reliability and accuracy. Caregivers and people with chronic disease often turn to online discussion groups for peer-to-peer advice and support, where information ranges from evidence-based to rumor.

Consumers may face similar challenges in assessing health information delivered via other media, including radio and television as well as printed brochures, newspapers, and magazines. For health information to be accessible, materials must be clear, understandable, accurate, and appropriate to the person, taking into account culture, age, gender, sexual preference, and other factors. Written materials should be clear, concise, use plain language, and incorporate appropriate design elements that help to communicate the messages clearly (U.S. DHHS, Quickguide).

Barriers to Accessing Health Care and Information in Rural Communities

Despite the ACA's expansion of coverage and investment in primary care infrastructure, Americans still face multiple barriers to accessing care, and people living in rural communities are more likely to

encounter barriers to care than their urban counterparts (Jones, Parker, Ahearn, Mishra, & Variyam, 2009; Newkirk & Damico, 2014). Lower incomes, economies based largely on self-employment and small businesses, an older population, health-care workforce shortages, lack of health-care infrastructure, and geography combine to inhibit access for rural populations (J. Bailey, 2009; Newkirk & Damico, 2014). As a result, people living in rural communities are less likely to receive preventive services and more likely than their urban counterparts to experience a potentially avoidable hospitalization (Majerol et al., 2015; Newkirk & Damico, 2014).

Income is a critical indicator of health-care access and health-care literacy, one that is amplified in rural communities. People with lower incomes face more barriers to accessing care, and a higher proportion of people with low-to-moderate incomes live in rural communities (J. Bailey, 2009; Majerol et al., 2015; Newkirk & Damico, 2014). Difficulties in financial access are found across income levels, but they are especially notable for low-income Americans (Davis et al., 2014; Majerol et al., 2015). The rate of employer-sponsored insurance is lower in rural areas, as few large employers tend to operate in remote locations (Newkirk & Damico, 2014).

Affordability remains the primary obstacle for many Americans, and rural residents are at even greater risk. Even among those with health coverage, medical bills are the most common reason for bankruptcy in the United States. Medical and other health-care related expenses are often significant deterrents to accessing care, especially for the underinsured – i.e., people who have health coverage but for whom the ratio of health expenses to income is unreasonably high.

Underinsurance remains a significant problem for working-age adults, driven largely by rising deductibles and other out-of-pocket expenses (Collins, Rasmussen, Beutel, & Doty, 2015). During the second half of 2014, nearly 31 million adults ages 19 to 64 were underinsured. Some groups are at greater risk of underinsurance:

- Enrollment in an employer-sponsored health plan was the most likely factor for being underinsured. Underinsurance is an especially acute problem for people working for small businesses.
- Adults with low incomes are twice as likely to be underinsured as those with higher incomes (Collins et al., 2015).
- About one in five (22%) of Medicaid enrollees are underinsured, despite minimal cost-sharing requirements, because their incomes are so low (Collins et al., 2015).
- Adults 65 years and younger who are enrolled in Medicare – 91 percent of whom are disabled or in fair or poor health – are most likely to be underinsured. Forty-two percent of this population is underinsured (Collins et al., 2015)
- Adults age 65 years and older face significant gaps in Medicare coverage, a complex enrollment system, and no limit on out-of-pocket costs, resulting in a fragmented, inefficient system of coverage that provides little financial protection (Collins et al., 2015; Moon, Hollin, Nicholas, Schoen, & Davis, 2015; Schoen, Davis, Buttorff, & Andersen, 2015).

Nearly two-thirds of rural residents live in states that are not expanding Medicaid (Newkirk & Damico, 2014). In these states, eligibility for adults is generally limited to parents and people with severe disabilities; childless adults do not qualify except in Wisconsin. Income limits vary from 18 percent of FPL in Texas and Alabama to 143 percent of FPL in Alaska. Only three states besides Alaska – Wisconsin, Tennessee, and Maine – offer Medicaid to parents with incomes at or above FPL (Kaiser Commission on Medicaid and the Uninsured, 2014). This means that rural residents are more likely to fall into the "coverage gap" between state eligibility levels and 138% of FPL (Newkirk & Damico, 2014). In states that have rejected Medicaid expansion, most low-income adults are not eligible for Medicaid or subsidies to purchase a qualified health plan.

Moderate-income people living in rural areas are often unable to purchase qualified health plans with premiums and benefits comparable to those purchased by their urban counterparts. While competition between insurance carriers in urban areas has been strong, the majority of rural areas are served by only one or two carriers. With little competition in these areas, rural residents are encountering some of the highest premium prices in the market (Abelson, Thomas, & McGinty, 2013). Analysis by the Department of Health and Human Services (2014) shows that premiums tend to be higher in states with eight

or more carriers, compared to states with three or fewer carriers, which tend to have the lowest premiums. In addition, rural residents may have a more limited network of providers from which to choose (Abelson et al., 2014).

In addition to finding it difficult to pay for care, lower-income adults are more likely to experience non-financial barriers to accessing care (Kullgren, Mclaughlin, Mitra, & Armstrong, 2011). Lower income adults are more likely to say that they had to wait six or more days for an appointment the last time they needed medical attention and that it was somewhat or very difficult to get care in the evenings, on weekends, or on holidays; they were also more likely to report having had to wait two or more hours before receiving care in an emergency department (Davis et al., 2014). They are also more likely to forgo preventive screenings. For instance, data analyzed by researchers at the Centers for Disease Control and Prevention (CDC, 2013) show that only 42% of people with incomes less than $15,000 are up to date on screening colonoscopies, versus 69% for those with incomes of $75,000 or greater.

Likewise, availability and accessibility of care are often issues in rural communities, where low population densities and small patient volumes have led to an emphasis on primary and emergency care. Low volumes and high rates of uncompensated care, combined with high fixed operating costs, may inhibit providers' ability to purchase state-of-the-art equipment, pay competitive wages, and provide the highest level of care.

Even when an organization's budget is sufficient to pay competitive wages, health-care workforce shortages in rural areas can interfere with the ability to provide care. A study of community health centers in rural areas found that in 2004 the centers were generally understaffed and having difficulty recruiting core personnel (R. A. Rosenblatt, Andrilla, Curtin, & Hart, 2006). The lack of available obstetrician/gynecologists and psychiatrists was also a problem, one that is likely exacerbated today by increased emphasis of integration of behavioral health into primary care. In addition, few dentists practice in rural areas. Without an adequate workforce, rural community health centers are challenged to serve their populations.

The supply of other services such as long-term care, home health, and hospice care may be inadequate to match demand – or altogether unavailable – in rural communities. Services such as housekeeping, yard maintenance, childcare, and home repair may be in short supply or proffered by well-meaning but untrained community members.

Rural residents who require specialty care generally are referred to providers in urban areas and often must travel long distances to reach those providers (Hart, Lishner, & Rosenblatt, 2002), raising the specter of accessibility. This situation is a natural response to economic forces: A population base of about 2,000 is required to support one primary care provider; in contrast, a neurosurgeon requires a base of about 100,000 (Rosenblatt & Hart, 2000). Hence, specialists such as neurosurgeons, cardiologists, oncologists, and endocrinologists tend to live in larger, urban areas (Hart et al., 2002; Rosenblatt & Hart, 2000).

Because of the dearth of specialists in rural communities, patients in rural communities may rely on their primary care providers for specialty treatment, or they may forego treatment. The cost of travel to specialist services may be prohibitive. The mode of travel may also constitute a barrier. Public transportation is rarely available in rural communities (Hart et al., 2002; Pierce, 2007). Patients may not have a reliable vehicle, or they may be unable to drive themselves several hours to an appointment. A spouse, other family member, or neighbor often must take time off work to drive the patient to and from appointments, increasing the costs even more (Hart et al., 2002).

The impact of geographic distance is well illustrated by a study of 45 women with heart failure living in rural upstate New York (Pierce, 2007). Half of the women in the study saw a cardiology specialist, while the rest received care for their heart failure from primary care physicians. Those who did receive care from a cardiologist traveled an average of 32 miles one way to each appointment; distances varied greatly, with the longest being 90 miles. The women, whose average age was just less than 78 years, often relied on family members or neighbors to transport them to primary care physicians (53%) and cardiologists' offices (91%). One woman paid her neighbor to drive her.

For providers, limited budgets and low patient volumes may make it prohibitively expensive to offer accommodations such as evening and weekend hours, child care, translation, same-day scheduling, and prompt telephone and email communications. In turn, limited staffing and hours may contribute to long wait times, which have been shown to negatively impact patient satisfaction and health outcomes (Kaplan, Lopez, & Mcginnis, 2015).

Access to health information may also be more difficult for rural residents to obtain. Limited internet access and low computer literacy skills may impede access to online health information; providers with limited budgets may not be able to provide adequate written materials, and support groups and other face-to-face resources may be geographically distant.

Low health literacy also creates a significant barrier to accessing to health information. Nearly 90 percent of U.S. adults have below basic health literacy (Kutner, Greenberg, Jin, & Paulsen, 2006). Those most likely to have low health literacy are people with lower incomes, low educational levels, the elderly, and minority groups (Kutner et al., 2006; "Quick Guide to Health Literacy Quick Guide to Health Literacy," n.d.) – populations that are all more prevalent in rural areas (Bailey, 2009, 2013).

Addressing Barriers

Access to health care and information is affected by factors both internal and external to the health-services organization, the patient, and the community. There is no single solution to resolving barriers to access for every patient. Each health-services organization must address access issues in the context of federal, state, and local policies, the communities it serves, its own resources, and the needs of its patients and families. However, certain elements are common in programs that effectively improve access to care and information.

Enrollment Assistance

Enrollment assistance (see Module 11) is a key component of access to care. For patients, health-care coverage can break down the barrier of affordability. For health-services organizations, a greater number of covered patients means more services can be billed for, rather than rendered for free. In a policy landscape that is phasing out most reimbursement for uncompensated care, organizations must focus on enrolling all eligible individuals and efficient delivery of care. In addition to providing support for eligibility and enrollment activities, health-services organizations in rural areas, especially in areas with a high proportion of ineligible individuals, may need to garner additional funding through grants, donations, and other means to cover the cost of providing uncompensated care.

To promote their services and educate community members about health coverage, health-services organizations can use social media, printed brochures, public service announcements on television and radio and in magazines. Health communications experts can help to develop outreach and marketing plans for the organization. Trained community health workers (CHWs) can help to educate and enroll community members in appropriate health plans. CHWs facilitate the relationship between community members and health systems by providing outreach, education, advocacy, translation, and more.

Telemedicine and other Technologies

Telemedicine and other technologies are helping to increase access to care in rural communities (see Module 9, Health Information Technology). One of the most successful models, Project ECHO, uses basic videoconferencing technology to link specialists at tertiary centers with primary care providers in rural communities. Mobile devices, remote monitoring devices, and other technologies are also helping patients and providers communicate in and out of clinics.

Patient portals provide patients with access to their health records from anywhere. However, only a small percentage of patients use this service. The slow uptake may have more to do with poorly designed systems than with patient reluctance. In addition, patients with lot health literacy may feel overwhelmed by clinician notes written in technical medical language.

Health-services organizations can address low uptake of electronic health records in two ways: first, by making the process of accessing those records easier, and second, by helping patients develop the

computer and health literacy skills they need to use the portals. Health-services organizations can support patients by providing an orientation to their online services. In addition, health-services organizations can partner with community colleges, libraries, and other organizations that provide computer literacy training and internet access.

Access to Specialty Care

In many rural communities, primary care providers contract with specialists who offer regularly scheduled, on-site services. For instance, some clinics have contracted with a cardiologist who holds office hours one or two days per week.

Appointment Scheduling

In 2015, at the request of the Department of Veterans Affairs, the Institute of Medicine (IOM) convened its Committee on Optimizing Scheduling in Health Care to address the question of delivering timely care in various health settings (Kaplan et al., 2015). The committee recommended the adoption of systems-based models – derived mostly from the fields of engineering and manufacturing – that have been employed by health-services organizations to address issues of supply and demand. They identified specific approaches that have been successful in different types of health-services organizations, all of which require continuous assessment, monitoring, and realignment of supply and demand.

In ambulatory care settings, two systems models and two strategies to reframe supply and demand were found to be effective:

- Advanced access model: Also called "open access" or "same-day scheduling," the advanced access model reserves a significant portion of the day's appointments for patients requesting a same-day appointment
- Smoothing flow scheduling model: The smoothing flow scheduling model uses an operations management technique to predict peak periods of demand, quantifying the need throughout the day, week, month, or year.
- Team-based workforce optimization strategies: This approach allows organizations to increase provider capacity by sharing tasks among a care team, delegating some tasks to non-clinician team members.
- Technology-based alternatives: Using the telephone, telemedicine, or mobile health units to provide care.

In emergency and in-patient settings

- Smoothing flow scheduling model: In the hospital setting, smoothing flow can be used to predict staffing and other needs in response to patterns of demand.
- Coordinated care models (see Module 3): Care coordination approaches can improve patient flow by improving discharge processes and preventing readmissions.
- Systems and simulation models: Systems models include Lean processes (see Module 10: Management) and other evidence-based management techniques that address process inefficiencies, reduce waste, and ensure resources are used effectively and efficiently.

Transportation Support

Multiple models of transportation support are available. All state Medicaid programs provide free or low-cost transportation for members to and from medical appointments. In addition, all FQHCs are required by law to provide transportation services to patients. Health-services organizations have adopted different strategies to fulfill these requirements. Many rural FQHCs purchase and operate their own wheelchair-friendly vehicles, which they use to transport patients. Other strategies include providing vouchers for taxi or bus services. The recent emergence of low-cost transport services such as Uber or Lyft may offer additional options for patients traveling to and from medical appointments. Transportation services effectively improve access to care, especially in rural settings. For instance, XXX (2013) found that transportation services limited the impact of mobility loss, and encouraged better use of health-care resources, reducing unnecessary emergency room visits among seniors.

Digital Access

In a digital age, health-services organizations also need to be digitally friendly. A user-friendly website[1], scalable to mobile devices, can allow patients to:

- Schedule appointments with clinicians and other health-care team members (e.g. a community health worker, dietitian, or physical therapist)
- Access health records, including prescription information
- Check accounts and pay bills

1 For an example of a well-designed, accessible website, see http://rodgershealth.org

- Schedule transportation services
- Access health information via links to consumer-friendly, reliable, health websites

These services should be available via telephone and print for patients who do not use the internet. A one-page handout or infographic given during clinic visits may help to ensure patients are aware of the resources available to them.

E-Information Prescriptions

While prescriptions are generally written for medications, providers are also writing prescriptions for information and behavioral changes. Health-services organizations can support this practice by developing and distributing handouts that list reliable online sources of information for specific conditions commonly seen in their patient populations, such as hypertension, diabetes, heart disease, and depression.

Addressing Health Literacy

Organizations can address health literacy by providing support to their communities, providers, and incorporating the IOM's 10 attributes of health literate organizations into their strategic and operational planning. The Minnesota Health Literacy Partnership provides resources, tools, and support for health-service organizations and community organizations working to increase health literacy among patients, providers, and organizations.

Community EMS Programs

Community paramedicine programs are a rapidly emerging model being developed to address gaps in care and improve access in rural and frontier areas. Community paramedics receive clinical training, sometimes extending their scope of practice, and work under medical direction to perform in-home visits, help patients manage chronic conditions, and follow up with patients recently discharged from inpatient care. In some programs, community paramedics and EMTs are given the latitude to transport non-emergent patients to urgent care or primary care facilities.

Through in-home visits, counseling, and monitoring, community paramedics extend the primary care physician workforce. Other models of physician extenders include community health aides, community care teams, and community health workers. Most recently, the primary care technician model has received attention – in this model, emergency medical technicians, including paramedics, are given additional training to focus their work on community-based, non-urgent care settings.

Why is Access to Health-Care Services and Information Important?

Access to high-quality health care is associated with improved quality of life and longevity (Radley & Schoen, 2012) (Kimmel et al, 2009). Children and adults who have a usual source of care are more likely to receive appropriate health care, including preventive services (Angier et al., 2015; Pandhi et al., 2012). The same benefits appear to extend to adults (Wyszewianski & Mclaughlin, 2002). Preventive care can stop disease from occurring in the first place (e.g. vaccinations), identify potentially life-threatening conditions during early stages (e.g. colon or breast cancer) and slow disease processes (e.g. heart disease or diabetes management (Bodenheimer & Grumbach, 2012).

Pandhi and colleagues (2012) found that patients who had easy access to primary care were more likely to receive cholesterol checks, flu shots, and prostate screenings (they found no difference in mammography screening rates). Patients in their study were also more likely to receive preventive care when they had generally positive "first-contact access" experiences, such as the ability to schedule appointments promptly and easily, short waiting periods to see a clinician, clinics that were conveniently located, evening and weekend hours, and the ability to make appointments by phone.

Conversely, gaps in affordability – a key component of access – can have dire consequences for health and financial wellbeing. Compared with people who have health insurance, people who do not have health insurance coverage are more likely to forego preventive care, are more likely to be hospitalized for preventable conditions, and are more likely to die in hospitals (Majerol et al., 2015). Zhang and colleagues (2012) found that uninsured people with diabetes were 2.5 times more likely to have a hemoglobin A1C measurement of greater than 9 percent, an indicator of poor glycemic control. In comparison with other adults with diabetes who

had made four or more visits to a health care provider in the past year, uninsured adults with diabetes in their study were 5.5 times more likely to have an A1C measurement of greater than 9 and almost twice as likely (odds ratio 1.9) to have a high blood pressure reading (>140/90 mmHg).

Rurality matters in terms of access to care and health outcomes. Rural patients with choledocholithiasis (CDL) – a type of gallstone disease that occurs when gallstones become lodged in the duct that carries fat-digesting bile from the liver to the gallbladder – are less likely to receive treatment than their urban counterparts and are more likely to undergo invasive open surgery rather than endoscopic surgery (Poulose et al., 2015). Obertova and colleagues (Obertova, Brown, Holmes, & Lawrenson, 2012) found that rural men were less likely to be diagnosed with prostate cancer; they also found some evidence of higher mortality rates among rural men with prostate cancer. These and many other studies strongly suggest that access to care is a critical issue for rural communities.

Adequate health-care insurance coverage important not only for its impact on accessing care but for its financial impact on families. Uninsured or underinsured families may use their resources attempting to pay for medical debt and end up struggling to meet basic needs such as food, shelter, and clothing. Having easy access to primary care has been linked with more appropriate use of health-care resources, including less inappropriate use of costly emergency services. The availability of interpreter services, after-hours care, and closely located primary care services may reduce non-emergent use of emergency departments (Villani & Mortensen, 2013). Having a regular source of care that can be contacted over the phone during regular business hours or has office hours during nights and weekends (both key features of the patient-centered medical home model) has been associated with significantly lower expenditures (Stockbridge, Philpot, & Pagan, 2014).

Access to health-care information is also central to good health. Informed consumers are better able to engage in their own health care, make decisions about their needs and treatment choices, and better prevent and manage both acute and chronic conditions (Abrams et al., 2014; IOM (Institute of Medecine), 2013)(Abrams; Brach, 2012). Patients' ability to access their own health records is thought to help them to become engaged, improve continuity of care, reduce unnecessary tests, increase safety of care, and improve patient satisfaction (Ammenwerth, Schnell-Inderst, & Hoerbst, 2012; Davis et al., 2014). However, more rigorous research needs to be done in this area (Ammenwerth et al., 2012; Jilka, Callahan, Sevdalis, Mayer, & Darzi, 2015).

Evidence shows that health literacy has a profound impact on health (U.S. DHHS, 2010; Zhang, 2012). Compared to adults with proficient health literacy, adults who have below basic health literacy are more likely to report their health as poor and to lack health insurance. Below basic health literacy has been linked with less use of preventive services such as vaccinations, mammograms, and colonoscopies; poor management of chronic conditions such as diabetes, asthma, heart disease, hypertension, and HIV/AIDs; and poorer self-reported health (U.S. DHHS, 2010).

Adults with low health literacy have higher rates of preventable hospital admissions and are more likely to misunderstand instructions about prescription medications, at greater risk of medication errors, may have difficulty understanding nutrition labels, and are at higher risk of death (Abrams, Kurtz-Rossi, Riffenburgh, & Savage, 2014; Berkman et al., 2004; U.S. Health and Human Services, 2010). Health literacy is intricately tied to health equity (Logan et al., 2015)

Challenges to Providing Access to Health-Care Services and Information

Health-care providers working in rural communities often encounter challenges to providing timely, accessible care to their patient populations.

In rural communities, general problems with affordability of health care in the United States are often compounded by low incomes and high rates of uninsured and underinsured patients. For providers, low patient volumes can lead to higher costs per patient for the provision of care. Individuals and small businesses enrolling in qualified health plans may have access to only one carrier and few plans.

In addition, availability of care is often limited in rural communities, where resources, health-care workforce shortages, and small patient volumes

combine to make it difficult for providers to provide all needed services and meet PCMH standards for extended hours and 24/7 availability while remaining financially viable.

Accessibility is also an issue in rural and frontier communities, where patients may need to travel an hour or more to a primary care provider or critical access hospital. Specialty care providers are often located in urban areas, often a trip requiring an overnight stay. Unreliable transportation, weather, difficult terrain – combine to make inaccessible.

Low health literacy levels in rural areas mean that a large proportion of patients may need coaching in basic health concepts and assistance making decisions when facing complex health problems.

Examples of How Health-Services Organizations Have Increased Capacity in Access to Care and Information

Rural health-services organizations continue to develop innovative approaches to helping their clients connect with health care and information. Access to care and information crosses the boundaries of clinic walls, often requiring clinics to work with social service agencies, transportation providers, schools, senior centers, and other community entities. Some successful models are described below.

Aaron E Henry Community Health Services Center

Delta Area Transportation System (DARTS)

https://www.aehchc.org

Aaron E Henry Community Health Services Center is an FQHC that serves as the primary care hub for seven rural counties in southeast Mississippi. The health center began its transportation program in 1989. In 1990, the center purchased two minivans with HRSA funding, as part of an effort to help older patients travel to and from specialty care appointments. In 1993, the system, now called the Delta Area Rural Transit System (DARTS), won a funding award from the Mississippi State Department of Transportation to expand the program to the general public. The program has continued to grow rapidly, and in 2015, DARTS was operating 28 multi-passenger vehicles and helping people travel to workplaces, shopping, childcare, schools, and human services agencies, as well as medical appointments. Services are provided regardless of ability to pay; however, most travelers can afford the $2 to $5 charge for the majority of local trips. A trip to Memphis is available for $25 round trip. DARTS serves people of all ages and mobility levels and has become the largest provider of transportation in the rural region.

University of Kentucky Center of Excellence in Rural Health

Kentucky Homeplace

http://ruralhealth.med.uky.edu/cerh-homeplace

Kentucky Homeplace is a multi-county community health worker (CHW) initiative started in 1994 by the University of Kentucky Center of Excellence in Rural Health. The program links underserved Kentucky residents with community health workers who can help them access medical, social, and environmental services. Preventive care, health education, and chronic disease self-management are the three focus areas. In 2015, Homeplace served 27 counties in eastern Kentucky, reaching out to some of the most underserved areas of the state. Availability of services in limited in throughout Kentucky, where most counties are designated medically underserved areas. Residents face other barriers to accessing care, including geographic distance, transportation, low health literacy, social and cultural factors, cost, and other challenges.

To address these barriers, Homeplace hires and trains CHWs, selecting them from the communities in which they live. In 2015, the program employed 22 CHWs, three regional coordinators, and two general administrative staff. CHWs work with community members to help them address barriers to medical care and acquire resources such as eyeglasses, dentures, home heating assistance, food, durable medical supplies. CHWs act as the liaison between clients, primary care physicians, and other health-care providers, facilitating communication and providing education support for health behaviors. Services are free. In addition to direct services, Homeplace CHWs are also participating in community-based research studies designed to understand risk reduction for colorectal cancer, lung cancer, and cardiovascular disease. CHWs help to enroll and maintain contact with hard-to-reach subjects, increasing study adherence and benefits to participants.

How to Pay for Enhancing Access to Health Care and Information

Activities to enhance access to health care and information often require costly and time-intensive up-front investments such as training, technology infrastructure, and hiring and certifying new staff such as community health workers or community EMTs. For organizations that wish to provide health information on their websites, licensing fees for high-quality content can be costly, and internal content development even more so.

Community health centers that receive funding from HRSA must provide comprehensive services including primary care, dental, prevention, education, and pharmacy, as well as health promotion and education activities including care coordination, transportation, insurance enrollment assistance, education, and translation. Medicaid payments are supposed to cover these services on a per visit basis. As a greater proportion of the population is covered by Medicaid, health centers are able to bill for those visits, which allows use of limited grant funding to pay for uncompensated care (National Association of Community Health Centers [NACHC], 2010). However, it is imperative that Medicaid payments and other funding sources are adequate to match the increased demands of coordinated, comprehensive care on primary care centers in rural areas, where patient volumes remain low and Medicaid expansion is less likely to have been adopted ("Status of State Action on the Medicaid Expansion Decision | The Henry J. Kaiser Family Foundation," n.d.).

Increased access to health care and information is cost effective at both the clinic and population levels. Increased access to primary care through community health centers has been shown to reduce the burden on overstressed emergency departments, decrease rates of low-birthweight neonate. Overall, community health centers alone are estimated to have generated $122 billion in savings from 2010 to 2015 (NACHC, 2010).

Emerging payment models incorporate approaches shown to increase access to care and information. For instance, innovative payment models such as bundled payments require providers to deliver a comprehensive set of services, from diagnosis to follow-up care, to receive full payment. This strategy increases patients' access to a continuum of care, rather than forcing them to choose one type of care over another (for instance, undergoing a surgical procedure but avoiding physical therapy because of the cost). Value-based purchasing initiatives, likewise, focus on providing quality care, reducing unnecessary care, and reducing costs. Share-savings programs linked to value-based programs can provide additional funding for these initiatives.

In addition, many public and private funders support programs to increase access to care for underserved communities. Organizations can look to local and regional foundations, as well as federal, state, county, and municipal agencies for funding opportunities. HRSA, CDC, USDA, and AHRQ provide funding for eligibility and enrollment activities (see Module 11), health literacy programs, access to care programs for specific populations, research, and other activities.

Sample funding opportunities include:

AIDS United

Access to Care (A2C) Initiative

http://www.aidsunited.org/Programs-0024-Grantmaking/Access-to-Care.aspx

The Access to Care (A2C) initiative is a public-private partnership with the Corporation for National and Community Service's Social Innovation Fund (SIF) and 14 private funders. A2C supports innovative, evidence-based, collaborative programs to connect thousands of low-income and marginalized individuals living with HIV to supportive services and health care. AIDS United's support includes cash grants, technical assistance, evaluation, and networking opportunities that help to maximize the impact of each A2C program.

American Dental Association

Access to Care Related Grants

http://www.adafoundation.org/en/how-to-apply/access-to-care

The ADA Foundation provides grants and awards related to **access to care** through grants to nonprofit organizations working in alignment with the ADA Foundation's mission; through awards to dental school student groups that provide care to underserved populations in their own communities and around the world; and through Give Kids A Smile-related efforts.

Center for Care Innovations

Expanding Access through Team Care (California only)
http://www.careinnovations.org/programs-grants/expanding-access-through-team-care/

The Expanding Access through Team Care program, funded by Blue Shield of California Foundation in partnership with CCI, is designed to guide participating clinics to expand access to primary care services, foster innovations in the safety net, and improve the efficiency and effectiveness of team care models.

Healthy Smiles, Healthy Children (HSHC)

HSHC Access to Care Grants
http://www.healthysmileshealthychildren.org

HSHC Access to Care Grants are matching grants of up to $20,000 per year supporting community-based initiatives in the U.S. providing dental care to underserved/limited access children. Special consideration is given to programs that have demonstrated success and/or have potential for replication in other communities.

National Institutes of Health

Understanding and Promoting Health Literacy (R01)
http://grants.nih.gov/grants/guide/pa-files/PAR-13-130.html

This research grant focuses on methodological, intervention and dissemination research for understanding and promoting health literacy.

Examples of Things SORH Can Do to Increase Capacity in Access to Care and Information

SORH are critical partners for health-services organizations working to increase their capacity to help patients access health care and information. Some of the many roles SORH can play include:

- Create regional networks that include social services, workforce development, transportation, education, libraries, chambers of commerce, small business development corporations, faith-based organizations, and other private and public providers, that can holistically address access issues. Include large and medium employers, local hospitals, and health and social services agencies.
- Support replication and adaptation of existing programs that have been shown to effectively improve access to care, such as adding CHWs to the health-care team,
- Support implementation of telemedicine programs such as Project ECHO through grant writing, facilitating liaisons between tertiary medical centers and rural clinics, and training.
- Provide technical support for development of contracts between specialists and primary care clinics in rural areas.
- Support the integration of EMS into local and regional systems of care using the Medicare Rural Hospital Flexibility (Flex) Program. Under the third core purpose of Flex programs is "developing local/regional systems of care with CAHs (critical access hospitals) as the hub; enhancing the community engagement of CAHs, and integrating EMS into those local and regional systems of care" (Pearson, Gale, & Shaler, 2014). As administrators of Flex funds for their states, SORH can strategically dedicate resources to the development of community paramedicine programs.
- Support the integration of community health workers into local and regional health systems
- Partner with other community agencies, such as social services agencies, to increase coverage (see Module 11: Health Care Enrollment Assistance).
- Partner with community colleges, and other training institutions to offer computer health literacy training that includes basic information about searching, evaluating, and using online health information.
- Develop and disseminate or purchase a license to use high-quality health information in different media, including print, online, radio, and video.

Tools

Agency for Health Research and Quality (AHRQ)

A Toolset for E-Prescribing Implementation in Physician Offices
http://healthit.ahrq.gov/health-it-tools-and-resources/implementation-toolsets-e-prescribing/toolset-e-prescribing
This toolset is designed for provider organizations that are implementing e-prescribing technologies. It provides a set of resources and specific tools to support planning and decision-making, such as surveys to assess readiness, worksheets for planning and monitoring, and templates for communicating with patients about e-prescribing.

Health Literacy Universal Precautions Toolkit
http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/index.html

PDF version at:
http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/healthliteracytoolkit.pdf
This comprehensive toolkit provides organizations with step-by-step guidance on assessing their practices and incorporating health literacy tools. Designed for the family primary care practice setting, the toolkit addresses the needs of all levels of staff. The appendix contains a set of useful plain-language forms and other resources that organizations can adapt to their own needs.

American Speech-Language-Hearing Association

Communicating with Patients and Families: Developing Clear Written Information
http://www.icpre.com/presentations/ASHA/2011/Communicating/player.html
This comprehensive webinar provides an overview of strategies to develop clear, understandable written health content. In addition to 22 slides, this tool offers various handouts and worksheets that complement the webinar content.

American Medical Association Health Literacy Kit
http://www.ama-assn.org/ama/pub/about-ama/ama-foundation/our-programs/public-health/health-literacy-program/health-literacy-kit.page?
This full-fledged health literacy kit includes an instructional video, an in-depth manual for clinicians, and additional resources to help instructors and to engage students. All content for the toolkit is developed and updated by the American Medical Association's Medicine and Public Health division.

Children's Health Fund, Health Literacy Materials
http://www.childrenshealthfund.org/healthcare-for-kids/health-education-materials
Children's Health Fund offers a full range of low-literacy, culturally relevant health education materials designed for children. Available in both English and Spanish, these booklets and brochures can be used either for one-on-one instruction or in a classroom or group environment. Topics include healthy behaviors, disease prevention, and management of chronic conditions.

Medical Library Association

What Did My Doctor Say?
https://www.mlanet.org/for-health-consumers/medspeak
This searchable site provides plain-language definitions for thousands of medical terms. It also offers definitions and usage examples of common suffixes and prefixes found in "medspeak," such as "ostomy" or "itis."

Robert Wood Johnson Foundation

County Health Rankings
http://www.countyhealthrankings.org
This useful resource offers county-level data on many quality-of-life and health outcomes measures, including access to care.

U.S. Department of Veteran Affairs, Office of Rural Health, Western Region Resource Center

Rural Veteran Outreach Toolkit
http://www.ruralhealth.va.gov/resource-centers/western/outreach-toolkit.asp
The Rural Veteran Outreach Toolkit, developed by the Office of Rural Health and the Veterans Rural Health Resource Center–Western Region in 2011, provides support for organizations serving veterans living in rural communities including access, enrollment, eligibility, and training.

U.S. Department of Health and Human Services, Health Resources and Services Administration

Effective Communication Tools for Healthcare Professionals (0nline course)

http://www.hrsa.gov/publichealth/healthliteracy/

This free, online, self-paced training course is designed to help improve patient-provider communication. The course consists of five, one-hour modules and includes topics such as medications, health-care utilization, and plain language explanations of complex medical conditions.

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion

Quick Guide to Health Literacy

http://www.health.gov/communication/literacy/quickguide

A comprehensive plain-language guide that provides an overview of key health literacy concepts, provides a library of techniques for improving health literacy, and offers examples of best practices in health literacy. The guide also provides specific suggestions for improving health literacy in health-services organizations.

Links and Resources

Centers for Disease Control and Prevention

Gateway to Health Communication & Social Marketing Practice

http://www.cdc.gov/healthcommunication

A host of tools and templates that health-services organizations can use to develop their health communication and social marketing campaigns and programs.

Health Literacy

http://www.cdc.gov/healthliteracy/

This extensive site provides a host of resources for public health professionals, clinicians, and others who communicate with people about health. It includes links, tools, and information about research, practice, and evaluation related to health literacy.

National Action Plan to Improve Health Literacy

http://www.health.gov/communication/hlactionplan/

An overall resource for implementing effective health literacy interventions in all communities. The plan is based on the principles that (1) everyone has the right to health information that helps them make informed decisions and (2) health services should be delivered in ways that are understandable and beneficial to health, longevity, and quality of life.

PlainLanguage.gov

http://www.plainlanguage.gov

Plainlanguage.gov is the federal government's comprehensive resource for plain language guidelines and training. The site includes a host of resources for organizations tasked with developing plain language resources. The health literacy topic offers resources specific to developing health-related materials.

RAC Access in Rural areas

http://www.raconline.org/topics/healthcare-access

This guide provides an overview of challenges to healthcare access in rural America and ways communities and policymakers can address these community needs. The guide includes information on barriers to care such as workforce shortages, health insurance status, distance and transportation, poor health literacy, and the stigma of certain conditions such as mental health or substance abuse issues.

http://www.imiaweb.org/resources/CLAS.asp

Access to Rural Health Care – A Literature Review and New Synthesis http://www.rupri.org/Forms/HealthPanel_Access_August2014.pdf

Reviews relevant literature to help clarify the meaning of access in the context of rural healthcare. Focuses on four dimensions of access, including people, place, provider, and payment, and notes that changes in one dimension affect the others. Recommends that policymakers should address all dimensions of access throughout the policy making process to ensure best outcomes. (08/2014)

*Source: RUPRI Center for Rural Health Policy Analysis

http://www.raconline.org/topics/health-care-workforce

RAC's Rural Healthcare Workforce topic guide provides a host of suggestions for ways that rural areas can address workforce shortages, such as partnering with other healthcare facilities, using telehealth services, and addressing staff needs by increasing pay and flexibility.

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Module 2
Organization-Based Services

What are Organization-Based Services?

Organization-based services are those services used to provide comprehensive care that encompasses all of a person's health needs. Organization-based services address acute and chronic conditions, prevention, wellness, end-of-life, and other physical and mental health needs. They include all clinical services, relationships between physicians and health-service organizations (HSOs), and clinical support services (e.g. laboratory, pharmacy, imaging, anesthesia, palliative care, and hospice) delivered either in-house or contractually (White and Griffith, 2013). These services can be provided within the organization or can be accessed outside the organization.

While large health systems may be able to provide a wide array of services in-house, it may be impossible for small rural organizations to offer the full array of services needed by the populations they serve. Rural HSOs contend with limited resources, relatively low patient volumes, relatively greater rates of chronic disease, workforce shortages, and geographic distances, making it difficult to offer a comprehensive array of services. The scarcity of specialists in rural areas puts extra burdens on primary care providers to provide additional services.

Clinical Services

Clinical services are the foundation of high-quality, comprehensive, coordinated, team-based care. Comprehensive clinical services may include primary medical and preventive care, integrated mental and behavioral health services, dental care, and end-of-life/palliative care.

Comprehensive care is a core element of the patient-centered medical home (PCMH) model and lays the foundation for addressing the majority of patients' needs. It is delivered by a team of health-care professionals, either in-house or through strategic and sometimes virtual liaisons with health-care professionals in other organizations.

Clinical services do not stop with the individual patient, however. The organization must reach beyond the individual patient to identify and meet the health-care needs of the wider community. Addressing these needs requires collaboration with other organizations to provide high-quality health promotion and education, disease prevention, and eliminate unnecessary care (White and Griffith, 2010).

The provision of services is driven by both evidence-based clinical protocols – which describe the steps to be taken to provide care for a specific clinical condition (e.g. diabetic ketoacidosis) – and functional protocols – which describe the process of a specific task that is related to care (e.g. giving an injection).

Advanced Primary Care Models

Advanced primary care models use integrated teams to deliver a full range of primary care services, including acute care, chronic disease management, preventive care (e.g. immunizations and screenings), and wellness education and support (for more information about developing and implementing team-based care in the rural setting, see Module 6: Organizational Team-Based Care). Primary medical care addresses the basic health-care needs of infants, children, adolescents, and adults, including women during maternity. Primary care teams care for people with diabetes, infectious diseases, cardiovascular disease, and other chronic and acute conditions, and play an important role in preventing these problems from developing.

Models for advanced primary care are based on the patient-centered medical home (PCMH) framework,

which seeks to provide "whole-person care" (Freeman, 2015) that spans the patient's and family's needs in and out of the clinic. In the PCMH delivery model, teams deliver comprehensive care and, when necessary, coordinate with other providers to assure that all of those needs are met. The PCMH model has been described as a "hub and spoke" model, with the patient and family forming the hub, and health-care professionals forming the spokes.

Integrated primary care and behavioral health services

Advanced primary care models include integration of behavioral health services into the primary care home. Physical and behavioral health are closely linked, yet they have traditionally operated as separate silos of care. People with chronic diseases including diabetes, cardiovascular disease, arthritis, and chronic pain are two to three times more likely to have mental health problems (Coghan, 2010). Conversely, mental health problems can complicate the course of physical disease, making it more difficult for patients to follow physician advice regarding diet, physical activity, and medication use. People with mental health disorders are also more likely to engage in adverse health behaviors such as cigarette smoking (Almeida and Pfaff, 2005; Kinnunen et al., 2006, Scott et al, 2009).

Up to 70 percent of visits to physicians have a behavioral health component (Pourat et al, 2015), including mental health disorders and behavior-related issues such as obesity, diabetes, and substance abuse. Estimates based on national data suggest that nearly one in three Americans are affected by one or more major mental health disorders during any given year. The most common mental health disorders are mood disorders, which affect about one in five Americans (19%), anxiety (11%) and substance use (25%) (Kessler et al, 2005).

The prevalence of mental illness rises as income levels decrease, an association that puts rural populations at risk. In rural areas, poverty rates are high, leaving a larger proportion of the population more vulnerable to mental health disorders. While 20-25 percent of people seen in clinics serving mixed-income populations are affected by mood and anxiety disorders, at least half of all patients seen in clinics serving low-income populations are affected (Wang et al, 2005).

Figure 1 :

Yet primary care providers often miss mental health disorders, and when those disorders are diagnosed, treatment often does not follow evidence-based guidelines. In a report on integration of primary care and behavioral health services prepared for the AHRQ, researchers from the Mathematica Institute sum up the problem: "Overwhelming evidence indicates that mental health problems are common but often go unrecognized in primary care settings, that they compromise the quality and outcomes of treatment for physical health conditions, and that appropriate mental health treatment can alleviate these impediments to well-being" (Croghan et al, 2010, p. 2).

In response to this critical unmet need, advanced primary care models are integrating behavioral health care into the primary care clinic. A growing body of research shows that primary care providers can effectively deliver mental health services *when*, in addition to using evidence-based protocols, they have the support of primary care practices that have been redesigned in ways that allow clinicians to identify and monitor mental health problems and coordinate treatment with mental health specialists (Crogan et al, 2010).

In general, effective integration has involved three key steps:

- Training primary care physicians and staff in recognizing and treating mental health disorders

- Restructuring and redefining staff roles and duties of providers and staff
- Collaborating between primary care and mental health specialists. Collaboration may vary from loose affiliations to full organizational and clinical integration of co-located medical and mental health professionals (Bower et al, 2006; Gilbody et al, 2003)

As models of integrated care continue to evolve, there is increasing recognition that integration occurs along a continuum, often requiring several

STANDARD FRAMEWORK FOR LEVELS OF INTEGRATED HEALTHCARE

SAMHSA-HRSA Center for Integrated Health Solutions

COORDINATED CARE

Level 1 – Minimal Collaboration: Behavioral health and primary care providers work at separate facilities and have separate systems. Providers communicate rarely about cases. When communication occurs, it is usually based on a particular provider's need for specific information about a mutual patient.

Level 2 — Basic Collaboration at a Distance: Behavioral health and primary care providers maintain separate facilities and separate systems. Providers view each other as resources and communicate periodically about shared patients. These communications are typically driven by specific issues. For example, a primary care physician may request a copy of a psychiatric evaluation to know if there is a confirmed psychiatric diagnosis. Behavioral health is most often viewed as specialty care.

CO-LOCATED CARE

Level 3 — Basic Collaboration Onsite: Behavioral health and primary care providers co-located in the same facility, but may or may not share the same practice space. Providers still use separate systems, but communication becomes more regular due to close proximity, especially by phone or email, with an occasional meeting to discuss shared patients. Movement of patients between practices is most often through a referral process that has a higher likelihood of success because the practices are in the same location. Providers may feel like they are part of a larger team, but the team and how it operates are not clearly defined, leaving most decisions about patient care to be done independently by individual providers.

Level 4 — Close Collaboration with Some System Integration: There is closer collaboration among primary care and behavioral healthcare providers due to colocation in the same practice space, and there is the beginning of integration in care through some shared systems. A typical model may involve a primary care setting embedding a behavioral health provider. In an embedded practice, the primary care front desk schedules all appointments and the behavioral health provider has access to and enters notes in the medical record. Often, complex patients with multiple healthcare issues drive the need for consultation, which is done through personal communication. As professionals have more opportunity to share patients, they have a better basic understanding of each other's roles.

INTEGRATED CARE

Level 5 — Close Collaboration Approaching an Integrated Practice: There are high levels of collaboration and integration between behavioral and primary care providers. The providers begin to function as a true team, with frequent personal communication. The team actively seeks system solutions as they recognize barriers to care integration for a broader range of patients. However, some issues, like the availability of an integrated medical record, may not be readily resolved. Providers understand the different roles team members need to play and they have started to change their practice and the structure of care to better achieve patient goals.

Level 6 — Full Collaboration in a Transformed/Merged Practice: The highest level of integration involves the greatest amount of practice change. Fuller collaboration between providers has allowed antecedent system cultures (whether from two separate systems or from one evolving system) to blur into a single transformed or merged practice. Providers and patients view the operation as a single health system treating the whole person. The principle of treating the whole person is applied to all patients, not just targeted

years for full adoption. The Substance Abuse and Mental Health Services Administration (SAMHSA) has described six levels of integration, drawing on the previous work of Doherty, McDaniel, and Baird (1995, 1996). These six levels are grouped into three general categories: coordinated care, co-located care, and integrated care (see box).

SAMHSA researchers differentiate between *coordination* and *integration* of care, based on Strosahl's (1998) definition of collaborative care as behavioral health care working *with* primary care, versus integration as behavioral health working within and *as part of* primary care. Other models emphasize that integration can be bidirectional – that is, primary care can also be integrated by establishing services within and as part of behavioral health (Gerolamo et al, 2014; HHS, 2011).

Not all organizations will be able to achieve full integration of primary and behavioral health care, nor should they. Each organization must respond to the needs and resources of the specific community and population it services. Achieving any level of collaboration and integration will require committed leadership, redesign of policies, procedures, and workspaces, financial investments, and political support (Heath et al, 2013).

Integrated oral health services.

Long the poor cousin of medical care, oral health services are increasingly recognized as essential to overall health (Grantmakers in Health, 2012). Several reports have demonstrated that access to and utilization of oral health services, including routine dental care, is notably lower in rural than in urban areas (Braswell & Johnson, 2013). Rates of tooth decay and permanent tooth loss are also notably higher in rural areas (HRSA, 2014).

These disparities have been attributed to a combination of social, economic, and geographic factors. Not only do rural communities have to contend with an overall lack of dentists (HRSA, 2014), many dentists practicing in rural areas do not accept the low reimbursement rates offered by public health coverage programs such as Medicaid (Braswell & Johnson, 2013). High poverty rates, geographic isolation, and the lack of a coordinated screening and referral network also contribute to lower utilization rates in rural areas (Braswell & Johnson, 2013; HRSA, 2014). In both rural and urban areas, elderly, low-income, and uninsured individuals are less likely to use dental care. These groups make up higher percentages of rural populations, leading to even greater disparities.

Lack of access to dental care also contributes to strain on emergency departments. From 1 to 3 percent of emergency department are attributed to oral health problems, the majority of which could

BEST PRACTICES IN INTEGRATION OF PRIMARY CARE AND BEHAVIORAL HEALTH

SAMHSA's Primary and Behavioral Healthcare Integration demonstration has revealed several essential elements of successful integration programs:

1. ***Hire Peers:*** Peers play an important role in keeping patients in treatment and addressing whole health and wellness: "A peer can instill hope, empower clients, and form a connection that supports ongoing access to services" (SAMHSA, 2015).
2. ***Get Organizational Buy-in:*** Everyone in the organization – from top management to physicians to front desk staff – needs to "buy-in" to the concept and processes of integrated care. Successful organizations establish position that is dedicated to overseeing and managing the integrated care process.
3. ***Address Cultural and Linguistic Competency:*** Health-care teams need be able to communicate with patients in their own language and understand how culture impacts the patients' (and their own) values and actions. If the health-care provider is not familiar with the patient's culture, they need to ask.
4. ***Co-locate for Better Communication and Better Care:*** Health-care teams, including behavioral health providers, should work onsite. Co-location helps clients recognize that they have the entire team's support, and it helps staff feel supported in managing complicated cases.
5. ***Implement Health Information Technology:*** Data are the key to assessing, analyzing, and improving outcomes. Health IT should be used to share data appropriately, allowing providers to see a comprehensive view of the patients overall physical and behavioral health.
6. ***Make Wellness Fun,*** Accessible and Social: Wellness is about clients, and clients need to be involve. Create a wellness advisory board made up of clients or engage clients to advise program development based on their interests and health goals. By ensuring that wellness programs meet the clients where they are - and with regards to their health needs - individuals are more likely to stay engaged and involved in wellness activities.

(SAMHSA, 2013)

have been prevented by adequate preventive dental care (Shortridge & Moore, 2010).

While FQHCs provide dental care, that care is often not fully integrated with primary medical care. The advanced primary care model calls for true integration of oral health care, but in many instances workforce shortages, geographic distances, and other barriers interfere with successful integration. As a result, several models of integration have emerged. Although they are described separately here, they occur along a spectrum of integration, often beginning as cooperation and collaboration and gradually, over a period of years, achieving full integration:

- ***Full integration:*** In this model, dental and medical providers are located in the same space and information is fully shared between primacy care providers, dental professionals, and other health professionals. Systems are put in place to ensure providers regularly consult to address patient needs.
- ***Colocation:*** Dental and medical providers are located in the same space (either physically or virtually), but there is no coordination of services. Colocation informally increases provider communication, mostly due to proximity. This model is considered a "stepping stone" to a fully integrated model.
- ***Primary care provider services:*** A third, less intensive approach often appropriate for rural settings is to address basic oral health needs from within the primary care practice. The primary care professional provides basic oral health services – screening, risk assessment, anticipatory guidance or health education, and application of fluoride varnish – without direct involvement of a dental health professional. If possible, a dental health professional should be available for referrals and consultations.
- ***Cooperation and collaboration:*** The fourth, and least disruptive model of integration, simply creates a system for information sharing, including active follow-up and referrals, between primary care and dental providers. In this model, the HSO generally contracts with one or more dentists to provide services.

To accelerate the process of integration, HSOs in rural areas can adopt the following strategies:

- Expand the workforce:
  - Train primary care providers to perform oral health exams and provide fluoride varnish/sealants on children
  - Expand the rural workforce through use of dental therapists and/or expand scope of practice and training for dental hygienists and assistants
- Establish dental services at school-based health clinics
- Use electronic health records (EHRs) to coordinate care, referrals, and references
- Advocate for parity in reimbursement by Medicaid

Acute care services:

Acute care services are delivered both in hospital and primary care settings. Acute care may respond to emergent and urgent health problems such as infectious diseases (e.g. flu, gastrointestinal infections), exacerbations of chronic diseases (e.g. diabetic coma or myocardial infarction), and trauma-related injuries.

In rural communities, several types of hospitals provide acute care services, including:

- ***Critical Access Hospitals (CAHs):*** This designation is reserved for hospitals with less than 25 beds, located at least 35 miles from another hospital. They must provide 24/7 emergency care and maintain an average length of stay for acute care patients (excluding swing beds) of 96 hours or less.
- ***Sole Community Hospitals:*** A designation by the Centers for Medicaid and Medicare Services (CMS) indicating that the hospital is the only facility of its kind serving a community. Determination is based on distance from other hospitals, which vary based on rurality, accessibility (taking into account weather, topography, etc.), and other factors.
- ***Rural Referral Center (RRC):*** Tertiary facilities located in or near rural areas that receive referrals from nearby acute-care facilities.
- ***Medicare-Dependent Hospital (MDH):*** An MDH is a hospital that participates in Medicare's Inpatient Prospective Payment System. The facility must have fewer than 100 beds and cannot be classified as a Sole Community

Hospital. In addition, at least 60 percent of their inpatient discharges must by Medicare beneficiaries.

In rural areas, health services organizations are forging alliances between hospitals, integrated primary care clinics, specialist physicians, and other agencies providing support services. These health systems are being developed through alliances, agreements, joint ventures, and sometimes mergers with other health services organizations to offer a full range of services from prehospital, emergency, urgent, inpatient, specialty, palliative, hospice, and primary care, along with community-based health education and wellness. Rural health services organizations are developing relationships with tertiary facilities in urban areas, which can either provide in-patient care for the critically ill or telemedicine support to rural providers.

The spectrum of acute care services include:

- Prehospital care: Health care provided on the scene of a traumatic injury or medical emergency, generally given by emergency medical technicians (EMTs) including paramedics.
- Emergency services: All Medicare-eligible hospitals must provide emergency services, following the provisions of the Emergency Medical (EMTALA) of 200X. Emergency conditions are those that threaten the loss of life or limb.
- Urgent care: Urgent care facilities offer treatment for conditions that require prompt but non-emergent care, such as ear infections, sprains, high fevers, gastrointestinal distress, and urinary tract infections.
- Inpatient services: Inpatient services are generally needed after major diagnostic, surgical, or therapeutic services that require close monitoring of the patient's condition or response to medication.
- Ambulatory care: Ambulatory care, or outpatient services, is provided to a person who is not admitted to a facility. Most routine care is provided in ambulatory care settings, and an increasing number of tests and surgical procedures are now performed routinely on an outpatient basis.
- Palliative care services: Palliative care offers supportive care for those with chronic illness, focusing on alleviating physical and emotional discomfort. Services may include pain management, nutritional counseling, physical therapy, psychological support, and
- Hospice services: Hospice services provide supportive care for the terminally ill, generally within six months of the end of life. Services can be provided in a facility or in the community.
- Post-acute services: Patients need post-acute care services such as home health care, physical and occupational therapy, and cardiac rehabilitation. These services are becoming more important as an increasing number of diagnostic and surgical procedures are being performed in ambulatory care centers. However, use of post-acute services is notably lower in rural than in urban areas established through networks and referrals to other providers, including specialists and primary care (Sutton, 2005).

HSOs in rural communities also must have mechanisms, including telemedicine, in place for referrals to and consultations with specialists. Epidemiological modeling can help determine expected patient loads for specific conditions, allowing management and board members to assess the feasibility of contracting with or employing specialists in certain disciplines, such as urology, gastroenterology, orthopedics, cardiology, and obstetrics/gynecology.

Physician/Health Service Organization Relationships

Traditionally, physicians and HSOs have interacted on a contractual basis, effectively becoming partners in delivering care to the community. HSOs have owned the facilities, equipment, and space, while physicians use those resources and their skills to provide services.

The HSO generally contracts with or employs physicians including primary care providers, hospitalists, surgeons, and specialists. The HSO is responsible for credentialing and privileging physicians, dentists, psychologists, and podiatrists. Credentialing and privileging serve to ensure minimum levels of competence and proficiency.

A nationally standardized privilege agreement has been developed by two accrediting organizations – the National Committee for Quality Assurance (NCQA) and the Joint Commission – as well as by various court decisions. The agreement includes four parts:

1. *Bylaws* define the physician's and

organization's rights and responsibilities

2. *Privileges* are defined for certain types of patient care
3. The expectation that an *independent physician-patient relationship* involves explicit obligations of the physician to his or her patients.
4. A description of the *continuous quality improvement and peer review* process in which physicians are expected to participate.

Physicians and HSOs can establish multiple forms of relationship and compensation arrangements.

- Independence: Traditionally the most common arrangement, in this model, the physician contracts with the organization and arranges her or his own payments.
- Salaried: In this model – gaining in popularity – the physician is employed full- or part-time by the organization. This may not be feasible in rural populations with low patient volumes, although larger rural areas may be able to sustain one or more physicians in this role.

Clinical Support Services

Clinical support services are specialized services provided by health-care professionals other than physicians and nurses. These services can generally be categorized as diagnostic services that provide clinical information, therapeutic services that offer specific interventions, or social and counseling services that offer behavioral health and social interventions (White & Griffith, 2010).

These services are essential for health-care teams to provide a full range of care to patients and may include:

Diagnostic Services

- Audiology
- Cardiopulmonary
- Clinical laboratory
- Consultative services (ethics committee, international review board)
- Diagnostic imaging (radiography, computerized tomography [CT], magnetic resonance imaging [MRI], ultrasound, etc.)
- Electroencephalography
- Electromyography

Therapeutic Services

- Anesthesia (pain management, surgical and obstetric anesthesia)
- Blood bank
- Blind and vision rehabilitation
- Nutrition
- Nursing (birthing suite, surgery and post-anesthesia care, wound care)
- Optometry
- Orthotics
- Palliative care (including but not limited to hospice care)
- Pharmacy (dispensing and advising, medication management, intravenous admixture)
- Radiation therapy
- Rehabilitation services (physical therapy, respiratory therapy, speech pathology, occupational therapy, etc.)

Social and Counseling Services

- Community support groups
- Grief counseling
- Pastoral care
- Psychological care
- Social services
- Recreation and creative arts therapies (music, art, dancing, drawing, writing, etc.)
- (Adapted from White and Griffith, 2010).

Why are Organization-Based Services Important?

Organization-based services are the foundation of safe, effective, comprehensive, coordinated, patient-centered care. As health-care teams work to provide care, they rely on the HSO to provide the infrastructure, equipment, physical space, policies, procedures, and safeguards in which to work. In addition, HSOs must recruit, train, support, and retain staff and contractors to provide the wide range of services needed to meet a community's healthcare needs.

- Clinical services provide the foundation of all health care, including acute care, chronic disease management, dental care, and behavioral health. Integration of care is increasingly recognized as the foundation for "whole-person" care that is patient-centered, high-quality, and cost-effective. Acute care services are comple-

mented by holistic primary care that addresses the person's physical and psychosocial needs. Rapidly evolving integration models represent a paradigm shift in health care delivery from silos of care into systems of care, recognizing the importance of behaviors, mental health status, and oral health on overall well being.

- The relationship between physicians and patients remains central to the delivery of health care, even in an era of team-based care. HSOs play an important role in ensuring that physicians are skilled, supported, and enabled to provide high-quality care.
- Clinical support services provide the foundation for the "workhorse" of organization-based services, providing information, hands-on care (e.g. physical therapy), and staff support (e.g. ethics committee). Clinicians can diagnose, develop a plan of care, and prescribe only with the information provided by clinical support services. For instance, clinicians rely on laboratory, imaging, and other services for the information they need to diagnose many conditions; in turn, treatment of those conditions often involves services such as dietary counseling, physical therapy, or pharmacy support.

Challenges to Implementing Organization-Based Services

Rural HSOs face multiple challenges to providing comprehensive, integrated, organization-based services. These challenged include low patient volumes, high rates of chronic disease and mental illness, socioeconomic pressures, limited access to continuing education and training for staff, and geographic distances. Health-care workforce shortages are often compounded by retention issues – for instance, a skilled physician may be willing to work in a rural or frontier setting, but she may relocate to an urban environment to find educational and cultural opportunities for her children.

Challenges to implementing organization-based services include:

- *Financing:* Developing an integrated program of organization-based services may involve substantial startup costs, including physical space, training existing staff, hiring new staff, and computer software and hardware. Administrative staff time, and possibly hiring administrative staff, should also be considered in start-up and maintenance costs. Ongoing costs may only be partially reimbursed by Medicaid, Medicare, and other payers.
- *Structural factors:* The external environment can pose barriers to integration of programs. Moscovice et al (1994) note that the key dimensions of organizational structure for integrated rural health networks include the complexity of member organizations and the services they offer and assumption of financial risk. Organizations may need to assume some financial risk to pursue integration.
- *Organizational culture:* Strong integrated programs require strong leadership, support from staff and board members, and open, careful communication. Integration will be difficult or impossible in an organizational culture that does not call for open, transparent change, engage staff at all levels of the organization, and develop policies and procedures that allow systematic implementation of integration.
- *Professional culture:* Medical, behavioral, and oral health professionals have traditionally operated in silos, approaching the care of the patient from widely different paradigms. Asking these professionals to work together – and to sometimes share payment – requires a cultural shift.
- *Workforce availability:* Shortages of primary care providers, mental health professionals, and dentists are acute in rural areas. Rural organizations may have difficulty finding skilled and licensed staff to provide care.
- *Training:* While training options are available, for providers and staff in rural areas, training may be far away and expensive to access. In a small clinic with only one or two providers, the absence of a provider for travel and training may severely affect workflow and patient access.
- *Privacy concerns:* As protected patient information is shared between clinicians other team members, and across organizations (for example, between a hospital and a primary care facility), protecting that information becomes more difficult.
- *Low patient volume:* In rural and frontier areas, patient volume may be inadequate to support the full array of organizational services needed to deliver high-quality care. Equipment may be prohibitively expensive and reimbursement

inadequate to cover the purchase or lease price before it becomes obsolete.

Examples of How Health Services Organizations have Increased Capacity and Resulting Outcomes

Project ECHO™ (Extension for Community Healthcare Outcomes).

http://echo.unm.edu

Project ECHO™ is a collaborative model of medical education and care management that uses teleconferencing technology to connect specialists with primary care clinicians in rural communities. As opposed to directly providing care to patients, Project ECHO™ connects clinicians through a continuous learning system, partnering them with specialist mentors at an academic medical center or hub. Primary care clinicians receive the knowledge and support they need manage patients with complex conditions such as hepatitis C, rheumatoid arthritis, chronic pain, and behavioral health disorders, while patients receive comprehensive, best-practice care without having to travel to a . Project ECHO™ was launched in 2003 by , As of May 2015, Project ECHO operated 39 hubs for nearly 30 diseases and conditions in 22 states and five countries outside the U.S., including sites within the Department of Defense health-care systems.

Stone Mountain Health Services Behavioral Health Internship.

This program was created to address the need for behavioral health services and provider shortages in rural Appalachian communities of southwest Virginia. The St. Charles Health Council, a federally qualified health center, partnered with Radford University and East Tennessee University to develop the program. The program uses an integrative behavioral health model, with the behavioral health intern serving as a member of the primary care team. Interns address traditional behavioral health issues, in addition to obesity, tobacco use, substance abuse, and other concerns where behavioral changes can improve the patient's quality of life. The program has made behavioral health services available in the 7-county area served by the health center, with behavioral health staff that can supervise future interns

Rural Health Group (RHG), Roanoke Rapids, North Carolina:

An FQHC in rural northeastern North Carolina, RHG provides care to more than 30,000 people to residents of five counties. RHG's 25 medical providers cover 13 clinics throughout the sparsely populated area. RHG has transformed itself into an integrated primary care practice in which every patient has, in addition to the primary care provider, a nurse, case manager, dentist, pharmacist, and behavioral health provider on their treatment team. To provide this level of care, RHG employs all staff, including five full-time behavioral health providers (either licensed clinical social workers or licensed psychologists). Behavioral health clinicians do not offer traditional psychotherapy but perform assessments, brief interventions (fewer than 6 sessions), and referrals for more intense treatment, as appropriate.

RHG director of integrated care Jan Sweeman, PsyD., sums up the strengths and limitations of their model: "Integrated primary care in a patient-centered medical home is the best way to invite patients to engage in better self-care, to move from provider-based care to team-based care, and to address whole-person needs. However, primary care—whether rural or urban, public or private—cannot become the default mental health system for North Carolinians with severe mental illness" (Freeman, 2015).

How to Pay for Organization-Based Services

Organization-based services are the financial backbone of the HSO, most of which use reimbursement from public and private payers to support these services. Payment sources for uncompensated care, such as the disproportionate share ..., are being phased out under the ACA.

However, rapidly evolving financial models are being designed to support innovative, integrative models of care. Traditional fee-for-service payments are being replaced by bundled payment models, which pay providers for an episode of care – for instance, all providers would receive one lump sum for all services related to a hip replacement, beginning with diagnosis and ending with physical therapy; or for all services associated with a hospital stay. This model, as opposed to billing for specific services –

offers a mechanism for organizations to experiment with integration models, flexibly paying staff and clinicians for their time and recouping other costs.

Value-based purchasing models also drive the integration of care with their focus on measurable outcomes, offering financial incentives for organizations that improve care quality while reducing costs.

To help assess the financial feasibility of providing services within the organization, management should begin by assessing population needs using epidemiological modeling, use decision modeling tools to determine what services are needed, and when and where they are needed, then use this analysis to estimate costs for facilities, workforce, training, and other resources:

- *Determine need:* Use tools including epidemiological modeling, community needs assessments, surveys, and qualitative and quantitative data to estimate current and projected needs for services in the population.
- *Use decision modeling:* Apply decision-modeling tools to the data to develop a plan for services, including workflow, acceptable wait times, facility requirements, equipment (including telehealth), and other resources.
- *Estimate costs:* Based on the process above, what investments in hiring and training personnel will the organization need to make? How much will it cost?

Payment sources for organization-based services include public and private coverage:

- ***Medicaid:*** While Medicaid reimbursement policies and rates vary widely by state, most provide payment for primary and preventive care and behavioral health. States vary widely in their payment for oral health and vision, services, although the majority of states that have (Commonwealth Fund, 2015). While most Medicaid policies do not include direct palliative care, are included in Medicaid policies. Federally qualified health centers can bill at , . Rural health clinics
- ***Medicare:*** Medicare pays for a range of primary care and behavioral health services and prescription medications, although significant co-pays may provide barriers to care for those without supplemental coverage. Medicare will only pay for dental services if they are an integral part of a covered procedure, however, making it an inappropriate funding mechanism for integrated oral care.
- ***Private Insurance:*** Private insurers are also experimenting with innovative payment models that reward high-quality, cost-effective care. Payment bundles, as well as value-based incentives, may be included in private plans. Under the ACA, all plans sold on health-care exchanges must pay for preventive care and meet specific requirements for covered services.

While reimbursement for services may provide adequate payments once integration is in place, substantial up-front investment may be necessary for organizations that pursue integrated models of care. Grants from public and private sources can help to reduce start-up costs for the rural HSO. Grant sources include:

Health Resources and Services Administration (HRSA):

http://www.hrsa.gov/grants/index.html

HRSA offers a range of grants that can be used to subsidize operational costs for rural providers. Grant cycles vary, with multiple programs introduced each year. Specific opportunities include:

- **Medicare Rural Hospital Flexibility (FLEX) Grant**: http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/flex.html The Flex Program provides funding to States to help sustain the rural healthcare infrastructure, with Critical Access Hospitals as the hub of an organized system of care. The FLEX Program also provides funding to assist Critical Access Hospitals (25 beds or less) with financial/operational and quality improvement.
- **Small Rural Hospital Improvement Grant Program (SHIP)**: http://www.hrsa.gov/ruralhealth/about/hospitalstate/smallimprovement.html The Small Rural Hospital Improvement (SHIP) Grant Program provides funding to small rural hospitals to assist with activities related to any or all of the following:
  - Value-Based Purchasing (VBP)
  - Accountable Care Organizations or Shared Savings (ACOs)
  - Payment Bundling/PPS (PB/PPS)
  - Care Transitions

  To be eligible for funding, a small rural hos-

pital (defined as one with "49 beds or less," as reported on the hospital's most recently filed Medicare Cost Report) must be located outside a Metropolitan Statistical Area (MSA), be located in a rural census tract of a MSA as determined under the Goldsmith Modification or Rural Urban Commuting Areas, or be located in an area designated by any State law or regulation as a rural area or as a rural hospital."

Section 330 Public Health Service Act Health Center Program: This ongoing federal funding program provides the core financial support for federally qualified health centers.

Centers for Medicare and Medicaid Services (CMS) Innovation Center:
http://innovation.cms.gov/

CMS continues to test innovative payment models that focus on value, quality, and cost-effectiveness. Examples are listed below; specific opportunities are evolving rapidly as more evidence is gathered about best practices in financing. Opportunities are available both directly through CMS and through state-wide awards:

- **Innovation Awards**: http://innovation.cms.gov/initiatives/Health-Care-Innovation-Awards/ The Health Care Innovation Awards provide up to $1 billion in awards to organizations that are implementing the most compelling new ideas to deliver better health, improved care and lower costs to people enrolled in Medicare, Medicaid and Children's Health Insurance Program (CHIP), particularly those with the highest health care needs. Round 2 awards were made on May 22 and July 9, 2014.
- **State Model Design Awards** http://innovation.cms.gov/initiatives/State-Innovations-Model-Design/index.html : Model Design awards support the development of Health Care Innovation Plans, A State Health Care Innovation Plan is a proposal that describes a state's strategy to transform its health care delivery system through multi-payer payment reform and other state-led initiatives, using use all of the levers available to it. The plan is a step toward applying for a State Model Test award. In 2015, CMS provided funding to 16 states under this award.
- **State Model Test Awards:** http://innovation.cms.gov/initiatives/State-Innovations-Model-Testing/index.html Model Test awards allow six states to implement their State Health Care Innovation Plans. In 2013, CMS awarded more than $250 million in Model Test awards.

Medicaid Innovation Accelerator Program (IAP): In July 2014, CMS launched the IAP with the goal of improving health and health care for Medicaid beneficiaries by supporting states' efforts to accelerate new payment and service delivery reforms.

Medicare Shared Savings Program: The CMS Medicare Share Savings program is designed to help doctors, hospitals, and other health care providers better coordinate care for Medicare patients through Accountable Care Organizations (ACOs). ACOs create incentives for health-care providers to work together to treat an Medicare fee-for-service beneficiaries across care settings – including doctor's offices, hospitals, and long-term care facilities. The Medicare Shared Savings Program (Shared Savings Program) will reward ACOs that lower their growth in health-care costs while meeting performance standards on quality of care and putting patients first. An ACO must serve at least 5,000 enrollees.

- **Health Homes**: The Affordable Care Act of 2010, Section 2703, created an optional Medicaid State Plan benefit for states to establish Health Homes to coordinate care for people with Medicaid who have chronic conditions by adding Section 1945 of the Social Security Act. States have the flexibility to determine who is eligible to provide services. CMS expects Health Home providers to take a "whole person" approach to care, integrating and coordinating all primary, acute, behavioral health, and long-term services and supports to treat the whole person.
- **HRSA's** Family/Patient-Centered Medical Home Program offers discretionary grants and contracts to support implementation of the medical home at federal, state, and community levels. Development of a core primary care team is an essential element of the medical home model.
- **HRSA Patient Centered Medical Home Supplemental Funding**. http://bphc.hrsa.gov/programopportunities/fundingopportunities/pcmh.html Organizations that achieved PCMH status by July 2014 are eligible to receive the PCMH supplemental base award, contingent on continued PCMH recognition.

- **Substance Abuse and Mental Health Services Administration (SAMSHA)** http://www.samhsa.gov/grants SAMHSA offers multiple funding opportunities for the integration of behavioral health services into the primary care setting
- **Private health insurers**:
- **Private funders**. Private foundations may be sources of one-time funding for start-up costs associated with developing health-care teams.
- **State Medicaid Offices**. with state Medicaid office, as reimbursement regulations may vary from state to state.

Additional information about financing for integrated health care can be found at the **SAMHSA/HRSA Center for Integrated Health Solutions (** http://www.integration.samhsa.gov/financing). This site offers an overview of mechanisms, structures, and infrastructure for financing integrated behavioral health services. Resources include policy analyses, examples of best-practices in billing and financial management, business models, grant opportunities, and more.

Examples of things that SORHs can do to Increase Capacity in Organization-Based Services

State offices of rural health play an essential role in developing HSOs' capacity to deliver integrated, effective, organization-based care. In addition to providing technical assistance with identifying and writing grants, policy analysis, and SORH can:

- Facilitate development of state-wide learning collaboratives, both face-to-face and virtual, that allow sharing of knowledge.
- Support telehealth programs by assisting with development of infrastructure, training, and networking.
- Facilitate development of both short- and long-term learning communities focused on provider transformation.
- Develop, either internally or through contractual agreements, a group of practice facilitators to serve as facilitators, coaches, and advisors to rural practices throughout rural areas.
- Assist rural providers with finding funding to cover the costs associated with integration of services, including recruitment, training, clinical systems redesign, implementation of new workflows, and coordination with learning collaborative.
- Support integration of new health professions into care delivery teams. Include health coaches, community health workers, community paramedics, and
- Support emerging workforce activities. Provide start-up grants to providers to integrate new professions into care delivery teams
- Facilitate face-to-face and virtual networking between providers to help bridge silos between acute care, primary care, behavioral health, and oral health care.
- Support health workforce development by facilitating discussions between Area Health Education Centers, community colleges, local and regional universities, and high school health-careers programs.
- Advocate for the creation of Dental Community Service Learning Centers, which are community-based, economically sustainable dental practices in rural, underserved areas where students live. Operated by dental schools, Service Learning Centers offer students an opportunity to advance their skills and knowledge under supervision of dental faculty.
- Develop a comprehensive set of health workforce programs to strengthen training, recruitment, and retention of health professionals (e.g. a clinician retention toolkit).

Tools

Integrating Behavioral Health into Primary Care. https://www.statereforum.org/sites/default/files/bhi-cepac-report-final-version-for-posting-march-231.pdf This report from the Institute for Clinical and Economic Review provides a comprehensive overview of steps to integration of behavioral health with primary care. The final pages of the report includes a set of useful tools, including a financial worksheet, to help guide implementation of integrated care programs.

Community APGAR Tool http://www.fmridaho.org/residency/rural-outreach/workforce/community-apgar-program Designed to be used like the neonatal "APGAR" score, this tool can help rural communities improve recruitment and retention of family practice physicians in critical access hospitals and community health centers. The tool was developed by the Idaho Academy of Family Physicians, Idaho Hospital Association, and the Idaho Medical Association. It helps communities to "differentially diagnose" factor important to strategic planning in individual community access hospitals. CAQ scores are used to facilitate discussions with key decision makers, laying the groundwork for strategic planning for recruitment.

National Rural Recruitment and Retention Network (3RNet): https://www.3rnet.org/ A top recruiting tool for safety net providers in rural areas, 3RNet is a not-for-profit network funded by the Office of Rural Health Policy and member dues. The network places more than 1,000 medical professionals annually, 90 percent in designated shortage areas, focusing on critical access hospitals, rural hospitals, federally qualified health centers, and public health agencies.

Partners in Health Interagency Toolkit: http://www.integration.samhsa.gov/operations-administration/IBHP_Interagency_Collaboration_Tool_Kit_2013.pdf This comprehensive toolkit offers a detailed, step-by-step guide for integrating medical and behavioral health care in multiple settings.

U.S. Department of Health and Human Services: Oral Health http://www.hrsa.gov/publichealth/clinical/oralhealth/hhsinitiative.html A comprehensive set of tools and resources for clinicians, patients, and policymakers addressing oral health needs, including consensus reports on challenges and solutions to improving oral health in rural communities.

Links and Resources

Agency for Healthcare Research and Quality (AHRQ):
Integrating Mental Health Treatment Into the Patient-Centered Medical Home (2010).
Available at https://pcmh.ahrq.gov/sites/default/files/attachments/Integrating%20Mental%20Health%20and%20Substance%20Use%20Treatment%20in%20the%20PCMH.pdf This AHRQ-sponsored report provides a comprehensive overview of the steps, pitfalls, and ... to promise of integrated primary and behavioral health care. The report reviews models that have been used to successfully integrate care in the patient-centered medical home model.

Agency for Healthcare Research and Quality (AHRQ): The Academy: Integrating Behavioral Health and Primary Care.
http://integrationacademy.ahrq.gov
AHRQ's vision is that the Academy will function as both a coordinating center and a national resource for people committed to delivering comprehensive, integrated healthcare. Through its web portal, the Academy offers resources to advance the integration of behavioral health and primary care and fosters a collaborative environment for dialogue and discussion among relevant thought leaders.

Agency for Healthcare Research and Quality (AHRQ): Dental Care.
http://www.ahrq.gov/health-care-information/topics/topic-dental-health.html
Comprehensive guide to AHRQ resources on dental care, including statistics, models, and the TeamSTEPPS dental module.

American Academy of Family Practitioners (AAFP) Collaborative Care Research Network (CCRN).
http://www.aafp.org/about/initiatives/nrn/ccrn.html
The Collaborative Care Research Network (CCRN) is a sub-network of the AAFP's National Research Network (NRN). The CCRN was created so that clinicians from across the country can ask questions and investigate how to make collaborative care work more effectively. The objectives of the CCRN are to support, conduct, and disseminate practice-based primary care effectiveness research that examines the clinical, financial, and operational impact of behavioral health on primary care and health outcomes.

Centers for Medicare and Medicaid Innovation Center

http://innovation.cms.gov/index.html

The CMS Innovation Center supports states, health centers, hospitals, and other providers as they test emerging health-care payment and service delivery models. A rich source for best practices, emerging models, and population-health interventions.

Centers for Medicare and Medicaid Regional Office Rural Health Coordinators

https://www.cms.gov/Outreach-and-Education/Outreach/OpenDoorForums/Downloads/CMSRuralHealthCoordinators.pdf

CMS Regional Office Rural Health Coordinators provide technical, policy, and operational assistance on rural health issues

National Association of Community Health Centers

http://www.nachc.com

NACHC works with a network of state health center and primary care organizations to serve health centers in a variety of ways:

- Provide research-based advocacy for health centers and their clients.
- Educate the public about the mission and value of health centers.
- Train and provide technical assistance to health center staff and boards.
- Develop alliances with private partners and key stakeholders to foster the delivery of primary health care services to communities in need.

National Center for Medical Home Implementation (NCMHI)

http://www.medicalhomeinfo.org

The mission of the NCMHI is to work in cooperation with federal agencies, particularly the MCHB, and other partners and stakeholders to ensure that all children and youth, including children with special needs, have access to a medical home. The NCMI provides resources, advocacy materials, technical assistance, and tools to physicians, families, and other medical and non-medical clinicians who care for children.

National Network for Oral Health Access (NNOHA).

http://www.nnoha.org

NNOHA is a not-for-profit organization founded in 1991 by a group of dental directors from FQHCs. Its mission is to improve the oral health of underserved populations and contribute to overall health through leadership, advocacy, and support to oral health providers in safety-net systems. NNOHA offers a host of resources and learning opportunities, including an operations manual that outlines the best approaches to running an efficient and effective practice and the annual National Primary Oral Health Conference. The organization's core values include integration of oral health with primary care.

SAMHSA's Behavioral Health Care Integration Resources (Children)

http://www.samhsa.gov/children/behavioral-health-care-integration-resources

A host of resources from national organizations and federal agencies, including research, toolkits, funding opportunities, and guidelines, for integration of behavioral health care with primary care, child welfare, and education.

SAMHSA-HRSA Center for Integrated Health Solutions (CIHS)

www.integration.samhsa.gov .

The CIHS was formed to promote the development of integrated primary and behavioral health services to better address the needs of individuals with mental health and substance use conditions, whether seen in specialty behavioral health or primary care provider settings. CIHS is the first "national home" for information, experts, and other resources dedicated to bidirectional integration of behavioral health and primary care. Jointly funded by the HHS/Substance Abuse and Mental Health Services Administration and the Health Resources and Services Administration, and run by the National Council for Community Behavioral Healthcare, CIHS provides training and technical assistance to community behavioral health organizations that received Primary and Behavioral Health Care Integration grants, as well as to community health centers and other primary care and behavioral health organizations.

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Module 3
Care Management

What is Care Management?

Care management is the provision of integrated, evidence-based clinical and non-clinical services to a patient using a coordinated care plan. The care plan is developed collaboratively by the patient and care providers, with a focus on helping the patient achieve the best possible health status and quality of life.

Generally, care management programs are offered to patients who have multiple chronic conditions and are considered at risk because of health conditions, social challenges, and/or functional problems. Disease management programs are a subset of care management programs that focus on helping patients with a particular condition such as hypertension or diabetes. Likewise, care management includes both clinical and non-clinical care coordination and case management.

Care management usually falls into one of the following three categories:

- *General care management:* General care management programs use nurses, community health workers, dieticians, and other clinical support staff to educate and train patients so that they can minimize disease progression, improve quality of life, and achieve the best possible health status. Disease management programs often fall into this category.
- *Transitional care management:* In transitional care management programs, nurses assist patients during and after discharge from a hospital or other facility. The nurse helps patients understand discharge instructions and medications, as well as developing a plan for and coordinating delivery of post-hospitalization needs for patients who are at risk of re-hospitalization.
- *Complex care management:* In complex care management, nurses work with patients, families, and clinicians to help develop and put into practice care plans to address complex health conditions. Complex care management may require coordination of several primary care and specialist clinicians, as well as providers of psycho-social care, physical therapy, long-term support services, and other types of care. In addition, care managers may need to help patients overcome barriers to accessing care and community resources.

Care managers often perform a range of tasks that include both clinical and non-clinical skills. According to the California Health Care Foundation, these tasks include:

- Performing assessments
- Developing care plans
- Helping to arrange physician visits
- Ensuring medication reconciliation
- Referring patients to social supports
- Educating patients about their illness
- Developing patient trust

Organizational Requirements for a Care Management Program

An effective care management program uses evidence-based interventions, is financially viable, addresses the specific health needs of the population it serves, and fits seamlessly into the health care organization's workflow and physical facility.

National Committee for Quality Assurance (NCQA) case management accreditation provides a framework for HSOs wishing to develop high-quality care management programs. To become accredited, HSOs must demonstrate that four components are integrated in their care management programs:

1. Evidence used to develop the program
2. Criteria for identifying patients who are eligible for the program
3. Services offered to individuals
4. Defined program goals

Developing a care management program is an organization-wide process that involves management, information technology, finance and accounting, clinical staff, and – in most cases – outside consultants. Briefly, the steps to develop a care management program include:

- *Address activities and workflows:* The HSO must develop and put into practice activities and workflows that support patient engagement, improve productivity, and achieve the best possible financial and clinical efficiencies. Decision-modeling tools can be effective in determining needs for staff, office and clinical space, and other resources.
- *Develop care-management teams.* Care-management teams can be built in many different ways, depending on the organization's structure, location, resources, and client population. Smaller organizations, especially in rural areas, may benefit from sharing resources – for instance, contracting with a regional care management agency (Hong, Siegel, & Ferris, 2014). Generally, teams are structured around a nurse care manager. Social workers and community health workers may be most effective in conducting initial outreach to patients with psychosocial barriers to care. Other key roles include community resource specialists, eligibility specialists, behavioral health providers, pharmacists, community health educators, specialty care clinicians, dieticians, physical therapists, and administrative and analytic support staff. In some communities, emergency medical services personnel are becoming part of care management teams through community paramedicine programs.
- *Train teams in care management.* Teams need explicit training in care management. While individual team members are skilled in their own areas of expertise, they may not have expertise in collaborative techniques that are required in the interactive, dynamic environment of care management. Research suggests that training needs to be explicit and focused. For instance, Treadwell and colleagues (2015) found that medical homes were more successful in developing collaborative environments when teams were educated explicitly about inter-professional collaboration tools.
- *Estimate costs and revenues:* Financial experts can help to develop detailed budget forecasts based on costs and projected savings associated with the care coordination program. Rural health providers may need to develop more resources and/or to enroll fewer people because of longer travel times and scarcer resources in the communities they serve (Hong, Siegel, & Ferris, 2014).
- *Use population management tools to identify needs:*
  - Identify the population in need of services. HSOs serve populations with a wide variety of needs. Generally it is best to start with one or two critical areas – for instance, diabetes or cardiovascular disease management – and carefully track both process outcomes and health outcomes.
  - Gather and analyze population health data. Data should be gathered on health status, quality metrics, and patient outcomes for the selected populations. Establish a baseline for selected measurements, which allows the HSO to track program impact.
- *Implement tracking systems:* Electronic health records, registries, and reporting systems are needed to provide the framework for capturing data, tracking patients, and reviewing outcomes. Health information exchange (HIE) is essential for integrating care across several providers and organizations (Griffin & Coburn, 2014).
- *Adopt clinical decision support tools:* Clinical decision support tools, both digital and paper, can help organizations incorporate best practices and evidence-based guidelines into care management.
- *Adopt coordination tools:* Communication and care coordination tools can eliminate variation in care between clinicians and other caregivers, both in the clinic and in the community. Again, HIE tools can play an important role.
- *Align financial incentives.* Payment models that reward value, not volume, are designed to encourage patient-centered, effective, high-quality care. Models might combine fee-for-service with capitated payments (i.e. a per-member, per-month fee) for integrated care or a shared-risk approach such as bundling payments for a specific episode of care or medical condition (Griffin & Coburn, 2014).

Providing Effective Care Management Services to Individuals

Providing effective care management services to individuals requires an ongoing cycle of engagement, assessment, planning, care delivery, and coordination.

Effective care management programs do the following:

- *Engage patients:* Encourage patients and their families to become involved in their own care and to manage their health. Strategies may include building relationships with patients and family members, exploring patients' and families' needs and values, education and training, collaborative goal setting, action planning, problem solving, and alternative means of delivering care (for instance, planned visits, group visits, telemedicine, and/or family caregiver training).
- *Assess patients and their environments:* Each patient should receive an initial assessment followed by periodic evaluations. Assessment also should occur at critical moments (e.g. after a surgical procedure). Assessments should include the patient's clinical condition, feasibility of completing various interventions, the patient's values, preferences and readiness to engage in self-management and treatment, and social determinants of health (i.e., factors that influence health, including socioeconomic status, physical environment, and other potential stressors).
- *Plan **with** the patient:* Engage the patient and family members in creating an individualized care plan that includes evidence-based, best-practice guidelines for disease management, feasibility, and patient preference.
- *Deliver the care:* Provide the services identified in the care plan on the specified schedule, including arranging follow-up and referral. The care manager should continually adapt the plan as needed.
- *Evaluate and measure:* Track and measure services and interventions offered, why they were or were not implemented, modifiers, and outcomes. Ask each patient to complete a patient satisfaction survey.
- *Coordinate with the patient and other caregivers:* To assure safe and efficient execution of the care plan, communicate and coordinate with the patient and others involved in his or her care using health information technology and other tools. Family caregivers should receive training, full information, and other support as needed.

Care Management Models

Care management is receiving new attention in the context of larger health-systems change that emphasizes the "triple aim" of patient-centered, high-quality, cost-effective care. Care management is a core component of several evolving models.

Physician-Led Models

Physician-led models are built around primary care practices and designed to integrate care both within an organization and between organizations in the community. CMS describes three subtypes of these models. From least to most integrated, they are:

- **The Primary Care Medical Home (PCMH)**: The PCMH is the building block of the evolving delivery system for primary care. The PCMH provides comprehensive care that includes care management, care coordination, referral management, use of a care plan, clinical data management, quality reporting, and other elements. Capitated payments are supplemented by incentive payments, which are awarded based on performance on process and outcome-based measures.
- **The Network-Supported Primary Care Medical Home:** The Network-Supported PCMH model builds on the basic PCMH framework by adding a physician group, network, collaborative, or another entity that includes individual practices. Additional functions include capacity building and supports such as staff training, support for health promotion, quality management, practice support, promotion of evidence-based practice, supporting infrastructure for quality and cost measurement, and supporting coordinated care.
- **Accountable Care Organizations (ACOs):** The Centers for Medicare and Medicaid Services (CMS) defines ACOs as "groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high quality care" to their patients. The ACO model is based on the premise of shared risk between providers and payers. In the ACO model, providers are collectively responsible for the care of the enrolled or assigned population and share in any savings associating with providing better, more cost-effective care.

Long-Term Support Services Provider-Led Models

Another model places responsibility for care coordination on long-term support services agencies, rather than on medical providers. In this model, the care management agency – which may be a home-care agency, area agency on aging, or a case manager – serves as the single point of contact for all of the patient's needs, develops a comprehensive care plan, and coordinates all services.

Community Care Management Teams

In rural areas, primary care practices may need to share resources to develop effective care management processes. Community health teams (sometimes called community health networks) can be built to share resources (Takach & Buxbaum, 2013). In this model, teams are not associated with one provider and do not focus on specific chronic diseases (as in traditional disease management models). Instead, these geographically based teams help patients manage complex illnesses across providers, settings, and systems of care. Staffed by health professionals across multiple disciplines – e.g. nursing, behavioral health, occupational health, pharmacy, and social work – the teams expand the reach of providers and limited-resource clinics. Teams have consistent in-person contact with patients and integrate with primary care providers, social services agencies, and other community resources. Eight states – Alabama, Maine, Minnesota, Montana, New York, North Carolina, Oklahoma, and Vermont – provide funding for these teams.

Program of All-Inclusive Care for the Elderly (PACE)

The PACE model offers integrated care to community dwelling adults 55 years of age and older who are dually eligible for Medicare and Medicaid. Patients must otherwise be eligible for nursing home placement. Authorized under the Balanced Budget Act of 1997, the PACE program operates under the direction of CMS. The parameters of the PACE program are defined by federal statute and regulation. Organizations that provide PACE services partner with CMS and their state Medicaid programs. The PACE agency provides all Medicare and Medicaid services to patients, including preventive, acute care, and long term services and supports. Agencies are also responsible for additional medically necessary care and services not covered by Medicare or Medicaid. Providers receive a prospective capitated payment for all services.

Rural providers face several challenges to implementing PACE programs, including lack of resources, insufficient payment volume, and geographic distances. However, CMS has funded development of PACE programs in rural areas as well as granting several waivers that have allowed experimentation with innovative models such as:

- Contracting with community-based primary-care physicians, allowing patients to retain pre-existing relationships with providers.
- Serving both PACE and non-PACE participants in one location, allowing sites to use resources more efficiently in areas with low population density.

(Griffin & Coburn, 2014)

Why is Care Management Important?

Care management can reduce costs while improving care quality, allowing organizations to adopt a population-based approach to delivering care that addresses patients as the whole people they are. Because the focus is on optimal health and quality of life, care management can have a significant impact on patient satisfaction and wellbeing.

Care management also can assist patients with complex health issues who use health systems frequently, called "super-utilizers." A review of super-utilizer programs conducted by Thomas Bodenheimer (2013) for the Center for Health Care Strategies, Inc. demonstrated that care management programs that address high-utilizers can significantly reduce hospital admissions, hospital days, emergency department visits, and total costs of care. In addition, when homeless or precariously housed people were provided with shelter and case management, their health-care utilization fell dramatically.

Similarly, a Cochrane review (Kruis et al, 2013) suggests that integrated disease management interventions for patients with chronic obstructive pulmonary disease improved outcomes and quality of life. A metaanalysis of data from 26 randomized controlled trials involving 2,997 people showed that patients with COPD who received care management

services, in comparison to those who did not, had significantly better quality of life, were able to walk further, and experienced fewer hospital admissions and fewer hospital days (Kruis et al, 2013).

Challenges to Building Capacity in Care Management

Organizations wishing to develop care management programs face several challenges, all of which are often exacerbated in relatively resource-poor rural areas (Griffin & Coburn, 2014):

- *Costs:* Significant up-front investment is needed to develop the necessary infrastructure, including clinical, administrative, organizational, and technological components. Existing staff will require training, and additional staff may need to be hired, both of which are costly. For rural clinics, these costs may be prohibitive.
- *Provider "turfdom."* Effective care management programs involve providers from multiple disciplines and often multiple locations. In some cases, tensions may arise between providers. For instance, a rural primary care provider may come into conflict with a specialist at a tertiary urban hospital; a social worker's priorities may come into conflict with clinical priorities of the primary care provider.
- *Conflicting payment systems for low-income older adults.* Older adults who are eligible for both Medicare and Medicaid – often referred to as "dually eligible" – may face a host of barriers to coordination of their care. Information-sharing between Medicare and Medicaid programs is generally non-existent, making overall care management difficult. Compounding the issues, this population is more likely to have chronic disease or disability, be in overall poor health, and have little community or family support (Griffin & Coburn, 2014).

Examples of How HSOs have Increased Capacity and Resulting Outcomes

West County Health Centers/Petaluma Health Center

http://phealthcenter.org
http://www.wchealth.org

Providers at West County Health Centers and Petaluma Health Center serve rural northern California residents via video visits to expand their capacity and reach patients and family members across geographic regions. Video visits are used to include out-of-town family members in end-of-life care discussions; enable nurses doing home visits to consult with physicians; check on patients after hospital discharge; introduce patients to staff such as social workers or care coordinators; and meet other needs.

Franklin County, Maine

An integrated, comprehensive cardiovascular risk reduction program in Franklin County, Maine.

Franklin County, Maine, a low-income rural community (population 22,444), is the site of a 40-year observational study that began in 1970. Multiple community organizations, including the local hospital and clinicians, sponsored community-wide programs targeting hypertension, cholesterol, and smoking, as well as diet and physical activity. Results were published in the *Journal of the American Medical Association* in January, 2015.

For the study, a research team led by N. Burgess Record of Franklin Memorial Hospital in Farmington, Maine, tracked data from the study and compared Franklin County with other Maine counties and state averages. Researchers found that sustained, community-wide programs targeting cardiovascular risk factors and behavior changes were associated with reductions in hospitalization and mortality rates over 40 years, compared with the rest of the state. More than 150 000 individual county resident contacts occurred over 40 years. Results included:

- Hypertension control had an absolute increase of 24.7% (95% CI, 21.6%-27.7%) from 18.3% to 43.0%, from 1975 to 1978;
- Elevated cholesterol control had an absolute increase of 28.5% (95% CI, 25.3%-31.6%) from 0.4% to 28.9%, from 1986 to 2010.
- Smoking quit rates improved from 48.5% to 69.5%, better than state averages (observed – expected [O – E], 11.3%; 95% CI, 5.5%-17.7%; $P < .001$), 1996-2000; these differences later disappeared when Maine's overall quit rate increased.
- Franklin County hospitalizations per capita were less than expected for the measured period, 1994-2006 (O – E, –17 discharges/1000 residents; 95% CI –20.1 to –13.9; $P < .001$).

- Franklin was the only Maine county with consistently lower adjusted mortality than predicted over the time periods 1970-1989 and 1990-2010 (O – E, –60.4 deaths/100 000; 95% CI, –97.9 to –22.8; P < .001, and –41.6/100 000; 95% CI, –77.3 to –5.8; P = .005, respectively).

Unity Point Clinic, Eagle Grove, Iowa

Diabetes Telephonic Care

http://cph.uiowa.edu/ruralhealthvalue/innovations/Profiles/UnityPoint.pdf

The Unity Point Health network includes a rural health clinic (RHC) located in Eagle Grove, Iowa, a rural community in the northwest region of the state. The RHC combined care management and technology to improve diabetes prevention and control for local residents. A pilot project used a team approach and remote telephonic nurse management for diabetes support, education, and care management. The goals of the project were to increase patients' understanding of their disease processes, improve their HgbA1c scores and, as a result, improve their overall health status. Unity Point Health, located in Fort Doedge, provides remote telephonic nurse management of the Eagle Grove patients in the diabetes pilot project. The project focused on developing staff skills in collaboration and communication, as well as providing individualized care and coaching to each participant.

Results of the pilot were extremely promising. Of the original 54 pilot project participants, 3 relocated and 2 are deceased, leaving 49 patients. Of those, 29 patients brought their HgbA1c level below 8, and 11 additional members were able to lower their HgbA1c levels, an 81.6 percent improvement.

Paying for Care Management

As evidence builds that care management can help to reduce overuse, improve clinical outcomes, increase patient satisfaction, and reduce costs, public and private payers have begun to reimburse both face-to-face and remote (e.g. telephone, telemedicine) care management services. The majority of care management programs are staffed by health plans, especially managed care organizations (Green, 2009). However, some plans offer direct reimbursement to providers who offer care management programs. With the formation of accountable care organizations (ACOs), the line between provider and payer is expected to become even more fluid.

Camden Group researchers, writing in Becker's Hospital Review, argue that care management may actually provide the key to financial viability for health-care organizations in an era of shifting payment models:

> In the new world of value-based payment, the care management model may provide the greatest opportunity for organizations to differentiate themselves from their competition to manage costs and improve profitability. Providers will increasingly need to take more responsibility for managing the total cost of care as payments migrate from fee-for-service to shared savings/loss, partial-risk and full capitation. This involves broadening the focus from within the walls of the hospital and adopting a broader definition of how care delivery occurs across the continuum.
> (Hines et al, 2011)

Thus, the general move to value-based payment methods is making care management a more attractive financial option for HSOs. Value-based payment models generally fall into two categories:

- Pay-for-performance initiatives, in which payments are tied to certain targets regarding quality and efficiency of care
- Bundled payment initiatives, in which an insurer makes a single payment to cover services delivered by multiple providers during a specific, defined episode of care

In both of these models, payment is tied to more efficient, effective care, based on established process and outcomes measures – i.e. value instead of volume (in comparison to old fee-for-service models, in which providers were paid simply for delivering *more* care). A well-run care management program can serve as the vehicle for improving cost-effectiveness. In a pay-for-performance initiative, providers are rewarded both for processes – e.g. all patients with diabetes receive nutritional counseling – and outcomes – e.g. a certain percentage of hypertensive patients achieves a reduction in blood pressure. In a bundled-payment arrangement, the better the outcomes, the fewer services the patient needs, and the greater the payment distributed to providers.

Several demonstration projects have shown significant savings and improved or at least equal outcomes with bundled payments. For instance, the Medicare Participating Heat Bypass Center Demonstration, which began in 1991, used bundled payments that covered all inpatient hospital and physician services for coronary artery bypass graft sur-

geries performed at seven hospitals. The Congressional Budget Office found that the program led to a 10 percent reduction in Medicare expenditures (Nelson, 2012) when a bundled care mechanism was used. No notable difference in health outcomes was identified.

Despite growing evidence of the efficacy of care management programs, reimbursement for services remains a potpourri of models, billing codes, programs, and payer mixes. Organizations interested in developing care management programs should ensure they have an experienced clinical documentation specialist to assist with the process.

CMS continues to test financing models for care management in both primary and specialty care through its Innovations Center. Care management services are covered by Medicare, Medicaid, and private insurers, although reimbursement rates may be insufficient to cover all expenses associated with a robust care management program.

- ***Medicare:*** CMS provides reimbursement for care management services through several programs. For example:
  - *Transitional Care Management:* In 2013, the CMS began paying for transitional care management (TCM) services for patients recently discharged from a hospital or other facility, outpatient observation, or partial hospitalization program. Medicare will reimburse qualified physicians, advanced practice nurses, and other approved providers. The TCM period lasts for 30 days after hospital discharge. FQHCs are not eligible to bill for services, although they can bill for the initial clinical encounter.
  - *Complex Care Management:* Beginning in 2015, Medicare began reimbursing physicians and advanced practice nurses for non-face-to-face care management of patients with two or more chronic conditions. One 20-minute encounter per month is covered. These payments are in addition to face-to-face visits. Practitioners must use electronic health records, and only one practitioner can bill for the service each month. Transitional care management and other care management services cannot be billed simultaneously.
- ***Medicaid:*** More than half of state Medicaid programs pay for care management services, either directly or through contracted services (AHRQ, 2014). Most states have structured their programs in one of three ways: 1) contracting with an existing organization to provide the services, 2) creating the program internally (usually via the state Medicaid office), or 3) contracting services from multiple vendors to customize the program. These three methods are often referred to as "buy, build, and assemble" (AHRQ, 2014). Rural HSOs may be able to bid on contracts to provide care management services in their communities, which are often paid on a per member per month (PMPM) basis.
- ***Multi-payer models:*** In addition to experimenting with unilateral reimbursement streams, CMS is testing multi-payer models for covering care management services. These models combine resources from Medicare, state Medicaid agencies, private payers, foundations, and other agencies. Payers enter into a memorandum of understanding (MOU) and agree to provide reimbursement for certain services. Because most of these programs are nascent, HSOs should expect significant changes in payment mechanisms to evolve. Sample programs include:
  - Oncology Care Model (OCM): OCM is an innovative multi-payer model in which oncology practices enter into payment arrangements that include financial and performance accountability for episodes of care associated with chemotherapy administration to cancer patients. OCM is a five-year program that will begin in 2016. The OCM multi-payer model includes Medicare fee-for-service (OCM-FFS), commercial insurance plans, State Medicaid agencies, and other payers.
  - Comprehensive End Stage Renal Disease (ESRD): More information needed here.
  - Comprehensive Primary Care Initiative: The CMS Innovation Center's Comprehensive Primary Care Initiative began in 2012 with 500 primary care practices in seven regions. The four-year program will end in 2016, but results from the program are shaping CMS' current reimbursement practices for primary care. The initiative is a partnership between providers and multiple payers including the CMS, state Medicaid agencies, commercial health plans, and self-insured businesses. CMS pays primary care practices a care management fee, initially set at an average of $20 per beneficiary per month, to support enhanced, coordinated services on

behalf of Medicare fee-for-service beneficiaries. At the same time, other payers, including commercial, state, and federal insurance plans, also are offering enhanced payment for care management and other primary care services. Services may include extended hours; use of electronic health records; coordination of care; patient engagement; and individualized, enhanced care for patients with chronic diseases and high needs.

The Future of Care Management Payment

Next-Generation Advanced Primary Care Models: Beginning in 2016, CMS will start experimenting with other innovative models of integrated care. In these "next-generation" models, payment for primary care services will shift from encounter-based (fee-for-service or fee-for-service with additional payments for care management services) to population-based (payment based on customers' health status and needs). As currently envisioned, population-based payments could cover both severity-adjusted, non-visit based care management services and some or all of the expected severity-adjusted fee-for-service (FFS) payment for a "basket" of services provided in primary care (also called "rolled up fee-for-service").

Examples of things SORH's Can Do to Increase Capacity in Care Management

State offices of rural health can support organizations' efforts to implement care management programs through networking and other technical assistance:

- Identify regional care management organizations that can provide contracted services to a specific geographic area.
- Support the development and funding of community health-teams that can provide interdisciplinary care to geographic regions.
- Identify and propose changes to policy obstacles, such as limited scope of services for emerging health workforces.
- Establish collaborative groups of providers, payers, and other agencies to develop a continuum of care management teams that function both internally and across organizations.
- Hold face-to-face and virtual workshops on care management essentials, emerging payment models, and best-practice guideline for care management programs in rural communities.
- Develop and disseminate trainings in collaboration, communication, and other essential care management skills.
- Support and administer programs to develop emerging health-care workers, including community health workers, community EMTs/paramedics, and health coaches.
- Assist with funding and implementation of information technology systems that can safely share data across a care management team.
- Provide clear, easy-to-access information about Medicaid, Medicare, and other payers.
- Help HSOs, in partnership with research teams, to develop applications for CMS innovation programs.
- Assist with development of proposals to public and private funders.

Tools

Center for Care Innovations

Health Homes for Complex Patients
http://www.careinnovations.org/programs-grants/health-homes-for-complex-patients
The Center for Care Innovations, a project of the Tides Center, focuses on developing ideas, best practices, and funding for California's health care-safety net. It offers several tools useful for organizations providing care management for complex patients: workflow tools, team management tools, and forms.

Doctor's Office Quality – Information Technology University.

Care Management
http://www.ddcmultimedia.com/doqit/Care_Management/CM_Overview/index.html
A detailed, step-by-step guide for physicians interested in implementing a care management program.

National Committee on Quality Assurance (NCQA)

Case Management Accreditation Program
http://www.ncqa.org/Programs/Accreditation/CaseManagementCM.aspx
NCQA provides a comprehensive, evidence-based accreditation program that can be used for case management programs in provider, payer, or community-based organizations.

Links and Resources

Agency for Healthcare Research and Quality (AHRQ)

Designing and Implementing Medicaid Disease and Care Management Programs
http://www.ahrq.gov/professionals/systems/long-term-care/resources/hcbs/medicaidmgmt/index.html#contents
This *Medicaid Care Management Guide* is designed to help states design, implement, and evaluate care management programs for the chronically ill. The guide is based on the experiences of 13 states that participated in the AHRQ's Medicaid Care Management Learning Network beginning in 2005.

Center for Health Care Strategies, Inc.

Care Management
http://www.chcs.org/topics/care-management/
Links to white papers and tools providing information about best practices in care management, primarily for Medicaid enrollees.

Center for Medicare and Medicaid Services (CMS)

Chronic Care Management
http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/ChronicCareManagement.pdf
The CMS fact sheet for providers on requirements, scope of services, and billing for care management services under Medicare.

The Commonwealth Fund

Caring for High-Need, High-Cost Patients: What Makes for a Successful Care Management Program?
http://www.commonwealthfund.org/publications/issue-briefs/2014/aug/high-need-high-cost-patients
A comprehensive guide to implementing a care management program at the organizational level.

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Module 4
Clinical Care Coordination

What is Care Coordination?

According to a 2007 technical review commissioned by the Agency for Healthcare Research and Quality (AHRQ) as part of their *Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies* series (Kathryn M. McDonald, Chang, & Schultz, 2013), care coordination can be defined as...

...the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services. Organizing care involves the marshalling of personnel and other resources needed to carry out all required patient care activities, and is often managed by the exchange of information among participants responsible for different aspects of care

(K M McDonald et al., 2007, p 39)"ISBN" : "AHRQ Publication No. 04(07.

This definition was created after identification of five key elements of care coordination in the literature reviewed for the technical review:

- Numerous participants are typically involved in care coordination
- Coordination is necessary when participants are dependent upon each other to carry out disparate activities in a patient's care
- In order to carry out these activities in a coordinated way, each participant needs adequate knowledge about their own and others' roles, and available resources
- In order to manage all required patient care activities, participants rely on exchange of information
- Integration of care activities has the goal of facilitating appropriate delivery of health care services.

Care coordination activities may be known by several other names. Terms listed in the AHRQ report include "collaboration, teamwork, continuity of care, disease management, case management, care management, Chronic Care Model, and care or patient navigator" (K M McDonald et al., 2007, 42)"ISBN" : "AHRQ Publication No. 04(07

The components of care coordination and the accompanying resources necessary for its implementation are listed in the following table from the AHRQ report (McDonald et al., 2007a)"ISBN" : "AHRQ Publication No. 04(07.

Why is Care Coordination Important?

According to the AHRQ technical review, "interventions using multidisciplinary teams and disease management programs consistently reported improved outcomes"(McDonald et al., 2007, p 62)"ISBN" : "AHRQ Publication No. 04(07. More specifically, the review found that the use of multidisciplinary teams was associated with improved patient outcomes for conditions such as heart failure and stroke (improved mortality and dependency and in the case of the former, reduced hospital admissions) and terminal conditions (symptom reduction) and that disease management programs can improve disease management for patients with diabetes, mental illness, and heart failure (McDonald et al., 2007, pp 69-70)"ISBN" : "AHRQ Publication No. 04(07

Care coordination is identified by the Institute of Medicine (Institute of Medicine: Committee on Identifying Priority Areas for Quality Improvement, 2003) as a key strategy that has the potential to

improve the effectiveness, safety, and efficiency of the American health care system. Well-designed, targeted care coordination that is delivered to the right people can improve outcomes for everyone: patients, providers, and payers.

Although the need for care coordination is clear, obstacles within the current health-care system must be overcome in order to provide effective care coordination. Some of these obstacles include:

- Processes vary among and between primary care sites and specialty sites.
- Patients are unclear about referrals, how to make appointments, aftercare, medications, and payment.

Component	Comparable Domains Noted by Others
ESSENTIAL CARE TASKS and *Associated Coordination Activity*	
ASSESS PATIENT *Determine Likely Coordination Challenges*	Initial Assessment (M)
DEVELOP CARE PLAN *Plan for Coordination Challenges and Organize Separate Care Plans*	Proactive Plan of Care and Follow-up (NQF) Problem Identification and Care Planning (M)
IDENTIFY PARTICIPANTS IN CARE AND SPECIFY ROLES *Specify Who Is Primarily Responsible For Coordination*	Healthcare 'home' – source of usual care selected by patient (NQF) Program Staffing (M) Provider Practice (M)
COMMUNICATE TO PATIENTS AND ALL OTHER PARTICIPANTS *Ensure Information Exchange Across Care Interfaces*	Communication-available to all team members, including patients and family (NQF) Communication (M)
EXECUTE CARE PLAN *Implement Coordination Interventions*	Service Arranging (M)
MONITOR AND ADJUST CARE *Monitor For And Address Coordination Failures*	Ongoing Monitoring (M)
EVALUATE HEALTH OUTCOMES *Identify Coordination Problems That Impact Outcomes*	Quality Management/ Outcomes Measurement (M)
COMMON FEATURES OF INTERVENTIONS TO SUPPORT COORDINATION ACTIVITIES *and examples*	
INFORMATION SYSTEMS *Electronic medical record; Personal health record; Continuity of care record, Decision support ; Used for population identification for intervention*	Information systems - the use of standardized, integrated electronic information (NQF) Information Technology and Electronic Records (M)
TOOLS *Standard protocols, Evidence-based guidelines, Self-management program, Clinician education on coordination skills, Routine reporting/feedback*	Patient Education (M)
TECHNIQUES TO MITIGATE INTERFACE ISSUES *Multidisciplinary teams for specialty and primary care interface;* *Case manager or patient navigators to network and connect between medical and social services; Collaborative practice model to connect different setting or levels of care; Medical home model to support information exchange at interfaces*	Transitions/Handoffs - transitions between settings of care (NQF)
SYSTEM RE-DESIGN *Paying clinicians for time spent coordinating care; Changes that reduce access barriers including system fragmentation, patient financial barriers - lack of insurance, underinsurance, physical barriers - distance from treatment facilities*	Environmental Level (e.g., consideration of alignment of incentives); Health care system reorganization (IOM)
NQF = National Quality Forum domain; M = Mathematica evaluation area; IOM = Factor noted in report on "Priority Areas for National Action	

Source: McDonald KM, Sundaram V, Bravata DM, Lewis R, Lin N, Kraft S, McKinnon M, Paguntalan H, Owens DK. Care Coordination. Vol 7 of: Shojania KG, McDonald KM, Wachter RM, Owens DK, editors. Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies. Technical Review 9 (Prepared by the Stanford University-UCSF Evidence-based Practice Center under contract 290-02-0017). AHRQ Publication No. 04(07)-0051-7. Rockville, MD: Agency for Healthcare Research and Quality. June 2007.

- Specialists do not consistently receive clear reasons for client referrals by primary care providers. Conversely, primary care providers do not often receive information about what happened in a referral visit.
- Referral systems and processes vary for each practice, making it difficult for referral staff to follow procedures and increasing the risk of errors including loss of information.

Accumulating evidence suggests that care coordination can help to reduce health-care associated costs. Authors of the AHRQ technical review noted that one study under review found "comprehensive disease management programs are cost-effective for improving outcomes in patients with depression" and another found that "disease management programs were economically effective" (McDonald et al., 2007, pp 107-108)"ISBN" : "AHRQ Publication No. 04(07.

Examples of how HSOs have Increased Capacity in Care Coordination

Community Care of the Sandhills, North Carolina

http://communitycare-sandhills.org/

As one of 14 networks participating in the Community Care of North Carolina (CCNC) program, Community Care of the Sandhills, North Carolina serves more than 74,000 Medicaid enrollees. The network includes 300 providers and 100 primary care practice sits, 16 pregnancy medical home sits, and includes health departments, hospitals, and departments of social science. Through its interdisciplinary care coordination model, the Sandhills network achieved the following outcomes:

- Decreased admissions by 7 percent (adjusting for clinical severity): 67 PKPY[1] in 2009 to 64 PKPY in 2012)
- Decreased emergency department visits by 4 percent (adjusting for clinical severity): 807 PKPY in 2009 to 774 PKPY in 2011
- Decreased total cost of care by 3 percent (adjusting for clinical severity): $352 PMPM[2] in 2009 to $332 PMPM in 2011
- Improved outcomes on 17 quality measures (including nine HEDIS measures) in 2012 compared with 2009
- Performed better than HEDIS benchmarks for eight of the nine HEDIS measures in 2012

Geisinger Health System

Geisinger Proven Health Navigator, Pennsylvania

https://www.thehealthplan.com/ghpcommon/healthnavigator.cfm

Geisinger Health System is an integrated HSO that serves more than 2.6 million people in central and northeastern Pennsylvania. In an effort to streamline and improve the quality and coordination of care, Geisinger Health System and Geisinger Health Plan created a medical home model that they dubbed ProvenHealth Navigator. The model provides patients and families with a range of services to address health behaviors, disease prevention, and disease management.

Results included better care coordination and improved outcomes, and Geisinger Health Plan has expanded the model nationwide:

- Decreased admission rates by 18 percent (over four years); decreased 30-day readmission rates by 24 percent (over four years)
- No change in emergency department visit rates per 1,000 (over four years) vs. an increase in controls.
- Decreased total expenditures by 8 percent (over four years)
- Improved HEDIS measures (LDL control, blood pressure control, HbA1c testing, diabetic eye exam, microalbuminuria, therapy for rheumatoid arthritis, and imaging for low back)
- 86 percent of primary care providerss reported the program allowed them to provide more comprehensive care;
- 93 percent of primary care providers agree/agree strongly that they would recommend the program to others
- 72 percent of patients believed quality of care was better

Oklahoma Health Care Authority

Oklahoma Sooner Care Health Management Program

http://www.okhca.org/individuals.aspx-?id=8516&menu=42

The Oklahoma Medicaid Program, Sooner Care, includes an innovative health management program

1 PKPY = Inpatient admissions per thousand members per year

2 PMPM = Per member per month

for enrollees with chronic diseases. Services include health coaching by a registered nurse; behavioral health screening; pharmacy review; support in accessing community resources; and involvement and communication with primary care providers. Outcomes have been notable:

- Decreased inpatient days by 65 percent (Tier 1) and 56 percent (Tier 2) vs. MEDai forecast (year 1)
- Decreased ED visit rates per 1,000 patients by 5 percent (Tier 1) and 18 percent (Tier 2) vs. MEDai forecast (year 1)
- Increased total PMPM costs by 3 percent (Tier 1) and decreased by 1 percent (Tier 2) vs. MEDai forecast (year 1) and decreased by 5 percent (Tier 1) and 10 percent (Tier 2) vs. MEDai forecast (year 2)
- Participant completion rate for 17 of the 21 diagnosis-specific measures increased vs. controls; significant for certain asthma, heart failure, CAD, diabetes, and hypertension measures
- 87 percent of practices surveyed reported improved chronic disease care; 68 percent reported being very satisfied with the program
- 86 percent (Tier 1) and 84 percent (Tier 2) of patients reported being very satisfied with the program

Paying for Care Coordination

Increased interest in care coordination at federal, state, and local levels has led to numerous opportunities for financing programs:

Medicare. Primary care providers will receive more payments for care coordination and telehealth services under the 2015 Medicare Physician Fee Schedule (PFS) released by the Centers for Medicare and Medicaid Systems (CMS) October 31, 2014. Physicians receive $40.39 per month per qualifying patient for care coordination management starting in January 2015. Services include non-face-to-face planning and management for patients with two or more chronic conditions.

Grants. The Centers for Medicare & Medicaid Services (CMS) is fostering improved care coordination through a number of initiatives such as Quality Demonstration Grants authorized by the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) and the State Innovations Model initiative authorized under ACA section 3021. These initiatives are outlined in Appendix A – Federal Support for Care Coordination .

ACA and State Medicaid Payments. Payment can promote care coordination by providers or by entities that work with providers and patients. For example, states can prospectively pay providers for coordinating care or hold providers accountable for costs that could be avoided by coordination. The ACA provides states with tools and potential funding to pilot and deploy new payment systems that reward providers for coordinating care. These reimbursement systems may take many forms, such as making care coordination codes billable, paying monthly care coordination fees, or tying payment to outcomes that are dependent on coordination with other providers. Many ACA provisions encourage the use of medical homes and accountable care organizations, offering states options for reimbursing for care coordination. Several additional opportunities are worth noting:

- §2704 – Up to eight Medicaid programs to participate in bundled payment demonstration. The demonstration will emphasize hospital discharge planning.
- §2705 – Up to five Medicaid programs to join global payment system demonstration.
- §3021 – The mandate of the new Center for Medicare and Medicaid Innovation includes testing comprehensive payments to groups of providers.

According to a recent report from the Centers for Medicare and Medicaid Services (CMS; 2014), states have been working to develop new delivery system models that increase integration of services and care coordination. As of April 2014, at least 18 states were seeking to increase integration of services (and thus care coordination) by implementing accountable care models for Medicaid and/or CHIP enrollees. As of April 2014, at least 18 states were making payments to patient-centered medical home programs that serve children as well as adults. Additionally, as of July 2014, at least 16 states had approved Affordable Care Act (ACA) section 2703 Health Home State Plan Amendments and an additional 12 states were receiving additional federal funding to support states in planning their health home state plan amendments (SPAs). All of these models of integrated care delivery systems have care coordination as a central tenet of service deliv-

ery. Early results of some of these models showed improvements in certain quality of care measures and an ability to produce cost savings. Metrics on outcomes were still being evaluated at the time of this writing.

Examples of Things That SORH Can Do To Increase Capacity in Care Coordination

SORH and other TA providers can play a critical role in helping HSOs increase their capacity in clinical care coordination. Some specific actions they can take include:

- Educate HSOs about various successful care coordination models. Models should fit culture and context of patient population and HSO facility.
- Assist with the design of care coordination teams and interventions that match patient needs and desired health outcomes. Identify scope of practice for each team member. Provide sample job descriptions. Provide information to allow for decisions on caseloads, patient interventions, quality control, communication, documentation and reporting.
- Offer specialized training for care coordination team members.
- Develop qualitative and quantitative methods and protocols to identify and engage patients most likely to benefit from the care coordination interventions. (referral processes, warm handoffs, during times of high need (hospital ED visits, inpatient discharge, etc.)
- Plan and implement the use of health information technology to bolster care coordination efforts: accessing real-time data (e.g., on hospital discharges); facilitating documentation, communication, decision support, and automated reminders; and remote patient monitoring and engagement.
- Facilitate collaborative relationships between hospitals, skilled nursing facilities, and other clinical providers, as well as with community service providers.
- Provide motivational interviewing training to care coordination staff as a nationally recognized best practice to encourage patient activation and self-management.

Tools

Various tools are needed to implement a clinical care coordination program. Some necessary tools include:

Job descriptions
- See a sample from Summit Health
- See a sample from Stratis Health

Patient risk assessments
- See a sample from Indiana Department of Health

Patient care plan processes and documentation, preferably electronic
- See a sample from the Ontario Medical Association

Policies, procedures, and forms for documenting and responding to trigger events
- See a sample from Kaiser Permanente

Training curricula and toolkits
- See a sample from the Center for Medical Home Improvement
- See a sample from the Medical Home Learning Collaborative

Community resource and asset mapping
- See a sample from the Community Research Lab

Medication reconciliation processes
- See a sample from the University of Wisconsin Hospital and Clinics

Advance directives
- See a sample from Aging with Dignity

Other tools are available at the following sites:

American Bar Association

Consumer's Toolkit for Health-Care Advance Planning
http://www.americanbar.org/groups/law_aging/resources/health_care_decision_making/consumer_s_toolkit_for_health_care_advance_planning.html

Brighter Futures Together

http://www.brighterfuturestogether.co.uk/brighter-futures-together-toolkit/map-assets-in-your-community/
A web-based toolkit that provides activities and guidance to map or inventory community assets and identify links between resources.

Rural Assistance Center

Rural Care Coordination Toolkit
http://www.raconline.org/communityhealth/
The Rural Assistance Center offers a comprehensive toolkit for implementing a care coordination program. The program includes seven modules, which provide an overview of care coordination, descriptions of six program models, guidelines for implementation, sustainability, and evaluation, a summary of best practices, and

National Hospice and Palliative Care Organization

Advanced Directives by State
http://www.caringinfo.org/i4a/pages/index.cfm?pageid=3289
Free advance directives by state, available as downloadable PDFs.

North Carolina Center for Hospital Quality and Patient Safety

Medication Safety Reconciliation
https://www.ncqualitycenter.org/wp-content/uploads/2013/01/MRToolkit.pdf
This quality and patient safety toolkit includes information about using care coordination to enhance quality.

Links and Resources

Agency for Healthcare Research and Quality (AHRQ)

PCMH Resource Center
http://pcmh.ahrq.gov/page/papers-briefs-and-resources
The Agency for Healthcare Research and Quality (AHRQ) offers a host of resources for clinicians, clinical teams, and health-care administrators to learn how to integrate care coordination into primary care practice. Available resources include:

- Care Coordination Accountability Measures for Primary Care Practice
- The Roles of Patient-Centered Medical Homes and Accountable Care Organizations in Coordinating Patient Care
- Coordinating Care in the Medical Neighborhood: Critical Components and Available Mechanisms
- Coordinating Care for Adults With Complex Care Needs in the Patient-Centered Medical Home: Challenges and Solutions
- Prospects for Care Coordination Measurement Using Electronic Data Sources
- Care Coordination

http://www.ahrq.gov/professionals/prevention-chronic-care/improve/coordination/index.html
AHRQ's resource page on care coordination offers a definition, description, and links to in-depth research briefs. See especially Care Management: Implications for Medical Practice, Health Policy, and Health Services Research, which provides a comprehensive overview of best practices in care coordination and recommendations for policy, practice, and future research.

Center for Medicare and Medicaid Services

Making Connections: Strengthening Care Coordination in the Medicaid Benefit for Children & Adolescents Early and Periodic Screening, Diagnostic and Treatment (EPSDT)
http://medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Downloads/EPSDT-Care-Coordination-Strategy-Guide.pdf
This comprehensive guide offers strategies for implementing and sustaining care coordination programs for children and adolescents enrolled in Medicaid EPSDT program. The guide, while designed for states, offers a host of resources and best-practice examples, many of which can be adapted by HSOs, community coalitions, and other providers.

Community Tool Box

http://ctb.ku.edu/en/table-of-contents

The Community Tool Box is a free, online resource for those working to build healthier communities and bring about social change. It offers thousands of pages of tips, tools, and toolkits for taking action in communities. It includes tools for community asset mapping, strategic planning, organizational improvement and much more.

Hidalgo Medical Services-Family Support Services

Community Connectors and Care Team Coordinators

http://www.raconline.org/success/project-examples/741

Hidalgo Medical Services employs "Community Connectors" and "Care Team Coordinators" (community health workers) who work with clients to help them better manage their health and promote awareness of healthy lifestyle options in the community.

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Module 5
Non Clinical Care Coordination

What is Non-Clinical Care Coordination?

Non-clinical care coordination is the process of helping people address the social, logistical, financial, cultural, emotional, and other non-medical aspects of health and health-care access (Accenture, 2014; Alfero et al., 2015). The complement to clinical care coordination (see Module 4), non-clinical care coordination is part of a continuum of processes that allow health-services organizations to offer integrated, patient-centered, high-quality, cost-effective care to patients.

While there is no clear line between clinical and non-clinical care coordination, generally, clinical care coordination seeks to ensure that medical care is delivered comprehensively and seamlessly, while *non*-clinical care coordination focuses on linking patients to that care and to social support systems. In other words, clinical care coordination attempts to ensure that patients' medical needs are recognized and addressed in a seamless, integrated manner; non-clinical care coordination seeks to ensure that patients can actually receive that care and the other support services they need. Comprehensive care coordination includes both. As researchers from the Rural Policy Research Institute (RUPRI) note: "Care coordination requires moving beyond a medical framework and toward a model that supports health services *and* social support systems, by integrating clinical *and* nonclinical providers" (Alfero et al., 2015, p 1; emphasis in original).

Interest in non-clinical care coordination services has grown with recognition that the impact of health *care* on health *status* is often overpowered by the social and environmental factors that affect health. These factors, called the social determinants of health, require that health care be delivered with awareness of the patient's story – including cultural and familial background, education, home environment, social networks, work, and more.

For rural populations, the need for coordinated non-clinical care is exacerbated by lack of resources, geographical distances, and logistical challenges. High rates of uninsurance and underinsurance put patients at financial risk and stress providers' limited resources. Average incomes are lower in rural than in urban communities, and residents tend to be older, whiter, and less educated. Health risk factors are more prevalent, including overweight and obesity, smoking and other risk behaviors. Distances to health-care providers, support agencies, and essential goods and services are often great; weather and topography can create additional barriers. Health workforce shortages are ubiquitous. Some members of rural populations, such as migrant farmworkers, are at greater risk of poor health and extremely hard to reach (Lighthall, 2001).

Who Delivers Non-Clinical Care Coordination?

Non-clinical care coordination can be delivered by any appropriately trained member of the health-care team. It does not require specific medical knowledge, but it does require extensive knowledge of community resources, social supports, and the skills to find those resources and communicate with patients, families and providers. Increasingly, health-services organizations are hiring lay health navigators to fill this role.

Lay health navigators are non-licensed personnel who focus on helping patients connect to health and social services systems. The lay health navigator is a type of community health worker (CHW), an umbrella term used to describe people who act as liaisons between communities and health and social services systems. CHWs, including lay health navigators, are generally members of the communities they serve, coming from similar ethnic, lin-

guistic, cultural, and socioeconomic backgrounds; they may also have experienced similar disease processes (Shelton et al., 2011). Patient navigators have been shown to be effective across a range of health concerns, helping people to access timely preventive screenings for a range of conditions, manage diseases such as diabetes, hypertension, and depression, and improve access to primary, specialty, dental, and behavioral health care (de Heer et al., 2015; deRosset, Mullenix, Flores, Mattia-Dewey, & Mai, 2014; Hede, 2006; Katigbak, Van Devanter, Islam, & Trinh-Shevrin, 2015).

What Happens During Non-Clinical Care Coordination?

The core role of the non-clinical care coordinator is to help the patient address barriers, not only to accessing health care, but to overall wellness. The coordinator helps the patient to combat:

- *Financial barriers:* Non-clinical care coordinators may help people enroll in available insurance coverage, including medically indigent care programs. They may help people address the cost of pharmaceuticals, durable medical supplies, and other necessary items, in addition to food security,
- *Communication barriers:* Non-clinical care coordinators facilitate communication between patients, families, primary care providers, specialists, and other members of the health care team. They help to break down social, cultural, literacy, and linguistic barriers to understanding – from both patients' and providers' perspectives.
- *System barriers:* Non-clinical care coordinators help patients address the complexities of a fragmented health system. They may help people make appointments, access transportation and other needed services,
- *Psychological barriers:* Fear, mistrust, and other psychological barriers often stand in the way of people accessing services. The lay health navigator, as a trusted community member, is often able to address these fears. Most navigators also receive training in motivational interviewing, which provides them with the tools to help assess patients' readiness to change and encourage them to move to the next step.
- *Other barriers:* Non-clinical care coordinators are often called upon to address other barriers people may face to care and well-being, such as childcare and transportation.

The specific steps that occur during non-clinical care coordination vary from patient to patient and between health-service organizations (HSOs). In a patient-centered approach, however, the patient's and family's needs are the driving force for services and coordination.

In a broader sense, the process of non-clinical care coordination might look something like this: Suppose a hypothetical patient named "Julia," who has diabetes, is a frequent user of EMS and the emergency department. She has been admitted as an inpatient twice in the last year. Julia is a low-income single mother of a 4-year-old. A lay health navigator follows up with Julia after one of her frequent visits and helps her to schedule an appointment with a primary care provider. She helps Julia to enroll her daughter in a Head Start program, arranges for transportation, and helps her enroll in Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and housing assistance. With the help of her primary care provider and frequent contact with the non-clinical care coordinator, Julia is able to manage her diabetes and stay out the ambulance and the emergency department. With her blood glucose level under control and her daughter in childcare, Julia is able to go back to school and become a certified early childhood educator, eventually becoming employed fulltime.

While Julie may be hypothetical, many real people struggle with similar barriers to accessing care, especially in rural communities. The non-clinical care coordinator helps to address these barriers in a systematic way. Actions the coordinator might take include:

- Place a reminder call to the patient 24 hours before each appointment
- After appointments, speak with patient and family to ensure they understand their diagnosis and the provider's instructions. If there is misunderstanding, facilitate communication between the patient, family, and provider.
- Help the patient enroll in all social support systems for which she or he is eligible and might benefit, including health coverage, medication assistance programs, SNAP, heating assistance,

housing assistance, meals-on-wheels, etc. (see Module 11)

- Help patients to fill prescriptions, acting as a liaison between the patient, pharmacist, and provider
- Help patient schedule appointments with primary care and specialist providers

Non-clinical care coordinators are often employed by health plans, community health centers, and hospitals. The support they provide may include referrals, follow-up, and facilitation of communication between the patient and providers. Coordinators help patients navigate the journey of cancer care, manage specific conditions such as diabetes or hypertension, and receive necessary preventive services such as vaccinations and cancer screenings, referrals, and follow-up care. In addition to one-on-one support for clients, coordinators may also provide services to groups in the community – for example, hosting a walking club, a cooking class, or diabetes support group.

In the hospital setting, the non-clinical care coordinator is an important part of discharge planning – a process that begins soon after admission. Typically, the hospital process evolves something like this:

- During an inpatient stay:
  - Within the first two days after the patient is admitted, the coordinator meets with the patient and family to explain the discharge follow-up process and to establish a relationship with them
  - Before the patient is discharged, the coordinator arranges to have prescribed medications delivered to the patient or family
  - Before the patient leaves the hospital, the coordinator reviews discharge instructions with the patient and family, having patients repeat the instructions back to assure understanding
  - In addition to providing written discharge instructions, the coordinator records the discharge instructions and conversation using audio software so the patient and family can refer back to the information once they are home
- After discharge:
  - The coordinator calls patients within 24 hours of discharge to ensure that they have their medications and to assist with making any necessary follow-up appointments. If the patient does not have his or her medications, the coordinator arranges for them to receive the pharmaceuticals.
  - The coordinator calls patients every five to six days to assess their needs and recovery progress.

Pathways© to Health

One of the best-developed models of non-clinical care coordination is the Pathways© model, a strategy used to organize and track outcomes of community health worker (CHW) interventions. The Pathways© Model is a project of the Community Health Access Project (CHAP), a program designed to improve health and social outcomes through the support of community health workers (CHWs). The model emerged as a way to link the activities of CHWs and health-care providers to health outcomes. The Pathways© Model can be used within an agency, several agencies, a community, a region, or across a state as a means of increasing positive outcome production to impact health and social service disparities.

A "pathway" is a process designed to address a specific health issue. Pathways are designed around people, not health systems, and outcomes are measured in terms of the person at the center. Pathways can be designed around any type of social, medical, or behavioral health issue: homelessness, immunizations, pregnancy, diabetes, substance abuse, and more. Individuals may be assigned many different pathways – for instance, a homeless person with diabetes and co-occurring substance abuse and mental health disorders would have at least three pathways.

Each Pathway begins with the identification of a problem or issue – for instance, a high-risk pregnancy might be the reason for enrollment in the program. The Pathway is then built starting with the completion step, which is the positive resolution of the issue. In the example of the high-risk pregnancy, the completion step would be birth of a healthy, normal birthweight (2500+ grams) infant. While there may be other issues involved – for instance, if the high-risk pregnancy is in a teen without health insurance or employment – other Pathways would be designed to address those issues. Clearly defined

steps between the identification and completion stage are then identified, many of them dealing with social, financial, and cultural issues. A typical pathway structure is shown in Figure 1.

Figure 1: Adapted from Community Health Access Project, *Pathways: Building a Community Outcome Production Model*.

Essential Elements of Non-Clinical Care Coordination Programs

Health-services organizations that wish to develop and implement non-clinical care organizations must ensure that the structures and processes are in place for coordination to be successful. As the RUPRI research team notes: "Care coordination involves more than simply employing a care coordinator; it is a deliberate and well-planned approach to meeting the diverse needs of patients and families, and when done well, it is built into policies, procedures, staffing, services, and communication systems" (Alfero et al., 2015, p 4).

Several elements are necessary for HSOs to make the shift to a systemic, comprehensive approach to addressing the geographic, physical, social, financial, cultural, communication, literacy, and other barriers to care that their patients may face:

Cultural Shift: Ultimately, successful implementation of comprehensive care coordination processes requires a cultural shift, one that recognizes the importance of integrating non-clinical and clinical care coordination processes. Such a shift requires the support of health-services leaders, providers, and staff; it must be both "top-down" and "bottom-up." Management can lead this cultural shift by clearly supporting the initiative, training providers and staff – including non-clinical and administrative staff – in team-based healthcare strategies, resource, and general framework of the social determinants of health.

Effective information exchange: Effective information exchange is central to care coordination. As patients transition from one health-care setting to another, or from provider to support services (e.g. from a primary care physician to an appointment with a dietitian), information must go with them. This process, referred to as health information exchange (HIE), ensures that all members of the health-care team have timely access to appropriate information. Effective non-clinical care coordination requires that clinical and non-clinical providers also share pertinent information sharing, while protecting non-essential private information.

Information exchange is ideally supported by a user-friendly, robust, health information technology system that allows patients to be followed "virtually," determining whether they have received needed services. In rural settings, where broadband access may be, systems should be backed up by a paper and pencil system that also allows tracking of information including patient plans, preferences, and use of services.

Strong relationships and networks of providers: Providers of non-clinical and clinical services need to know each other and know what services they offer. This is one area where rural communities may have an advantage over urban ones: In small town, most providers have built at least informal referral networks with other providers, hospitals, and social services agencies.

A trained, available workforce: HSOs are using multiple strategies to develop cadres of non-clinical care coordinators, including developing peer-to-peer networks, providing additional training to existing staff, creating volunteer and paid positions, and recruiting EMTs and others. Lay health workers are emerging as a providers of non-clinical care coordination. However, workforce shortages in rural areas often pose challenges to HSOs seeking to develop non-clinical care coordination programs. Many rural residents may be in search of full- or part-time employment opportunities, but they often face the barriers to sustaining employment, including distance, transportation, childcare needs, culture, language, and literacy. For peer-to-peer programs, especially in areas such as substance abuse, barriers including criminal records may create obstacles. HSOs will need to invest in training, equipment, and infrastructure (e.g. office space and furniture) to support the non-clinical care coordinator workforce.

Recognize non-clinical care coordinators as team members. HSOs must build systems to ensure that non-clinical care coordinators are recognized and treated as members of the health-care team. Coordinators, including lay health navigators, should participate in team meetings and information exchange processes. See Module 6: Organization-Based Team Care for a detailed discussion of health-care teams.

Evaluation: Evaluation of structures, processes, and outcomes is key to successful programs. Before a program is implemented, an evaluation plan should be in place, measures selected, and baseline data gathered. Areas to evaluate include costs, patient

experience (e.g. satisfaction, trust, understanding of follow-up care), and patient-reported outcomes (e.g. changes in health-related behaviors, ability to self-manage chronic conditions, knowledge of health processes). Other key metrics include process measures (organizational measures of how processes are working such as the number of duplicated services, number of referrals, or wait time to see a provider), health outcome measures (weight loss or gain, blood pressure, cholesterol, etc.), and quality measures. Larger systems – or rural HSOs working with other regional organizations – may wish to measure community and population health measures such as rates of diabetes, obesity, and smoking. Measures should include non-clinical indicators such as access to healthy food, transportation, living conditions, and the ability to pay for utilities (Alfero et al., 2015).

Why is Non-Clinical Care Coordination Important?

Non-clinical care coordination is the often-missed "other half" of comprehensive care coordination. Yet support and guidance in navigating complex health and social services systems is essential to the provision of providing patient-centered, cost-effective care.

Patient-centered care must take into account the context of the patient's life, including family, community, workplace, education, and physical and social environment. Non-clinical care coordination recognizes the importance of social determinants of health and integrates services across clinicians, caregivers, and community-based support systems. By addressing social determinants of health --- for instance, assisting a patient with a disability to sign up for assistance with food, housing, and health-care coverage – the patient navigator helps to address determinants of health that cannot be addressed in a clinic or hospital. In this way, the person is put at the center of the care plan, rather than the disease.

In rural communities with scarce resources, non-clinical care coordination contributes to the development of regional health systems by promoting effective use of both medical and non-medical resources (Alfero et al., 2015). Deployed effectively, non- clinical care coordination can shift the burden away from overstressed EMS agencies, emergency departments, and in-patient facilities to primary care providers.

A growing body of evidence suggests that non-clinical care coordination has a positive impact on health outcomes and health utilization:

- A pilot of non-clinical care coordination programs in three hospitals located in western Pennsylvania, showed an increase in appropriate health-care utilization, including preventive care, and a decrease in readmissions (Accenture, 2014). From July 2013 and March 2014, hospitals in the pilot programs saw a 43 percent reduction in non-emergent use of emergency departments among frequent users, a 13 percent increase in screening colonoscopy use, and a 60 percent drop in 30-day readmissions across target diagnosis-related groups (Accenture, 2014).
- Non-clinical care coordination has been shown to reduce emergency room visits (Aventure, 2015; Alfero, et al, 2015).
- Percac-Lima and colleagues (Percac-Lima et al., 2013)533 Latina women with an abnormal Pap smear requiring colposcopy received patient navigation from their healthcare center in Chelsea, Massachusetts, to the Massachusetts General Hospital (MGH found that by increasing access to cervical cancer screening and an early interventional procedure (colposcopy), patient navigation can actually prevent cervical cancer.
- *Mi Corazon Mi Comunidad (MiCMiC)*, a program in which *Promotoras de Salud*/Community Health Workers promote use of community physical activity and nutrition resources (e.g. parks, community gardens, farmers' markets), showed substantial improvements in health behaviors and modest improvements in cardiovascular risk factors (de Heer et al., 2015).
- Ramirez and colleagues (2013)chiefly because of later diagnosis. The time from screening to diagnosis is critical to optimizing cancer care, yet the efficacy of navigation in reducing it is insufficiently documented. Here, the authors evaluate a culturally sensitive patient navigation program to reduce the time to diagnosis and increase the proportions of women diagnosed within 30 days and 60 days. METHODS.: The authors analyzed 425 Latinas who had Breast Imaging Reporting and Data System

(BI-RADS found that Latina women with abnormal screening mammograms who received patient-centered navigation were more likely to receive timely diagnosis. Researchers suggested the benefit was probably due to fewer missed diagnostic appointments.

Addressing the non-clinical aspects of health appears to be a cost-effective approach to improving quality of care, patient satisfaction, and patient outcomes (Accenture, 2014; Alfero et al., 2015; Brown et al., 2012; Donaldson et al., 2012; Ramsey et al., 2010). For instance, Brown and colleagues (Brown et al., 2012) estimated the incremental cost-effectiveness of a CHW intervention addressing lifestyle behaviors in an Hispanic population with diabetes at $10,995 to $33,319 per quality-adjusted life-year (QALY) gained. Donaldson and colleagues (Donaldson et al., 2012) found that patient navigation improved cost-effectiveness of breast cancer diagnostic resolution by up to $2080 and up to $9708 per colorectal cancer case diagnostic resolution.

In addition, lay health navigation appears to improve use of health resources, shifting the burden of care from EMS, emergency departments, and inpatient facilities to primary care providers (Alfero et al., 2015). Even in primary care settings, non-clinical care coordination has been linked to more efficient care. For instance, researchers at Accenture found that task-shifting – the shifting of tasks from clinical personnel to lay health navigators – helped to reduce the non-clinical burden on clinical staff by 25 percent, freeing up staff to work at the top of their scope (Accenture, 2014).

Challenges to Increasing Capacity in Non-Clinical Care Coordination

Nonclinical care coordination programs are likely to require significant investment by HSOs in planning and implementing programs, redesigning processes, hiring and training new and existing staff, and ongoing evaluation and improvement. The process may be costly and disruptive. Changes to the HSO's traditional patient flow patterns may be required. New relationships may need to be established with other HSOs, social services agencies, and other community-based organizations. While funding sources for nonclinical care coordination programs exist, most are limited in scope and duration.

Logistical challenges may also hamper development of non-clinical care coordination programs. Schedules must allow lay health navigators to conduct time-intensive patient visits. In rural areas, health navigators who conduct home visits may be able to make only one or two visits per day due to geographic distances; at the same time, lack of broadband connectivity and low health and computer literacy skills may limit the usefulness of telecommunications and other technologically driven solutions. Safety is also a concern for all health-care personnel, especially those working in private homes.

In addition, efforts to develop a trained lay health navigator workforce have been hampered by a lack of common core standards and competencies. While CHW training and certification programs are beginning to emerge, there is still little consensus about what CHWs do and what they need to know. CHWs and other non-clinical care staff must have a wide range of skills, from communication to data entry to familiarity with health coverage systems. Those skills may vary widely from state to state and community to community.

Fundamentally, however, the biggest challenge to non-clinical care coordination is changing the mindset of HSO leadership and clinical staff from the conventional medical model in which disease is cured after it occurs in a clinic, to a model in which the full impact of the social determinants of health – the places where people live, the food they eat, the air they breathe, the water they drink and bathe in, the schools they attend, the places they work, the stores where they shop, the roads where they drive and bike and walk, the places they play – is understood, addressed, and transformed.

Examples of how Health-Services Organizations have Increased Capacity in Non-Clinical Care Coordination

Hidalgo Medical Services, Silver City, New Mexico

Community Connections

http://www.hms-nm.org

Hidalgo Medical Services, a federally qualified health center serving Grant and Hidalgo counties

in rural southwest New Mexico, has developed an extensive network of lay health advisors who provide culturally and linguistically competent support through the *Community Connections* program. *Community Connections* uses non-clinical care coordinators to increase access to primary care and social support services for uninsured and underserved adults. Hidalgo Medical Services delivers all care coordination and clinical care. Care coordinators work with patients to address their needs, including housing, medication assistance, cash assistance, publicly-funded health insurance, and transportation. Originally funded by the New Mexico Department of Health, Community Connections is now supported with internal resources. While data are still preliminary, the program appears to have improved patient health outcomes and lowered health-care costs.

Humboldt Independent Practice Association, Humboldt County, California

Referral Improvement Project

http://www.humboldtipa.com/referralcollaboration.php

Humboldt Independent Practice Association is leading a community-wide effort to streamline referral processes in Humboldt County, California. The effort began with the November 20, 2014 Primary Care Renewal Collaborative meeting, In addition to providing a resource page, the IPA is offering technical support and networking opportunities to providers, payers, and others working on referral reform in Humboldt County.

Vermont Blueprint for Health

Support and Services at Home (SASH)

http://www.sashvt.org

Vermont's Support and Services at Home (SASH), a project developed under the Vermont Blueprint for Health, provides onsite assistance to help senior citizens (and other Medicare beneficiaries) remain in their homes as they age. Key services include an initial assessment by a multidisciplinary onsite health team, creation of an individualized care plan, onsite nursing and care coordination with team members and other local partners, and community activities to support health and wellness. In a year-long pilot test with 65 residents, the program reduced hospital admissions and readmissions, had no bounce backs to nursing homes, decreased falls, improved nutritional status, and increased levels of physical activity.

How to Pay for Non-Clinical Care Coordination

Historically, lack of direct funding for non-clinical care coordination services has posed a challenge for health-services organizations that are interested in providing this support for their patients. In traditional fee-for-service payment models, non-clinical care coordination generally was not a reimbursable activity. Many innovative navigation programs have been developed, most of them relying on grant funding, only to disappear with the end of the funding period.

Increasingly, however, providers, payers, and policymakers are recognizing that cost-effective care – a core component of the "triple aim" – must reward high-value, high-talk interventions over high-volume, high-tech clinical procedures (Alfero et al., 2015; Khullar et al., 2015; Melvan et al., 2015) In response, financing strategies are shifting from action-based to outcomes-based payments – that is, instead of being rewarded for performing specific tests or procedures, health-services organizations are being rewarded for better patient outcomes.

In this environment, sustainable funding of non-clinical care coordination has become more feasible. Several emerging financing strategies allow rural HSOs to incorporate CHWs and other lay health professionals into provision of care. Generally, these strategies include non-clinical care coordination as part of a comprehensive approach to improve health-care quality and cost-effectiveness. Examples include:

- *Population-based payments:* In these models, payments are made as part of global budgets, capitation, or "bundles" of care. In these models, HSO's assume the risk of poor care quality. For instance, in a bundled-payment model, payment is issued per time unit for chronic care (for example, diabetes management for one year) or for a specific episode of disease (for example, knee replacement). The "bundle" includes all services that would usually be part of the management protocols or episode of care, such as counseling by a dietitian for a person with diabetes or physical therapy after

an orthopedic procedure. HSOs benefit by retaining more dollars if the patient recovers without complications or does not experience exacerbations of chronic disease. Non-clinical care coordination can be a critical component of reducing complications and thus costs.

- *Per member per month (PMPM) payments:* In the PMPM model, HSOs providing or delivering care coordination services receive a set fee per enrollee per month for those services.
- *Multi-payer models:* In these models, several payers join together to pay for services. Non-clinical care coordination can be part of the package of services, or, as in Vermont's Blueprint for Health model, the payments can be used to increase a region's or state's overall capacity for community-based care supports.

In addition to these emerging strategies, federal and state reimbursement policies are shifting to support care coordination services. Two significant changes from the Centers for Medicare and Medicaid (CMS) allow providers to be reimbursed for these services:

- In January 2014, CMS created a final rule, (CMS 2334-F), "Medicaid and Children's Health Insurance Programs: Essential Health Benefits in Alternative Benefit Plans, Eligible Notices, Fair Hearings and Appeal Process, and Premiums and Cost Sharing, Exchange: Eligibility and Enrollment." This rule makes it possible for HSOs to receive payment for preventive services given by non-licensed personnel. The rule calls for services to be "*recommended* by physicians or other licensed practitioners of the healing arts," as opposed to *delivered* only by licensed personnel. With this ruling, CHWs potentially could be reimbursed under Medicaid.
- The Medicare Transitional Care Management program pays for care coordination services for patients within 30 days of discharge from an acute- or long-term care facility. Allowable activities include typical non-clinical care coordination services such as identification of available community and health resources, communicating with the patient and/or caregiver within two days of discharge, and facilitating access to care and services needed by the patient and/or family. Services (other than the required initial face-to-face visit) may be provided non-physician members of the health-care team; however, those team members must be licensed in their fields (e.g. nurses, certified diabetes educators, social workers). Another limitation is that FQHCs and rural health clinics may not bill for TCM services with the exception of the initial face-to-face visit. However, FQHC providers who also practice at private clinics may bill for services in those settings.

Even with emerging reimbursement strategies, grant funding remains an important source of support for HSOs interested in offering non-clinical care coordination services. Several grants that support non-clinical care coordination are available through private and public funding agencies. Some examples include:

- *HRSA* requires health centers receiving Section 330 funding to offer "enabling" services as part of their eligibility for funding. In many cases, health centers are able cross-train eligibility and enrollment specialists as patient navigators.
- *CMS Innovation Center* offers funding for projects to "test the development of innovative health-care payment and delivery models." Many of the innovation models being tested include care coordination components.
- *Centers for Disease Control and Prevention* (CDC) provides funding for CHW programs under the Patient Protection and Affordable Care Act of 2010. Section 5313, Grants to Promote the Community Health Workforce, amends Part P of Title III of the Public Health Service Act (42 U.S.C. 280g et seq.) to authorize CDC, in collaboration with the Secretary of Health and Human Services, to award grants to "eligible entities to promote positive health behaviors and outcomes for populations in medically underserved communities through the use of CHWs."

In some instances, state governments have funded regional programs. For instance, the Kentucky General Assembly funds Kentucky Homeplace, a CHW initiative that addresses health behaviors, inadequate health insurance, and environmental factors that contribute to chronic disease. The program, which was developed in 1994 by the University of Kentucky Center of Excellence in Rural Health, serves 27 counties in the Appalachian region of eastern Kentucky. Other states assign responsibilities for care coordination to specific entities, generally FQHCs, which hire and manage the lay health navigator workforce. HSOs can also approach county and municipal gov-

ernments, which may fund initiatives to cover their safety-net populations and include non-clinical care coordination as part of that package.

Things SORH Can Do to Help HSOs Build Capacity in Non-Clinical Care Coordination

SORH can play a critical role in the development of robust non-clinical care coordination services both at individual HSOs and throughout regions. Sample activities include the following:

- Convening networks of HSOs, social services, payers, and other community-based agencies to develop health information exchanges (HIEs), share information about each other's services and resources, and pool resources for trainings, etc.
- Facilitating and/or participating in the development of core competencies, standards, and certification processes for patient navigators and community health workers. SORH can also participate in curriculum development or adoption decisions.
- Providing training opportunities for lay health navigators, both online and face-to-face.
- Supporting the development of community paramedicine programs through research, data analysis, and policy initiatives.
- Providing information, in the form of websites, newsletters, letters to the editor, blogs, and other avenues, about non-clinical care coordination, its benefits, and how to access it.
- Helping HSOs develop robust referral networks and build relationships with specialty care providers, social services agencies, other community-based organizations, and public safety agencies (e.g. police, fire, EMS).
- Facilitating the development of centralized referral systems within communities.

Tools

Agency for Healthcare Research and Quality

Care Coordination Measures Atlas

https://innovations.ahrq.gov/qualitytools/care-coordination-measures-atlas

The *Care Coordination Measures Atlas* is a compendium of existing measures of care coordination, focusing on ambulatory care. It offers a framework for understanding measurement of care coordination. Measures span patient's, caregiver's, health-care professionals', and health-system managers' experiences with care coordination, as well as experiences of health care professionals and health system managers. It is intended for evaluators of projects aimed at improving care coordination and for quality improvement practitioners and researchers studying care coordination.

Association of Academic Health Centers

Social Determinants of Health Initiative

http://wherehealthbegins.org/

This comprehensive resource on the social determinants of health was developed by the Association of Academic Health Centers (AAHC), a non-profit organization that seeks to advance the nation's health and well-being through vigorous leadership of the nation's academic health centers. The AAHC is working to help academic medical centers shift from their traditional focus on medical care to a broader approach that more directly addresses the social determinants of health. This toolkit includes a host of articles, reports, and other resources; a social determinants questionnaire to help organizations assess their readiness to address those determinants; a comprehensive report on academic health centers' efforts to address social determinants of health; and more.

Centers for Disease Control and Prevention

Community Health Worker Toolkit

http://www.cdc.gov/dhdsp/pubs/chw-toolkit.htm

This compilation of evidence-based resources

Community Access Health Project (CHAP)

Pathways: Building a Community Outcomes Production Model
https://innovations.ahrq.gov/qualitytools/pathways-building-community-outcome-production-model
This manual was developed by the Community Health Access Project (CHAP), a program designed to improve health and social outcomes through the support of community health workers (CHWs). It offers a comprehensive overview and guide to implementation of the Pathways© Model, a model of community-based care coordination that began in 1999 in Mansfield, Ohio.

Community Healthcare and Emergency Cooperative (CHEC)

Community Paramedic Program Manual
http://communityparamedic.org/Program-Handbook
This free program manual, developed by the Western Eagle County Health Services District and the North Central EMS Institute, is a comprehensive tool for HSOs and communities interested in developing a community paramedic program. Modules include Planning to Plan; Assessing Program Feasibility; Considering State Regulations; Making the Internal Commitment; Securing Key Partner Commitment; Determining how to Provide Medical Direction; Assessing Community Needs; Determining Program Scope; Services to Provide; Developing Personnel; Budgeting; Engaging the Community; Developing Policies and Procedures; Planning and Implementing Training; Developing an Evaluation Plan; Beginning Operations; and, Evaluating the Pilot Phase.

Rural Assistance Center

Community Health Worker Toolkit
https://www.raconline.org/communityhealth/chw
An eight-module toolkit designed for HSOs interested in developing CHW programs. The toolkit provides the tools to assess organizational readiness to develop a CHW program, an overview of best practices in CHW program development, resources for training, and summaries of sample programs. Links to training opportunities are also available.

Links and Resources

Centers for Disease Control and Prevention (CDC)

Racial and Ethnic Approaches to Community Health (REACH)
http://www.cdc.gov/nccdphp/dch/programs/reach/index.htm
The REACH program focuses on reducing health disparities linked to racial and ethnic background. Awardees plan and carry out local, culturally appropriate programs to address health issues among African Americans, American Indians, Hispanics/Latinos, Asian Americans, Alaska Natives, and Pacific Islanders.

Community Health Worker National Education Collaborative

http://chw-nec.org/
A resource for organizations working to develop their own CHW educational programs and materials, The CHW-NEC assists HSOs with development of CHW educational resources, services, curricula, and promising practice delivery strategies

McColl Center for Healthcare Innovation

Care Coordination
http://www.maccollcenter.org/our-work/care-coordination
MacColl offers a host of resources for health-services organizations developing care coordination programs, both clinical and non-clinical. Resources include models, toolkits, research summaries, and innovation

Community Healthcare and Emergency Cooperative (CHEC)

Community Paramedic Program
http://communityparamedic.org
The Community Paramedic Program is a project of the Community Healthcare and Emergency Cooperative (CHEC), which formed in July 2007 to address critical health-care shortages in rural and remote areas by developing a new community health provider model. The Community Paramedic model is based on the best practices of similar initiatives around the world, including the Alaska Community Health Aide, the Nova Scotia Community Paramedic model, and the Australia Rural and Remote Paramedic Program.

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Module 6
Team–Based Services

What are Team-Based Services?

As health-care providers, patients, and health policymakers focus on achieving the "triple aim" of a patient-centered, high-quality, cost-effective health-care system, stakeholders have called for an end to traditional "silos" of care, instead emphasizing the need to work together to provide a full range of services to each patient. In addition, significant shortages of health-care professionals, combined with the complex needs of an aging population, ever-expanding medical knowledge, and increasing complexity of services and treatments, are driving the need for teamwork and collaboration. In rural and frontier areas, these issues are exacerbated by distance, low population densities, high poverty rates, and even more pronounced health-care workforce shortages.

In response to these pressures, health-service organizations (HSOs) are developing teams of providers, nurses, allied health professionals, eligibility experts, and others to offer services to patients and families, a delivery model called "team-based care." In the discussion paper *Core Principles & Values of Effective Team-Based Health Care* (Mitchell et al., 2012), the Institute for Healthcare Improvement adopted the following definition of team-based care[1]:

> *"Team-based health care is the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers – to the extent preferred by each patient – to accomplish shared goals within and across settings to achieve coordinated, high-quality care."*

This definition is worth parsing for its four essential parts:

1. *The goal of team-based care is the provision of health services – not health care:* Health "services" encompass a broader range of activities, locations, and professionals than health "care," including prevention, education, and support in addition to clinical care. Both licensed and unlicensed health-care workers are involved in the provision of health services.
2. *Services are provided to individuals, families, and/or communities*: This definition recognizes that health care and other services are not provided to an isolated individual, but to a person who is part of a family and larger community. Families and communities are affected by the health status of their members – and vice versa.
3. *At least two providers work collaboratively with patients and caregivers*: Collaboration is key to teamwork, yet it is a skill rarely taught or practiced in most clinical training. The patient is recognized as a collaborator and team member.
4. *Care is given "to the extent preferred by each patient"*: Patients are in control of their care, redefining the standard of informed consent.

These key concepts underlie the definition of team-based health care. In this definition, health care encompasses a range of services controlled by the patient, with the physician, nurses, allied health professionals, and other team members providing expertise, guidance, and skilled hands-on services in collaboration with patient and family wishes. The patient is not an isolated individual, but a person who lives in the midst of family, friends, and community – all of which strongly influence health status, access to care, and choices about care.

1 This definition was developed in 2011 at a two-day conference on team-based competencies sponsored by the Health Resources and Services Administration (HRSA), the Josiah Macy Jr. Foundation, the Robert Wood Johnson Foundation (RWJF), and the ABIM Foundation in collaboration with the Interprofessional Education Collaborative (IPEC).

Models of Team-Based Care

Various models of team-based care are evolving, both in primary and specialty care. Teams are being developed in home health, palliative care, hospice, and other specialty settings. In rural communities, teams may work with multiple organizations to ensure the full range of services are provided to the patient. While the focus of this module is on primary care teams, the core principles discussed in the following sections apply to all types of teams.

The most important team members in any health-care scenario are the patient, his or her family members, caregivers, and community.

Most health-care teams are either *multidisciplinary* or *interdisciplinary*.

- Multidisciplinary teams generally involve a primary care provider and one or more specialists; they may be formed to address specific conditions or populations. For instance, a diabetes-focused team may include a primary care physician or nurse practitioner, certified diabetes educator, clinical pharmacist, community health worker, community paramedic, and dietitian, with referrals to specialists made as needed (e.g. endocrinologist, cardiologist, or orthopedic specialist). In oncology care, multidisciplinary teams provide a range of services, including chemotherapy, radiation, surgery, and palliative care.
- Interdisciplinary teams, which include practitioners from different professions, address the needs of a common patient population and share patient care goals. Team members perform complementary tasks and rely on each other to ensure the full range of health services are delivered to the patient.

Teamwork has long been a hallmark of health care, both formally and informally (Bodenheimer, 2014). Hospitals and health systems host both specialist and generalist teams. Many specialty areas have developed team-based approaches that involve specified workflows and clearly defined roles for health-care professionals. For instance, a cancer patient might receive care from an oncologist, radiologist, surgeon, and palliative care expert along with specially trained nurses, dieticians, and technicians, and other professionals. In the operating theater, the surgeon functions with support of a team that includes an anesthesiologist, operating-room technician and nurse, and others. These models continue to evolve, with increasing emphasis on multidisciplinary teams (Fennell et al, 2010). In these settings, each team member functions in a specific way, with workflows, roles, and responsibilities clearly delineated.

In the acute-care setting, generalist teams may need to be more responsive and flexible in their approaches. For instance, an acute-care generalist team might help a person who frequently visits the emergency room to establish a primary care home, enroll in health coverage, gain access to other financial supports and social services, and access post-emergency specialty care (for instance, orthopedic surgery and physical therapy for a broken bone).

Processes such as these depend on a strong recognition and referral system and clear communications across teams that include emergency medical services (EMS), emergency room personnel including administrative personnel, nurses, and physicians, and discharge planners. Community health workers often play a key role in helping patients develop relationships with primary care providers after discharge from an emergency room.

In the primary care setting, workflows are not so distinctly defined – because patients and their issues are not so distinctly defined (Bodenheimer, 2014). Only in recent years has the development of care teams in the primary care setting been formalized, researched, and theorized. This work has demonstrated that high-functioning team-based care is the most efficient and effective way to deliver quality, patient-centered care in the primary care setting (Baker et al, 2005; Mitchell et al, 2012; Scholl et al, 2014; Sinsky et al, 2013).

Effective models of team-based care generally involve a core primary care team in concert with a broader array of health professionals. The core primary care team generally includes one or two core providers, a nurse, one or more medical assistants, administrative personnel, and/or lay people such as health coaches or community health workers. This core team may be supported by additional health professionals such as nurses in care coordination roles, pharmacists, physical or occupational therapists, and behavioral health providers.

Larger primary care practices, such as federally qualified health centers (FQHCs), may be able to develop robust primary care teams. Smaller practices and rural health clinics may not have the resources to employ a wide array of professionals – or health workforce shortages may simply mean that professionals are not available in the communities they serve. Some rural providers have turned to contractual agreements to help to fill these gaps, while others have focused on providing additional training to existing personnel.

The "Teamlet" Model of Primary Care

Bodenheimer and Laing (2007) propose that small practices adopt a "teamlet" model of primary care, in which a clinician partners with one or two "health coaches." Health coaches can come from a variety of backgrounds and may be medical assistants, community health workers, licensed practical or vocational nurses, registered nurses, or health educators – "whoever is available and willing to undertake a new job" (p. 458). This model is easily adaptable to small clinics and rural settings.

In "teamlet" model, the smaller, flexible team of clinician and health coach(es) treats each patient in a specific sequence of care. A typical patient encounter would progress as follows:

Previsit: The health coach conducts the previsit, taking on routine tasks and ordering routine studies, thus improving chronic disease and prevention process measures.

Huddle: The clinician and health coach "huddle" to discuss the clinical goals for the encounter

Agenda setting: The health coach works with the patient to set the agenda for the visit, explaining the clinician's agenda items and allowing the patient to express his or her goals for the visit.

Medication reconciliation: The health coach initiates medication reconciliation.

Order routine services: The health coach orders routine chronic disease and preventive services, using standing orders or protocols as guidelines. They are only ordered after the coach explains them to the patient and the patient agrees.

History taking: The health coach may take and record the patient's history, guided by specific questionnaires tailored to each common sign or symptom.

Visit: The clinician enters the room after the pre-visit is completed, accompanied by the health coach.
During the clinician's visit with the patient, the health coach acts as scribe and assistant, allowing the physician to focus on cognitive work and relationship-building instead of the busy work of data entry, ordering tests, and writing prescriptions.

Post-visit: After the clinician leaves the room, the health coach remains in or returns to the room and conducts a post-visit follow-up conversation. The goals are to ensure the patient understands the advice given by the clinician (Bodenheimer recommends using a "closed loop" technique, in which the patient summarizes the advice) and to engage the patient in active self-management of the condition. There are four steps to the post-visit:

Soliciting patient concerns: The coach asks the patient whether there is anything he or she would like to talk about, thus adopting a patient-centered approach.

Closing the loop: The coach asks the patient to repeat back each item of advice given during the visit.

Goal setting: The patient and health coach work together to set goals and develop an action plan that includes diet, physical activity, medication management, or other behavioral and social aspects of the patient's life.

Navigating the system: The coach ensures the patient is able to navigate the health system to take the agreed-upon steps.

Between visits: Patients receive support from the health coach between office visits via telephone and email contacts. The coach is also available to the patient via telephone and acts as liaison between the patient and clinician.

Developing a Primary Care Team

The shift to a team-based care approach is often a disruptive and difficult process for organizations and staff. The process requires significant redesign of work flows, clinician and staff roles, work spaces, payment structures, and more. Job descriptions may have to be revised and policies rewritten to accommodate the team-based emphasis on care. Most important, however, is a need for a change in culture.

Step 1: *Foster a Team-Based Culture*

Results from The Primary Care Team: Learning from Effective Ambulatory Practices (LEAP) suggest that the first step in medical team-building is to identify leaders and start fostering a team-based culture. The LEAP project aims to make primary care more accessible and effective by identifying practices that maximize the services of the primary care workforce (Improving Chronic Illness Care, 2014). Important cultural changes include "flattening the hierarchy" and giving all team members a voice in discussions. Performance information and credit (such as incentive payments) should be shared among all members.

LEAP researchers cite four other practices necessary for fostering a team-based culture:

- *Leadership.* Formal and informal practice leaders should repeatedly voice clear and strong support for team-based care and consistently demonstrate their support through their actions.
- *Resources.* The organization must dedicate resources to team-building exercises. These exercises can help to foster trust and coordination of duties.
- *Co-location.* Core team members should work in close proximity to each other. Organizations with high-functioning teams often develop team rooms spaces, where providers and core team staff could chart, telephone, email, and communicate with each other.
- *Daily huddles.* Encourage teams to schedule daily huddles and meetings where they can work on problems together and plan out the work.

Step 2: *Determine who will be on the team, and what their roles will be.*

Duties that do not have to be performed by physicians can be referred to other team members, allowing the physician to see more patients. The HSO must establish protocols for these expanded roles and ensure that all staff are well trained and competent in their new responsibilities.

Suggestions for expanding or shifting roles from the Primary Care Team LEAP project include the following:

- *Physicians and other clinicians:* Physicians and other clinicians share responsibilities for their patients by empowering other team members to provide significant amounts chronic and preventive care. By distributing patient care responsibilities to other team members, the physicians and clinicians can see more patients and more effectively use their expertise to manage complex patients.
- *Medical Assistant (MA):* Of all the roles in the health workplace, that of the MA is the most profoundly changed. The LEAP project suggests multiple new responsibilities for MAs: helping with pre-visit planning; answering phones, triaging calls, and generally serving as a primary point of contact for patients; reconciling medications; scribing for providers; conducting patient outreach; health coaching and motivational interviewing; patient education; participating in quality improvement work; and performing injections, tests, and procedures (as allowed by their license)—including EKGs, blood tests, spirometry, and others.
- *Registered Nurses (RNs):* Registered Nurses must be able to use their clinical skills and function autonomously. Roles may include providing complex case management, acting as team leaders, sharing visits with providers, offering specialized services (e.g. obstetrics, diabetes, or cardiovascular support programs), and providing independent visits and medication titration by protocol.
- *Lay people:* Lay people – those without specific health-care training and resulting licensure or certification – play an important role in team-based care. Front-office staff can help

with prior authorization processes, as well as calling or emailing patients who are overdue for preventive screenings, lab tests, or other procedure. Specialized non-clinical staff can help with quality improvement, train staff and patients in best use of electronic health records, and develop other infrastructure. Lay health workers (e.g. community health workers) can also provide culturally appropriate health coaching to individuals or groups, help patients navigate the health system, and generally act as liaisons to their communities.

- *Clinical pharmacists:* Clinical pharmacist bring in-depth knowledge of medication dosing, side effects, and efficacy. Including a clinical pharmacist on the care team is one of the most effective ways to prevent adverse drug events. Clinical pharmacists can participate in team huddles, panel management, and problem-solving efforts. In the high-functioning team, the clinical pharmacist is available for warm handoffs and works with patients over time to solve problems, assist with medication adherence and management, and address concerns. The pharmacist works closely with the primary care provider to answer medication questions and address medication safety and drug interaction issues.
- *Behavioral health providers:* Integration of behavioral health into primary care is essential to the provision of patient-centered, effective care. In the team-based model of care, the behavioral health specialist should be located with or near the primary care team and available for warm hand-offs. The provider focuses on short-term therapy, but mechanisms should be in place for referrals to specialists when needed, as well as communication with other team members.
- *Patients and family members:* Instead of being perceived as solely the recipient of care, patients are understood to be full participants in their own care. Family members may be caregivers, support, help to understand and education. Family and friends may provide intensive and even skilled support – for instance assistance with the activities of daily living intensive support for medication management, changing dietary and physical activity patterns to support

These are only some examples of potential roles that members of the core primary care team may play. Other professionals such as dietitians, dentists, dental assistants, respiratory, physical, and occupational therapists, and certified nursing assistants can support the core team when needed. Increasingly, emergency medical technicians are taking on expanded roles in and out of clinics, providing yet another skillset to the health-care team.

Step 3: *Provide Training in Teamwork-Related Competencies*

Effective teams do two important things. First, they recognize patients and families as central team members. Second, they foster teamwork through training, teambuilding, and establishing relationships between individuals.

Health service organizations must provide ample opportunities for training in teamwork, as well as encouraging staff to develop, practice, and enhance these skills.

As Marlowe, Manusov, and Teasley (2012) observe, "Efforts to deliver integrated care succeed or fail based on team relationships – not solely on workflow and processes" (p 19). In other words, it is not enough to staff a team, create processes and workflows, and track outcomes. Although these are all important components of team-based care, they miss the most essential element: people who are skillful at working in a team and building relationships.

Health-care professionals' ability to work effectively in teams is not a given. Few health-care workers in any discipline receive specific training in teamwork itself. A 2005 study by the Agency for Healthcare Research and Quality (AHRQ) showed an improvement in patient safety and a reduction in medical errors with team training. Study authors concluded that for teams to be effective, members must be willing to collaborate toward a shared goal and have strong communications skills. In addition, sufficient organizational resources must be available to sustain the team's work.

The AHRQ research group identified three types of competencies that were essential to effective teamwork:

1. Teamwork-related *knowledge*: Understanding the skills and behaviors needed for an effective team and how they are manifested in a team setting.
2. Teamwork-related *skills*: the learned capacity to interact with other team members.
3. Teamwork-related *attitudes*: Internal states that influence a team member's decision to act in a particular way.

Sustaining Effective Teams

A growing body of research is beginning to elucidate factors that help create and sustain high-functioning teams in clinical settings. Yet the majority of these investigations have been performed in urban settings with large populations and a broader array of resources than are available in most rural communities. Thus, there is a gap in knowledge about the specific challenges and advantages of health-care team-building in rural and frontier settings. Still, this research does illuminate several common elements shared by high-functioning health-care teams across urban, suburban, rural, and frontier settings.

Xyrichis and Lowton (2009) found that team performance was affected primarily by team structure and team processes. Within these two components, they identified six categories of function: team premises; team size and composition; organizational support; team meetings; clear goals and objectives; and audit. Likewise, the IOM working group found that high-functioning teams shared standardization of workflows, assigned roles and responsibilities, communication between team members, and ongoing support and training (Mitchell et al, 2012).

Evaluation and monitoring of teams, processes, and outcomes is also essential to ensure that teams are meeting their goals and improving processes – especially the core goal of providing better care (Marlowe, Manusov, & Teasley, 2012; Mitchell et al, 2012; Primary Care Group, 2015). Health service organizations should initiate pilot projects and evaluate results carefully before implementing the model organization-wide (Primary Care Group, 2015).

Similarly, Bodenheimer et al (2014) found that teams were more effective when they had identified measurable outcomes, had clinical and administrative systems in place, practiced division of labor, trained all team members, used effective communication, and had clear leadership. Scholl et al (2014) noted that effective patient-centered teams "are characterized by their ability to communicate, respect and trust among team members, mutually shared values, goals and visions, information sharing, constructive feedback, more equal distribution of responsibility, accountability, and power and awareness of one's own abilities and priorities" (p 4).

The IOM taskforce (Mitchell et al, 2012) summarizes much of this work and identifies a set of essential values and core principles that underlie effective team-based health care, as well as organizational steps to support those principles. The taskforce identified the following essential values of effective teams:

- *Honesty.* Teams communicate effectively and are transparent about aims, decisions, uncertainty, and mistakes.
- *Discipline.* Roles and responsibilities are carried out, even when it is inconvenient or uncomfortable.
- *Creativity.* Team members approach problems creatively, focusing on finding solutions.
- *Humility.* Team members recognize that each person has a specific set of skills and do not believe one type of training is better than another. Team members rely on each other, no matter their place in the team hierarchy.
- *Curiosity.* Team members seek continuous improvement for themselves and their team by reviewing and reflecting on events of their daily work.

These values are supported by a set of core principles that underlie the everyday functioning of the team. These core principles are:

- *Shared goals.* The team—including the patient and, where appropriate, family members or other support persons—works to establish shared goals that reflect patient and family priorities, and can be clearly articulated, understood, and supported by all team members.

- *Clear roles.* There are clear expectations for each team member's functions, responsibilities, and accountabilities, which optimize the team's efficiency and often make it possible for the team to take advantage of division of labor, thereby accomplishing more than the sum of its parts
- *Mutual trust.* Team members earn each other's trust, creating strong norms of reciprocity and greater opportunities for shared achievement.
- *Effective communication.* The team prioritizes and continuously refines its communication skills. It has consistent channels for candid and complete communications, which are accessed and used by all team members across all settings.
- *Measurable processes and outcomes.* The team agrees on and implements reliable and timely feedback on successes and failures in both the functioning of the team and achievement of the team's goals. These are used to track and improve performance immediately and over time. (Mitchell et al, 2012, p.)

Organizations must support these processes and competencies with infrastructure, policies, and procedures. In rural communities, organizations may need to create cooperative agreements or structures, such as coalitions or shared entities, to develop the full array of resources for team member training and support.

Health service organizations need to take specific steps to facilitate the work of teams:

- Policies and procedures should be put into place to support the exchange of information between and among team members. This support should include training, time, and physical space.
  - One commonly used technique is the "morning huddle," a specific time at the beginning of each workday when the team gathers and reviews the patients for the day, discussing each patient's specific needs and issues. Extra time should be allotted for the formation of new teams – for example, when a new patient/family begins to work with the team.
  - Work spaces should be shared by care teams, rather than by profession (e.g. nurses sitting next to nurses, MAs sitting next to MAs, etc.) – an arrangement called co-location. Co-location allows all members of a care team to work side by side, making communication easier and quicker and fostering the exchange of ideas, observations, and alerts.
- The HSO should provide the necessary infrastructure, time, and training for development of written and digital care plans that can be accessed and updated by all team members. All services should be entered in the electronic health record, with information shared across the team with HIPAA-compliant safeguards.
- Data-gathering and analysis tools and other resources should be provided to support teams' capacity to assess progress toward shared goals for all team members, including health-care professionals, lay staff, patients, and their families.
  - Teams should receive training in use of all tools.
  - The team leader should act as liaison with information technology staff to ensure clinical processes drive data entry and analysis processes – not the other way around.
- Policies and procedures should be developed to maximize involvement of patients and family members.

Why are Team-Based Services Important?

Team-based skills are essential in an era of complex health care delivery systems and exponential growth in medical knowledge. Nearly 2400 clinical practice guidelines are listed in the National Guideline Clearinghouse. The U.S. Preventive Services Taskforce proffers 94 recommendations, and results of more than 2500 clinical trials are published each year. Even with clinical decision aids, no single person can stay abreast of this information. Increasing recognition of the importance of social determinants of health – such as income level, physical environment, education, and access to fresh foods – suggests that clinical interventions are only part of improving health status, and experts in community and social services are needed. In addition, increasing rates of chronic disease in an aging population lead to the need for more management of disease, medication, and home-based medical equipment.

Team-based services help to maximize efficiency. Physicians do not have enough time to provide care to their patients, especially in the framework of

the 15 minute office visit. With large patient panels and limited time, they are often unable to provide counseling, follow-up, or take a detailed history and patient interview. For instance, to provide all recommended preventive care to a panel of 2,500 patients would require 7.4 hours per working day; adequately managing chronic conditions would require an additional 10.6 hours (Yarnall, et al, 2003; Ostbye, et al, 2005).

When some duties are transferred to other trained caregivers, the physician can focus on using his expertise during the visit, while patients receive more thorough services. The physician's time is freed up to see other patients, and the patient receives health care of a breadth and depth that is impossible for a single provider to offer.

Team-based care can help providers deliver culturally competent care. No single person can be culturally competent with every single patient. Cultures may span gender, sexual preference, age, socioeconomic class, ethnicity, and more. In a team-based approach, one or more team members can address cultural and linguistic issues, translating not only from clinical staff to the patient, but from the patient and family to the clinical team.

By coordinating efforts across providers and disciplines, team-based care helps to eliminate silos of medical care. Silos of care have been shown to lead to poorer outcomes for patients, as well as frustration and burnout for health workers. Lancaster and colleagues (2015) found that physicians, nurses, and unlicensed allied health providers often work separately, with little communication. They also saw clear divisions and hierarchies in roles that could negatively affect patient care. Physicians in their study saw themselves as the primary decision makers regarding patient care. While physicians often acknowledged the importance of nurses' knowledge and expertise, Lancaster found that nurses did not extend the same respect to unlicensed assistive personnel. The research team characterized the relationship between nurses and unlicensed personnel as hierarchical and subservient.

In Lancaster and colleagues' study, unlicensed allied health providers were rarely included in any type of meaningful patient discussion. Yet these personnel are most likely to spend more time with patients and to be aware of the day-to-day challenges that patients face. For instance, the certified nursing assistant who bathes a patient may find skin lesions, indicators of abuse, or other issues that must be addressed. If the CNA's perspective is not included in a team huddle, those important issues may be missed in the patient's treatment plan. Without appropriate levels of communication and trust between all team members, patients do not receive the best case possible.

Team-based care appears to improve not only patient satisfaction and outcomes (Scholl et al, 2014) but work satisfaction for health-care providers (Sinsky et al, 2013). In addition, evidence is building that team-based approaches contribute to more efficient, cost-effective care. Team-based care in the primary care setting has been shown to increase productivity, enhance efficiency, and create a more satisfying work environment, in addition to increasing provider capacity to serve patients (Bodenheimer, 2014; Ladden et al, 2013; Scholl et al, 2014; Sinsky et al, 2013; Willard-Grace et al, 2014).

Challenges to Implementing Team-Based Services

As Bodenheimer and Laing (2007) observe, "all primary care practices have a team" (p 457). They offer the example of a physician working in a small private practice, who relies on a medical assistant, nurse, and administrative staff. Although they may not think of themselves as a "team," they work together to provide patients the services they need when they need them. But the intentional development, training, and maintenance of specific core primary care teams is a relatively new development in health care and can be extremely challenging to implement.

The IOM report identified four major challenges to building high-functioning health-care teams: 1) lack of experience and expertise, 2) cultural silos, 3) deficient infrastructure, and 4) inadequate or absent reimbursement (pp 3-4).

1. *Lack of experience and expertise in teamwork:* Traditionally, physician, nurses, and other health-care workers work independently, rarely speaking to each other, with the physician perceived as the primary decision maker (Lancaster et al, 2015). For team-based care to be effective, team members need the skills to work collaboratively, drawing

on each other's strengths and filling in knowledge and skills gaps. Yet health-care professionals receive little or no training in effective teamwork and communications skills. These skills are rarely taught in medical schools, nursing programs, or other health-professional training programs.

2. *Cultural silos:* Effective, high-functioning team-based care requires a rethinking of the traditional medical model, in which the provider in responsible for all care. To develop a team-based care framework, HSOs must explicitly support the development of trust, respect, and value between team members, accept new roles and processes, and think of patients as care partners (Group Health Research Institute, 2014). Likewise, patients may expect care to be based on a hierarchical medical model in which the physician is the only provider that "counts."
3. *Deficient infrastructure*: Teams require physical infrastructure, including the physical space to train and co-locate team members, information technology for data-gathering, analysis, information sharing, and evaluation.
4. *Inadequate or absent reimbursement*: Financial viability poses another significant challenge to the development and use of primary care teams. In addition to increased staff time, developing a team may require significant investment in training and/or hiring staff, infrastructure (e.g. information technology), and an ongoing commitment to training and resources for the teams. Other implementation costs include unbillable hours (e.g. team meeting times, services of unlicensed staff), additional patient encounters, and data gathering and analysis. Team-based services are more intensive and require more people, yet in rural areas, patient panels may not be large enough to sustain salaries for a robust team. Current emphasis on value-based, bundled payments makes team-based care a more attractive model financially, but many services may not be reimbursable under traditional fee-for-service models. In addition, as some staff members assume more responsibilities – for instance, an employee who adds health coaching duties to his medical assistant role – they should receive a concomitant increase in pay. Yet there is no corresponding certification or licensure that allows reimbursement by public or private payer sources.

Examples of How HSOs have Increased Capacity and Resulting Outcomes

Department of Veteran's Affairs

Patient-Aligned Care Teams (PACTs)

http://www.va.gov/HEALTH/services/primarycare/docs/AppletonFinal.pdf

The Department of Veteran Affairs (VA) began a national PCMH implementation in 2010, which it dubbed "Patient-Aligned Care Teams" (PACTs). PACTs have been formed at Veterans Administration health centers across the nation, in both rural and urban environments. Implementation in Appleton, Wisconsin began with system redesign. The team created a "patient flow process" tool to track the flow of patients through the system. They then developed a detailed COMPASS "Teamlet Goals" plan, which clarified the roles and responsibilities of teamlet members. Next was the creation of a plan for capturing additional phone encounter time for staff, and finally, the creation of a query tool panel management report. After addressing barriers, the clinics saw dramatic increases in efficiency of primary care providers – for instance, from 1986 patient encounters in 2011 (pre-rollout) for a full-time physician to 5850 encounters in 2013, the second year of the rollout.

Lenoir County, North Carolina

The Heart Healthy Lenoir Program

http://hearthealthylenoir.com

The goal of the Heart-Healthy Lenoir Project is to create long-term approaches to reduce the burden of heart disease in rural Lenoir County, North Carolina. It is a community-based research project that encompasses all aspects of heart disease burden, from prevention to treatment. Collaborators include several Lenoir County agencies and community members, UNC at Chapel Hill, and ECU Departments of Family Medicine and Public Health. Phase 1 of the project consisted of gathering data from the community. Phase 2, **Practice-Based Enhanced Care Management for Hypertension**, focuses on 1) training pri-

mary care providers regarding improved hypertension care and 2) pairing each client with a health coach who uses strategic techniques to help clients set goals and better manage their diseases. Collaboration is encouraged between the client and the primary care provider. The study, which was still underway in May 2015, is showing positive early results. Notably, health coaching appears to play a key role in motivating patients and improving outcomes (Tilman, 2013).

How to Pay for Organization-Based Services

Few direct payment sources are available for team-based services. However, team-based care is a core response to policies and payment models that are exerting pressure on HSOs to improve the overall quality and value of care. Team-based care models have been shown to improve efficiencies, cost-savings at the population level, and higher revenues due to an increase in capacity to see patients (Mitchell, 2012).

Various incentive programs from the Centers for Medicare and Medicaid Services (CMS), as well as funding opportunities for innovation in primary care from CMS, HRSA, and other public and private funders, offer financial incentives to develop and implement team-based approaches to primary care. Increased efficiencies in team-based care, in addition to a shift to value-based payment models and policies including outcomes-based incentive payments, may contribute to long-term sustainability of the team approach to care.

CMS continues to test innovative payment models that focus on value, quality, and cost-effectiveness, all hallmarks of the team-based model. In February 2015, CMS issued a request for information for its Advanced Primary Care Initiative, calling for input to develop next generation models for advanced primary care that seek to improve further the delivery of patient-centered care and population health.

Examples of potential funding opportunities and policies that will affect reimbursement for team-based services include:

- *Medicaid Innovation Accelerator Program (IAP)*. In July 2014, CMS launched the IAP with the goal of improving health and health care for Medicaid beneficiaries by supporting states' efforts to accelerate new payment and service delivery reforms.
- *Medicare Shared Savings Program*. The CMS Medicare Share Savings program is designed to help doctors, hospitals, and other health care providers better coordinate care for Medicare patients through Accountable Care Organizations (ACOs). ACOs create incentives for health-care providers to work together to treat an Medicare fee-for-service beneficiaries across care settings – including doctor's offices, hospitals, and long-term care facilities. The Medicare Shared Savings Program (Shared Savings Program) will reward ACOs that lower their growth in health-care costs while meeting performance standards on quality of care and putting patients first. An ACO must serve at least 5,000 enrollees.
- *Health Homes*. The Affordable Care Act of 2010, Section 2703, created an optional Medicaid State Plan benefit for states to establish Health Homes to coordinate care for people with Medicaid who have chronic conditions by adding Section 1945 of the Social Security Act. States have the flexibility to determine who is eligible to provide services. CMS expects Health Home providers to take a "whole person" approach to care, integrating and coordinating all primary, acute, behavioral health, and long-term services and supports to treat the whole person.
- HRSA's Family/Patient-Centered Medical Home Program offers discretionary grants and contracts to support implementation of the medical home at federal, state, and community levels. Development of a core primary care team is an essential element of the medical home model.
- *HRSA Patient Centered Medical Home Supplemental Funding*. Organizations that achieved PCMH status by July 2014 are eligible to receive the PCMH supplemental base award, contingent on continued PCMH recognition.
- *Substance Abuse and Mental Health Services Administration (SAMSHA)*. SAMHSA offers multiple funding opportunities for the integration of behavioral health services into the primary care setting
- *Private health insurers.* Private health insurers are experimenting with payment models that focus on coordinated, team-based care arrangement. Payment bundles, as well as value-based incentives, may be included in private plans.

- *Private funders.* Private foundations may be sources of funding for start-up costs or other expenses associated with developing and sustaining health-care teams. .

Health-service organizations should also check with their state Medicaid office, as reimbursement regulations may vary from state to state. Some states, such as Pennsylvania, have proactively sought out Medicaid funding for team-based care initiatives.

Examples of things that SORHs can do to Increase Capacity in Organization-Based Services

State offices of rural health play an essential role in developing HSOs' capacity to deliver integrated, effective, team-based care. Actions they can take include the following:

- Facilitate training sessions in teamwork and collaboration, face-to-face as well as through webinars and other distance-learning tools.
- Provide consultation and develop and disseminate tools to address areas such as communication among team members.
- Provide consultation in how to use electronic health records (EHRs) to determine and document patient need and follow-through.
- Review job descriptions, policies, and organizational charts so they reflect integrated care.
- Provide technical assistance, either directly or contractually, for data collection and analysis, program evaluation, and grant writing.
- Help rural providers develop partnerships to share team-building resources, including staffing, information technology infrastructure, trainings in team-building, data collection and analysis, evaluation, and funding.
- Sponsor a conference on team-based care. For example, the Wisconsin Council on Medical Education and Workforce partnered with multiple other Wisconsin-based organizations including the Rural Wisconsin Health Cooperative, to hold *Building a Culture for Patient-Centered Team Based Care* in November 2014. The full-day conference showcased successful health-care teams in Wisconsin and promoted dialogue and discussion about how cooperation and integration among health professionals lead to continuous improvement of patient care.
- Facilitate networking between rural primary care providers, specialists, critical access hospitals, and other HSOs to share information and participate, individually or collectively, in state and federal team-building and value-based initiatives.

Tools

American Academy of Family Physicians

Family Practice Management Work Relationship Assessment Form
http://www.aafp.org/fpm/2006/0100/fpm20060100p47-rt1.pdf
This worksheet allows clinicians and other team members to assess their practices in seven critical areas for team success: trust, diversity, mindfulness, interrelatedness, respect, varied interaction, and effective communication.

Robert Wood Johnson Foundation

Improving Primary Care: A guide to better care through teamwork
http://www.improvingprimarycare.org
An in-depth guide to development and implementation of teams in the primary care setting, guided by research into the effectiveness of 31 primary care centers that have used the team-based approach.

Agency for Healthcare Research and Quality

TeamSTEPPS
http://teamstepps.ahrq.gov/
TeamSTEPPS is teamwork system designed for health professionals. It was developed by the Department of Defense's Patient Safety Program in collaboration with the Agency for Healthcare Research and Quality (AHRQ). TeamSTEPPS uses a three-phase process that includes 1) A pre-training assessment for site readiness; 2) Training for onsite trainers and health care staff; and 3) Implementation and sustainment. Materials are available both online and in print (at cost).

Links and Resources

Agency for Healthcare Research and Quality (AHRQ)
Patient-Centered Medical Home Resource Center
http://pcmh.ahrq.gov/
The AHRQ PCMH Resource Center offers a host of materials, including webinars, research, case studies, and how-to guides for developing and running a primary care practice facilitation program. The most comprehensive materials on the PCMH available.

American Academy of Family Physicians
Patient-Centered Medical Home
http://www.aafp.org/practice-management/transformation/pcmh.html#Parsys22487
The AAFP's virtual library of resources on patient-centered medical home includes information on building comprehensive health-care teams.

Free Management Library
All about Team-Building
http://managementhelp.org/groups/team-building.htm
A guide to classic team-building processes in the workplace.

Institute for Health Improvement (IHI).
Huddles
http://www.ihi.org/resources/Pages/Tools/Huddles.aspx
This resource on huddles – quick, frequent team briefings that substitute for the traditional one-hour meeting – provides a comprehensive rationale and guide for implementing huddles in the team-based care environment.

National Center for Medical Home Implementation (NCMHI)
http://www.medicalhomeinfo.org
The mission of the NCMHI is to work in cooperation with federal agencies, particularly the MCHB, and other partners and stakeholders to ensure that all children and youth, including children with special needs, have access to a medical home. The NCMI provides resources, advocacy materials, technical assistance, and tools to physicians, families, and other medical and non-medical clinicians who care for children.

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Module 7
Quality

"The U.S. health care delivery system does not provide consistent, high-quality medical care to all people. Americans should be able to count on receiving care that meets their needs and is based on the best scientific knowledge--yet there is strong evidence that this frequently is not the case. Health care harms patients too frequently and routinely fails to deliver its potential benefits. Indeed, between the health care that we now have and the health care that we could have lies not just a gap, but a chasm."

Institute of Medicine (2001)

What is Quality in Health Care?

Quality health care helps healthy people stay healthy, cures people who are acutely ill, and supports people with chronic illnesses to live as fulfilling and long a life as possible (Bodenheimer & Grumbach, 2006). High-quality health care is the foundation for the Institute for Healthcare Improvement's framework optimizing health-system performance, the now widely accepted "Triple Aim." The Triple Aim consists of three dimensions:

1. Improving the patient experience of care (including quality and satisfaction);
2. Improving the health of populations; and
3. Reducing the per capita cost of health care

In the realm of health care, "quality" is not easy to define. The U.S. Agency for Healthcare Research and Quality (AHRQ; 2012) defines quality health care as "doing the right thing at the right time in the right way for the right person and having the best results possible." Similarly, the Institute of Medicine (IOM; 2001), the nation's leading non-partisan health think tank, defines quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."

While these definitions focus on clinical and technical proficiencies, other health systems professionals insist that any definition of health-care quality must include overall performance of health-care systems, as well as clinical processes. Patients' perceptions of quality may be influenced as much by amenities (e.g. food, flat-screen televisions in hospital rooms, physical surroundings) and providers' attitudes as much as by skills, knowledge, safety, and efficiency.

Ultimately, however, high-quality health care is about people – the people who provide the care, the people who receive the care, and the people who organize the systems in which the care is provided. As Bodenheimer and Grumbach (2006) argue, quality health-care systems are built out of five distinct components:

- *Access to care.* To receive high-quality care, people must first have access to that care.
- *Adequate scientific knowledge.* Evidence for the effectiveness and safety of interventions must exist, including evidence that a particular intervention will help a particular patient.
- *Competent health-care providers.* Health-care providers must have the diagnostic, technical, intellectual, and communication skills to provide quality care.

- *Separation of financial and clinical decisions.* Payment that is tied to clinical decisions creates poor incentives for provision of quality care. For instance, fee-for-service payment methods encourage overuse; conversely, incentive payments to reduce inappropriate use of emergency rooms and expensive diagnostic tests may lead to missed diagnoses.
- *Organization of health-care institutions to maximize quality.* Even the most skilled and competent provider cannot deliver high-quality care without a well-organized, supportive system in which to work. Health-services organizations must be adequately staffed, have appropriate equipment, medications, disposable medical supplies, and other necessities, and minimize waste, rework, complexity, and error (Berwick et al, 1998).

All too often, health care in the United States does not meet these quality criteria. In 2001, the Institute of Medicine (IOM) published a landmark report that detailed just how far the United States is from consistently delivering high-quality care, titled *Crossing the Quality Chasm*. The report illuminated significant gaps in health-care safety and quality in the United States. Study authors highlighted the need for improvement in six specific areas and argued that health-care systems should provide care that is:

- *Safe.* People should not be injured by the care that is intended to help them.
- *Effective.* Services should be based on scientific knowledge and provided to all who could benefit, while and refraining from providing services to those not likely to benefit.
- *Patient-centered.* Care must be respectful of and responsive to individual patient preferences, needs, and values, and patient values should guide all clinical decisions.
- *Timely.* Waits and sometimes harmful delays must be reduced for both those who receive and those who give care.
- *Efficient.* Avoiding waste, including waste of equipment, supplies, ideas, and energy.
- *Equitable.* Care must not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

These six focus areas have provided the framework for recent efforts to improve health-care quality, guiding development of measures to track and assess quality.

Improving Health Care Quality

Quality improvement is a formal, systematic approach to improving performance. Traditional quality improvement models focus on identifying benchmarks, examining systems, and testing potential fixes. Several different models are commonly used, including Six Sigma, Total Quality Management (TQM), Focus, Analyze, Develop, Execute, Evaluate (FADE), and Plan, Do, Study, Act (PDSA). Many medical device and equipment manufacturers and some large health-services organization have adopted ISO 9000 standards.

All of these models have in common the two fundamental steps of quality improvement:

1. Assess where you are
2. Find ways to make things better

Quality improvement replaces the old model of quality *assurance*, which was a reactive approach to problem-solving that often involved assigning fault to one or more people after something went wrong. In contrast, quality improvement focuses on improvement, avoids blame, and seeks to create systems that prevent errors from happening.

While many quality improvement efforts have been undertaken at the level of the individual organization, more recent programs have focused on a wider ecology of quality in health care. Bataldan and Davidoff (2007) articulated this broader focus when they proposed that quality improvement should be defined as "the combined and unceasing efforts of everyone—healthcare professionals, patients and their families, researchers, payers, planners and educators—to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning)." They argued that making changes should be "an intrinsic part of everyone's job, every day, in all parts of the system," an approach that requires a significant rethinking of the "work of healthcare."

National efforts to improve care quality have been informed by this integrated approach. In 2011 the Agency for Healthcare Research and Quality (AHRQ) first published the National Quality Strategy, which

was called for by the Patient Protection and Affordable Care Act of 2010 ("the ACA"). The strategy, which is updated every year, is based on input from stakeholders including clinicians, patients, administrators, and public health experts. It is designed to promote quality health care that is driven by the needs of patients, families, and communities. It calls for the use of evidence-based medicine, public health, and health-care delivery.

The National Quality Strategy was developed with three aims in mind:

- *Better Care.* Improve the overall quality of health care by making it more patient-centered, reliable, accessible, and safe.
- *Healthy People/Healthy Communities.* Improve the health of the U.S. population by supporting proven interventions to address behavioral, social and, environmental determinants of health in addition to delivering higher-quality care.
- *Affordable Care.* Reduce the cost of quality health care for individuals, families, employers, and government.

To advance these aims, the strategy calls for a national focus on six priorities, which, like the IOM report (2001), emphasize safe, timely, effective, patient-centered, efficient, timely, equitable care:

- Making care safer by reducing harm caused in the delivery of care.
- Ensuring that each person and family are engaged as partners in their care.
- Promoting effective communication and coordination of care.
- Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease.
- Working with communities to promote wide use of best practices to enable healthy living.
- Making quality care more affordable for individuals, families, employers, and governments by developing and spreading new health-care delivery models.

"Over time, our goal is to ensure that all patients receive the right care, at the right time, in the right setting, every time. The United States leads the world in discovering new approaches to prevent, diagnose, manage, and cure illness. Our institutions educate and train exceptional doctors, nurses, and other health care professionals. Yet Americans don't consistently receive a high level of care. Achieving optimal results every time requires an unyielding focus on eliminating patient harms from health care, reducing waste, and applying creativity and innovation to how care is delivered."

National Strategy for Quality Improvement in Health Care, March, 2011

Quality, Cost, and Value

Many health-care quality improvement efforts have been based in expensive quality agendas, requiring investment in infrastructure, equipment, and other resources. Yet health-care quality in the United States remains, for the most part, unreliable and uneven.

In today's challenging economic environment, health-care leaders are facing financial pressures that often jeopardize quality agendas. They are being asked to improve *value* – that is, to increase quality *while* reducing costs. CMS and other payers are experimenting with innovative payment models, including bundled payments, pay-for-performance, and value-based purchasing, that reward efficiency and quality while discouraging overuse. Overall, policymakers are seeking a shift "from volume to value."

Health-care leaders are approaching this challenge by adopting strategies developed by manufacturing industries to eliminate waste, harm, and variation, such as Lean (see Chapter 10, Management.). Organizations such as the Institute for Healthcare Improvement (IHI) and the Lown Institute are key players in national efforts to move from "volume to value" and to assure that efforts to reduce costs and optimize workflow are driven by better clinical and operational quality.

Assessing Health-Care Quality

A widely accepted framework for assessing health-care quality was developed by Avedis Donabedian, a public health researcher at the University of Michigan model, in his 1966 article, "Evaluating the Quality of Medical Care." In that article, Donebedian proposed that three dimensions should be analyzed to assess quality of care:

- *Structure:* How is health care organized? What are the physical and organizational characteristics of the place where health care is delivered? What stable elements make up the health-care system? Analysis of structure includes community characteristics, delivery system characteristics, provider characteristics, and population characteristics.
- *Process:* What is done? What is the nature of the interaction between patients and providers? Analysis of health-care processes includes assessing the technical, care, and interpersonal processes of health-care providers as well as assessing access to care, equity of care, and patients' adherence to medical interventions.
- *Outcomes:* What happens to the patient's health? What are the end results of health-care practices and interventions? Assessment of outcomes includes measurement of overall health status, functional status, patient satisfaction, mortality, and cost.

This basic framework, which came to be known as the "Donabedian model," has gained widespread acceptance among health services researchers and policy makers. Donabedian himself, as well as other researchers, have identified limitations to the model and suggested modifications. For instance, Coyle and Battles (2003) suggest that analyses of effectiveness of health-care structures and processes needs to take into account characteristics that exist prior to the health-care encounter (environmental factors and patient characteristics including genetics, socio-demographics, health habits, beliefs and preferences, and attitudes). The evolving model continues to provide a framework for quality measurement in health care even in a time of unprecedented change.

Quality Measures

Quality measures, as defined by the Centers for Medicare and Medicaid Services (CMS; 2015) are specific indicators that "help us measure or quantify health-care processes, outcomes, patient perceptions, and organizational structure and/or systems that are associated with the ability to provide high-quality health care and/or that relate to one or more quality goals for health care." These goals include: "effective, safe, efficient, patient-centered, equitable, and timely care," as proposed by the IOM in *Crossing the Quality Chasm*.

The development of **quality measures** is often divided into the three general areas of structure, process, and outcomes described by Donabedian. Increasingly, there is a move to standardize quality measures and to tie them to financial incentives and payment structures.

CMS Quality Measures

CMS maintains and continually develops quality measures for multiple types of providers and systems. CMS uses a standardized system, the **Measures Management System**, to develop and maintain the quality measures it uses in its wide range of accountability programs and initiatives (CMS, 2015b). Measures have been developed to for programs including the hospital quality initiative, physician quality reporting system, electronic prescribing, home health quality initiative, and the end-stage renal disease (ESRD) quality initiative.

Healthcare Effectiveness Data and Information Set (HEDIS)

HEDIS is a set of measures used by 90 percent of health plans in the United States. The tool was developed and is maintained by the National Committee for Quality Assurance (NCQA). HEDIS consists of 81 process and performance measures that span five domains of care. These measures help to assess clinical performance (sometimes called "technical quality").

Consumer Assessment of Healthcare Providers and Systems (CAHPS)

CAHPS measures, which are included in HEDIS, focus on patients' experience of receiving health care. CAHPS is a multi-year initiative of the Agency for Healthcare Research and Quality (AHRQ) in partnership with other public and private organizations. CAHPS surveys support and promote the assessment of consumers' experiences with health care. The CAHPS program has two goals:

1. Develop standardized patient questionnaires that can be used to compare results across sponsors and over time.
2. Create tools and resources that can be used to produce understandable and usable comparative information for health-care consumers, providers, and administrators.

Medicare Beneficiary Quality Improvement Project (MBQIP)

The MBQIP is a quality improvement project designed to improve quality of care provided by critical access hospitals. The MBQIP is administered under the Medicare Rural Hospital Flexibility (FLEX) program. The goal of the program is for all of the nation's 1,327 critical access hospitals to implement quality improvement initiatives to improve their patient care and operations.

Hospitals that choose to participate collect and report quality data, which are then used to drive quality improvement activities. Hospitals can examine their own data, compare their outcomes with other critical access hospitals, and partner with other similar hospitals to implement quality improvement initiatives. While MBQIP focuses on Medicare beneficiaries, all patients benefit from improved systems and attention to quality.

In all states with critical access hospitals, SORH are charged with administering the MBQIP, which is coordinated and funded by the Federal Office of Rural Health Policy.

Accreditation

Accreditation provides a framework and structure for quality assessment. During the accreditation process, HSOs must demonstrate that they meet certain standards and criteria. In essence, accreditation constitutes a "seal of approval." Most hospitals, health systems, and health plans seek accreditation, partly because CMS requires HSOs that participate in Medicare to become accredited. This includes home health agencies, hospices, and providers of durable medical equipment, prosthetics, orthotics, and supplies.

Major accrediting bodies include the following organizations:

- *Accreditation Association for Ambulatory Health Care (AAAHC).* The AAAHC provides certification options for ambulatory care centers, including ambulatory surgery centers, community health centers, medical and dental group practices, medical home practices, and managed care organizations, Indian health centers, and student health centers. It is a HRSA-contracted accreditation organization for health centers.
- *Accreditation Commission for Health Care, Inc. (ACHC).* ACHC is a national organization developed by homecare and alternate-site healthcare industry providers. It provides accreditation for these agencies.
- *The Joint Commission*. The Joint Commission, founded in 1951, is the largest and oldest standards-setting body in the United States. An independent, not-for-profit organization, the Joint Commission accredits and certifies more than 20,500 health care organizations and programs in the United States. Joint Commission accreditation and certification is the "gold standard" in the industry. Accreditation is available for multiple types of health-care organizations including ambulatory health care, behavioral health care, critical access hospitals, home care, hospital, laboratory services, and nursing care centers.
- *National Committee for Quality Assurance (NCQA).* NCQA is a private not-for-profit organization dedicated to improving health-care quality. It provides accreditation, certification, and recognition programs. Accreditation is available for health plans, provider organizations, and other organizations and users. Certification requires organizations to achieve a subset of standards and guidelines for certification and is designed for organizations that provide only specific services. Recognition programs are appropriate

for individual clinicians or practices, as well as multi-site organizations. Providers must demonstrate that they are meeting standards for health-care quality, including use of the latest clinical protocols, with the aim of delivering the right care to the right patient at the right time.

Why is Quality Important?

Overall health-care quality in the United States is far from what it could be, considering the technological and human expertise that is available. A 2009 comparison of health-care quality in the United States and other developed nations, published by the Urban Institute, demonstrated that health care in the United States is not clearly superior to that received by people in other developed countries – and in many instances, it is worse. The only generalizable differences, study authors concluded, "are in the very high costs of its health care and the share of its population that is uninsured" (Docteur & Berenson, 2009, p 10). In rural areas of the United States, the problem is often compounded by limited health-care resources, low patient volumes that contribute to provider skill degeneration, and limited expertise in quality improvement models.

Crossing the Quality Chasm (2001) identified serious lapses in health-care quality that lead to care that is ineffectual or harmful. In its entirety, the report is a scathing indictment of health-care quality. That report followed a 1999 IOM report, *To Err is Human,* which estimated that nearly 98,000 people die in U.S. hospitals each year because of medical errors. Yet even that estimate does not include the number of people who die because they are not receiving appropriate health care, including timely preventive screenings and chronic disease management. For instance, only about half of people with hypertension receive adequate treatment; their deaths are not included in most medical mortality totals.

Yet the IOM estimate may be far under the true number of people who are lethally harmed because of medical care. Study results published in 2013 in the *Journal of Patient Safety* suggest the situation may be even more dire than IOM estimates suggest. John James, a toxicologist at NASA's space science laboratory and director of Patient Safety America, estimated, based on meta-analysis of four studies that used IHIs Global Trigger Tool, that more than 400,000 premature deaths per year are associated with medical care in hospitals. In addition, his models suggest that serious harm was 10 to 20 times more common than lethal harm.

Improving quality is cost-effective. It directly reduces costs by eliminating waste and streamlining processes. Because better quality care leads to fewer medical errors and patient harms, expensive complications such as nosocomial infections are reduced. For instance, CMS estimates that from 2006 to 2012, 7,000 to 10,000 lives were saved through improved performance on inpatient hospital heart failure process measures, and 4,000 to 7,000 infections were averted through improved performance on inpatient hospital surgical process measures (CMS, 2015).

Challenges to Improving Health-Care Quality

To improve health-care quality, organizations first need to measure the level of quality they are currently providing. Yet health-care quality is difficult to measure, partly because the idea of "quality" may vary greatly depending on a person's perspective.

From a patient's perspective, high-quality health care might include amenities such as flat-screen televisions in waiting rooms and organic foods in a hospital cafeteria, extra time spent with a provider, and additional testing or interventions. Yet such amenities have little to do with the technical skills of the clinicians, nurses, and staff. From the provider's perspective, clinical skills, knowledge, and supportive processes are most important. From an administrator's perspective, quality in health care is directly linked to cost, efficiency, and outcomes. Health-care payers may perceive quality in yet another way, prioritizing value over patient experience.

Thus, developing and implementing meaningful measurements is difficult, as the experience of health care varies widely based on one's role in the health system. In addition, the evidence base for many medical procedures and interventions is minimal, often leading providers, payers, and patients to dispute the need for certain interventions. Tradi-

tional fee-for-service payment models have encouraged overuse of many procedures, screening tests, and other unnecessary interventions, often leading to harm. Even as simple a procedure as an unnecessary mammogram can cause psychological stress, lead to unnecessary biopsies and other procedures, and increase the risk of complications for unnecessary treatment.

Examples of How HSOs have Increased Capacity and Resulting Outcomes

Quality improvement efforts have led to better care for critical access hospitals, primary care practices, and other providers operating in rural and frontier settings. Two examples of the direct impact of health-care quality monitoring and improvement efforts follow:

University of Illinois, Chicago College of Medicine

The Impact of Accreditation on Critical Access Hospitals
http://dx.doi.org/10.1093/intqhc/mzp003

In 2009, a research team from the University of Illinois, Chicago College of Medicine published study results that suggest accreditation can help critical access hospitals improve the quality of care they deliver. Findings appeared in the *International Journal for Quality in Health Care*. For this cross-sectional study, the research team used the Hospital Compare database to examine critical access hospital outcome measures by Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accreditation status (accredited versus non-accredited).

The team examined secondary data from 45 U.S. states with at least one critical access hospital that submitted data to the Hospital Compare database and analyzed differences between accredited and non-accredited rural critical access hospitals on quality care indicators related to acute myocardial infarction, heart failure, pneumonia and surgical infection. Investigators found statistically significant ($P \leq 0.01$) differences between accredited and non-accredited rural critical access hospitals for 4 out of 16 hospital quality indicators. Accredited hospitals scored higher on these four indicators and were more likely to rank in the top half of hospitals for 6 of the 16 quality measures. Researchers concluded that external accreditation appears to result in modestly better performance for critical access hospitals.

University of Colorado, Denver

Improving Asthma Care in Rural Primary Care Practices
http://onlinelibrary.wiley.com/doi/10.1002/chp.21254/abstract

Quality improvement efforts can help rural and frontier primary care practices align their asthma care practices with evidence-based asthma care guidelines, according to findings published in 2014 by the *Journal of Continuing Education for Health Professionals.* The study was led by Lisa Cicutto, PhD, Director of Community Research at the University of Colorado, Denver.

Researchers used a pre-post, quasi-experimental design to assess the impact of providing a complex, multifaceted intervention to multidisciplinary primary care teams in practices serving children and adults with asthma. The intervention included face-to-face trainings, clinical support tools, patient education materials, a website, and clinic visits. Chart audits and surveys from participating health-care teams were used to collect performance improvement and behavior change indicators.

Three HSOs and their staff participated, representing 13 primary care practices. Overall, all team members reported statistically significant improvements in confidence levels for providing quality asthma care. Chart reviews of asthma patient encounters completed before and after the program demonstrated statistically significant improvements in asthma care practices for:

- Asthma control assessment (1% vs 20%)
- Provision of asthma action plans (2% vs 29%)
- Controller prescription (39% vs 71%)
- Inhaler technique assessment (1% vs 18%)
- Arrangement of follow-up appointment (20% vs 37%)

The research team concluded that the intervention provided to rural primary health care teams lead to significant improvements in all indicators of quality asthma care provision to adults and children with asthma. Despite the success of the program, researchers noted that rural practices face significant barriers to adopting evidence-based asthma care practices.

How to Pay for Health-Care Quality Improvement

Improved quality can be cost-effective, often resulting in substantial savings for organizations, providers, patients, and communities. However, a substantial investment may be needed to begin and sustain quality improvement programs, including data collection, consultants, and staff time. Integrated health initiatives (a form of accountable care organizations, known as ACOs) allow multiple organizations to share both expenses and savings associated with quality improvement programs.

CMS quality initiatives offer payment incentives for meeting quality measures, including its hospital value-based purchasing initiative (and, conversely, penalties for poor performance on measures such as readmissions). In addition, the CMS Innovations Center is experimenting with multiple quality-improvement demonstration projects such as the Medicare Health-Care Quality demonstration, a five-year project with the goals of enhancing quality, increasing efficiency, improving patient safety, and reducing scientific uncertainty and the unwarranted variation in medical practice that results in both lower quality and higher costs.

In addition to CMS initiatives, both private foundations and public agencies offer funding opportunities for health-care quality improvement. Federal grant opportunities to support quality initiatives for rural health services organizations include the following:

- The Agency for Healthcare Research and Quality offers multiple grant and contract opportunities supporting research for improving the quality, effectiveness, accessibility, and cost effectiveness of health care.
- The Health Resources and Services Administration (HRSA) program offers multiple grant opportunities for rural providers, including funding for technical assistance and capacity building.
- HRSA also provides award payments for community health centers that that meet or exceed quality improvement measures in their annual Uniform Data System reports.
- The Small Health Care Provider Quality Improvement grant program, another HRSA initiative, provides three-year grants of up to $150,000 per year for small HSOs in rural and frontier areas to implement quality improvement activities. The program goal is to promote the development of an evidence-based culture and delivery of coordinated care in the primary care setting.

In addition to these federal opportunities, many state health departments offer funding for quality improvement initiatives. Likewise, many local and national foundations focus on health improvement and offer funding opportunities, technical assistance, networking, and other support. For instance, the Robert Wood Johnson Foundation offers multiple funding opportunities each year. The Foundation's Aligning Forces for Quality has funded quality improvement efforts in 16 communities, both rural and urban.

Examples of things SORHs can do to Increase Quality

State offices of rural health are key players in health-care quality improvement. Examples of how SORH can help organizations build capacity for quality efforts include:

- Convening regional or statewide meetings of rural health providers to share resources, best-practices, and challenges in quality improvement.
- Developing or licensing quality improvement materials
- Providing – either directly or contractually – technical assistance in integrating quality improvement and disease management programs
- Hosting quality improvement seminars, conferences, or workshops, both face-to-face and online
- Providing training and education for quality improvement specialists, clinicians, and in rural communities
- Facilitating development and dissemination of evidence-based clinical decision tools and protocols, either directly or by contracting with specialist organizations to identify quality measures
- Facilitating development of quality improvement plans

Tools

Duke University

Patient Safety Quality Improvement Course
http://patientsafetyed.duhs.duke.edu/module_a/module_overview.html
An interactive course that provides a comprehensive overview of the principles and practices of quality improvement. The course covers measures of quality, models of quality improvement, and the difference between quality improvement and research.

Agency for Healthcare Research and Quality

National Quality Measures Clearinghouse
http://www.qualitymeasures.ahrq.gov/
NQMC is a public resource for quality measures in health care, which span clinical, administrative, and social areas.

Agency for Healthcare Research and Quality, American Medical Association, American Association of Health Plans

National Guidelines Clearinghouse
http://www.guideline.gov/
The National Guidelines Clearinghouse (NGC) is a repository of the most up-to-date, evidence-based clinical practice guidelines. NGC was developed by Agency for Healthcare Research and Quality (AHRQ) in partnership with the American Medical Association and the American Association of Health Plans (now America's Health Insurance Plans [AHIP]). The NGC mission is to provide physicians and other health professionals, health care providers, health plans, integrated delivery systems, purchasers, and others an accessible mechanism for obtaining objective, detailed information on clinical practice guidelines and to further their dissemination, implementation, and use.

Centers for Medicare & Medicaid Services (CMS)

Quality Net
www.qualitynet.org
Established by the Centers for Medicare & Medicaid Services (CMS), QualityNet provides healthcare quality improvement news, resources and data reporting tools and applications used by healthcare providers and others.

Resources

Accreditation Commission for Health Care (ACHC)

http://www.achc.org/about-achc

Agency for Healthcare Research and Quality (AHRQ).

National Healthcare Quality and Disparities Reports
http://nhqrnet.ahrq.gov/inhqrdr/state/select
AHRQ's series of reports on health-care quality and disparities offers a state-by-state snapshot of quality metrics. Users can assess each state's performance on quality measures and compare with national rates or data from best-performing states.

American Health Quality Association

http://www.ahqa.org
The American Health Quality Association (AHQA) is an educational, not-for-profit, national membership association dedicated to promoting and facilitating fundamental change that improves the quality of health care in America. AHQA represents Quality Improvement Organizations (QIOs) and other professionals working to improve health-care quality and patient safety. AHQA members provide technical assistance across a broad range of health-care quality improvement and evaluation activities.

American Medical Association Physician Consortium for Performance Improvement

http://www.ama-assn.org/ama/pub/physician-resources/physician-consortium-performance-improvement.page
The AMA-convened Physician Consortium for Performance Improvement® (PCPI®) is a national, physician-led program dedicated to enhancing quality and patient safety. The ongoing mission of the PCPI is to align patient-centered care, performance measurement, and quality improvement.

AQA Alliance

http://www.aqaalliance.org/

Originally known as the Ambulatory Care Quality Alliance, the AQA alliance is a large, voluntary, multi-stakeholder collaborative of physicians and other clinicians, consumers, purchasers, health plans, and others. The mission of the AQA alliance is to improve patient safety, health care quality, and value in all settings through a collaborative process in which key stakeholders agree on and promote strategies to:

- Implement performance measurement at the physician and other clinician or group level;
- Collect and aggregate data in the most appropriate way; and
- Report meaningful information to consumers, physicians and other clinicians, and other stakeholders to inform decision-making and improve outcomes.

Centers for Medicare and Medicaid Services (CMS)

Quality Initiatives

http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/index.html

CMS quality initiatives are focused as health-care systems across all settings. This website, developed by the Center for Clinical Standards and Quality, offers detailed information about CMW quality initiatives, including quality measures and their development, public reporting of quality measures, and quality improvement organizations.

Hospital Quality Alliance

http://hospitalqualityalliance.org

The Hospital Quality Alliance (HQA) is a national private/public partnership committed to adopting and disseminating to the public standardized, meaningful, relevant, and easily understood information about hospitals' performance on an ever-increasing number of clinical quality and patient experience measures. The HQA posts and continuously updates quality measures data submitted by hospitals on its Hospital Compare website (www.HospitalCompare.hhs.gov).

International Standards Organization (ISO)

http://www.iso.org/iso/health

ISO has more than 1200 standards that address health and health care, including dentistry, medical devices, health informatics, and traditional medicines.

Institute for Safe Medication Practices

http://www.ismp.org/

The Institute for Safe Medication Practices (ISMP) focuses on medication error prevention and safe medication use.

Joint Commission

www.jointcommission.org

The mission of the Joint Commission is to continuously improve health care for the public, in collaboration with other stakeholders, by evaluating health care organizations and inspiring them to excel in providing safe and effective care of the highest quality and value. The Joint Commission is a HRSA-contracted accreditor of health centers.

Joint Commission Center for Transforming Healthcare

www.centerfortransforminghealthcare.org

The mission of the Joint Commission Center for Transforming Healthcare is to transform health care into a high-reliability industry by developing highly effective, durable solutions to health care's most critical safety and quality problems in collaboration with health-care organizations, by disseminating the solutions widely, and by facilitating their adoption.

Leapfrog Group

http://www.leapfroggroup.org

The mission of the Leapfrog Group is to trigger giant leaps forward in the safety, quality and affordability of health care by 1) supporting informed health-care decisions by those who use and pay for health care; and promoting high-value health care through incentives and rewards. It is a voluntary program that focuses on using employer purchasing power to recognize and reward "big leaps" in health-care safety, quality, and customer value. Leapfrog works with its employer members to encourage transparency and easy access to health-care information and to reward hospitals that have a proven record of high-quality care. The Leapfrog Hospital Survey compares hospitals' performance on national standards of safety, quality, and efficiency.

National Coordinating Council for Medication Error Reporting and Prevention

http://www.nccmerp.org

The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) is an independent body made up of 27 national organizations. The mission of the NCC MERP is to maximize the safe use of medications and to increase awareness of medication errors through open communication, increased reporting, and promotion of medication error prevention strategies.

National Patient Safety Foundation

http://www.npsf.org/

The National Patient Safety Foundation, founded in 1997, partners with patients and families, the health care community, and key stakeholders to advance patient safety and health care workforce safety and disseminate strategies to prevent harm.

National Quality Forum

http://www.qualityforum.org/Show_Content.aspx?id=119

The National Quality Forum (NQF) is a not-for-profit, non-partisan, membership-based organization that works to catalyze improvements in healthcare. NQF convenes working groups to foster quality improvement in both public- and private-sectors; endorses consensus standards for performance measurement; ensures that consistent, high-quality performance information is publicly available; and seeks real time feedback to ensure measures are meaningful and accurate. Endorsement of a quality measure by NQF is considered the "gold standard" in health care.

Network for Regional Health Improvement

www.nrhi.org

The Network for Regional Healthcare Improvement (NRHI) is a national organization representing more than 30 member Regional Health Improvement Collaboratives (RHICs). These multi-stakeholder organizations are working in their regions and collaborating across regions to transform the health-care delivery system and achieve the Triple Aim: improving the patient experience of care, including quality and satisfaction; improving the health of populations; and reducing the per-capita cost of healthcare.

Quality Alliance Steering Committee

http://www.healthqualityalliance.org

The Quality Alliance Steering Committee (QASC) is a collaborative effort aimed at implementing measures to improve the quality and efficiency of health care across the United States. The QASC is comprised of existing and emerging sector-specific quality alliances, as well as leaders among physicians, nurses, hospitals, health insurers, consumers, accrediting agencies and the public sector. Together, all of these stakeholders are working to ensure that quality measures are constructed and reported in a clear, consistent, and person-focused way to inform both consumer and employer decision-making, as well as the efforts of practitioners to improve care that is delivered.

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Module 8
Patient Safety

"A defining realization of the 1990s was that, despite all the known power of modern medicine to cure and ameliorate illness, hospitals were not safe places for healing. Instead, they were places fraught with risk of patient harm. One important response to this realization has been the growth of interest in patient safety. It is increasingly clear that patient safety has become a discipline, complete with an integrated body of knowledge and expertise, and that it has the potential to revolutionize health care, perhaps as radically as molecular biology once dramatically increased the therapeutic power in medicine."

(Emanuel et al, 2013)

What is Patient Safety?

The Institute for Healthcare Improvement (IHI) defines patient safety as "making care continually safer by reducing harm and preventable mortality" (IHI, 2015). Notably, this definition focuses on patient safety as a set of *actions* – "*making* care continually safer" – rather than as a *thing*. By defining patient safety as an action, the IHI emphasizes the need for a continuous cycle of improvement that includes monitoring, improvement efforts, action, and evaluation. In other words, patient safety is something that *happens*.

The IHI definition stems from the earlier work of IHI leaders Emanuel, Berwick, and colleagues (2013), who previously defined patient safety as a "discipline in the health care professions that applies safety science methods toward the goal of achieving a trustworthy system of health care delivery," *and* "an attribute of health care systems that minimizes the incidence and impact of adverse events and maximizes recovery from such events" (Emanuel et al, 2013, p. 6). Using this approach, patient safety can be understood in three ways: first, as a "way of doing things;" second, as an emerging area of scientific study; and third, as a thing itself – the assurance to patients that they will not be harmed by the health-care they receive.

Health service organizations (HSOs) who wish to improve patient safety must address all of its four components: 1) the person who receives care 2) providers 3) therapeutics and 4) methods (Emanuel et al, 2013). In any HSO, the tools to keep patients safe must be built with a complex mixture of safety science, systems management, technology, and human behavior.

Rethinking Medical Errors

The origins of the patient safety movement are often traced to the 1999 publication of a groundbreaking report by the Institutes of Medicine (IOM), *To Err is Human: Building a Safer Health System* (Kohn, Corrigan, & Donaldson, 1999). The report offered a comprehensive review of the impact of medical errors in hospitals across the United States. Researchers estimated that as many as 98,000 people die each year in hospitals due to medical errors and that one million are harmed, either temporarily or permanently. According to the report, the direct and indirect costs of medical errors reach up to $29 billion annually.

The report received widespread attention from media, policymakers, health-systems researchers, health-care administrators, clinicians, and patients. After its publication, public and private agencies began funding research to help determine both *why* health care in the United States is so unsafe and *what* to do about it.

The IOM report offered a radically new way to think about preventing medical errors – one that focuses on fixing the systems in which people work, rather than on individual actions. When William C. Richardson, PhD, wrote in the report's preface that "errors can be prevented by designing systems that make it hard for people to do the wrong thing and easy for people to do the right thing" (p. ix), he challenged decades of tradition in medicine.

Traditionally, the clinician was the central authority and had full responsibility for management of care. In this context, medical errors had been treated as single-cause events that were best handled by litigation or disciplinary actions, even imprisonment. Instead, the IOM report authors called on researchers and health-care managers to ask *why* people make errors that lead to adverse events and to examine the systems that allow errors to happen (Kohn et al, 1999). They concluded that most medical errors result from "faulty systems, processes, and conditions that lead people to make mistakes or fail to prevent them" (IOM, 1999). While holding that individual health-care professionals must still remain "vigilant and be held responsible for their actions," (Kohn et al, 1999, p. ix), they proposed that system redesign is the key to reducing errors.

This line of questioning eventually led to a systems-engineering design framework for patient safety efforts, representing a fundamental change in approaches not only to preventing medical errors but to health-care delivery as a whole (Emanuel, 2013). It also opened up a new field of study that married traditional concepts of patient safety with an emerging field of scientific study.

The shift to a systems thinking approach was propelled by the work of James Reason (2000), who had shown that "active" errors occur when health professionals interact with patients or equipment (the "sharp end") when there are "latent" errors in the system (the "blunt end"). Latent errors are defects that occur "upstream" at the level of systems, management, organizations, training, and equipment, causing errors at the sharp end.

Understanding Patient Safety Events

A "patient safety event" (sometimes referred to as an "adverse event") occurs when there is a mistake at the sharp end of the patient/organization encounter, regardless of whether the patient is harmed or not. According to the IHI, only 10 to 20 percent of errors are ever reported, and 90 to 95 percent of those reported errors cause no harm to patients. The majority of adverse events cause little harm and go unreported – for instance, a fall occurs, but the patient is not injured, or an unnecessary scan is performed and results are negative.

There are many types of adverse events, all of which should prompt investigation and clarification at the systems level. In a "near-miss" or "almost" event, an error does not quite occur. For instance, an almost event has occurred if the wrong medication is drawn up but someone notices the mistake and prevents the medication from being administered. In the traditional model, blame would be assigned to the person who drew up the medication and disciplinary taken. Using a systems approach, the investigation would focus on identifying and responding to blunt-end errors in structure (facilities, equipment, etc.), processes (workflow, training, teamwork), and other upstream factors.

A sentinel event is a patient safety event that reaches a patient and results in death, permanent harm, or severe temporary harm with intervention required to sustain life. An event can also be considered sentinel even if it does not meet these criteria. Such events are called "sentinel" because they signal the need for immediate investigation and response.

In 2001, Ken Kizer, MD, then CEO of the National Quality Forum, introduced the term "Never Event" to refer to grievous medical errors that should never occur (AHRQ, 2014). The National Quality Forum now uses the term "serious reportable event" (SRE) and Kizer's definition has been refined to signify adverse events that are:

- *Unambiguous.* They can be clearly identified and measured
- *Serious.* They result in death or significant disability
- *Usually preventable.* They could have been prevented, often by redesigning a system.

The National Quality Forum expanded its list of SRE measures in 2011. The list now extends beyond hospitals to clinics, ambulatory surgery centers, and skilled nursing facilities. Yet the evidence base for measures and processes in these settings is still

The National Quality Forum developed a list of 27 SREs in 2002. The list is periodically revised, with the most recent update occurring in 2011. It now consists of 29 events grouped into 6 categories, as follows:

Category 1: Surgical Events

- Surgery performed on the wrong body part
- Surgery performed on the wrong patient
- Wrong surgical procedure on a patient
- Retention of a foreign object in a patient after surgery or other procedure
- Intraoperative or immediately post-operative death in a normal health patient (defined as a Class 1 patient for purposes of the American Society of Anesthesiologists patient safety initiative
- Category 2: Product or Device Events
- Patient death or serious disability associated with the use of contaminated drugs, devices, or biologics provided by the healthcare facility
- Patient death or serious disability associated with the use or function of a device in patient care in which the device is used or functions other than as intended
- Patient death or serious disability associated with intravascular air embolism that occurs while being cared for in a healthcare facility

Category 3: Patient Protection Events

- Infant discharged to the wrong person
- Patient death or serious disability associated with patient elopement (disappearance) for more than four hours
- Patient suicide, or attempted suicide resulting in serious disability, while being cared for in a healthcare facility

Category 4: Care Management Events

- Patient death or serious disability associated with a medication error (e.g., error involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration)
- Patient death or serious disability associated with a hemolytic reaction due to the administration of ABO-incompatible blood or blood products
- Maternal death or serious disability associated with labor or delivery on a low-risk pregnancy while being cared for in a healthcare facility
- Patient death or serious disability associated with hypoglycemia, the onset of which occurs while the patient is being cared for in a healthcare facility
- Death or serious disability (kernicterus) associated with failure to identify and treat hyperbilirubinemia in neonates
- Stage 3 or 4 pressure ulcers acquired after admission to a healthcare facility
- Patient death or serious disability due to spinal manipulative therapy

Category 5: Environmental Events

1. Patient death or serious disability associated with an electric shock while being cared for in a healthcare facility

- Any incident in which a line designated for oxygen or other gas to be delivered to a patient contains the wrong gas or is contaminated by toxic substances
- Patient death or serious disability associated with a burn incurred from any source while being cared for in a healthcare facility
- Patient death associated with a fall while being cared for in a healthcare facility
- Patient death or serious disability associated with the use of restraints or bedrails while being cared for in a healthcare facility

Category 6: Criminal Events

- Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider
- Abduction of a patient of any age
- Sexual assault on a patient within or on the grounds of a healthcare facility
- Death or significant injury of a patient or staff member resulting from a physical assault (i.e., battery) that occurs within or on the grounds of a healthcare facility

The occurrence of any of the SREs listed above shows that immediate examination of all workflows, policies, and systems is necessary.

limited. Much more research remains to be done to assess patient safety issues in non-hospital settings, which are even more open and complex than acute-care systems.

Common Patient Safety Events

Adverse events can take almost any form, but certain components of health-care delivery are more prone to error than are others. Some of these are described briefly in this section.

- *Overuse and over-diagnosis:* Overuse problems range from unnecessary screenings to inappropriate procedures and other treatment. Unnecessary care is always poor care. The Lown Institute (2015) defines overuse as occurring "when a patient is hospitalized unnecessarily, or receives a test, treatment, drug, or procedure that is unnecessary, ineffective, or unwanted." Likewise, over-diagnosis – which occurs when patients are diagnosed with a problem that is unlikely to cause symptoms or shorten life (Lown Institute, 2015), leads to sometimes harmful, unnecessary care. For instance, performing a mammogram on a 90-year-old woman with heart failure is only likely to lead to psychological and potential physical harms. An estimated 10 to 30 percent of all U.S. health-care spending goes to overuse, while the costs of over-diagnosis have not been reliably estimated (Lown, 2015).
- *Diagnostic error.* A diagnostic error occurs when a diagnosis is wrong, missed, or delayed (Graber, 2005). Diagnostic error occurs in 5 to 15 percent of patient encounters (Berner & Graber, 2008) and has been linked to 17 percent of adverse events (Leape & Brennan, 1991). In a survey of pediatricians, more than half (54%) of respondents reported that they made a diagnostic error at least once or twice per month, and almost half (45%) reported making diagnostic errors that harmed patients at least once or twice per year (Singh et al, 2010). In ambulatory settings, diagnostic error is the most common cause of malpractice claims; while it ranks second in hospitals (after improper performance of a procedure), rates are similar in both settings (Bishop, Ryan, & Casalino, 2011).
- *Delays in treatment and access to preventive services.* Delays in treatment and prevention can lead to serious harm – as in 2014, when delays in access to colonoscopies in Veterans Administration facilities were linked with at least 79 cases of advanced colon cancer and 23 deaths. While delays in treatment do occur in hospitals – for instance, high-acuity patients who present at an emergency department but do not receive immediate care – treatment delays are more often an issue in the ambulatory care setting. The Joint Commission (2005) cites problems in four areas as root causes of sentinel events related to delay in treatment: communication, patient assessment, procedural compliance, and continuity of care. Likewise, delays in delivery of preventive services, such as vaccinations, laboratory tests, PAP smears, fecal occult blood testing, colonoscopies, mammograms, and other monitoring and screening tools may be related to faulty processes, lack of information technology support, time pressures, inadequate training of personnel, lack of financial resources, organizational culture, lack of teamwork, and poor communication (Webster et al, 2008).
- *Adverse drug events.* Errors in medication lead to at least 700,000 emergency department visits and 120,000 hospitalizations each year (Budnitz, Pollock, Weidenbach, et al, 2006). More than $3.5 billion is spent on extra medical costs associated with adverse drug events annually, and at least 40 percent of those costs in ambulatory settings are thought to be preventable (IOM, 2006).
- *Falls.* Especially in long-term care facilities and hospitals, falls are a serious cause of health-care associated injury. Between 1999 and 2007, 27,305 hip fractures occurred among short-stay nursing home patients receiving SNF care. After surgical repair of the hip fracture, 83.9% of these patients were discharged from the hospital back to an SNF, with most (99%) returning to the facility where the hip fracture occurred. In the first 90 days after hospitalization, 24.1% of patients died, 7.3% were discharged to the community but remained fewer than 30 days, 14.0% achieved successful community discharge, and 54.6%

were still in a health care institution with almost 46.4% having transitioned to long-term care.

- *Healthcare-associated infections (HAIs):* Infections acquired in health-care settings are a major threat to patient safety. In acute-care hospitals alone, nearly 722,000 patients had one or more HAIs in 2011, leading to 75,000 deaths (Magill, Edwards, Bamberg, et al, 2014). Data analyzed by the Centers for Disease Control and Prevention (CDC), show that each day, approximately 1 of every 25 hospitalized patients in the United States has a healthcare-acquired infection (HAI). Annually, more than one million HAIs occur in the United States health-care system.
- *Top causes of HAIs include specific pathogens including methicillin-resistant staphylococcus aureus (MRSA),* C. difficile, and those associated with procedures, including ventilator-associated pneumonia, central line-associated bloodstream infections, and surgical site infections.
- *Surgical errors:* Surgical errors are common, expensive, often deadly, and have repercussions for health-care professionals and organizations. Wrong-patient/wrong-site/wrong-procedure surgery was the sentinel event most commonly reported to the Joint Commission from 2004-2014 (Joint Commission, 2015). Based on analysis of national malpractice claims, a research team from Johns Hopkins University (Mehtsun et al, 2013) estimated that a surgeon in the United States leaves a foreign object such as a sponge or a towel inside a patient's body after an operation 39 times a week, performs the wrong procedure on a patient 20 times a week, and operates on the wrong body site 20 times a week. The researchers estimated that at least 80,000 never events occurred in American hospitals between 1990 and 2010. Malpractice payments for surgical never events totaled $1.3 billion. Outcomes included mortality (6.6% of patients), permanent injury (32.9%), and temporary injury (59.2%).
- *Health information technology:* Health information technology is at once a solution and a threat to patient safety. Electronic health records are notorious for missing or incorrect data; reliance on computerized systems for alerts may lead health-care workers to miss problems or overreact to non-issues. Interruptions in workflow are also common with technology.
- *Alarm hazards:* Inadequate and ineffective alarm configurations contribute to serious patient safety events. Alarm fatigue – in which too many alarms lead to providers "tuning out" the alarms – is a critical factor in patient safety events. Alarm fatigue can be as simple as posting too many warning signs and should be seen as an indicator of problems with workflows and processes (Graban, 2012).

Reporting and Analyzing Medical Errors

Addressing medical errors is difficult, partly because they often go unrecognized and unreported. In a traditional litigious system, it makes no sense for a health-care professional to report a patient safety event, especially if it caused no harm. However, from a systems-thinking perspective, every patient safety event must be investigated, analyzed, and acted upon before any (additional) harm is caused.

The shift toward systems thinking in patient safety set the stage for the federal Patient Safety and Quality Improvement Act, which became effective on January 19, 2009. By encouraging transparency in reporting safety and quality information, the Act provides the mechanism to identify and analyze the underlying causes of patient safety events – allowing organizations to take effective action to prevent further events from occurring.

The legislation created entities called Patient Safety Organizations (PSOs) to support the collection, analysis, sharing, and learning about what medical errors occur – and why and how to prevent them. Participation is voluntary, and the Act provides confidentiality and privilege protections for patient safety information to health-care providers who work with PSOs. Health-care providers choose how much patient safety information they share with a PSO. Aggregated data are subsequently stored in a global database.

AHRQ has also developed standardized definitions and reporting formats for patient safety events, called Common Formats. The Common Formats, which were released in 2009, address events in acute-care hospitals and skilled nursing facilities and cover a broad range of safety events.

Top Ten Patient Safety Concerns for 2015

In May 2015, the Emergency Care Research Institute (ECRI) Patient Safety Organization (PSO) issued its 2015 "top 10 list" of safety concerns for multiple healthcare settings, such as hospitals, ambulatory care centers, doctor's offices and nursing homes. The list is as follows:

1. Alarm hazards: inadequate alarm configuration policies and practices; the investigations found that hospitals have had a lack of, or inconsistent practices to determine how alarms are set by care area or patient type. In past years, attention had been focused more on "alarm fatigue," meaning missed alarms due to excessive activations.
2. Data Integrity: incorrect or missing data in EHRs and other health IT systems; healthcare organizations need better testing of the electronic health record (EHR) systems, as well as checks and balances, to identify and address missing or incorrect data.
3. Managing patient violence; aggressive or agitated behavior signals a high-risk, high acuity situation that warrants immediate clinical attention.
4. Mix-up of IV lines leading to misadministration of drugs and solutions; these errors result in wrong-drug, wrong-rate, wrong dose, or wrong-site infusions which sometimes have serious consequences.
5. Care coordination events related to medication reconciliation; at every care transition such as admissions, transfers and discharges, the patient's medications need to be reconciled to ensure the patient is on the correct medications for the next phase of care.
6. Failure to conduct independent double checks independently; in blood banking, having two practitioners perform an independent double check of the blood group before transfusion has been a long-time requirement.
7. Opioid-related events; the increasing use and dispensing of opioids has led to overdose, over-sedation, respiratory depression, gastrointestinal adverse events, pruritus and immunologic or hormonal dysfunction. The most common events reported to the ECRI database for this category involved hydromorphone, oxycodone, opioids used in PCA, and fentanyl patches.
8. Inadequate reprocessing of endoscopes and surgical instruments: a multistep cleaning and disinfection process must be followed or organisms may remain on the devices.
9. Inadequate patient handoffs related to patient transport: safety concerns reflected in the analyzed data include patients being transported to the wrong department, the wrong patient being transported and patients left unmonitored at the receiving site.
10. Medication errors related to pounds and kilograms: the miscalculation of weight-based doses and weight being incorrectly entered in the EHR are reported in the data.

AHRQ is also developing specifications for patients to report adverse events. Patients can provide important information that can lead to better understanding of patient safety events and health-care system failures.

Hospitals can also use the IHI's Global Trigger Tool to identify and track patient safety events. This tool uses clues, called "triggers," to identify adverse events as the means to measure the overall level of harm in an HSO. The tool includes instructions and forms for collecting data to track three measures: 1) adverse events per 1,000 patient days; 2) adverse events per 100 admissions; and 3) percent of admissions with an adverse event.

Analysis of an event is critical for determining what went wrong and finding a way to fix the error. After a patient safety event occurs and is identified, "root cause analysis" (RCA) is performed. The goal of the RCA process is to 1) what happened 2) why it happened and 3) how to prevent it from happening again.

RCA is a multidisciplinary process involving frontline staff, leadership, patient safety experts, and sometimes external consultants. RCA is used to discover underlying features of a system that contributed to a patient safety event. It is based on the premise that the immediate cause of an event is almost always the end result of multiple systems failures. The RCA process includes reviewing data

and interviewing those affected to identify all root causes and contributing factors. This information is then used to redesign the systems and make them safer.

Patient Safety: Process, Structure, and Outcomes

Donebedian (1988) suggests that quality of health care can be evaluated in three dimensions: structure, processes, and outcomes. Structure is the setting in which care is delivered, including facilities, administration, care providers' qualifications, and program operations (see Module 7: Quality). Processes involve the "how" of care delivery: How has care been delivered, considering appropriateness, acceptability, completeness, and competence? Outcomes are the end points of care, such as improvements in function, recovery, or survival (Donebedian, 2005).

When Donebedian's evaluation framework is applied to patient safety, it illuminates the complex relationship between upstream factors, such as physical infrastructure and workflow, and sharp end events. Such an approach requires a radical rethinking of traditional approaches that focus on assignment of blame for errors, privileging of the physician-patient relationship, and a "see no evil, do no evil" approach to adverse events. As Emanuel and colleagues write:

> *Patient safety advocates turn away from the traditions of the guild in which social standing and privileged knowledge shielded practitioners from accountability. They also reject the defensive posture of old risk management approaches in which physicians and leaders of health care organizations were advised to admit no responsibility and to defend all malpractice claims, whether or not they were justified. Patient safety embraces organizational and personal accountability, but it also recognizes the importance of moving beyond blame in both in organizational and its personal dimensions, while maintaining accountability and integrity in interactions with patients and families who have suffered avoidable adverse events. (p. 8)*

In addition to the ever-growing recognition that most medical errors are caused by upstream problems, research suggests that safe health systems are built upon the following premises:

- *Engaged and active leadership:* Active, committed, ongoing, and visionary leadership is needed to develop and sustain the systems that create a safer health system. Both transformational leadership and servant leadership models have been used successfully to improve patient safety outcomes.
- *A culture of safety that asks "Why?":* Successfully addressing patient safety issues involves a shift from a culture of blame to one that focuses on identifying systems issues while maintaining an emphasis on organizational and individual responsibility. Patient safety always asks *why* an event happened rather than focusing on *who* is to blame.
- *High-reliability design:* High-reliability design is the foundation of patient safety. Health care is inherently complex and uncertain. Yet all elements of health-care delivery must be integrated into a system that is as reliable as possible. Health care must be recognized as an open system – that is, interacting with and influenced by elements external to the processes and structures within health care itself. Complex, open systems are unpredictable by nature; the safe health system must be flexible enough to accommodate unpredictability. In the Six Sigma model, every level of increased reliability is a "sigma." Design processes are also guided by the concept of "lean," derived from manufacturing, which focuses on eliminating waste to increase value (including safety) (see Module 10: Management).
- *Team- and community-based care (see Module 6).* Health care that is delivered in silos is dangerous care. Evidence is mounting that patient safety depends less on the actions of individual health professionals than on systems of safety *across* an organization and *between* organizations. Safety happens when processes and structures are implemented across a whole system of care, including care in the community, primary care, hospitals, rehabilitation, and home health (IHI, 2015).
- *Clear communication.* Clear communication is essential to safe health care. Safe communication requires skill, technology, protocols, and commitment.

- *Design of the physical environment.* The physical environment plays an important role in assuring patient safety. Facilities must meet building codes and fire safety standards, appropriate sanitation methods must be used, and building design should enhance workflow. Medical devices and other necessary equipment should be well maintained and easily accessible.
- *Patient engagement.* Engaged patients are safer patients. A substantial body of research shows that health-care quality and safety improve when patient and families are educated, informed, and engaged. Families must be involved, become advocates, provide support, and often should be involved in decision-making. In its *Guide to Patient and Family Engagement in Hospital Quality and Safety*, AHRQ describe four key strategies for hospitals to use to promote patient engagement:
  - Encourage patients and family members to participate as advisors.
  - Promote better communication among patients, family members, and health care professionals from the point of admission.
  - Implement safe continuity of care by keeping the patient and family informed through nurse bedside change-of-shift reports.
  - Engage patients and families in discharge planning throughout the hospital stay.
- *Technology.* Technology infrastructure such as electronic health records (EHRs), computerized order entry, and clinical decision tools can help standardize processes and improve patient safety when used well.
- *Training.* Well-trained personnel are essential for patient safety. Patient safety has been enhanced by use of simulation tools for training in technical procedures, both for initial training and for continuing education.
- *Reporting systems.* Clear reporting measures and data gathering protocols are needed to identify and analyze both adverse and sentinel events. Indicators for reportable events must be clearly established, and processes must be streamlined and clear.
- *Safe hand-offs.* Multiple health-care professionals may be involved in caring for patients, especially during an acute-care hospital stay. However, the process of transferring responsibility for patient care, called a "hand-off," is much like a game of "telephone" played by children (AHRQ, 2014) – and just as prone to error. In most organizations, transfer of information about a patient (called a "sign-out"), is performed without following a specific protocol.
- *Improving the safety of handoffs requires standardization of sign-out mechanisms.* Successful handoffs involve both the *outgoing* team presentation and *oncoming* team learning and explanation, creating an opportunity for a decision-making and collaborative learning cycle (Abraham, Kannampallil, & Patel, 2012).
- *AHRQ proposes that the components of a safe and effective sign-out can be summarized using the acronym* **ANTIC***:*
  - **A**dministrative data (e.g., patient's name, medical record number, and location) must be accurate.
  - **N**ew clinical information must be updated.
  - **T**asks to be performed by the covering provider must be clearly explained
  - **I**llness severity must be communicated.
  - **C**ontingency plans for changes in clinical status must be outlined, to assist cross-coverage in managing the patient overnight.
  - Efforts to improve the quality of clinical handoffs must enhance the quality of both written and verbal sign-outs. In addition to accurate and complete written sign-outs, effective handoffs require an environment free of interruptions and distractions, allowing for the clinician receiving the sign-out to listen actively and engage in a discussion when necessary.
- *Infection prevention and control:* Infection prevention is a critical concern both in acute-care and ambulatory care settings. The CDC has released evidence-based guidelines for HAI prevention in both settings. While the methodologies are well researched, it may be difficult, especially in low-resource settings, for health professionals and organizations to incorporate the recommended methods a standard practices. Specific guidelines for outpatient care address the complexity of infection prevention in uncontrolled settings such as primary care clinics. Hand hygiene remains a major focus of efforts, based on strong evidence that improved hand hygiene

notably reduces HAI rates (AHRQ, 2015). The AHRQ-supported Comprehensive Unit-based Safety Program (CUSP) has brought about significant advances in HAI prevention. CUSP combines improvement in safety culture, teamwork, and communications, together with a checklist that incorporates a manageable set of evidence-based measures to prevent a particular HAI.

- *Medication reconciliation:* During care transitions, patients are often prescribed new medications or changes are made to existing medications. Without a standardized and comprehensive review of the patient's medications – a process called medication reconciliation – it is all too easy for unintended changes to occur. At hospital admission, more than half of patients have one or more medication discrepancies (Cornish, Knowles, Marchesano, et al, 2005). Addressed by computerized order entry (CPOE). Addition of a clinical pharmacist to the team has been shown to reduce errors and improve compliance.

Why is Patient Safety Important?

Patient safety is the first of six aims included in the U.S. Department of Health and Human Services' National Strategy for Quality Improvement in Health Care, released in March 2011. But patient safety is more than an "aim" in a national strategic plan. It is an ethical, moral, and human imperative reflected in the central tenet of health-care: "Do no harm."

Yet considering the complexities of modern health care, the task of accomplishing that fundamental oath is a Herculean undertaking – in addition to a Hippocratic one. After the 1999 IOM report, both public and private entities began developing reporting tools, drawing on the work of experts across multiple fields. And as reporting tools and measures grew better, the problem appeared to grow worse. Data from a study published in 2011 in the journal *Health Affairs* (Van de Bos et al, 2011) suggest that patient safety events occur in one out of three hospital admissions, and that the IOM study may have underestimated medical errors *by a factor of 10*. A recent, robust study that used data from the IHI's Global Trigger Tool found that patient safety events led to between 200,000 and 410,000 deaths per year in hospitals alone. Serious harm appears to occur at a rate 10- to 20-fold more common than lethal harm (James, 2013).

In the ambulatory care setting, errors are much harder to trace, partly because errors of omission are more common (Webster et al, 2008). In 2005, there were an estimated 1.2 billion visits to clinics, physicians' offices, and emergency rooms. Systems are disconnected and geographically dispersed, leading to challenges in continuity of care between providers and systems. Yet little research has focused on safety and quality problems in ambulatory settings.

While it is unclear whether the large discrepancies are due to a worsening situation or if better reporting had led to more accurate estimates, one thing is certain: It is unacceptably dangerous to be a patient in the United States, in either ambulatory or hospital settings.

In addition, unsafe care is costly. A study sponsored by the Society for Actuaries (Shreve et al, 2010) estimated the direct health-care associated costs of medical errors in the United States during 2008 at $19.5 billion. About $17 billion of those dollars were directly associated with additional medical cost, including ancillary services, prescription drug services, and inpatient and outpatient care. Van de Bos and colleagues (2011) put the figure at $17.1 billion for measurable medical errors. Goodman, Villareal, and Jones (2011) estimated the social costs of adverse medical events – excluding medical costs – to be between $393 billion and $958 billion, amounts equivalent to 18 percent and 45 percent of total U.S. health-care spending in 2006. And a 2013 study published in the *Journal of Healthcare Economics* (Andel et al, 2013) estimated the total direct and indirect costs of patient safety events at close to $1 trillion.

Challenges to Improving Patient Safety

AHRQ data show significantly better scores for health systems in patient safety measures for 2014, with improvements of as much as 17 percent on half of patient-safety measures (AHRQ, 2015). Yet health care in the United States remains fundamentally unsafe.

Health information technology still has not lived up to its promise in developing a safer system – and, in fact, has led to harms. Data entry errors or omissions have contributed to new types of patient safety threats. Alert fatigue – the tendency for health-care

professionals to ignore alarms and other alerts, ranging from posted signs to blaring machines – increases the risk that patients in critical need will be ignored. Technology often interrupts workflows, causing distraction and frustration rather than providing useful guidance to professionals.

Truly addressing patient safety requires a fundamental shift in the culture and structure of health-care systems, including long-embedded perceptions of fundamental power structures such as the doctor-patient (and doctor-nurse) relationship. Silos of care that create a fragmented potpourri of health-care delivery must be eliminated. The traditional physician-patient relationship must evolve as team-based models are developed in which the specific expertise of each team member – including the patient and family – is acknowledged.

Information-sharing poses challenges, especially across organizations, as managers, clinicians, lawyers, and information technology specialists grapple with privacy regulations, software incompatibilities, and interrupted workflows. The blunt-end systems in many organizations are error-prone, often relying on the person at the sharp end to identify problems that jeopardize patient safety. Lack of communication between providers and other health-care professionals – including lack of protocols for hand-offs and sign-outs – are the norm, not the exception, in most systems. Likewise, most current payment models rely on fee-for-service structures, creating incentives to deliver *more* care – not *better, safer* care.

Patient safety also requires transparency – and the shift from a culture of blame and shame to one in which errors are openly investigated to determine where the system went wrong. Such a shift requires energetic leadership, time commitment from managers, clinicians, and other front-line staff, and time commitment from all personnel.

Of special concern for rural health services organizations, the bulk of evidence regarding improving patient safety has been developed in hospitals and large, urban health systems. It is not clear how much of this evidence translates to the ambulatory care setting, especially in small primary care clinics in rural or frontier settings. Additional challenges in rural areas include low patient volumes, lack of easily accessible training opportunities for staff, and limited resources for implementing a comprehensive patient-safety program. Complexity of health-care needs and decentralized organizations make care coordination, information accuracy, and sharing more difficult.

Organizations serving low-income populations may have difficulty tracking and engaging patients, as well as following up with laboratory and other diagnostic tests or referrals. Patient safety experts may not be available for consulting or other services, hiring a full-time patient safety professional may not be feasible. Combined, these factors pose challenges to patient safety in rural communities.

Examples of How Health Services Organizations have Increased Capacity in Patient Safety

Patient safety spans most elements of health care delivery described in other modules of this toolkit. Patient safety is closely related to quality, depends on management and leadership approaches, and is an integral outcome of team-based care and well-defined organizational services. It is often difficult to clearly demarcate between initiatives that address patient safety and quality, as the two go hand in hand. However, several projects have specifically addressed patient safety in rural settings.

Projects at several rural Veterans Affairs (VA) hospitals and outpatient clinics have shown that involving pharmacists at different points of care can reduce the risk of adverse drug events. For instance, a project at a rural VA outpatient clinic in the VA Black Hills Health-Care System focused on educating pharmacists and physicians in the *2013 Guidelines for the Diagnosis and Management of Gastroesophageal Reflux Disease (GERD)*, which recommend that patients with typical GERD symptoms receive an eight-week trial of proton pump inhibitors (PPIs) as the first line treatment for resolving symptoms and confirming a GERD diagnosis. Longer durations of therapy are unnecessary and may expose patients to undue adverse risks and prescription costs.

The study team provided guidelines-based education to pharmacists and providers and enrolled patients receiving long-term omeprazole therapy into a pharmacist-run medication therapy management clinic. Of 22 patients enrolled, nine (41%) had no documented indication for omeprazole use, 11

(50%) were initially started on high-dose omeprazole (40 mg/day), and 19 (86%) had received an initial 90-day supply. With pharmacist support, patients were able to taper off omeprazole use either completely or to the lowest effective dose; average dose at the beginning of the study was 22 mg, and at the end 9 mg. Most patients were able to discontinue use of omeprazole completely, reducing the risk of omeprazole-related adverse events, pill burden, and cost. Savings were estimated at $67,240.

While the Black Hills VA pharmacy project focused on a small population receiving treatment for one common condition, the **Tennessee Rural Hospital Patient Safety Demonstration Project** (Tupper et al, 2008) is a broad-based project that addresses small and rural hospitals, tailoring capacity building efforts to each hospital's idiosyncratic needs. This collaborative project was designed to help small rural facilities strengthen their capacity to implement priority patient safety interventions.

The Tennessee demonstration project focused on interventions relevant to the core services and capacities of rural hospitals and was sensitive to their structure and processes. Hospital patient safety programs were assessed, technical assistance tools were deployed, and resources provided. Organizational and clinical changes designed to prevent errors and improve safety were initiated. Eight hospitals participated in the project. Each hospital completed a self-assessment tool to identify and prioritize patient safety interventions. Three interventions were provided:

- Assessment of patient safety culture and implementation of a safety culture plan
- Development and implementation of emergency department protocols
- Use of personal digital assistant devices (PDAs) by clinicians at the point of care to decrease medication errors.

All eight participating hospitals completed three rounds of the AHRQ Patient Safety Culture Survey during the two-year project period. Aggregate scores showed significant improvements from baseline in nine of the 12 dimensions of patient safety culture assessed in the survey. Demonstration hospitals performed above benchmarks set by the AHRQ in five of the 12 dimensions. In the emergency department, six of the eight hospitals implemented 24 protocols, with participants reporting substantial improvements in standardization of treatments and reductions in staff variance; improvements in patient flow, hand-offs, and transfers were reported qualitatively. Likewise, PDA use was widely adopted, with 95 percent of adopters reducing their use of prior sources of drug information (often potentially out-of-date text references) through use of the drug database software.

The Tennessee demonstration suggests that the implementation of patient safety initiatives is feasible and effective in rural hospitals and that rural hospitals are interested in and willing to invest in patient safety initiatives. The study was a collaborative effort that involved providers, a payer, a hospital association, a quality improvement organization, and academic institutions. Hence, the study also provides a collaborative model to efficiently and effectively support patient safety activities in rural hospitals.

How to Pay for Improving Capacity in Patient Safety

Evidence shows that patient safety pays for itself in reduced health costs. For instance, economic analysis by CDC experts projects an estimated savings of $5.7 to $6.8 billion if 20 percent of health-care acquired infections was eliminated; they also estimate that savings would reach $25.0 to $31.5 billion if 70 percent of those infections was prevented (Scott, 2009).

However, significant expenses can be associated with implementing and maintaining a patient safety program. Start-up costs may include staffing, training for staff, management, and board, facility redesign, information technology infrastructure, equipment, and other large and small investments.

Several funding sources are available specific to patient safety efforts:

Public Funding Sources

Centers for Medicare and Medicaid Services

www.cms.gov

CMS has adopted a "carrot and stick" approach to improving patient safety. In October 2008, Medicare stopped paying for care associated with eight sentinel events, including falls, infections, air embolisms,

and pressure ulcers; three of the eight are "never events": operating on the wrong patient, operating on the wrong body part, or leaving a surgical object, such as a sponge, inside the patient

Conversely, several CMS initiatives provide incentives for patient safety initiatives. Most incentives, however, are not adequate to recoup the costs associated with developing a robust patient safety program. In addition, the risk of not meeting goals – and penalties for adverse events – is high, especially for small rural providers.

CMS also provides the **Medicare Beneficiary Quality Improvement Project (MBQIP),** a quality improvement activity under the Medicare Rural Hospital Flexibility (Flex) grant program. The goal of MBQIP is to improve the quality of care provided in small, rural Critical Access Hospitals (CAHs). The project seeks to increase voluntary reporting of quality data by CAHs, and then use those data to drive quality improvement activities. Patient safety improvement activities are allowable activities as part of MBQIP. Several SORH have taken advantage of FLEX funding to address patient safety issues.

Agency for Healthcare Research and Quality

http://www.ahrq.gov/funding/fund-opps/index.html

The AHRQ is the lead federal agency for research pertaining to patient safety. Multiple grants are available, many offering support for both research and implementation.

Private Foundations

ABIM Foundation

http://www.abimfoundation.org

The strategic goal of the ABIM Foundation is to catalyze improvements in health care by advancing medical professionalism. The Foundation offers several initiatives, including programs that:

- Highlight and stimulate organizational and policy forces to advance professional values and behaviors
- Engage physicians in advancing the quality of care
- Support new competencies to improve quality
- Learn from international comparisons

One such initiative offered by the ABIM Foundation is *Choosing Wisely,*® a campaign to help providers and patients engage in conversations to reduce overuse of tests and procedures and support patients' efforts to make smart and effective care choices.

Aetna Foundation

http://www.aetna-foundation.org

The Aetna Foundation is dedicated to promoting wellness, health, and access to high-quality health care for everyone, while supporting the communities they serve. They offer both regional and national grant programs. Current focus areas are

- Healthy eating and active living
- Health-care equity
- Health-care innovations, with an emphasis on patient-centered care
- Digital health in vulnerable and minority communities

American Hospital Association, Quest for Quality Prize

http://www.aha.org/about/awards/q4q/index.shtml

The goals of The American Hospital Association-McKesson Quest for Quality Prize are to raise awareness of the need for a hospital-wide commitment to highly reliable, exceptional quality, safe, patient-centered care; reward successful efforts to develop and promote a systems-based approach toward improvements in quality of care; inspire hospitals to be leaders in improving the health of their communities while enhancing outcomes and the experience of care for patients and reducing per capita cost of care; and communicate successful programs and strategies to the hospital field.

Lown Institute

http://lowninstitute.org

The Lown Institute offers grants to young physicians interested in addressing the risks of overuse:

- *RightCare Alliance Young Innovator Grants* support initiatives that help trainees challenge the culture of overuse in healthcare. Funding is available for young investigators to develop programs that teach trainees to recognize and avoid overuse, build more meaningful relationships with patients, and provide ethical compassionate care.

- *RightCare Educator Grants* provide Chief Residents with training and support to implement Right-Care Rounds in their home institutions. Right-Care Rounds use the familiar format of a case presentation, incorporating evidence-based discussions to explore the drivers of medical overuse and to promote appropriate care for patients. Goals for Right Care Rounds include helping clinicians recognize and avoid overuse before it occurs, ensuring that the whole patient and the entire continuum of care are considered, and identifying opportunities for improving the quality of care in the future. Additionally, the rounds may address barriers to accessing care, caring for patients without strong social networks and failures in patient safety.

Robert Wood Johnson Foundation
http://www.rwjf.org/en/how-we-work/grants/what-we-fund.html

One of the leading philanthropic organizations in health care and public health, the RWJ Foundation provides support for a wide variety of projects to improve both health-care systems and health. The foundation's legacy includes many projects on health-care quality, including patient safety. A 2015 priority area is "seeking high value from investments in health care and public and population health."

Examples of Things SORH Can Do to Increase Capacity in Safety

SORH can play an integral role in helping HSOs increase their capacity to provide safe care. In addition to offering general technical support – for instance, through grantwriting assistance or compiling and disseminating best-practices research – SORH can engage in activities such as the following to help organizations build capacity in patient safety:

- Provide networking and training opportunities in patient safety for providers, managers, and other staff, including nurses and ancillary staff.
- Support development of collaborative groups, formal and informal, to identify, prioritize, and address patient safety issues across organizations and communities. Such a group could, for instance, collaboratively hire or contract with a pharmacist, patient safety expert, systems engineer, Lean management expert, or information technology professional to work with various small organizations.
- Partner with research institutions to investigate knowledge gaps regarding patient safety in rural areas, especially in ambulatory care.
- Host a series of "brown bag" lunches, both face-to-face and virtual, with invited experts on various patient safety topics.
- Assist with analysis of structure and processes, including facilities, equipment, workflows, and to help identify potential patient safety hazards.
- As administrators for the MBQIP program, SORH have been instrumental in introducing patient safety quality measures to rural and critical access hospitals. SORH should continue to use FLEX funds to address patient safety issues and pursue other funding to expand these efforts to clinics and other ambulatory settings.

Tools

Agency for Healthcare Research and Quality (AHRQ)

AHRQ offers a host of toolkits and other resources for improving patient safety at its Quality and Patient Safety page. Highlights include:

Comprehensive Unit-based Safety Program (CUSP)

http://www.ahrq.gov/professionals/quality-patient-safety/cusp/index.html

The Comprehensive Unit-based Safety Program (CUSP) toolkit includes training tools to make care safer by improving the foundation of how your physicians, nurses, and other clinical team members work together. It builds the capacity to address safety issues by combining clinical best practices and the science of safety

Toolkit for Reduction of Clostridium difficile Infections through Antimicrobial Stewardship.

http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/cdifftoolkit/index.html

This toolkit is designed for hospital staff and leadership to develop an effective antimicrobial stewardship program (ASP) with the potential to reduce *C. difficile*. An ASP is a systematic approach to developing coordinated interventions to reduce overuse and inappropriate selection of antibiotics with the goal of achieving optimal outcomes for patients in cost-efficient ways. The toolkit was prepared by a research team at the Boston University School of Public Health, Montefiore Medical Center, with support from the Greater New York Hospital Association/United Hospital Fund.

Toolkit for Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation

http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/match/index.html

This toolkit is based on the Medications at Transitions and Clinical Handoffs (MATCH) Web site. It provides a step-by-step process for developing a patient-centered medication reconciliation process that follows patients as they move through all health-care settings. The process involves comparison of a patient's current medication regimen against a physician's admission, transfer, or discharge orders to identify discrepancies. MATCH was developed by Gary Noskin, M.D., and Kristine Gleason, R.Ph., of Northwestern Memorial Hospital in Chicago, Illinois, through the support of Agency for Healthcare Research and Quality (AHRQ) and collaboration between Northwestern University Feinberg School of Medicine and The Joint Commission.

Institute for Healthcare Improvement (IHI)

Open School

http://www.ihi.org/education/IHIOpenSchool/Courses/Pages/default.aspx

The IHI Open School offers a full series of courses on patient safety topics, ranging from fundamentals to the role of team-based care in providing safer care.

Medication Reconciliation Form (requires log-in)

http://www.ihi.org/resources/Pages/Tools/BMHMemphisMedicationReconciliationForm.aspx

This easy-to-use form can be used to track a patient's medication at care transitions, including admission, transfer, and discharge from a hospital or long-term care facility. It can easily be adapted to primary care settings.

Office of Disease Prevention and Health Promotion

Partnering to Heal

http://www.health.gov/hcq/training.asp

Partnering to Heal is a computer-based, video-simulation training program on infection control practices for clinicians, health professional students, and patient advocates. Users assume the identity of five main characters and make decisions about preventing health-care-associated infections from each character's perspective.

The overall focus of the training is on effective communication about infection control practices and ideas for creating a "culture of safety" in health-care institutions. Topics include prevention of surgical site infections, central line-associated bloodstream infections, ventilator-associated pneumonia, catheter-associated urinary tract infections, Clostridium difficile, and methicillin-resistant Staphylococcus aureus (MRSA). The training also outlines basic protocols for universal precautions and isolation precautions and highlights several key safety-related behaviors:

- Teamwork
- Communication
- Hand washing
- Vaccination against the flu
- Appropriate use of antibiotics and
- Proper insertion, maintenance, and removal of devices, such as catheters and ventilators.

Minnesota Department of Health

Root Cause Analysis Shared Checklist
http://www.health.state.mn.us/patientsafety/toolkit/rcaprocesschecklist.pdf
A comprehensive checklist for completing a root cause analysis after a patient safety event. Includes chronological sequence of events and assigned roles.

The Joint Commission

Framework for Conducting a Root Cause Analysis and Action Plan
http://www.jointcommission.org/sentinel_event.aspx
A comprehensive tool designed to help managers and clinicians conduct root cause analysis and develop appropriate responses to sentinel events.

Veterans Administration

National Center for Patient Safety, Falls Toolkit
http://www.patientsafety.va.gov/professionals/onthejob/falls.asp
This toolkit, first posted in 2004 and updated in 2014, is designed to help health-care facilities develop a comprehensive falls prevention program.

Links and Resources

Agency for Healthcare Research and Quality (AHRQ)

Patient Safety Portfolio
http://www.ahrq.gov/cpi/portfolios/patient-safety
The mission of the AHRQ Patient Safety Portfolio is to prevent, mitigate, and decrease the number of medical errors, patient safety risks and hazards, and quality gaps associated with health care and their harmful impact on patients. To further this mission, funding is made available for health services research in the following areas: 1) patient safety threats and medical errors, 2) patient safety organizations (PSOs), 3) patient safety and medical liability reform, and 4) health-care-associated infections (HAIs).

The Patient Safety Portfolio offers a growing evidence base in best-practices in patient safety, including:

Patient Safety Organizations: Organizations that collect and analyze patient safety events that health care providers report and provide feedback to help clinicians and health care organizations improve health care quality.

Patient Safety Culture Assessment Tools, which enable health-care providers to audit their current patient safety culture, track changes in patient safety over time, and evaluate the impact of specific patient safety interventions.

TeamSTEPPS® (Team Strategies and Tools to Enhance Performance and Patient Safety), an evidence-based teamwork system which is designed to improve communication and teamwork skills among health care professionals.

Center for Patient Safety

http://www.centerforpatientsafety.org
The Center for Patient Safety was established in 2005 with the mission of promoting safe and quality healthcare through the reduction of medical errors. It is an independent, not-for-profit organization and in November 2008 became one of the first federally listed patient safety organizations. The Center focuses on providing resources and facilitation to health-care providers, government agencies, the public, and others who wish to improve patient safety.

Institute for Safe Medication Practices

https://www.ismp.org
The Institute for Safe Medication Practices (ISMP) is a nonprofit organization devoted entirely to medication error prevention and safe medication use. ISMP has more than 35 years of experience helping health-care professionals keep patients safe, and continues to lead efforts to improve the medication use process. The organization is known and respected worldwide as the premier resource for impartial, timely, and accurate medication safety information.

National Patient Safety Foundation

http://www.npsf.org
The National Patient Safety Foundation (NPSF) is the largest independent, not-for-profit organization focused on patient safety. Founded in 1997, the NPSF partners with patients and families, the health care community, and key stakeholders to advance patient safety and health care workforce safety and disseminate strategies to prevent harm. Its vision is to create a world where patients and those who care for them are free from harm. The NPSF offers a wide array of educational resources for patients and health-care professionals, including white papers, certification, an annual conference, and online learning tools. Annually, the NPSF funds innovative projects that are directed toward enhancing patient safety in the United States.

Lown Institute

http://lowninstitute.org/

The Lown Institute is an independent not-for-profit organization that seeks to catalyze a grassroots movement for transforming healthcare systems and improving the health of communities. They are building a grassroots social movement that includes an alliance of health professionals, religious and community groups, and the general public. The movement, called the RightCare Alliance, advocates for a transformation of the healthcare system and for a redirection of resources currently being wasted in healthcare towards promoting community health and redressing health disparities.

HealthIT.gov

Safety Assurance Factors for EHR Resilience (SAFER)

http://www.healthit.gov/safer

The SAFER Guides are designed to help healthcare organizations conduct self-assessments to optimize the safety and safe use of electronic health records (EHRs). They cover the following topics: 1) High priority practices 2) organizational responsibilities 3) contingency planning 4) system configuration 5) system interfaces 6) patient identification 7) computerized provider order entry with decision support 7) test results reporting and follow-up 8) clinician communication

Safe Care Campaign

http://www.safecarecampaign.org

The Safe Care Campaign was founded in 2006 by Victoria and Armando Nahum after three different members of their family were infected in three different hospitals in three different states in 10 months' time, eventually resulting in the death of their 26-year-old son Joshua. The Campaign offers a host of resources for prevention of health-care acquired infections, including evidence-based guidelines and the "Patient Perspective Safety Videos" series, which focus on training providers in patient engagement.

Centers for Disease Control and Prevention (CDC)/Safe Injection Practices Coalition

The One & Only Campaign

http://www.oneandonlycampaign.org/

The One & Only Campaign is a public health campaign, led by the Centers for Disease Control and Prevention (CDC) and the Safe Injection Practices Coalition (SIPC), to raise awareness among patients and healthcare providers about safe injection practices. The Campaign aims to eliminate infections resulting from unsafe injection practices. The website provide free educational resources for health professionals and others.

University of Wisconsin Center for Quality and Productivity Improvement

Systems Engineering Initiative for Patient Safety (SEIPS)

http://cqpi.wisc.edu/seips-main.htm

The Systems Engineering Initiative for Patient Safety (SEIPS) is a multidisciplinary initiative applying systems engineering, human factors engineering, and quality engineering approaches to patient safety. SEIPS was one of 18 patient safety developmental centers originally funded by the Agency for Healthcare Research and Quality (AHRQ), the only such center located in a college of engineering.

World Alliance for Patient Safety

http://www.who.int/patientsafety/en

A host of resources addressing global patient safety issues. Many resources focus on patient safety approaches in low-resource settings and may be applicable to rural and frontier communities in the United States.

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Module 9
Health Information Systems

What is the Health Information Systems?

The health information systems is the infrastructure and management of health data that provides the foundation for decision-making. Health information systems collect and generate data, compile them, analyze and synthesize those data, and include the means for communicating and using those data. Critically, the health information system converts data into information that can be used for timely, health-related decision-making (World Health Organization, 2008).

The American Health Information Management Association classifies health information systems into three broad categories:

- *Health Information* ***Technology*** is the "nuts and bolts" framework used to control the collection, flow, and exchange of health information. It is the hardware, software, and general framework used to manage health information, and the exchange of health information in a digital format.
- *Health Information* ***Management*** entails the collection, analysis, use, and protection of health information, both digital and traditional.
- *Health* ***Informatics*** is an interdisciplinary science that that defines how health information is technically captured, transmitted, and used.

Every health-care provider or system, no matter how small or remote, is part of the federal goal of developing "a sustainable, learning health-care system that gets the right care to people when they need it and then captures the results for improvement" (Friedman, 2011).

Successful use of digital tools by health-care organizations integrates health information technology, management, and informatics. Organizations need technology, including software, hardware, and broadband Internet access; providers trained to use those systems; and staff to maintain and update those systems. They need processes and systems to manage data and turn them into information, and the people with the skills to do that. They also need to stay abreast of science and research developments in health information, as well as recognizing potential drawbacks and risks implementing digital tools in the health-care environment.

Interoperability is also key to the successful deployment of health technologies. Interoperability is defined by the Office of the National Coordinator for Health Information Technology (ONC) as "the ability of systems to exchange and use electronic health information from other systems without special effort on the part of the user" (ONC, 2014). The ONC is responsible for advancing connectivity and interoperability of health information technology (health IT). Ultimately, the vision is of an electronic health information exchange that allows "information to follow a patient where and when it is needed, across organizational, health IT developer and geographic boundaries" (ONC, 2014).

The Electronic Health Record

The core of health information systems is the ***Electronic Health Record (EHR).*** The EHR is a person's comprehensive digital health record, shared among multiple facilities and agencies. It is the underlying foundation of health information technology systems. Done correctly, the EHR provides a comprehensive, accurate, and complete patient health record. Its many parts must integrate to capture, create, share, maintain, and store all data for each patient.

Other health information tools both contribute to and rest on effective use of the EHR. The EHR provides the mechanism to collect and organize data

that can then be analyzed, shared appropriately, and used to determine the course of the patient's care. Beginning in 2015, Medicare and Medicaid reimbursements will be reduced if an EHR system is not in place. However, the CMS incentive program for meaningful use (see box) provides incentive payments for organizations that meet specific quality metrics in implementing EHR technologies.

Meaningful Use (MU) is the use of certified EHR technologies technology to achieve specific health and efficiency goals set by the Centers for Medicare and Medicaid Services (CMS).

The *Medicare and Medicaid EHR Incentive Programs* provide financial incentives for the meaningful use of certified EHR technology to improve patient care. Incentive payments for meaningful use are based on meeting specific objectives, defined in three stages. Broadly, the stages require providers to demonstrate the following:

1. **Stage 1:** Successful implementation of the EHR and digitization of health records
2. **Stage 2:** The use of data from the EHR for quality measurement, clinical decision support, and information exchange
3. **Stage 3:** The use of the EHR to improve health outcomes for both patients and populations

To qualify for incentives, health systems must enroll in Medicare and/or Medicaid incentive programs. Because Medicaid is administered by each state, determination for participation will be made by the state in collaboration with CMS. Most hospitals and larger health systems should register for both.

Multiple applications are commonly integrated with the EHR, in addition to having unique functions of their own. These include:

Point of Care Health Information Technologies

Clinical Physician Order Entry (CPOE). CPOE is any computer software that allows providers to enter medical orders into a computer system. Early CPOE systems focused on medications, but current systems include processes such as orders for laboratory or radiology tests, procedures, and decision-support tools directly related to the orders (e.g. drug dosages, drug-drug interactions, duplicate-therapy checking). CPOE is integrated into the EHR and the HSO's general information system to ensure access to the latest, evidence-based protocols and procedures. When successfully implemented, CPOE has been shown to reduce preventable adverse events in comparison to traditional systems such as written, verbal, fax, or telephone orders.

Clinical decision support. Clinical decision support (CDS) offers providers, staff, patients, and others customized information and knowledge. Information is intelligently filtered or presented at appropriate times. A range of tools is available to support decision-making in the clinical workflow. These tools include evidence-based clinical guidelines, condition-specific order sets; focused patient data reports and summaries; documentation templates; diagnostic support, and contextually relevant reference information. Automated alerts and reminders cue both patients and providers when action is needed.

Clinical Documentation. Accurate and efficient clinical documentation is essential to ensure quality patient care, timely reimbursement, and accurate public health surveillance data. Digital clinical documentation tools help to ensure that the patient's status and scope of services provided during the clinical encounter are accurately represented and translated into coded data.

Care coordination technology. Care coordination tools provide the means for all people involved in caring for a patient to know what's been done and what needs to be done.

Care management technology. Care management systems provide the framework for identifying the needs of a particular patient or patient population and developing and executing a customized treatment strategy for that patient or population. They are often part of the EHR.

Patient engagement technologies. Patient-engagement technologies, such as secure patient portals, offer health-care consumers a way to view their health records and test results, schedule appointments, request prescription refills, and communicate with their care team through secure messaging. Patient portals are integrated with the EHR.

Population Health Tools

Health Information Exchange (HIE). Health information exchange is the appropriate access and sharing of medical information. With electronic HIE, information is shared among health-care team members, including primary care and specialist physicians, nurses, pharmacists, community health workers, community paramedics, and others. Patients can also access and share their own records. Implementation of HIE systems often requires agreements between multiple partners, interoperability, and coordination.

Patient population management. According to the Institute of Medicine report, *The Learning Healthcare System* (2007), "the goal of population health management (PHM) is to keep a patient population as healthy as possible, minimizing the need for expensive interventions such as emergency department visits, hospitalizations, imaging tests, and procedures" (IOM, 2007, p. 7). Effective patient population management requires interoperability of multiple technology tools.

Patient population management requires software that collects claims and clinical data, including medical assessment and treatment data. Analyses of those data can help clinicians, public health officials, and others identify specific needs. For instance, EHRs provide integrated clinical data from the primary care health-care team, emergency rooms, specialists, and payers that help to identify people who could benefit from additional interventions.

Connected Health[1] Technologies

In addition to technologies used in clinical settings, new tools are being used to reach health-care consumers in their homes and communities. These tools have the potential to radically transform health-care delivery. In general, they fall into three categories:

Telemedicine. Telemedicine can take the form of "e-visits," in which patients and one or more health-care providers uses secure messaging to supplement face-to-face encounters. E-visits provide a mechanism for preventive care, acute care, chronic disease management, and care coordination. Clinical information can be exchanged securely, including text, images, and biometric data.

Mobile Health (mHealth). Mobile health, or "mHealth" is the practice of medicine and public health supported by mobile devices. mHealth has been used to collect community and clinical health data, deliver health-care information, remotely monitor patient status in real time, and to support consumer health behaviors (for example, consumers tracking dietary intake or physical activity using their smartphones).

Online health information. A plethora of health information is available online for both providers and consumers. The information ranges widely in quality, depth, breadth, and complexity. In some cases, larger health systems license content from reputable sites. Smaller HSOs and individual providers may wish to develop lists of reputable sites for their patients.

Why are Health Information Systems Important?

Experts agree that health information systems have the potential to radically transform the delivery and coordination of health services, as well as overall patient care. Electronic health records and other health information applications are tools that can be used to develop a culture of health data management and sharing, which, in turn, can affect patient care and outcomes.

Digital technologies, as Klein et al (2014) observe, have the potential to "meet five high-priority needs:"

- Increasing patient engagement in self-care
- Closing communication gaps that have contributed to suboptimal treatment and patient experiences
- Identifying and tailoring services to meet the common needs of discrete patient populations;
- Building new care models that enable consumers to get care in the most convenient, cost-effective ways
- Improving decision-making by consumers and providers (Klein, 2014, 8)

For health systems, implementation of EHR and other health technologies has the potential to:

- Improve patient care and advance quality outcomes

1 The term "connected health" was first used by researchers and providers in Partners Healthcare System in 2006. It has been defined as the use of digital technology to engage and care for patients in the community, outside of the health care system.

- Strengthen patient safety, privacy, and security
- Improve efficiency and reimbursement
- Reduce paperwork in filling out forms and processing billing requests
- Eliminate duplicate workflow processes
- Expand access to specialty services

In rural and frontier communities, especially, health information technologies can help coordinate care, improve disease surveillance, focus health education, and compile regional data. The federal strategic plan for health information technology calls for the development of a **learning health system** – that is, a system that "learns" in real time as data are entered and aggregated. An integrated, real-time learning health system will provide the evidence base to determine best-practices in clinical care; monitor the safety and effectiveness of medications, medical devices, and procedures; assess cost-effectiveness; and more. Such a system will have a profound effect on access to knowledge and information for rural and frontier providers, giving them immediate access to evidence-based protocols.

While evidence is still limited regarding the benefits of health information technology, early studies suggest that it is effective in promoting efficiencies, reducing costs, and improving patient satisfaction and outcomes. For instance, Buntin, Burke, Hoagland, and Blumenthal (2011) systematically reviewed 154 studies and found that 62 percent reported improvements in one or more aspects of care with no negative effects, while 92 percent reported either positive or mixed effects (i.e. positive overall effects despite at least one negative aspect) of health information technology.

Examples of How Health Services Organizations have Used Health Information Systems to Increase Capacity and Resulting Outcomes

Health systems in rural areas are using technologies to manage patients' health records and other information, streamline processes, reduce medical and prescribing errors, and overcome geographic barriers to care. Telemedicine allows staff in rural clinics, health centers, and Critical Access Hospitals (CAHs) to connect with specialists in tertiary care centers, with ambulance crews working in even more remote locations, or with patients in their homes. Remote monitoring devices allow providers to follow patients over sustained time periods. In addition, consumers are empowered by access to digital technologies such as smart phones and personal computers.

Exemplary projects include:

NDSU College of Pharmacy, Nursing, and Allied Sciences, the North Dakota Board of Pharmacy, and the North Dakota Pharmacists Association

The North Dakota Telepharmacy Project
https://www.ndsu.edu/telepharmacy

The North Dakota Telepharmacy Project delivers telepharmacy services from a central-order entry site to 17 CAHs in rural North Dakota. Remote pharmacists use telepharmacy technology to review medication orders prepared at the hospitals, identify and address quality-related events (QREs), and code clinical interventions.

Results were recorded over the first 17 months of the project:

- Cumulative monthly medication orders ranged from a low of 12,535 in the first month of the study to a high of 18,257. Monthly rates of visual medication verification and clinical intervention ranged from 8.0% to 14.2% and from 1.3% to 3.1ent %, respectively.
- The most frequently identified QREs were transcription errors, which accounted for 2,389 interventions (43.3%); 2,078 interventions (37.7%) targeted prescribing-related QREs.
- The most frequently cited intervention codes were for dosage adjustments (n = 547), deep venous thrombosis prophylaxis (n = 437), pharmacokinetic consultation (n = 268), renal dosing (n = 182), and the prevention of minor (n = 148) and major (n = 94) adverse drug events.

Study results indicate that the NDTP telepharmacy model is effective in identifying and resolving QREs in CAHs. The use of the telepharmacy services increased over the study period, suggesting that CAH practitioners became more comfortable using the technology on a regular basis to enhance patient safety. As of August 2015, more than 80,000 residents had been served by the program.

University of South Carolina, Arnold School of Public Health, Health Services Policy and Management Department

Telestroke Interventions

A research team led by Rajendra Singh of the Arnold School of Public Health, Health Services Policy and Management Department at the University of South Carolina conducted an exploratory, qualitative case study of two stroke networks, one in Georgia and one in South Carolina. Each network used the same telestroke technology (called Remote Evaluation of Acute isCHemic stroke, or REACH) to connect a comprehensive stroke center (hub) to rural hospitals (spokes). The networks were similar in size and complexity. The researchers based their research on previous work showing that specialized Web-based stroke evaluation systems (telestroke) have helped improve urgent stroke care in underserved communities. However, many rural hospitals that have deployed telestroke are not using it fully – i.e., have not fully assimilated the model. The researchers investigated the underlying causes for variations in the use of a Web-based telestroke system for urgent stroke evaluation.

- The team found large variations in telestroke assimilation across spokes. These variations can be explained by several hub- and spoke-related characteristics,
- Hub-related characteristics that led to greater assimilation included telestroke institutionalization into stroke care, resources for the telestroke program, ongoing support for stroke readiness of spokes, telestroke performance monitoring, and continuous telestroke process improvement.
- Spoke-related characteristics that led to greater assimilation included having a manager who championed telestroke, certification as a stroke center, having a dedicated telestroke coordinator, establishing a stroke committee comprised of key stakeholders, accessing local neurological experts, and using continuous process improvement methods.

The team concluded that telestroke systems can help rural hospitals improve their stroke readiness. However, networks need to integrate the technology into their stroke delivery processes. In other words, telestroke technology needs to be assimilated into stroke care protocols and day-to-day operations of the organization.

How to Pay for Health Information Systems

A significant federal investment in health information technology began in 2009 with the Health Information Technology for Economic and Clinical Health Act, which was passed as part of the American Recovery and Reinvestment Act (ARRA) of 2009. While the ARRA has expired, federal investment in health information technology infrastructure continues to affect the health sector dramatically.

The Federal government offers grants, incentives, and loans to help rural providers subsidize the cost of implementing EHR and other digital technology solutions to patient care. Other programs offer telecom options and discounted Internet services. Federal efforts in rural communities have focused on bringing infrastructure such as broadband connectivity and developing health information exchanges (HIE).

Some examples of funding opportunities include:

Agency for Healthcare Research and Quality (AHRQ)

http://healthit.ahrq.gov/ahrq-health-it-funding-opportunities

Funding opportunities designed for basic health IT research and to fill gaps in the field that will lead to improved design of health IT systems are available through the

Appalachian Regional Commission

http://www.arc.gov/grants

The Appalachian Regional Commission awards grants and contracts for research on topics that directly impact economic development in the Appalachian Region. Funds are appropriated to the Commission annually by Congress. Program grants are awarded to state and local agencies and governmental entities (such as economic development authorities), local governing boards (such as county councils), and nonprofit organizations (such as schools and organizations that build low-cost housing). Contracts are awarded for research on topics that directly impact economic development in the Appalachian Region.

Federal Communications Commission

Rural Health Care Program

The Rural Health Care Program provides funding to eligible HSOs for telecommunications services, including broadband necessary for the provision of health care.

Health Resources and Services Administration (HRSA)

Office for the Advancement of Telehealth
http://www.hrsa.gov/ruralhealth/about/telehealth/
HRSA administers several telehealth grant programs, both for HSOs and for technical support providers in the area of telehealth, with a focus on rural and underserved communities.

The Office of the National Coordinator for Health Information Technology (ONC)

Grants Primer [PDF - 30 KB]
Describes key steps needed to find and apply for grants in health technology.

Rural Assistance Center

http://raconline.org
The Rural Assistance Center maintains an updated list of health information technology funding sources available to rural communities.

US Department of Agriculture (USDA)

http://usda.gov
The USDA offers multiple resources and funding opportunities for rural communities, most of which can be used to help build telecommunications infrastructure and other community supports for HSOs.

National Agricultural Library

http://ric.nal.usda.gov/funding-resources
A useful list of rural funding sources.

Rural Utilities Service

The USDA Rural Utilities Service (RUS) administers programs that provide infrastructure or infrastructure improvements to rural communities. These include water and waste treatment, electric power and telecommunications services.

Telecommunications programs

Several USDA telecommunications grant programs provide opportunities for strengthening local infrastructure and connecting rural communities.

Distance Learning and Telemedicine Program

Community Connect Grant Program

Telecommunications Infrastructure Loan Program

Rural Development Program

The (USDA) Rural Development Program offers more than 50 financial assistance programs to rural communities, nonprofits, businesses, and government agencies.

Community Facility Direct Loan & Grant Program

The Community Facility Direct Loan & Grant Program provides loans and grants and loan guarantees for water and environmental projects, as well as community facilities projects. Community facilities projects develop essential community facilities for public use in rural areas and may include hospitals, as well as many other community-based initiatives.

Farm Bill Broadband Program

The Farm Bill Broadband Program is designed to provide loans for funding, on a technology neutral basis, for the costs of construction, improvement, and acquisition of facilities and equipment to provide broadband service to eligible rural communities.

Universal Services Administrative Company (USAC)

http://www.usac.org/
The Universal Services Administrative Company (USAC) is an independent, not-for-profit corporation designated by the Federal Communications Commission (FCC) as the administrator of universal service. The mission of the USAC is to protect the integrity of universal service by informing and educating program audiences, collecting and distributing contributions, and promoting program compliance. Three divisions administer the four universal service support programs: High Cost and Low Income, Rural Health Care, and Schools and Libraries divisions.

Among the programs administered by the USAC is the Healthcare Connect Fund Program. The program offers a 65 percent discount on eligible expenses related to broadband connectivity to both individual rural health care providers and consortia. Consortia can include non-rural health care providers if the consortium has a majority of rural sites.

Examples of things that SORHs Can do to Increase Capacity in Health Information Systems

State Offices of Rural Health are well poised to support local health systems organizations in pursuing funding to build capacity in health information systems, understanding the transformative potential of health technology, and identifying resources for assistance.

- Provide support in identifying local, regional, state, and federal funding sources for increasing connectivity options, purchasing equipment, and providing training and education to providers.
- Facilitate the development of local consortia, formal or informal, of health-care systems and providers to support HIE, telehealth, development of interoperable systems, and implementation.
- Conduct health-care professional and administrator training via Webinars and other online resources, both one-on-one and in groups.
- Provide discussion forums, online and face-to-face, for organizations implementing EHR and other technologies.

Help HSOs develop health information technology infrastructure, internally and externally, by working with communities to increase broadband access, providing support for grantwriting, training, and other necessary elements.

Tools

Agency for Health Research and Quality (AHRQ)

e-prescribing toolset
http://healthit.ahrq.gov/health-it-tools-and-resources/implementation-toolsets-e-prescribing/toolset-e-prescribing
A comprehensive toolset for implementing e-prescribing technologies.

American Academy of Family Physicians

Family Practice Medicine Toolbox: Clinical Decision Tools
http://www.aafp.org/fpm/toolBox/viewToolType.htm?toolTypeId=29
A set of interactive tools for calculating risk of disease, evidence-based treatment protocols, medication dosing, and more. Includes both the tool and source articles for each tool.

Health Resources and Services Administration (HRSAP)

Meaningful Use and Critical Access Hospitals: A Primer on HIT Adoption in the Rural Setting
http://www.hrsa.gov/ruralhealth/pdf/meaningfuluseprimer.pdf
A guide for critical access hospitals working to attain meaningful use standards.

Rural Health IT Toolbox

http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/
A resource developed by HRSA to help rural health providers seeking to implement health IT to improve the overall effectiveness of their institutions.

Links and Resources

American Medical Association

Digital Health
http://www.ama-assn.org/ama/pub/advocacy/topics/digital-health.page
A collection of resources, toolkits, and training to help physicians use digital technologies to navigate the changing health-care environment.

Association of Clinical Documentation Improvement Specialists

http://www.hcpro.com/acdis
The homepage of the Association of Clinical Documentation Improvement Specialists. ACDI is a community in which CDI professionals share strategies for successful CDI programs and achieve professional growth. Its mission is to bring CDI specialists together.

Agency for Health Research and Quality (AHRQ)

Health IT homepage
http://healthit.ahrq.gov/
The AHRQ Health IT homepage offers a plethora of resources, including evidence-based research reports, best-practices, toolkits, and funding sources.

American Health Information Management Association (AHIMA)

http://www.ahima.org

The homepage of the American Health Information Management Association (AHIMA), the premier association of health information management (HIM) professionals worldwide. Founded in 1928, AHIMA has extensive experience in helping health-care organizations effectively manage health records and data.

Centers for Medicare and Medicaid Services (CMS)

EHR Incentive Programs

http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html

The official web site for the Medicare and Medicaid electronic health records (HER) incentive programs. The key resource for meeting standards of meaningful use.

Health Information Management Systems Society (HIMSS)

http://www.himss.org/

The home page of the HIMSS, a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology. HIMSS produces health IT thought leadership, education, events, market research, and media services around the world.

Institute of Medicine.

The Learning Healthcare System. (2007).

http://www.iom.edu/Reports/2007/The-Learning-Healthcare-System-Workshop-Summary.aspx

A summary of the Institute of Medicine (IOM) workshop on development of a learning health-care system. "This workshop considered how health care is structured to develop and to apply evidence—from health professions training and infrastructure development to advances in research methodology, patient engagement, payment schemes, and measurement—and highlighted opportunities for the creation of a sustainable, learning healthcare system that gets the right care to people when they need it and then captures the results for improvement."

ONC Regional Extension Centers (RECs)

http://www.healthit.gov/providers-professionals/regional-extension-centers-recs

The Office of the National Regional Extension Centers (RECs), located in every region of the country. They provide support and resources for providers in EHR implementation and HealthIT needs. Highly trained staff at the RECs can walk providers through the EHR adoption process from vendor selection and workflow analysis to implementation and meaningful use.

National Learning Consortium

http://www.healthit.gov/providers-professionals/national-learning-consortium

The National Learning Consortium (NLC) represents a collective body of knowledge and resources designed to support health care providers and Health IT professionals working towards the implementation, adoption, and meaningful use of **certified EHR systems**

Wager, K.A., Lee, F.W. and Glaser, J.P. (2013).

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2nd ed. San Francisco: Jossey-Bass.

The key textbook for health-care managers implementing health information systems in their organizations.

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Module 10
Health-Care Management

What is Health-Care Management?

Health-care management is the overall leadership and guidance of all or part of a health-services organization using people, money, equipment, physical facilities, intellectual, and other resources. Health-care managers focus on the business of health care, including planning, implementing, and evaluating the organization's structure, processes, and outcomes (Donebedian, 2005). Leading and managing a health-services organization involves multiple tasks including program management, human resources management, financial planning and accounting, outcomes evaluation, physical facility maintenance and development, strategic planning, outreach and marketing, and more.

Skillful management of health-services organizations provides the infrastructure for providers to deliver high-quality care. Leading health systems researchers Kenneth White and John Griffith (2010) define "excellent" health-services organizations as those that "delight their patients, families, caregivers, and other associates and that provide care that is safe, effective, patient-centered, timely, efficient, and equitable" (p. 1). Excellent care, they suggest, is achieved when four critical issues are addressed:

- Establishment and adoption of a clear mission, vision, and values
- Creation of a culture that supports listening, empowerment, training, and rewards.
- Measuring performance by aspiring to meet or exceed benchmarks while setting realistic goals.
- Ensuring the engagement of all stakeholders, including staff, administrators, clinicians, patients, families, and community members.

White and Griffith propose that the role of the health-care leader is to create, support, and coordinate the teams that deliver care. They define the health-services organization as any "formal legal entity that reaches across the panorama of medicine, other clinical disciplines, and business to identify and deliver care to its community" (p. 3). This definition transcends the traditional idea of a health-services organization as an isolated entity, or of the health-care provider as a solo player. Instead, it proposes that the health-services organization operates in the context of the community it serves. .

A glance at the etymological origins of the word "management" serves as a reminder that management is both science and art. The word "management" comes from the Old French ménagement, which translates as "the art of conducting, directing" and in turn comes from the Latin manu agere, meaning "to lead by the hand." Much as a conductor marshals the resources of an orchestra into one coordinated group that makes music, the health-care manager must coordinate and guide the many elements of a health-services organization or system. The image of being led by the hand implies guidance that is firm but gentle, with the leader walking beside, rather than in front of or at a distance from, the owner of that hand.

Evidence-Based Management

Sweeping changes in the U.S. health-care environment are transforming the way that health care is managed. Financial and regulatory pressures are being levied as patients, payers, and policymakers demand care that is safe, patient-centered, efficient, effective, timely, and equitable (Baker, 2001). Today's

health-care managers must balance between a clinical focus on helping individual patients in the moment and a broader focus on helping improve the overall health of their communities – that is, **population health**.

In this challenging environment, rural health-services organizations that seek to deliver high-quality care cannot rely on managing organizations by tradition or intuition. Recognition of serious lapses in patient safety, quality of care, and spiraling costs has led to a critical shift in the approach to managing health-services organizations. This shift began in the early 1990s and continues today and resulted in the emergence of a model often called **evidence-based management** (White & Griffith, 2010). Evidence-based management relies on performance measures and delineation of formal processes to achieve specific goals and objectives. Health care is a latecomer to the world of management science, which has built a robust body of evidence about the most effective ways to develop structures and processes and evaluate outcomes.

Evidence-based management is built around four core functions:

1. *Boundary spanning*: establishing and maintaining effective relationships with all stakeholders, and adapting the HCO [health-care organization] to the needs of its community
2. *Knowledge management*: maintaining a detailed fact base about the organization, including performance measures, benchmarks, and work processes, and making that fact base accessible to associates through training and communication
3. *Accountability and organizational design*: identifying and integrating the contribution and goals of each HCO component
4. *Continuous improvement*: continually analyzing and improving all work processes, following a systematic cycle of measurement, opportunity identification, analysis, trial, goal setting, and training for implementation.
(White and Griffith, 2010, p 25).

Components of Health-Services Organizations

Health-services organizations are composed of groups of teams. Teams vary based on the size and focus of the organization, but they generally fall into one of four categories (White & Griffith, 2010):

- *Clinical caregiving teams:* Clinical caregiving teams provide direct care to patients, based on those patients' needs. In the primary care setting, caregiving teams must be flexible generalists but may still specialize in pediatrics, adult internal medicine, family medicine, or geriatric care; in a rural hospital, teams may specialize in different areas of acute care. Other caregiving teams provide rehabilitation, home care, palliative care, hospice, behavioral health, and continuing care.
- *Clinical support teams:* Clinical support teams provide specific services to support the work of caregiving teams. For example, laboratory, imaging, and pharmacy teams provide the information that is needed for providers to diagnose and treat disease; physical therapy provides rehabilitation as prescribed; and social services help to address psychosocial needs.
- *Logistic support teams:* Health services organizations rely on teams of trained professionals to address complex logistics, including maintaining and rotating inventory, information, facilities, accounting, and cash management.
- *Strategic support teams:* Strategic support teams provide core business functions, including governance, marketing, internal consulting, and overall direction. They are responsible for creating and protecting the organization's culture, developing resources, and assuring that all stakeholders are respected.

These teams may be arranged in different ways, depending on the legal and organizational structures of the health-services organization. In rural areas and small organizations, the same person may be part of several different teams.

Legal Structures of Health-Services Organizations

Health-services organizations can be formed using several different legal structures. Generally, these fall into the categories of not-for-profit (nonprofit), for-profit, and government entities. In rural areas, the majority of large providers are not-for-profit or governmental organizations, including community

health centers and county-owned hospitals. However, many small clinics, including primary care and specialty care providers, are for-profit entities.

- *Not-for-profit:* Not-for-profit (nonprofit) organizations are formed to serve the public's interest. This type of organization is termed "nonprofit" because they do not declare a profit. Instead, all revenue available after paying for normal operational expenses must be committed to furthering the organization's community mission. Nonprofits may be incorporated or unincorporated. Incorporated organizations may apply for federal 501(c)(3) status from the Internal Revenue Service. Because their main purpose is to serve the community, 501(c)(3) organizations are exempt from paying taxes ("tax-exempt").
- *For-profit:* For-profit health-services organizations include clinics, hospitals, home-health agencies, and other providers. This type of organization can be organized as a sole proprietorship, limited liability company (LLC), partnership, corporation, S corporation, or cooperative. Most are incorporated and are run like any other for-profit corporation.
- *Government:* Government-run health services include clinics and hospitals run by the Department of Veterans' Affairs, public health agencies, and agencies owned by a state, county, or municipality. Such agencies are often subject to local, state, and federal policies.

Increasingly, individual clinics, hospitals, and other types of health centers (e.g. ambulatory surgical centers, hospice services, and long-term care organizations) are joining together to form health-care systems. These systems of care facilitate information-sharing, referrals, and other services. In rural areas, telemedicine and other technologies may allow patients to visit a clinic closer to his or her home while receiving services and consultation from specialists are tertiary-care centers. Health systems generally have a top-level management team as well as local administrators at each site. The health system may own all of its subsidiary sites, form partnerships, or engage in joint ventures.

Health-Services Organizations in Rural Communities

While many rural communities are home to a variety of health-services organizations, a few types of organizations may be more prevalent in rural communities. Types of health-services organizations commonly located in rural communities include:

- Federally Qualified Health Centers (FQHCs): All organizations receiving grants under Section 330 of the Public Health Service Act (PHS) are considered FQHCs. FQHCs may receive enhanced reimbursement from Medicare and Medicaid, as well as other benefits. FQHCs must serve an underserved area or population, offer a sliding fee scale, provide comprehensive services, have an ongoing quality assurance program, and have a governing board of directors. Certain tribal organizations and FQHC Look-Alikes (an organization that meets PHS Section 330 eligibility requirements, but does not receive grant funding) also may receive special Medicare and Medicaid reimbursement.
- *Rural Health Clinics (RHCs)*: A rural health clinic is a stand-alone clinic that has been federally qualified to receive special reimbursement from Medicare and Medicaid. CMS offers higher reimbursement rates to RHCs as an incentive for them to provide care in rural communities. To qualify for this reimbursement, RHCs must meet certain conditions described in Section 330 of the Public Health Service Act. RHCs must be staffed by a team that includes one mid-level provider, such as a nurse practitioner (NP), physician assistant (PA), or certified nurse midwife (CNM), who must be on-site to see patients at least 50 percent of the time the clinic is open. A physician (MD or DO) must supervise the mid-level practitioner as called for by state and federal law. Unlike federally qualified health centers (FQHCs), which are required to provide dental, mental health, substance abuse, and transportation services, RHCs are only required to provide outpatient primary care services and basic laboratory services. RHCs must be located within non-urban rural areas that have health care shortage designations.
- *Community hospitals:* Of 5,686 registered hospitals in the United States, 4,974 are community hospitals, according to data from the American Hospital Association. Community hospitals are short-stay general hospitals or specialty hospitals. Community hospitals have historically been owned either by local (not federal) government or, as not-for-profit entities, by local communities. HRSA has developed two special designations for

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community hospitals serving rural areas:

- *Critical Access Hospitals (CAHs):* CAHs are hospitals located in rural areas at least 35 miles away from any other hospital or CAH (with some exceptions). They may have no more than 25 inpatient beds and must maintain an annual average length of stay of 96 hours or less for acute inpatient care (not counting swing beds). They must offer services 24 hours, 7 days per week. CAH certification comes under a set of Medicare Conditions of Participation (CoP). CAHs receive cost-based reimbursement from Medicare instead of standard fixed reimbursement rates.
- *Rural Hospital:* While not an official federal designation, the American Hospital Association considers any hospital that has 100 or fewer beds, has 4,000 or fewer admissions per year, or is located outside of a Metropolitan Statistical Area, eligible for membership in its section for small and rural hospitals.
- Rural Referral Center (RRC): A hospital located in a rural area that receives referrals from the surrounding area and meets certain other criteria may receive the designation of RRC.
- Disproportionate Share Hospital (DSH): Hospitals that provide an extensive amount of care to low-income patients can receive disproportionate share payments. At least 25 percent of the hospital's patients must be low-income, or the hospital's Medicaid utilization rate must be one standard deviation above the state's average. While DSH payments are being phased out under the ACA, they are still a viable means for rural providers to recoup some funding from delivering uncompensated care.
- Sole Community Provider Hospital (SCPH): Hospitals designated by the Centers for Medicare and Medicaid Services (CMS) as SCPH qualify for special reimbursements for providing care, in addition to the 340B drug pricing program. Designation as a SCPH is dependent on the hospital's distance from other facilities, whether it is located in a rural area, and other factors such as topography, weather, etc.

› *Other providers,* including home-health agencies, hospice services, occupational and physical therapy services, and long-term care facilities also provide care in rural communities. While these organizations may be stand-alone agencies, community hospitals in rural areas often also offer these services.

Organizational Structure

Like other types of organizations, health-services organizations are structured to provide a framework for activities including communication, monitoring performance, and setting goals. Generally, organizations are structured around three general functions: governance, administration, and programs.

Governance (Strategic Leadership)

Nonprofits and many for-profit health-services organizations are governed by a board of directors. Government organizations often have an advisory board of directors but answer to an elected body (for instance, a county commission or city council).

The purpose of the board of directors is to provide for guidance and oversight for the organization, including setting direction, keeping the organization on track to meet its goals, and establishing policy. Board members act as representatives for stakeholders, including the community at large.

The board accomplishes its purpose by:

› *Building an effective executive team.* The board is directly responsible for hiring the chief executive officer (CEO) of the organization. The CEO is the critical liaison between the board and organization and is responsible for selecting and hiring all other employees, coordinating operations and design of the entire organization, implementing plans and policies, and representing the board and other stakeholders. The board must establish a strong working relationship with the CEO and support the person in that position as she builds an effective leadership team.

› *Establishing the organization's mission, vision, and values.* To lead the organization, the board must regularly review and update the reason why the organization exists (its mission), what the world will look like if it accomplishes its mission (its vision), and the core assumptions and beliefs that form the foundation of its work (its values).

› *Setting strategy and assuring it is implemented.* The board is responsible for setting strategic goals and monitoring progress toward those goals, as well as determining the scope of services

to be provided by the organization. To meet this obligation, the board must plan for the future by engaging in strategic, financial, and long-term planning as well as setting and monitoring annual goals. As part of shaping the organization's future, the board must ensure the adequacy of physical facilities and equipment and constantly engage with stakeholders including clinical and non-clinical staff, patients, and community members.

- *Ensuring the quality of clinical care.* The board of a health-services organization has a unique responsibility among governing boards: In addition to its overall responsibilities for leading the organization, it is also responsible for the quality of medical care (Marren, Feazell, & Paddock, 2003). The board must set specific quality goals, which must be measured and acted upon. In addition, the board is obligated to:
  - Approve medical staff bylaws or clinical policies and procedures
  - Appoint medical executives at all levels (this does not apply to community health centers)
  - Approve the plan for medical staff recruitment and development
  - Approve appointments and reappointments of individual physicians,
  - Approve contracts with physicians and physician organizations
  (White & Griffith, 2010, p. 116)
- *Monitoring the performance of the organization.* The board's responsibilities include monitoring the overall performance of the organization, including performance data, financial performance, community perceptions of the organization, and approving a yearly budget. The board also contracts with external auditors and accreditors, accepts their reports, and directs actions to be taken in response to recommendations.
- *Monitoring and improving board performance.* The board is also tasked with monitoring its own performance and assuring improvement in that performance. Understanding and responding to the needs of a complex organization is not an easy task, and even experienced board members may need training and additional support. The board monitors its performance through a yearly self-evaluation, interviews, and other data-gathering activities. The true measure of the board's performance, however, is how well the organization is meeting stakeholder needs. In other words, "the board's performance is the corporation's performance" (White & Griffith, 119).

Board members have a **fiduciary responsibility** to the organization – that is, they have what is called a **responsibility of care** for the organization (Black, 2001). The word *fiduciary* comes from the Latin term for "trust" or "faith." In other words, the well-being of the organization, fiscally and otherwise, is entrusted to the board. In this legal and ethical framework, board members have two important duties:

- **The duty of loyalty**, which holds that board members should always act in the best interests of the organization, not themselves. The duty of loyalty calls for board members to avoid **conflicts of interest**. If a board member – or family member or friend – stands to benefit from the corporations 's actions, then the board member must declare the conflict and recuse herself from the vote on that topic.
- **The duty of care**, which calls for board members to make careful, well-justified decisions in pursuing the organization's goals. Making rash or unreasonable decisions – for instance, placing all of the organization's financial assets in a high-risk investment fund – could be considered a breach of the duty of care. Board members are also responsible for making sure all of the organization's business is transacted legally.

The board is also responsible for establishing and regularly updating the organization's **bylaws**, which provide the structure for the organization's function. Bylaws spell out requirements for the board, such as the length of term, number of board members, and frequency of meetings. Nonprofit agencies must file a report about all of these activities, including the names of board members, in their annual tax returns.

Management (Operational Leadership)

While the board of directors, together with the chief executive officer (CEO) and chief medical officer (CMO), is responsible for strategic leadership, executive management is responsible for the day-to-day and long-term operations of the organization. The executive management team generally consists of a CEO, a chief operations manager (COO), a chief financial officer (CFO), and a chief health informa-

tion officer (CIO). In smaller organizations, many of these functions may be combined into one or two positions. Generally, these positions are responsible for the following duties:

- Chief Executive Officer (CEO): The CEO straddles strategy and operations, acting as the liaison with the board, other members of the executive team, and staff. The CEO hires and monitors all other employees, oversees the design and operation of the organization, and represents both board and owners of the organization (White & Griffith, 2010). The CEO is responsible for providing the board with timely, relevant information about the organization's performance and other issues. In addition, the CEO works with the leadership team to establish a culture that supports and reflects the organization's values.
- Chief Operating Officer: The COO monitors the organization's daily operations, assesses them for pertinence to the organization's strategic goals and overall performance, and reports on this assessment to the CEO. The COO typically oversees all facilities.
- Chief Financial Officer (CFO): The CFO oversees all of the organization's finances. The duties of the CFO includes the following critical functions:
  - Ensuring adequate cash flow
  - Monitoring company liabilities
  - Analyzing and communicating with the board and CEO about the organization's financial performance
  - Establishing relationships with key financial players, including bankers, financial analysts, and shareholders
  - Approving all agreements regarding financial obligations.
  - Ensuring all financial records are kept accurately and are up to date, including real estate bids, contracts, and leases
  - Maintaining relationships with shareholders and ensuring that annual reports and other documents are accurate
  - Overseeing the budget process and assessing the organization's actual financial performance in relationship to the financial performance projected in its budget
- Chief Information Officer (CIO): The CIO is responsible for coordinating the **knowledge management** functions of the organization, which include all forms of communication and information: computer-based, internet, voice, a local data warehouse, and access to internet information The role of the CIO is critically important in today's health-services organization, especially as emphasis increases on electronic health records, meaningful use of health-care data, online clinical decision-making tools, interoperability of systems, wearable technology, mobile health, telemedicine, and more.

Sophisticated data collection and analysis is needed to achieve the promise of the patient-centered medical home and other advanced primary care models. New payment models such as accountable care organizations (ACOs) (groups of providers that share responsibility, risk, and potential savings for care) depend on a constant flow of information to determine patient population needs, outcomes, and expenses (MacKinney, Mueller, & McBride, 2011). Electronic health records and health information exchanges are key pieces in the puzzle of coordinated, cost-effective health-care delivery. The job of the CIO also includes ensuring privacy rights in regards to electronic and other records and protecting the knowledge management system against failure, loss, or misuse.

Clinical Leadership

In addition to the administrative management team, the health-services organization requires clinical leadership. Clinical leaders are responsible for ensuring that the organization follows evidence-based protocols, appropriate equipment and training is provided to all staff, clinical processes are efficient and contribute to good patient outcomes, care meets quality standards, and that each clinical department fiscally responsible. The clinical leadership team is in charge of developing and/or approving patient care protocols (or guidelines), which describe evidence-based interventions to be taken, step-by-step, to treat patients with specific conditions. The team also oversees functional protocols, which identify the steps for performing specific clinical procedures. In small organizations, one clinician may assume both clinical and administrative leadership roles.

Members of the clinical leadership team include:

- *Chief Medical Officer (CMO)*: The CMO is the health-services organization's lead physician and leads all clinical teams. The CMO is part of both management and clinical teams, and acts as liaison between these two essential functions. As the organization's top physician, the CMO is responsible for ensuring that medical care meets quality standards, is delivered ethically and efficiently, and is in compliance with all federal, state, and organizational policies, rules, regulations, and standards.

  The CMO provides the final medical decision on disputed medical issues, as well as working with the CEO to assess clinical training needs of other staff and to assure that training is delivered. Responsibilities of the CMO include development of the organization's plan for clinical operations and efficient interdisciplinary care for both the community and individuals. As population health becomes a central goal of health-services organizations, the CMO has become the person in that organization with responsibility for developing a population health plan, both in community health centers and in hospital settings. The CMO also helps to develop clinical policies and formulate the organization's clinical budget.
- *Chief Nursing Officer (CNO)*: The CNO leads the nursing team, ensuring that all nursing care is delivered in accordance with standard practices. In the hospital setting, the CNO supervises other nurses, nurse managers. As an integral part of the organization's management team, the CNO helps to design and implement care delivery, gather data, hire and evaluate members of the nursing team, and identify and implement strategies to improve patient care and reach organizational goals. In a small rural clinic, one or two nurses may assume responsibility for all of these functions.

  The CNO is responsible for assuring that all nurses deliver care using the **nursing process**, a five-step process that includes:
  - Assessment of the person's health issues.
  - Developing a nursing diagnosis, which is a standardized statement about a patient's health identified from the NANDA International list of more than 200 nursing diagnoses.
  - Developing an interdisciplinary plan of care, which describes nursing procedures to be used and expected outcomes.
  - Implementing care, including coordinating and monitoring all of the teams involved in delivering care to the patient.
  - Evaluating care by monitoring improvements in outcomes, using the Nursing Outcomes Classification (NOC) tool. Standardization of outcomes is essential in developing evidence-based nursing practices.
- *Clinical Support Staff:* Health-service organizations are recognizing the value of integrated and team-based care with members of the health care team working at the highest level of their scope of practice. In addition to the medical provider and nurses, care team members may include medical assistants, include community health workers, social workers and care coordinators.
- *All Clinical Staff:* In today's health-services organization, leadership extends beyond designated "chiefs" and department heads. In a high-performing organization, every person, from housekeeping staff to the CEO, is expected to make suggestions to improve processes, contribute to performance improvement teams, and offer his or her particular expertise. All clinicians need to have an overall understanding of the health systems in which they work, and they need to be empowered by the culture of the organization to use that understanding to improve structures and processes to achieve better patient outcomes.

Programs

The programs offered by health-services organizations vary widely, from the delivery of primary care, acute care, and specialty services to rehabilitation services, to prevention education in the community. In most health-services organizations, programs form the core of what they do.. From a management perspective, all clinical care is a "program" that is delivered and can be assessed as a system that adds value to the organization – always seeking to, in White and Griffith's (2010) term – "delight" the customer.

Management Models

Several management models have begun to shape health-care systems in recent years, adopted

from manufacturing and other industries. These approaches focus on reducing waste, improving quality, and changing organizational cultures. The three most significant models have been Lean, Six Sigma, and a combination of the two referred to as "Lean-Six Sigma."

Lean

Lean is a philosophy, management style, and a toolset that focuses on improving value by reducing waste (Graban, 2010). Adapted from Toyota's "Total Process Management" (TPM) techniques, Lean is fast pervading the health-care industry. Large organizations such as ThedaCare and Virginia Mason Medical Centers that have implemented Lean have seen increases in cost-effectiveness, patient safety, and overall quality of care (Hseng-Long Yeh, 2011; Miller, 2005).

Lean thinkers look at the details of processes to find and eliminate waste – including time, supplies, equipment, or good will. In Lean terminology, waste is referred to using the Japanese word "*muda,*" and is specifically defined as "any problem that interferes with people doing their work effectively or any activity that does not provide value for the customer" (Graban, 2010, p. 18). Lean systems replace waste with value-added steps (Miller, 2005).

Here's one common illustration of the difference between Lean thinking and traditional cultures at most health-care organizations:

1. In traditional organizational culture, warning signs are seen as a way to minimize errors and reduce liability. Quality control efforts focus on inspection and double-checks, and when errors occur, the response is often "naming, blaming, and shaming" employees (Graban, 2010).
2. From the Lean thinker's perspective, the more warning signs, the less "lean" the process is and the more safety hazards are present. Any area that's rife with warning signs means that the process must be examined carefully, with a focus on preventing errors at the source, rather than on inspecting and double checking the end product. When errors occur, the response is to ask "Why?" at least five times, until the source of the error is uncovered.

The first and most important job of the Lean leader is to create and support an organizational culture that supports Lean thinking. Lean transformation requires a whole-system approach that involves all staff, including top leadership, middle management, and all health professionals and support staff (Graban, 2010). All staff should be trained in introductory Lean theory and tools and participate in basic Lean activities such as Rapid Improvement Process Weeks (RPIWs). During an RPIW, teams analyze processes and propose, test, and implement improvements (Miller, 2005).

The Lean manager learns to "go to the *gemba*" – the place where the work occurs – to examine processes and learn from the people who do the work (Graban, 2010). When errors occur, Lean managers focus on fixing the system, not on pointing fingers at people who were set up to make a mistake.

In their seminal book on the topic, *Lean Thinking* (1996), management experts James P. Womack, Ph.D., the founder and senior advisor to the Lean Enterprise Institute, Inc., and Daniel T. Jones, founder and chairman of the Lean Enterprise Academy in the U.K., articulate five foundational principles of Lean thinking:

1. Specify *value* from the standpoint of the end customer
2. Identify all the steps in the value stream, eliminating every step that does not create value.
3. Make the value-added steps occur in a tightly integrated sequence so work *flows* smoothly.
4. Let customers *pull* value.
5. Pursue *perfection* through continuous improvement.

These five principles form the basis for Lean thinking and actions. They remind us that the ultimate goal of Lean health-services organization is to provide care that helps health people stay healthy, acutely sick people get well, and chronically ill manage their diseases optimally.

Six-Sigma

Six-Sigma: Six-sigma is a philosophy, measurement tool, and methodology designed to improve business processes (Lynch & Ph, n.d.). Developed in 1986 at Motorola, Six Sigma gained reknown after General Electric CEO Jack Welch adopted it in 1995. Six Sigma relies on data and statistical analysis to improve processes. The methodology focuses on identifying, collecting, and using data to drive improvement. As in Lean, processes are standardized in ways that minimize waste and error.

In statistical parlance, the word "sigma" refers to how far something is from perfection. The sigma level of a process corresponds to the level of performance, using a measure called "defects per million opportunities" (DPMO). The goal is to achieve processes with a sigma level of 6, which has a DPMO of 3.4 – meaning that 99.99966% of operations are error free (Lynch & Ph, n.d.)

Organizations apply Six Sigma using five steps, often abbreviated "DMAIC": Define, Measure, Analyze, Improve, and Control. Some organizations add a sixth step – "R" for Recognize – at the beginning of the cycle (Lynch & Ph, n.d.). These steps are:

- *Recognize:* Recognize the right problem to address.
- *Define:* Defines the system, the customer and requirements, and the specific project goals.
- *Measure:* Measure elements of the current process and collect relevant data to establish a quantitative baseline.
- *Analyze:* Analyze data to explore and verify cause-and-effect relationships. All factors should be considered, internal and external. The analysis should reveal the root cause of the error.
- *Improve:* Improve the current process based on results of the analysis.
- *Control:* Control the process to ensure that any problems are corrected during the process -- before they lead to errors.

Lean Six Sigma

Most recently, health-services organizations have been combining Lean and Six-Sigma into one coherent philosophy and methodology, with promising results. Lean Six Sigma was first described by Michael George and Robert Lawrence in *Lean Six Sigma: Combining Six Sigma with Lean Speed* (2002). Organizations that adopt the Lean Six Sigma approach retain the Lean focus on reducing waste (*muda*) while incorporating the Six Sigma emphasis on assessing and responding to quality.

Leadership Models

Strong leadership is essential to the success of any organization, and health-services organizations are no exception to this truism. Organizational function depends on both the effectiveness and efficiency of the CEO, as well as other clinical and administrative leaders. Throughout the organization, the ways that managers behave are closely tied to organizational performance (Aji, Aernoudts, & Joosten, 2015).

Transformational Leadership

Transformational leadership is a leadership style that causes positive and valuable change in followers and social systems, with the goal of developing followers into leaders. The term "transforming leadership" was first used by James MacGregor Burns in 1978 to describe the leadership approaches of successful political leaders. According to Burns, the transforming leader effects change through his "personality, traits, and ability to make a change through example, articulation of an energizing vision and challenging goals" Burns contrasted transformational leadership with "transactional leadership," a more common "give-and-take" approach to leadership in which the focus is on power and position.

Bass (1985) expanded on Burns' work to develop a full-fledged theory of transformational leadership. In his formulation, transformational leaders transform followers' personal value to support the vision and goals of the organization. They do so by establishing a climate of trust and fostering an environment in which relationships can be formed and visions can be shared (Bass & Avolio, 1994).

Avolio, Waldman, and Yammarino (1991) proposed four behaviors of the transformational leader, which are now commonly accepted:

3. Char*isma or idealized influence*: The leader articulates and enacts a clear set of values and behaves admirably, providing a moral compass for followers. The leader displays convictions and takes stands that cause followers to identify with him or her,

behaving ethically and instilling trust.

4. *Inspirational motivation*: The leader articulates a vision that is appealing and inspiring to followers. The leader challenges followers with high standards, communicates optimism about future goals, and provide meaning for each task. The leader instills a sense of purpose and meaning in the group, thus motivating followers to act.
5. *Intellectual stimulation*: The leader challenges long-held assumptions and beliefs, takes appropriate risks, and solicits ideas from followers. Learning is seen as a value, and unexpected situations are learning opportunities.
6. *Individualized consideration*: The leader attends to each follower's needs, listening to the follower's concerns, ideas, and needs, and acting as a mentor or coach. In this way, the leader celebrates the individual contribution each follower can give to the team.

Servant leadership

A second well-defined leadership model, servant leadership, is timeless in origin and well-suited to health-services organizations. The servant leader focuses on the growth and well-being of the people and communities she oversees and sees herself as the servant of the community. Robert Greenleaf, in *The Servant as Leader* (1991; 1970), first articulated the concept of servant leadership in management:

> The servant-leader is servant first… It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead. That person is sharply different from one who is leader first, perhaps because of the need to assuage an unusual power drive or to acquire material possessions…The leader-first and the servant-first are two extreme types. Between them there are shadings and blends that are part of the infinite variety of human nature.

Collaborative Health-care Leadership

The Collaborative Health-care Leadership model, developed by the Center for Creative Leadership (CCL), is designed to address the rapid changes occurring in health care today. CCL researchers propose that "the successful health-care organization of the future will develop and implement a leadership strategy that systematically addresses priorities and is supported by the leadership practices needed to achieve organizational goals and to adapt to rapid change and uncertainty" (Browning, Torain, & Patterson, 2011, 4).

Collaborative health-care leadership focuses on six essential organizational capabilities, which, CCL researchers argue, "are a prerequisite for success in this new world order" (p. 4). In turn, each of these organizational capabilities is linked to specific leadership capabilities. The capacities and leadership skills are as follows:

- *Collaborative patient care teams:* Collaboration has long been an essential part of delivering high-quality care, and collaboration and communication skills have been recognized as central. With the implementation of the ACA, however, the concept of the health-care team has expanded beyond the clinical care team (e.g. physician, nurse, technician, therapist) to include non-clinical personnel and others; collaboration across organizations is often necessary. Collaboration skills are increasingly required of all employees, including group process skills that promote open communication, learning, trust, and quality decision-making. CCL researchers identified the following leadership skills as essential to supporting this organizational capacity:
  - Engaging doctors, nurses, and other caregivers in shared ownership of the patient-care experience using concreate dialogue and listening skills across roles.
  - Creating an environment that supports learning agility and adapting to change.
  - Collaborative problem-solving and decisions-making with all members of the patient-care team. (Browning et al, 2011, p. 5)
- *Resource stewardship:* Health-care resources are limited, and in an environment that increasingly rewards value over volume, HSOs must strategically minimize costs while delivering high-quality care. CCL researchers identified the following leadership skills as essential to supporting this organizational capacity:
  - Accountability, transparency, and integrity.
  - Scanning the environment and seeking innovative solutions

- Appreciating and combining compassionate care needs with business strategy.
- Entrepreneurial: generating new ideas and seizing opportunities.
  (Browning et al, 2011, p. 6)

- *Talent transformation:* In a time of rapid change, HSOs need visionary leaders who can navigate cultural and structural changes, build relationships, and manage through empowerment. CCL researchers argue that "leaders of healthcare systems will need to hire and develop talented individuals who can see the next wave of plausible solutions and innovations and lead transformational change" (Browning et al, 2011, p. 7). CCL researchers identified the following leadership skills as essential to supporting this organizational capacity:
  - Accessing a larger talent pool, beyond the traditional arena of healthcare specialty.
  - Redefining a new leadership strategy in the face of the new structures and models associated with reform.
  - Identifying, developing, and retaining the leadership talent needed to create and implement solutions in the face of rapid and evolving change.
  - Creating a culture that encourages and values mutual respect and professional practice.
    (Browning et al, 2011, p. 7)
- *Boundary spanning:* In a fragmented health system, boundaries are plentiful – and often poorly negotiated. Boundaries affect patient care, whether they are between shifts, providers, departments, organizations, or health and social systems. According to CCL, "the most pressing challenges in hospitals and health systems cannot be solved by one person, one specialty, or one organization. They require expertise, ideas, and support from multiple perspectives and stakeholders" (Browning et al, 2011, p. 8). CCL researchers identified the following leadership skills as essential to supporting this organizational capacity:
  - Expanding and leveraging strategic networks to fast-track solutions.
  - Thinking, acting and influencing systemically.
  - Leveraging differences to drive innovation.
  - Co-creating tools for practical application and sustainable change.
    (Browning et al, 2011, p. 8)
- *Capacity for complexity, innovation, and change*: Health-care is complex, and everything about health-care – from systems to technology to culture – is changing rapidly. HSOs must simultaneously address the needs of the moment while looking ahead to changing needs of their patient populations and the changing tools and systems they have at hand to address those needs. Innovative solutions are needed and must be generated by many people across departments and organizations. CCL researchers identified the following leadership skills as essential to supporting this organizational capacity:
  - Driving innovation and risk-taking in the midst of ambiguity and uncertainty.
  - Transforming the culture from dependent to interdependent.
  - Leading both the structural and human side of change and transition.
    (Browning et al, 2011, p. 10)
- *Employee engagement and well-being:* CCL researchers identified the following leadership skills as essential to supporting this organizational capacity:
  - Creating an integrated approach to engagement and well-being.
  - Maximizing human energy and potential in service of the organization's mission.
  - Fostering a culture in which the people who work in the organization are treated as well as the people they serve. (Includes encouraging a healthy work/life balance, sustainable staffing models.) (Browning et al, 2011, p. 11)

Why is Management Important?

Skillful health-care management is the core of providing safe, effective, timely, efficient, patient-centered care – the "Holy Grail" of health care called for by the Institute of Medicine in *Crossing the Quality Chasm* (2001). Without a clear and coherent infrastructure, processes, and organizational structure, the best health-care provider in the world cannot deliver high-quality care.

Management and leadership – including the board of directors, CEO, administrative and clinical lead-

ership – are likewise responsible for the financial viability of the organization. As Sister Irene Kraus, former CEO of Daughters of Charity National Health Care System, famously said, "No margin, no mission" (Fritz, 2012, Mar 20). Even the most well-meaning and benevolent health-services organization cannot deliver care to patients if it does not have a "margin" of financial security. Conversely, as the margin grows, so, too, does the organization's capacity to deliver care. Ideally, the nonprofit health services organization, through its board and leadership, safeguards the use of resources, using those resources to its best advantage. It still needs to make a profit to invest back into the organization.

Finally, there is a moral imperative for optimal management of health-services organizations. While the moral imperative of the health-care provider is generally accepted, administrators are often seen as extraneous to the function of the organization. Yet their role is also critical. Health-services managers provide ethical stewardship of resources, address key population health challenges in communities, and ultimately develop, provide, and sustain the infrastructure in which providers can ply their trade. They are responsible for ensuring that quality care is delivered in their organizations, partly by creating the criteria to ensure providers are competent and the processes to ensure safe delivery of care, and for assuring that the care they deliver meets the needs of their communities.

Challenges to Management of Health-Services Organizations

In a rapidly changing health-care world, rural health-services organizations face many challenges to effective management. Rural providers serve populations that have high rates of uninsurance and underinsurance, low rates of employer-sponsored coverage, high dependence on public insurance, and are generally older, sicker, less active, fatter, and poorer (Bailey, 2009). Medicaid and Medicare compose an estimated 60 percent of revenues for rural hospitals. Reimbursement rates for both programs are generally below actual costs, putting additional financial stress on providers.

New payment models, which emphasize value over volume, also pose challenges for health-care management. Traditional fee-for-service payment mechanisms are being replaced by value-based purchasing options such as bundled payments (i.e. one payment per episode of care or chronic disease, to be spread among all providers); likewise, financial incentives and penalties are now tied to quality measures. Analysis from the Rural Health Research Center suggests that rural providers may be at greater financial risk in a bundled-payment environment, threatening both the solvency of rural providers and negatively impacting rural consumer choices and patient/provider relationships (Town et al, 2011).

Financial stress is compounded by health-care workforce shortages, lack of health and wellness resources, and limited broadband connectivity. Rural health-care delivery systems are stressed, financially and otherwise, often operating on slim margins and with limited resources that do not allow them to invest in emerging technologies, training, and other capacity-building activities (Bailey, 2009).

Examples of How Health Services Organizations have Increased Capacity in Health-Care Management and Resulting Outcomes

As health-services organizations adopt evidence-based management approaches and leadership styles, they are experiencing notable savings, improved patient outcomes, and better patient and provider satisfaction. Here are some notable examples of increased management capacity in rural providers:

Rural Hospital Lean Culture Transformation Collaboration

In 2008, the North Carolina Office of Rural Health spearheaded the development of a collaborative between five rural hospitals in North Carolina with the goal of implementing Lean transformation in each hospital. The hospitals – Ashe Memorial Hospital in Jefferson, Blue Ridge Regional Hospital in Spruce Pine, Caldwell Memorial Hospital in Lenoir, Charles A. Cannon Jr. Memorial Hospital in Linville, and McDowell Hospital in Marion – agreed to a three-year collaborative effort to establish a basis for Lean culture transformation.

The rural hospitals in the collaborative were interested in Lean transformation but did not have the

resources to implement it individually. Like many other rural hospitals, they were small, operated on tight financial margins, and had limited staff. Formation of the collaborative allowed hospitals to pool resources, resources, learning, and coaching.

Funding for the project was garnered from multiple sources and "stitched together" into a "funding quilt" of private, state, federal, and other resources. Project partners were the North Carolina Hospital Association, the private consulting firm Simpler Healthcare, and North Carolina State University Industrial Extension Service.

The collaborative process began with a series of informal workshops to create dialogue among hospital CEOs. These workshops were complemented by one-on-one sessions between executives and Lean coaches, resulting in leadership commitment to Lean philosophy.

The five hospitals hired three Lean Transformation coordinators to manage the transformation for the hospitals, to conduct Rapid Improvement Events (RIEs) and to train hospital managers, executives, physicians and staff in the application of Lean management tools, process improvement, and value stream analysis. Three week-long training programs were held for hospital executives and managers (Executive Lean Training, Value Stream Analysis and Core Team Development). Transformational Plans of Care were developed for each of the five hospitals to guide strategic implementation of the Lean transformation project. Each hospital identified two value streams to undergo a rapid improvement project (RIE).

The project achieved notable results. Most RIEs met or surpassed the target of 50 percent improvement within three years, with an overall return-on-investment ratio of greater than 6:1 for some hospitals.

- Total savings for all hospitals of nearly $2.5 million
- Ashe Memorial Hospital:
  - A 80 percent decrease in time transporting inpatients to and from imaging
  - Increased percentage of pre-registered patients by 72 percent
- Cannon Memorial Hospital:
  - A 35 percent reduction in turnaround time for the top five laboratory tests ordered
  - Time from presentation in ED to triage reduced by 42 percent
  - Time from ED triage to first intervention reduced by 60 percent
  - Symptom control metric improved to 93.1 percent
- Caldwell Memorial Hospital:
  - Patient room turnaround time at inpatient discharge reduced from an average of 90 minutes to 45 minutes.
  - Decreased turnaround time led to an increase in aggregate capacity of 230 patient days, resulting in $398,750 net revenue with no additional staff or rooms.
  - $160K in ED supply charge recapture
- Blue Ridge Memorial Hospital:
  - Revenue cycle improvement of more than $400,000

Based on the initial success of the program, hospitals in the collaborative moved on to address additional areas, such as nursing, for process improvements. In addition, the initiative's success allowed NCORH to start a second collaborative, this one involving five hospitals in the eastern part of North Carolina: Bladen County Hospital in Elizabethtown, the Columbus Regional Healthcare System in Whiteville, J. Arthur Dosher Memorial Hospital in Southport, Duplin General Hospital in Kenansville and Sampson Regional Medical Center in Clinton. The project has also been replicated in Nebraska and Oregon, and other states are adapting it to their needs (Santamour, 2012).

Altarum Institute Community Health Innovation Project

Applying Lean to Improve the Patient Visit Process at Three Federally Qualified Health Centers http://altarum.org/our-work/community-health-center-innovation-mission-project

In May 2009, the nonprofit health research think-tank Altarum Institute created partnerships with three FQHCs—Alexandria Neighborhood Health Services, Inc. (Virginia), Baldwin Family Health Care (Michigan), and Penobscot Community Health Care (Maine) – to test the Lean management approach in the FQHC setting. During the next 18 months, consultants from Altarum worked with the FQHC partners to address problems linked to multiple value streams including scheduling, registration,

no shows, wait time, provider productivity, care coordination, miscommunication, and unclear roles and processes. Altarum provided training in Lean principles, tools, and techniques and facilitated a series of Value Stream Mapping events. At the end of the 18 months, all three FQHCs noted improvements in multiple areas:

- *Standardization of processes:* By standardizing processes, the FQHCs achieved better role clarity, reduction in errors, and improved patient and staff safety. Centers were also better able to use limited resources because of the efficiencies associated with standardized processes.
- *Patient flow:* As processes were streamlined and work areas organized, the FQHCs were able to move patients more efficiently through the systems. All three centers saw fewer delays and interruptions, reduced waste, time savings, and increased patient and staff satisfaction.
- *Improved communication.* Value stream mapping events were identified as a critical framework for open discussion of issues and helped enhance ongoing communication.
- *Collaboration:* Interdisciplinary teams were able to form and work together toward a shared goal of improved patient care.
- *Staff satisfaction and empowerment:* Staff members said they felt they were "active contributors to the improvement process, had a voice, and could offer ideas and solutions for improvement."
- *Patient access to care:* Improved efficiency across the organizations led to better access to care for patients. Changes in processes helped to "free up exam rooms, reduce wait times, and improve provider productivity."
- *Patient satisfaction:* Staff members reported positive reactions from patients who experienced a "more organized, timely, and efficient visit."
- *Quality of care:* Many of the changes made to improve efficiency and standardization also helped to improve care quality and safety.

How to Pay for Management

Skillful management is essential not only to the provision of efficient, safe, effective health care but to the financial well-being of the organization. Administrative costs, including salaries for managers and support staff, are important line items in the organization's overall budget.

It is the responsibility of the governing board to budget an appropriate amount for leadership and administration of the organization. Ideally, funding for these activities should come from a sustainable source such as the patient revenue cycle. Organizations such as FQHCs and Critical Access Hospitals that serve a high percentage of uninsured and underinsured patients may need to garner additional funding from myriad sources.

In addition, while innovative management methods may lead to greater efficiencies and improve the overall financial picture of the organization, significant costs may be associated with implementing these programs. Rural organizations operating on a slim margin may not have the resources to invest in training, equipment, and technology necessary to implement these methods.

Small rural providers may need to find additional sources of funding to maintain a highly skilled management team. In many instances, program grants can help to supplement income earned through the patient revenue cycle. Both public and private grants that allow for indirect costs can help to offset administrative costs.

FQHCs and FQHC Look-Alikes are allowed to use a percentage of their Section 330 funding to pay for administrative costs (Adams, Kolick, & Fishel, 2010). Allowable administrative costs for FQHCs and look-alikes receiving Section 330 funding include:

- General administration
- Billing and collection functions
  - Including practice management system operation, depreciation and maintenance
- All patient record costs
- Patient service support costs
- Leadership time in corporate administration

Examples of Things that SORH Can Do to Increase Capacity in Management

SORH can support rural health-care providers to increase capacity for management and leadership through education, leadership training, board empowerment, and facilitating networking and collaboration, among other activities. In addition, SORH

can internally adopt best-practices approaches such as Lean Six Sigma and transformational leadership, thus modeling and testing the processes themselves.

Specific activities that SORH can engage in include:

- Provide support for governing boards of rural providers, including training in board roles and responsibilities, fiscal oversight (including reading financial statements), policy review, and evaluation
- Provide technical assistance for strategic planning, either internally via the SORH or by contracting with an experienced strategic planning professional
- Hold webinars and trainings that focus on specific management and leadership approaches
- Provide technical assistance – either directly or by contracting with expert consulting groups – for individual organizations interested in Lean Six Sigma, transformational leadership, servant leadership, and other management-related skills and competencies
- Support provider collaboratives that can pool resources, knowledge, and tools to develop capacity in specific value streams (see, for instance, the North Carolina Rural Hospital Collaborative).
- Include articles about management and leadership in regularly produced newsletters, blogs, and other outreach materials
- Develop liaisons with health-care management experts at universities to provide technical assistance in Lean Six Sigma implementation, leadership training, health information technology, financial management, and other key pillars of managing a health-services organization.

In addition, the National Rural Health Resource Center Lean Health Care Training & Mini Project is a national model that SORH could replicate in their respective states. The project provides free Lean training and hands-on implementation to 30 SHIP-eligible hospitals. To deliver the training, the Resource Center contracted with John Roberts, CEO and President, Midwest Health Consultants. Participating hospitals each select a Lean project focused on their HCAHPS results, which they complete during the project. Trainings are delivered via webinar and online, using the open-source learning platform Moodle.

Tools

Board Source
https://www.boardsource.org
The only technical assistance and capacity-building organization focused exclusively on nonprofit governance, Board Source provides a host of resources for boards including live and online training, consulting, membership programs, and a comprehensive library of governance resources and publication.

Bridgespan Group
http://www.bridgespan.org/Home.aspx
The Bridgespan Group is a nonprofit advisor and resource for mission-driven organizations and philanthropists. The Group collaborates with social sector leaders to help scale impact, build leadership, advance philanthropic effectiveness, and accelerate learning.

Foundation Center
http://foundationcenter.org/
Since 1995, the Foundation Center has provided support and technical assistance to philanthropic organizations around the world. The Foundation Center maintains the most comprehensive database on grantmakers in the United States (and globally). It also provides research, education, and training to the sector.

National Rural Health Resource Center, Lean Sigma Healthcare
This archived webinar, first presented August 6, 2014, provides an overview of the Lean Sigma approach tailored to the needs of small and rural hospitals.

University of Michigan, Integrative Systems + Design
http://isd.engin.umich.edu
A host of resources and expertise on quality and design that spans disciplines. Offers onsite certification in Lean, as well as online and face-to-face courses in systems engineering, and a Master Black Belt program that blends online and face-to-face learning.

Links and Resources

American Association of Healthcare Administrative Management
http://www.aaham.org/
A national professional organization for health-care administrative management. The AAHAM provides education, certification, networking, and advocacy for health-care revenue cycle professionals.

American College of Healthcare Executives (ACHE)
http://www.ache.org/
The largest professional society for health-care executives, the ACHE offers a host of resources focused on improving health-care delivery. Resources include credentialing, education, books and articles, career resources, and more.

American Hospital Association, Section for Small or Rural Hospitals
http://www.aha.org/about/membership/constituency/smallrural/index.shtml
This section of the American Hospital Association addresses the management and policy issues facing small and rural hospitals. It provides representation and advocacy; helps organizations develop communication, education, and management strategies; supports state association and inter-organization collaboration; and offers a rural hospital leadership awards program. The AHA's Section for Small or Rural Hospitals (section) has More than 1600 small or rural hospitals are members of the AHS Section for Small or Rural Hospitals. Qualifying hospitals must meet one of the following criteria: have 100 or fewer beds, 4000 or fewer admissions, or be located outside a Metropolitan Statistical Area.

American Organization of Nurse Executives (AONE)
http://www.aone.org/
The American Organization of Nurse Executives (AONE), founded in 1967, provides leadership, professional development, advocacy and research to advance nursing practice and patient care, promote nursing leadership excellence, and shape public policy for health care nationwide. AONE is a subsidiary of the American Hospital Association.

The Center for Rural Affairs
http://www.cfra.org/
The Center for Rural Affairs works to establish strong rural communities, social and economic justice, environmental stewardship, and genuine opportunity for all while engaging people in decisions that affect the quality of their lives and the future of their communities. Rural health is a core issue.

Health Care Financial Management Association (HFMA)
http://www.hfma.org/
The largest national organization of health-care financial management professionals, the HFMA offers a host of resources including education, policy resources, career support, a job board, various publications, and industry initiatives.

Health Information and Management Systems Society
http://www.himss.org/
HIMSS is a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology. Resources include a professional development tools, a resource library, membership support, and more.

Healthcare Leadership Alliance
http://www.healthcareleadershipalliance.org/
The HLA is a consortium of professional health-care administration associations, including ACHE, HFMA, AONE, HIMS, and MGMA. The goal of the Alliance is to pursue common interests and advance the healthcare management profession. The HLA Competency Directory provides a comprehensive overview of key abilities that health-care managers should possess. It is divided into "Common Competency Domains": Communication and Relationship management, Leadership, Professionalism, Knowledge of the Healthcare Environment, and Business Skills and Knowledge.

The Lean Institute
http://www.lean.org
The Lean Enterprise Institute, Inc. (LEI), founded by James P. Womack in 1997, is a nonprofit education, publishing, research, and conference organization with an action plan. They characterize themselves as a "do" tank, as opposed to a traditional "think" tank. The site offers resources including videos and webinars, a discussion list, and a library of publications. They summarize their approach: "By creating a strong Lean Community through our website and public events we try to give managers the courage to become lean change agents."

Medical Group Management Association (MGMA)
http://www.mgma.com/
An association for medical practice administrators and health-care executives, MGMA offers education, legislative and policy information, and data and career resources to help improve patient services and operational efficiencies.

National Institute for Health Care Management
http://www.nihcm.org/
The NIHCM Foundation is a nonprofit, nonpartisan organization dedicated to improving the effectiveness, efficiency, and quality of America's health care system. The Foundation conducts research, policy analysis and educational activities on a range of health care issues. It fosters dialogue between the private health care industry and government to find workable solutions to health system problems. The Foundation gives awards each year for excellence in health care research and journalism. It also serves as a clearinghouse for information on health-care issues.

National Rural Health Resource Center
https://www.ruralcenter.org
The National Rural Health Resource Center is a nonprofit organization dedicated to sustaining and improving health in rural communities. It offers technical assistance focused on five core areas: 1) performance improvement 2) health information technology 3) recruitment and retention, 4) community health assessments, and 5) networking.

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Module 11
Health Coverage Enrollment Assistance

What is Health Coverage Enrollment Assistance?

On March 23, 2010, President Barak Obama signed the Patient Protection and Affordable Care Act ("the ACA") into law, putting health-care coverage in reach of millions of previously uninsured Americans. The law established health insurance exchanges ("marketplaces") where individuals and small businesses could purchase coverage, allowed states to expand Medicaid eligibility to low-income adults, and required large employers to offer insurance to their employees. It established minimum standards for plans sold in marketplaces, also called "qualified health plans" (QHPs). The ACA also prohibited insurers from denying coverage to people with pre-existing health conditions or charging them higher premiums and allowed adult children to remain on their parents' plans until age 26 years. The law also put in place a much-contested "individual mandate" requiring people who choose not to purchase coverage to pay a tax penalty.

Five years after the ACA was signed into law, more than 30 million Americans had health insurance under these provisions and consumer protections (Blumenthal, Abrams, & Nuzum, 2015). Of those people, between 7.0 million and 16.4 million had previously been uninsured (Blumenthal et al, 2015). The significant increase in health insurance enrollment can be attributed partly to policy levers such as the individual mandate, the availability of online enrollment options, federal subsidies, Medicaid expansion in states that chose that option, and increased competition among insurers.

Yet those policy levers would have had much less effect without the efforts of thousands of outreach and enrollment specialists working in primary care clinics, hospitals, community-based organizations, and other settings to share information and resources about health insurance enrollment options. The massive changes brought about by the ACA radically transformed the process of enrolling in health insurance coverage. While it created many affordable options for individuals and small businesses, it also created a bewildering array of coverage options, including individual and employer-based plans sold through health exchanges, and a complex group of Medicaid/CHIP options that vary state by state, and – for people 65 years and older – changes to Medicare policies.

Eligibility for different coverage alternatives is linked to income levels, geographic region, immigration status, and more. For instance, low-income seniors may be dually eligible for Medicare and Medicaid; children and adults with disabilities are eligible for different programs, depending on the extent of the disability; in many immigrant families, one or more family members are eligible for coverage while other members remain ineligible.

The ACA established four types of marketplaces:

- *Federally-Facilitated Marketplaces.* In states that have chosen federal facilitation of their marketplace, the U.S. Department of Health and Human Services (HHS) performs all marketplace functions. Applications and enrollment are handled through healthcare.gov.
- *State-Partnership Marketplaces.* In states that have entered into a Partnership Marketplace, in-person consumer-assistance functions are administered by the state, while HHS performs the remaining marketplace functions. Applications and enrollment are handled through healthcare.gov.

- *State-based Marketplaces.* States perform all marketplace functions, including in-person consumer-assistance functions, running a State-based Marketplace. Applications and enrollment are handled through Marketplace websites established and maintained by the states.
- *Federally-Supported State-Based Marketplaces.* Considered a type of State-Based Marketplace, the Federally-Supported State-Based Marketplace operates using a hybrid model. States are responsible for performing all Marketplace functions, with one exception: consumers sign up using the Federally-Facilitated Marketplace information technology platform. Consumers in these states apply for and enroll in coverage through healthcare.gov.

Anticipating that people would need help maneuvering through this complex array of coverage options and eligibility, policymakers included funding in the ACA for programs to train several different types of outreach and enrollment specialists. The following types of "assisters" offer impartial support and guidance to people who are trying to understand and navigate the health insurance enrollment process:

- *Navigators.* Navigators must complete a comprehensive federal training, which prepares them to help consumers fill out electronic and paper applications to establish eligibility and enroll in coverage through the Marketplaces. Their role includes providing outreach and education about the Marketplace and referring consumers to health insurance ombudsman and consumer assistance programs when necessary. Information and services must be provided in a culturally and linguistically appropriate manner and must be accessible to people with disabilities. Organizations eligible to become Navigators include state and local human services agencies, non-profit groups; American Indian tribes; trade, industry, and professional associations including ranching and farming associations; commercial fishing industry organizations; chambers of commerce; unions; and licensed producers. Health insurance issuers and organizations or individuals with connections to health insurance issuers are prohibited from becoming Navigators.
- *In-Person Assisters (IPAs) (Non-navigator assistance personnel).* IPAs are similar in function to Navigators and operate under the same training and regulations. This position is designed to help with heavy demand during the initial years of the exchanges, before the exchange becomes economically self-sustaining. State exchanges can design the IPA program to meet their particular needs and have the authority to designate which entities can play this role as well as setting certification and training standards. IPAs operate in state-based exchanges and state-partnership exchanges.
- *Certified Application Counselors (CACs).* Application counselors perform many of the same duties as navigators and IPAs, including educating consumers about coverage options available through the exchange, helping people select and apply for coverage, and facilitating enrollment in a plan that is in the best interests of the applicant. However, CAC training is less extensive than that for Navigators or IPAs. Certifying organizations include health centers, other health-care providers, hospitals, or social service agencies. CACs are not funded by the ACA. Organizations interested in becoming a certifying organization can apply at marketplace.cms.gov.
- *Government agencies.* Workers at many government agencies such as Medicaid and Indian Health Services are trained to facilitate enrollment in Medicaid, CHIP, Medicare, and QHPs.
- *Insurance agents and brokers:* If permitted by the state, licensed health insurance agents and brokers may enroll individuals, small employers, and employees in plans offered in the marketplace. They can make specific recommendations about the plans. Agents and brokers must meet federal and state training and certification requirements; in addition, they are licensed and regulated by states. They usually receive payment in the form of commissions from health insurers for enrolling a consumer into an issuer's plans.

In addition to initial training and certification requirements, CMS regulations require that all assisters and supporting organizations complete an annual recertification program. Assisters who

conduct outreach and enrollment activities without having completed required training on at least an annual basis, as well as their supporting organizations, may face civil monetary penalties. The CMS rules for assisters describe assister rights, responsibilities, and a remediation process in case of violations. CMS provides a general overview of these rules.

All marketplaces are required to include Navigator programs. In states with Federal and Partnership Marketplaces, funding for Navigator programs comes from the federal government. States that are running their own exchanges are able to design their consumer assistance programs, including IPA and Navigator programs, to meet the specific needs of their populations. Even in these states, however, programs that address the specific needs of rural populations need to be taken into consideration.

For entities that provide services, enrollment assistance must be available year-round – not only during open enrollment periods. In between the yearly fall enrollment periods, several million people are expected to experience a "qualifying life event" – a life-changing event such as the birth of a child, divorce, job loss or change, shift in income, homelessness, and other major life changes. In addition, Medicaid enrollment occurs year-round.

Hartman and colleagues (2015) estimated that in 2014, 3.7 million nonelderly adults with coverage through a federal or state marketplace could experience a qualifying life event and become eligible for a special enrollment period because of income shifts. An additional 8.4 million people who did not have marketplace coverage – three-quarters of whom had no insurance – became eligible for a special enrollment period as a result of other qualifying life events. In states that did not expand Medicaid eligibility, an estimated 1.9 million people experienced income shifts outside of the open enrollment period that would make them eligible for marketplace subsidies (Hartman et al, 2015).

Outreach and Enrollment is a Community Benefit

Nonprofit rural and critical access hospitals can include outreach and enrollment activities in their IRS community benefit reporting (Schedule H or form 990). In its Notice of Proposed Rulemaking, the IRS specifically mentions the inclusion of outreach and enrollment activities in the implementation plan for a Community Health Needs Assessment (CHNA).

Federally Qualified Health Centers (FQHCs) and Health Center Lookalikes are required to provide outreach and enrollment support for Medicaid, CHIP, and Medicare, as well as for QHPs. To count as assisters, individuals must complete a federal training program and meet all requirements for certification as navigators, IPAs, or CACs. Recertification is required yearly.

How Can My Organization Get Involved?

Rural HSOs, including clinics, hospitals, public health agencies, and human services entities, can help community members understand their health coverage options under the ACA. The level of involvement chosen by organizations depends on available resources, willingness to invest, and staffing. Some organizations may wish to become certified as assisters, while others may simply wish to provide basic information and referrals.

Health-service organizations that do not have the resources to become certified assistance entities – and are not mandated to do so – can still help to increase enrollment in health-care coverage. Those organizations can contribute by engaging in the following activities:

- Train select staff as Certified Application Counselors (CACs)
- Apply for recognition as a Champion for Coverage. Any organization, public or profit, nonprofit or for-profit, can become a Champion-for-Coverage organizations as long as it is not in a position to profit from the designation of Champion.
- Refer people to navigators, IPAs, or CACs operating in the community. If resources allow, provide office space and internet access for staff from local assister organizations.
- Conduct outreach activities. Staff and volunteers can conduct outreach activities in multiple settings, including health fairs, community events, libraries, churches, laundromats, and other places people frequent:
  - Distribute brochures and other materials to

other agencies

- Post information and make brochures available in your office
- Include information about health-care coverage – including the marketplace's web address (URL) – in office voice mail, on-hold messages, email messages, and on the organization's website.
- Schedule presentations at local events, including meetings of community-based organizations (Rotary Club, Kiwanis, etc.), fairs, high school football games, music events, etc.
- Enlist the help of local media. Consider running a column in a local newspaper, participating in local radio or television programs, and sending out press releases on a regular basis.
- Enlist the help of community-based organizations and businesses. For instance, ask a local grocer, hardware store, or utility provider to include an insert in each bag or in monthly bills, or to add the marketplace URL to the back of receipts.
- Develop a list of talking points and provide basic training to all staff – including community health workers, providers, nurses, front-office staff, and financial counselors – so they can offer information to consumers about health coverage options and financial assistance.
- Provide health insurance literacy support, as well as enrollment support, to help people understand how best to use the plan they select.

Healthcare.gov offers a host of official outreach resources, including brochures, flyers, widgets, social media messages, and more.

- Ensure all staff are familiar with the cultural and community traditions and beliefs prevalent in the organization's service area. This includes not only ethnic heritage, but disabilities, English proficiency, sexuality, and other specific needs.
- Refer all clients and patients to the Health Insurance Marketplace website and briefly explain its purpose and use. Explain that they can use website to explore their coverage options including Medicaid, CHIP, and QHPs, then sign up for coverage.
- Use the "Plan, Do, Check, Act" cycle to plan, implement, evaluate, and improve the quality of services. For a detailed planning and evaluation checklist, see Enroll America's "Reaching and Engaging Customers worksheet.

What Training Resources are Available for Health-care Coverage Enrollment Assistance?

Many free training resources are available to HSOs and other entities wishing to provide outreach and enrollment services. The choice of resources depends largely on what level of assistance the organization wishes to offer. Here are a few currently available resources; additional resources are evolving as implementation continues:

- *Centers for Medicare and Medicaid Services (CMS) Health Insurance Marketplace for Professionals*. CMS offers core training, forms, and other resources. Key resources include:
  - Training for navigators, agents, brokers, and other assisters: A comprehensive list of resources from CMS and other agencies. Includes course content for CAC training courses, complete guides for federal assister training, and much more.
  - Outreach and education: A continually updated list of resources for consumers, presentations, and promotional tools ranging from brochures to widgets.
- *HRSA Provider Marketplace Toolkit*. A comprehensive toolkit from HRSA that includes many useful resources for staff at health services organizations. Topics range from the basics of the Affordable Care Act to in-depth training resources.
- *CDC Health Insurance Marketplace: Communication Toolkit for Health Agencies*. This CDC resource offers outreach communications tools including social media messages, badges, and videos that organizations can post on their websites.
- *Enroll America*. An independent, nonpartisan, nonprofit organization, Enroll America is a coalition of partners focusing on enrolling people

in health-care plans that work for them.

- Application Assistance 101: Helping Individuals Sign Up for Health Insurance – This fact sheet from Enroll America offers basic tips and best practices for staff and volunteers providing enrollment assistance.

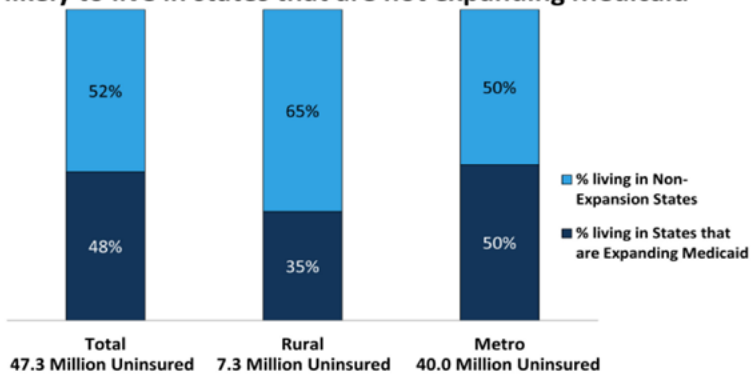
Why is Enrollment Assistance Important?

Health-coverage enrollment assistance is integral to providing high-quality health care to rural residents and improving population health. By helping people learn about and choose health insurance plans, enrollment specialists help to eliminate financial barriers to accessing health care. Those financial barriers have profound impact on health, leading people to skip preventive screenings, receive less support for chronic disease management, and often negatively impacting their ability to work and live full lives. An estimated 45,000 deaths each year in people ages 17 to 64 – one every 13 minutes – are caused by lack of health insurance (Wilper et al, 2009).

Health insurance coverage also increases financial security, which is itself a key social determinant of health. The insured are more likely to seek timely preventive care, which insurers are required to cover with no co-pay or co-insurance. Lack of health insurance has been associated with diagnosis of cancers at later stages (Halpern et al, 2008), higher rates of preterm birth and lower survival rates among very-low-birthweight neonates (Hsieh, 2015), higher mortality rates among trauma patients (Chikani et al, 2015), greater incidence of both major and minor complications after head and neck cancer surgery (Weyh, Lunday, & McClure, 2015), higher mortality rates after coronary bypass surgery (LaPar et al, 2012), and many other adverse health outcomes.

Figure 3

Uninsured individuals in rural areas are disproportionately likely to live in states that are not expanding Medicaid



SOURCE: Kaiser Family Foundation analysis of 2013 Current Population Survey. KFF State Health Facts Analysis of State Medicaid Decisions, 2014. Data are for nonelderly individuals under 65 years of age.
NOTE: "States expanding Medicaid" includes the 25 states and the District of Columbia expanding Medicaid as of March 1. "States not Expanding" includes 25 states that are not expanding as of March 1, some of which may be considering expansion in the future

In rural areas, health coverage enrollment assistance is critical to improving coverage rates. In comparison to urban dwellers, a greater proportion of rural residents lacks health insurance. Income levels are lower in rural communities, which means a large segment of the rural population is eligible for federal subsidies to help pay for coverage through the marketplace. Likewise, in states that are expanding Medicaid, rural residents are more likely to be eligible for the program.

For HSOs, increasing enrollment in QHPs and Medicaid is critical for financial survival. The ACA calls for a gradual phase-out of most funding streams for uncompensated care, including the disproportionate share hospital (DSH) fund. Many local entities, such as state and county governments, rely on the federal match to provide medically indigent care in their communities. As these and other funding streams for uncompensated care dry up, hospitals and clinics are at financial risk (Neuhausen et al, 2014). While federally qualified health centers (FQHCs) have received additional funding under the ACA, only a fraction of the funding originally dedicated to primary care has been made available, and the increased duties are only partially offset by that funding.

In this changing landscape of reimbursement, rural providers are finding it imperative to receive payment for services rendered. Increasing the proportion of the population that has health-care coverage is likely to lead to both an increase in the volume of primary care visits and a decrease in uncompensated care.

Finally, the work of enrollment and outreach is ongoing. Despite the substantial gains in coverage since the initial roll-out of the ACA in 2014, many people who are eligible for coverage under the ACA remain

uninsured. Analysis by a Kaiser Family Foundation research team shows wide geographic variations in coverage rates, ranging from less than 15 percent of the eligible population in parts of Texas, Iowa, and Ohio to 90 percent or more in parts of Miami-Dade and Broward counties in Florida, Philadelphia, Pennsylvania, Jackson, Mississippi, and Atlanta, Georgia (Levitt et al, 2015). Other work suggests that the first wave of enrollees tended to be older, use more medications, and have more complex health needs; it is expected that healthier, younger people will continue to enroll as tax penalties become more significant (Levitt et al, 2015).

Challenges to Health Coverage Enrollment Assistance

Rural health services organizations face several challenges to increasing health coverage enrollment to their communities. Early data suggest that eligible individuals living in rural areas are less likely to enroll in an Exchange plan than their urban counterparts (Holmes et al, 2014). This is likely due to a combination of factors, including state policies, political ideologies, low population densities, health-care workforce shortages, geographic distances, and more.

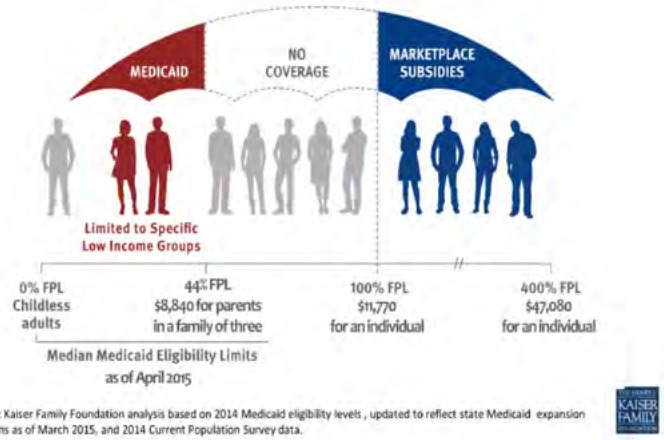
The majority of states with federally-facilitated or partnership marketplaces are considering or have enacted legislation that establishes state-specific requirements for navigators, IPAs, or CACs. Most state assister laws require state licensure or approval. Most such laws impose additional training requirements, require criminal background checks, or require Navigators/assisters to secure financial protection against wrong-doing. They often require substantial fees. The agent and broker community has supported these laws, many of which prohibit navigators from offering advice about the features of a health plan or about whether a plan is better or worse for a particular individual or employer.

Consumer advocates have expressed concerns that these laws will make it difficult for organizations to become navigators and restrict the ability of assisters to help consumers. Federal regulations prohibit states from imposing standards or requirements that prevent Navigators and IPAs from performing their duties. To date, HHS has not challenged any of the state laws.

Rural residents are also more likely to fall into the "Medicaid coverage gap." As of May 2015, the opportunity to expand Medicaid had been rejected by 22 states. A significant coverage gap exists for low-income adults in these states: While most traditional Medicaid programs cover children and disabled adults, coverage for other adults is generally restricted to parents with extremely low incomes. In 2015, the median income limit for parents was 44 percent of federal poverty level; in almost all non-expansion states, childless adults remained ineligible. On the other side of the "gap," the ACA does not provide subsidies for people below 135 percent of federal poverty level who wish to purchase a plan in a marketplace. Thus, many low-income adults in these states have incomes higher than Medicaid eligibility limits (or are childless and ineligible) but below the lower limit for marketplace premium tax credits.

Figure 1

In states that do not expand Medicaid under the ACA, there will be large gaps in coverage available for adults.



Source: Kaiser Family Foundation analysis based on 2014 Medicaid eligibility levels, updated to reflect state Medicaid expansion decisions as of March 2015, and 2014 Current Population Survey data.

Rural residents who quality for a QHP face another challenge: Rural markets have seen higher premiums and less choice of health insurance providers. For instance, in 64 of Alabama's 67 counties, Blue Cross Blue Shield is the only insurer (Douban, 2014). In addition, health *care* providers may not be in the insurer's network. Network inadequacies often mean people must travel long distances for services to find an in-network provider (Barker

et al, 2014). Researchers from the RUPRI Center for Rural Policy Analysis found that in states with low rural populations, but where high percentage of their populations are rural, have the highest average adjusted premiums, about 9 percent higher than the least rural states ($265 per month compared to $243 per month; McBride et al, 2014). The RUPRI team found that premiums were greatest in states with federally-facilitated marketplaces, areas with lower ratios of providers to population, in sparsely populated states with low overall populations, especially in the Midwest, and when insurance rating areas were individual counties.

Other challenges to enrollment in rural areas include:

- *Resistance.* The ACA as a whole has been hotly debated, and many residents of rural communities may be resistant to enrolling in programs related to "Obamacare." As noted above, most rural residents live in states that chose not to expand Medicaid, reflecting a generally antagonistic attitude toward the ACA.
- *Knowledge.* People may be unaware that they and other family members are eligible for subsidized plans or for Medicaid or Medicare. They may not know how to apply.
- *Workforce shortages.* Agencies may already face staffing challenges as they draw from a limited rural workforce. It may be difficult to find staff willing to be trained to take on assister roles. Staff who are willing may not have time to devote to training and enrollment activities, as other responsibilities may interfere.
- *Geographic distance.* Geographic distances, combined with lack of public transportation and unreliable private vehicles, often create barriers to people who are trying to reach in-person enrollment assistance.
- *Limited internet access/computer literacy.* The World Wide Web is a fundamental tool in the ACA outreach plan, and marketplaces are all accessible primarily online. Yet many rural residents do not have access to high-speed internet. Many residents may not own a computer, and computer literacy rates are relatively low in these regions. Even when enrollment is done using a public computer and internet access (e.g. at a public library or FQHC), enrollees may not be able to check their accounts for messages, payment details, and other information.
- *Immigrant families.* While documented immigrants are eligible for enrollment in QHPs, undocumented immigrants cannot purchase plans on an exchange or receive federal subsidies. Yet many immigrant families include foreign nationals who are undocumented and documented, as well as U.S. citizens. For instance, an older child may have been born in Ireland while younger children were born in the United States. Fear of authorities may pervade the entire family, making it difficult to enroll eligible individuals.
- *Low health insurance literacy.* The language of health insurance coverage – co-pays versus co-insurance, deductibles and premiums, out-of-pocket versus reasonable and customary expenses, etc. – may bewilder those new to purchasing their own coverage. Even those who previously had employer-sponsored insurance may have paid little attention to the cost-sharing requirements of their plans. For those who speak English as a second language, the landscape of health insurance may be undecipherable.

Examples of How HSOs have Increased Capacity and Resulting Outcomes

Rural HSOs have approached the challenges of health coverage enrollment in their communities with creativity, persistence, and dedication. Several best practices have emerged in outreach and enrollment for rural communities (Morris, T., 2014; Silberman et al., 2014).

One of the most important strategies has been the formation of regional coalitions to work together, address implementation challenges, and advocate for the needs of rural communities. Organizations have joined together in coalitions composed of providers, health and human services agencies, education, libraries, and other community-based organizations, spanning for-profit, non-profit, and government entities.

For example, the California Primary Care Association successfully advocated for regional clinic consortia to be able to train CECs at community health centers (Gomez, Wunch, & Finocchio, 2014). Regional consortia developed a cadre of "Master Trainers"

who have played a key role in training CECs, resolving implementation issues, and developing supplemental trainings on the state's Medicaid program, Medi-Cal, medically indigent programs, and their intersection with Covered California, the state's marketplace initiative.

Strategies that have been used successfully to address specific challenges include:

- ***To address political resistance:***
  - Enlist the help of community health workers (CHWs), trusted members of the community who act as liaisons between the community and health-care systems.
  - Remaining neutral, acting not as advocates but as educators,
  - Staying up-to-date on the most current information
  - Promoting "word-of-mouth" recommendations from satisfied consumers to help with marketing and outreach (for instance, providing information cards to successfully enrolled consumers)
- ***To address gaps in knowledge***
  - Ensuring that patients and clients have access to accurate, up-to-date, easy-to-use information, in print, digitally, and verbally
  - Using CHWs and other trusted community members to explaining eligibility
- ***To address health-care workforce challenges:***
  - Conducting "in-reach" as well as "outreach" – that is, providing training and support to all staff and providers
  - Providing adequate time for staff tasked with enrollment activities to perform additional duties
  - Educating staff at all levels of the organization, including front desk staff, providers, nurses, and administrators, so that they can identify patient in need of health coverage and refer them to the appropriate assister
- ***To address geographic barriers:***
  - Aligning with community events and initiatives
  - Equipping community health workers (CHWs) and others to conduct place-based outreach (e.g. a mobile hotspot)
  - Using agents and brokers to contact people in more isolated communities
- ***To enroll eligible immigrants:***
  - Establishing partnerships with legal aid organizations
  - Using mobile hotspots to enroll children in their homes
  - Taking advantage of presumptive eligibility for Medicaid and CHIP enrollment
- ***To address lack of internet access and low computer literacy:***
  - Providing enrollment in public settings such as libraries, using laptops, mobile scanners, and mobile hotspots at enrollment centers
  - Using print materials for outreach

Some specific examples of health-services organizations

Mariposa Community Health Center

Vivir Mejor! (Live Better!) Consortium ACA Outreach and Education Project

http://www.mariposachc.net/

The Mariposa Community Health Center Vivir Mejor! Consortium is a partnership between the Health Center and other organizations engaged in outreach and enrollment activities. The project is designed to address the health coverage needs of uninsured and underinsured residents in Santa Cruz County, Arizona. It included training five bilingual (English/Spanish) staff members as assisters. Partnerships were established with non-health services organizations, including the Nogales Community Development corporation, the local Rotary Club, the Rio Rico Fire Department, Literacy Volunteers of Santa Cruz County, and the Mexican Consulate. The outreach team also gave enrollment presentations at free tax preparation events. From October-March 2014, 525 people attended MCHC's ACA education presentations. Each session was attended by 8 to 33 people.

Dartmouth-Hitchcock Center for Telehealth

Introduction to Accountable and Affordable Care

The Dartmouth-Hitchcock Center for Telehealth built an online training module, "Introduction to Accountable and Affordable Care," designed for

emergency room personnel. This module is part of a broader series of online courses for the Center for Rural Emergency Services and Trauma (CREST), a collaborative network of 16 Critical Access Hospitals and community hospitals committed to improving the emergency care of patients in rural New England through education, outreach, and quality improvement. The ACA training module offers rural emergency room providers an easy way to access information about outreach and enrollment, including how to find local certified ACA enrollment counselors or resource centers. The educational program was released in March 2014. By August 2014, 14 providers had registered for the program, representing 4 counties throughout New Hampshire and Vermont.

Nebraska Association of Local Health Directors

Outreach and Education Project

http://nalhd.org/resources-ACA.html

The Nebraska Association of Local Health Directors (NALHD) ACA outreach and education project is designed to help rural local health departments (LHDs) apply health literacy training to respond to their communities' specific questions and needs related to health insurance options. Health Literacy Advisor software was used during materials development. NALHD gave LHDs an orientation to the ACA using static, online educational modules, which were supplemented with two interactive webinars. The LHDs then conducted outreach and education events in their communities, using several strategies to reach specific populations. Strategies included distribution of Spanish-language materials, ensuring bilingual staff and CACs were available for Spanish-speaking population, working with Navigators to co-present, using the materials to train community organizations, and integrating enrollment outreach into home visitation programs and the Every Woman Matters program. At least one staff member from each of NALHD's 16 rural member local health departments completed the training. Of those 16 LHDs, 11 partnered with other organizations to sponsor at least one ACA outreach event. All told, 912 participants attended an ACA outreach event sponsored by an LHD, and nearly 36 percent of participants received one-on-one education during the event.

How to Pay for Health Insurance Enrollment Assistance

For rural safety-net organizations and small providers who have traditionally served a large proportion of uninsured or underinsured patients, helping patients enroll in health insurance coverage is part of a transition to a new business model for health care. Funding streams for uncompensated care (e.g. the Disproportionate Share Fund) have been adjusted based on the premise that almost all Americans would have health coverage under the ACA. Hence, it is in the best interest of health-services organizations to ensure that as high a proportion of their communities as possible is enrolled in health coverage.

However, not all organizations may wish to employ staff as assisters. In many rural communities, small practices may find it more useful to refer patients in need of assistance to eligibility experts at Navigator or CAC organizations. Federally Qualified Health Centers, however, are required to offer enrollment assistance for QHPs, Medicaid, and Medicare.

The ACA includes significant federal funding for organizations wishing to become certified as Navigators, IPAs, or CACs. States that are running their own marketplaces have had access to nearly four times the resources available to the states with a federally-facilitated or partnership marketplace.

The Centers for Medicare & Medicaid Services (CMS) provides funding to support Navigators in Federally-Facilitated Marketplaces (FFM), including State Partnership Marketplaces. There is no dedicated source of funding for navigator programs. However, navigator awards, originally scheduled to end in December 2015, have been extended to 2016. Entities and individuals cannot serve as federal Navigators without receiving federal grant funding from CMS to perform Navigator duties.

Additional funding is available from other sources such as state Medicaid agencies, private foundations, and local collaborative partnerships.

Examples of Things that SORH's Can Do to Increase Capacity in Health Insurance Enrollment Assistance

SORH play an important role in helping increase enrollment in health plans in rural communities. Specific activities that SORH can engage in include:

- *Convene.* Each SORH can convene regional and statewide coalitions to address outreach and enrollment challenges in rural regions of its state.
- *Ensure accuracy of information.* SORH staff should collaborate with state health agencies, health insurance marketplaces, and their states' Medicaid agencies to ensure information on eligibility disseminated by rural providers is current and reliable.
- *Use the SORH website to provide information about health insurance and enrollment assistance.* Display consumer materials from HealthCare.gov explaining the basics of Medicaid, The Children's Health Insurance Plan (CHIP), and coverage through the Health Insurance Marketplace. Post the Health Insurance Marketplace widget on your organization website. Include eligibility and enrollment information in newsletters and other take-home items.
- *Train staff as assisters.* SORH staff can become trained as CECs or other assister personnel to help people apply for benefits; SORH can also take on the role of "master trainer" to disseminate CEC training to rural communities around the state.
- *Partner with community organizations that offer help applying.* Connect individuals and families with organizations that are likely to be able to offer application assistance. Go to https://localhelp.healthcare.gov/
- *Bring application assistance on site.* Arrange for trained assisters to provide application help at your organization. All states have online applications, and people are also able to apply by phone, by mail, or in person.
- *Share best practices.* Collect strategies that rural organizations are using to conduct outreach and enrollment activities and share them via your website, newsletters, conference calls, and other means.

Tools

Get Covered America
https://www.getcoveredamerica.org
A nonprofit, nonpartisan campaign of Enroll America (www.enrollamerica.org) that provides tools for organizations and consumers seeking health insurance coverage via the marketplaces.

Healthcare.gov
https://www.healthcare.gov/
The federal gateway for all health care marketplaces.

National Disability Navigator Resource Collaborative.
Guide to Disability for Healthcare Insurance Marketplace Navigators
http://www.nationaldisabilitynavigator.org/ndnrc-materials/disability-guide/
This guide provides additional information for navigators who are working with people with disabilities, with the goal of strengthening Navigators' capacity to assist individuals with disabilities to make informed and appropriate healthcare insurance choices. This guide supplements other materials developed by the U.S. Department of Health and Human Services, other federal agencies including the US Department of Justice (DOJ), and other health policy advocates.

Links and Resources

Bureau of Primary Care, Health Resources and Services Administration
http://bphc.hrsa.gov/
The HRSA bureau devoted to primary care. Provides support to federally qualified health centers and health center look-alikes. Resources include program opportunities, technical assistance in applying for and maintain health center and look-alike status, and more.

CMS.gov Health Insurance Marketplace

https://marketplace.cms.gov/

The official marketplace source for assisters and outreach partners. Resources include a weekly newsletter and webinar series. Sign up for updates by sending an e-mail to cacquestion@cms.hhs.gov.

Enroll America

http://www.enrollamerica.org/

The largest health-care enrollment coalition in the United States, Enroll America is an independent nonprofit, nonpartisan organization dedicated to **maximizing the number of Americans who enroll in and retain health coverage** under the Affordable Care Act. Enroll America works with more than 4,600 partners in all 50 states and the District of Columbia to create cutting-edge tools, analyze data, inform policy, and share best practices.

Federal Office of Rural Health Policy (FORHP)

The FORHP offers ongoing support for ACA implementation in rural communities, including health insurance outreach, education, and enrollment issues. Technical support includes:

Virtual Office Hours – Biweekly calls offer information and support for rural health stakeholders and FORHP grantees. Recordings of past calls are accessible anytime via the website.

Emails (sign up by emailing FSORHP-ACAQuestions@hrsa.gov): Weekly emails provide ACA updates and resources geared towards rural communities.

A rural-specific contact that can be reached at ORHP-ACAQuestions@hrsa.gov. Contact the FORHP ACA Team at this email address to ask any questions, raise any issues, or share stories from the field.

In the Loop

http://enrollmentloop.org/

In the Loop is an online community where people who are engaged in helping individuals enroll in health insurance can interact with others doing similar work. In the Loop community members engage with other enrollment specialists across the country to share best practices, successes and lessons learned. Members include navigators, in-person assisters, non-profit certified application counselors, community health center staff helping with enrollment and other providers, non-profit health and consumer advocates, staff who work at legal aid organizations, staff who work at protection & advocacy organizations, and staff from other non-profit organizations.

National Association of Community Health Centers

http://www.nachc.org/

Established in 1971, the National Association of Community Health Centers (NACHC) works with a network of state health center and primary care organizations to serve health centers in a variety of ways:

Provide research-based advocacy for health centers and their clients.

Educate the public about the mission and value of health centers.

Train and provide technical assistance to health center staff and boards.

Develop alliances with private partners and key stakeholders to foster the delivery of primary health care services to communities in need.

National Association of Insurance Commissioners

http://www.naic.org

The National Association of Insurance Commissioners (NAIC) is the U.S. standard-setting and regulatory support organization created and governed by the chief insurance regulators from the 50 states, the District of Columbia and five U.S. territories. Through the NAIC, state insurance regulators establish standards and best practices, conduct peer review, and coordinate their regulatory oversight. NAIC staff supports these efforts and represents the collective views of state regulators domestically and internationally. NAIC members, together with the central resources of the NAIC, form the national system of state-based insurance regulation in the U.S.

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Section III.
Collaboration and Expertise

How to Build Partnerships and Work with Experts to Enhance Technical Assistance Services

Section Three highlights potential partnerships for State Offices of Rural Health (SORH) and other technical assistance (TA) providers. By partnering with other organizations, TA providers can add value to the services they offer. Although TA providers and other organizations may have different structures and approaches, they can work together toward common purposes and achieve shared results.

This section identifies various not-for-profit organizations that SORH and other TA providers can call upon for expertise, tools, training, and resources. The organizations discussed in this section do not reflect a complete list of resources available. Rather, these organizations were identified by the National Network for Rural and Frontier Capacity based on prior experience with these organizations, the level of expertise available, and the quality of services offered. They are potential collaborators that can offer resources, expertise, and guidance to help improve the capacity of SORH and other TA providers. The organizations listed offer some or all services at no charge.

A Network of National Experts and Trusted Organizations

The organizations listed here have been working with SORH and other TA providers for many years to improve staff knowledge, skills, and capacity with the aim to improve rural and frontier health-care delivery systems. These organizations share expertise on a range of topics and offer a variety of free services and resources that can help to improve staff capacity to provide TA services.

National Organization for State Offices of Rural Health (NOSORH)

Website: http://www.nosorh.org/

Contact:

NOSORH
44648 Mound Road, #114
Sterling Heights, MI 48314-1322
Phone: (586) 336-4627
Email: info@nosorh.org

The National Organization of State Offices of Rural Health (NOSORH) was established in 1995 to assist State Offices of Rural Health in their efforts to improve access to, and the quality of, health care for America's 61 million rural citizens. NOSORH enhances the capacity of SORHs to do this by supporting the development of state and community rural health leaders; creating and facilitating state, regional and national partnerships that foster information sharing and spur rural health-related programs/activities; and enhancing access to quality health-care services in rural communities.

Services

SORH to SORH Support

Peer learning is a strategy commonly used to build capacity and expertise. Recognizing that staff at SORHs often learn best from staff at other SORH, NOSORH promotes educational exchange and mentoring among SORH. Jim Bernstein, former Director of the North Carolina Office of Rural Health and a mentor to many SORH staff around the nation, together with the early leaders of the State Office of Rural Health movement, were masters of change; they knew how to work within existing policy frameworks and built sustainable programs that addressed longstanding problems. That philosophy and dedica-

tion are the foundation of NOSORH's efforts to cultivate the next generation of rural health leaders.

Any NOSORH member, including SORH staff, may request travel scholarships to meet with other SORH staffers to learn about a topic of importance to that member's SORH. Scholarships support travel, which enables NOSORH members to link with mentors or peers at other SORH. Travel scholarships may be used by NOSORH members to visit another SORH in order to:

- Develop or enhance their rural health expertise or knowledge
- Cultivate their leadership skills
- Adopt a promising practice
- Improve their program management and/or strategic planning and implementation effectiveness.

Educational Conference and Meetings

NOSORH hosts an Annual Meeting for NOSORH members and partners, SORH Regional Partnership Meetings, and the annual National Rural EMS Conference.

Webinars

Throughout the year, NOSORH hosts webinars on topics of interest to SORH and rural and frontier health, ranging from payment systems to quality improvement models to workforce development. Webinars are available at no cost and webinar recordings can be accessed on the NOSORH website.

Educational Resources

The NOSORH educational resources have been collected from various webinars projects of SORH for use by other SORH. The collection includes hundreds of resources addressing following nine topics:

- Emergency Medical Services
- Grant Writing Institute
- Leadership Institute
- Medicare Hospital Readmission Reduction Program (MHRRP)
- New SORH Staff
- Oral Health
- Recruitment and Retention
- Rural Health Clinics
- TruServe

The National Center for Frontier Communities (NCFC)

Website: www.frontierus.org and www.NResourcGroup.org

Contact:

Susan Wilger, Director of Programs
301 W. College St., Suite 16
Silver City, NM 880611
Phone: (575) 313-4720
Email: swilger@swchi.org

The National Center for Frontier Communities (NCFC) is the national advocacy voice for frontier communities across the country. The NCFC creates and implements targeted, frontier-specific solutions to strengthen remote communities. NCFC's mission is to provide national leadership and build collaboration on issues important to frontier communities. It assures that frontier needs and voices are not only heard, but that they are a key part of the solution. NCFC serves as a central point of contact for capacity improvement, referrals, information exchange, and networking among geographically separated communities.

Services

Nonprofit Capacity Assessments

The Nonprofit Organizational Capacity Assessment (NOCA) is the first step in any capacity building journey. It serves as a crucial baseline, as a starting point for strategic planning, and promotes an important conversation among leadership. The NOCA tool is research-based and was developed and refined by NCFC staff, working closely with rural and frontier nonprofit organizations. The NOCA provides a comprehensive overview of an organization's capacity in the areas of leadership, organizational development programs, and community engagement. It also calculates scores for adaptive, innovative, advocacy and collaborative capacities—crucial for the sustainability of any organization today.

Unlike most other capacity assessments, the NOCA is administered at no charge. The assessment is always administered by a trained professional to a team of organizational leaders, and is a two-hour process. To complement the NOCA, NCFC has also developed a capacity assessment tool for community coalitions, known as the Coalition Organizational Capacity Assessment, or COCA.

Curbside Consulting

Weekly free consulting services are offered each Wednesday from 9AM to 12 Noon (MST) either face-to-face or via video conferencing (with prior scheduling). Expert advice is provided in the following areas:

- Nonprofit start-up assistance
- Legal and liability issues
- Proposal writing and proposal coaching
- Governance: Board training, development, recruitment
- Executive coaching
- Strategic planning
- Business planning
- Financial management systems
- Funding prospect search
- Document review (by-laws, policies, contracts, proposals etc.)

Resource Library

NCFC maintains a clearinghouse of information and resources relevant to frontier communities. The staff can provide free customized assistance on the following topics:

- Frontier definitions
- Frontier maps
- Publications about frontier communities
- Frontier and nonprofit resources
- Frontier food systems (food policy councils, sustainable food economies, regional food hubs, food access to vulnerable rural and frontier populations)

Rural Health Value

Website: http://cph.uiowa.edu/ruralhealthvalue/

Contact:

Keith Mueller, Ph.D.

Rural Health Value

The University of Iowa College of Public Health

Rural Policy Research Institute

Email: cph-RuralHealthValue@uiowa.edu

Rural Health Value is a cooperative agreement between the Office of Rural Health Policy, the Rural Policy Research Institute Center for Rural Health Policy Analysis (RUPRI Center), and Stratis Health. The Rural Health Value team analyzes implications of changes in the organization, finance, and delivery of health-care services for rural communities. The team also helps rural communities and providers transition to a high-performance rural health system. The RUPRI Center is experienced in multiple research strategies, including survey design, qualitative analysis, simulation development, and large national database query and report design. Stratis Health leads collaboration and innovation in health-care quality and safety and serves as a trusted expert in facilitating improvement for people and communities.

Services

Tools and Resources

Transitioning to a high-performance rural health system that provides the Institute for Healthcare Improvement's "Triple Aim" of better patient care, improved population health, and lower per capita cost will require innovation and disruptive change. The goal of Rural Health Value is to assist rural communities and providers achieve a high-performance health system by providing tools and resources appropriate for varying levels of change-readiness. The Rural Health Value website provides tools and resources designed to facilitate transitions to such a high performance system. These resources have been developed by various individual and organizations as models or strategies to support rural community and health-care provider transitions.

Innovations and Demonstrations

Recently implemented public programs (including provisions of the Affordable Care Act) and health-care innovation demonstrations/grants cultivate new health-care models. Successful models and programs promote affordability, accessibility, sustainability, patient-centeredness, and high quality care while responding to the unique needs of each community. The Rural Health Value team has developed the following tools and resources to assist TA providers, communities, and others interested in innovative rural and frontier healthcare solutions:

- *Innovation Briefs.* Short reports describing selected rural health-care programs a nd demonstrations that may provide ideas about new health-care delivery and financing models.

- *Profiles in Innovation.* Reports describing exciting, and potentially replicable, innovations in rural and frontier health-care delivery and finance systems.
- *Innovations Table.* A directory of rural-specific projects that seek to test new healthcare payment and delivery models.

Presentations

Presentations given by Rural Health Value researchers addressing health-care innovation, volume-to-value transformation, health-care reform, and other pertinent topics.

National Rural Health Research Center

Website: https://www.ruralcenter.org/

Contact:
National Rural Health Research Center
600 East Superior Street, Suite 404
Duluth, MN 55802
(800) 997-6685
(218) 727-9390 ext. 0
info@ruralcenter.org

The National Rural Health Resource Center provides technical assistance, information, tools and resources for the improvement of rural health care. It serves as a national rural health knowledge center and strives to build state and local capacity.

Services

Community Health Assessments and Community Engagement

The NRHRC understands that community support of the local health-care system is vital for sustainability and growth. These resources can organizations learn how to support healthier, more engaged communities.

Health Information Technology Consulting

As the national knowledge center on rural electronic health record adoption, the NRHRC offers comprehensive services targeted at rural hospitals, rural health clinics, and state and national health-information technology programs.

Strategic Planning

The NRHRC offers strategic planning services to HSOs in need of support for the strategic planning process. The planning process is facilitated by the Center's staff of national rural health experts.

Leadership

Success begins with strong, informed leadership. The Center offers a variety of services, on-site and remotely, to help leaders to assess strengths and identify areas of useful performance improvement.

Performance Improvement

The Center offers a complete spectrum of rural health performance improvement services. With support from the Center, clients succeed in aligning people, processes and resources with their mission.

Workforce Services

The Center understands that rural health care facilities face unique workforce challenges. Since 1991, The Center has assisted rural citizens, health professionals, educators and policymakers with design and implementation strategies to assure the availability of quality health care.

Rural Assistance Center

Website: http://www.raconline.org/

Contact:
Rural Assistance Center
School of Medicine and Health Sciences Room 4520
501 North Columbia Road Stop 9037
Grand Forks, ND 58202-9037
Phone: 1-800-270-1898
Email: info@raconline.org

A product of the U.S. Department of Health and Human Services' Rural Initiative, the Rural Assistance Center (RAC) was established in December 2002 as a rural health and human services "information portal." RAC helps rural communities and other rural stakeholders access the full range of available programs, funding, and research that can enable them to provide quality health and human services to rural residents.

Services

RAC offers many services to help inform decisions affecting rural health and human services. All services are provided free of charge.

Web-Based Services

- *Online Library*. Provides access to thousands of resources, including funding and opportunities, news, events, organizations, maps, and publications.

- *Topics & States*. Features information, resources, and data for specific topics and states.
- *Tools for Success*. Tools to help communities plan and implement successful projects, including program models and innovations, strategies that work, and tools for demonstrating need and impact.
- *RAC Publications & Updates*. Original publications from the Rural Assistance Center, including health and human services updates, The Rural Monitor, webinars, the Directory of Rural Health Contacts, and customizable maps.
- *Electronic Mailing Lists.* Users can subscribe to receive email updates on:
- Latest funding opportunities
- Recent news
- New documents and tools
- Upcoming events
- *Customized assistance.* RAC maintains a clearinghouse of rural health and human services resources. RAC information specialists provide free customized assistance including:
  - Identifying potential funding opportunities
  - Locating appropriate federal or state agency contacts
  - Finding and printing electronic documents
  - Locating statistics, data sources and maps
  - Connecting you to organizations, experts, and colleagues

The Rural Assistance Center also serves as a single point of entry into the U.S. Department of Health and Human Services by putting callers with rural concerns in contact with appropriate contacts within the Department.

National Center for Rural Health Works (RHW)

Website: http://ruralhealthworks.org/about/

Contact:
Gerald A. Doeksen, Director
National Center for Rural Health Works
Oklahoma State University, 513 Ag Hall
Stillwater, OK 74078
Phone: (405) 744-6083
Fax: (405) 744-9835
Email: gad@okstate.edu

The National Center for Rural Health Works (RHW) is funded through the Federal Office of Rural Health Policy (ORHP). RHW began in 1998 as an initiative to expand public awareness of the importance of the economic impact of the health-care sector and to stress health care's critical role in rural development. RHW has provided information to support local decision-makers in rural communities to become proactive and intricately involved in planning and supporting their local health systems. The ultimate objective is to maintain local health care-services, including critical access hospitals, resulting in healthier rural communities and economies.

Services

Tools and Templates

The National Center for Rural Health Works provides tools and templates in four areas:

1. Economic Impact
2. Community Health Needs Assessment
3. Rural Health Needs Assessment
4. Rural Health Service Profitability

Each year the RHW develops new applications of the impact model to policy relevant issues, provides current information on community health needs assessment requirements and toolkits, develops rural health needs assessment tools and templates, and develops new applications of rural health service profitability templates. These applications can be modified to fit other states regardless of geographic or demographic differences and serve as tools for community and state leaders facing rural health-related challenges.

Workshops

RHW provides annual training workshops to communicate how to use the tools, templates, guidebooks, and methodologies developed. Two types of workshops are available: Regional Workshops and State- or Organization-Specific Workshops

Two regional workshops are provided each year by RHW. The workshops are designed for professionals from agencies that plan to provide technical assistance to local communities in any of the four areas of focus of RHW.

State- or Organization Specific Workshops are designed to address the specific needs of the host state or organization. An example of a state-specific work-

shop is a workshop designed to cover community health needs assessment only; the state invites the non-profit rural and critical access hospitals to attend. The participants at these workshops are determined by the specific state or organization. The cost of the workshops varies based on location and attendance. Contact RHW to schedule a state-specific workshop.

Webinars

Webinars are presented at no cost to participants. Anyone wanting to host (or sponsor) a webinar can contact the National Center for Rural Health Works. A webinar host can choose a webinar topic and then invite participants. Typically, webinars last one hour. The webinar host is responsible for marketing the webinar to their desired audience. Possible webinar topics include:

- Economic Impact of Rural Health
- Economic impact of a small rural hospital or a critical access hospital
- Economic impact of an FQHC or rural health clinic
- Economic impact of a rural health network
- Economic impact of a state Medicaid program
- Economic impact of a medical school
- Economic impact of a nursing home

Community Health Needs Assessments

Community health needs assessment is mandated under new legislation that not-for-profit hospitals must complete this process no less than every three years. Other communities and health-care organizations have found utilizing this type of needs assessment beneficial.

Needs Assessment

Tools and templates will be presented to illustrate how to estimate the need for rural primary care physicians and specialty care physicians.

Technical Assistance

RHW assists users with development of the tools and templates for their organization. For technical assistance, contact the RHW staff by phone or email to share original documents in Word, Powerpoint, or Excel. The staff will also walk through any of the tools or templates and assist with understanding the IMPLAN model, data sources, etc. The staff is available to review user draft documents to assure appropriate illustration of the model and appropriate use of the multipliers.

Common Partnerships

Collaboration and partnerships have become progressively necessary as competition for markets and funding continues to increase. SORH and other TA providers have formed partnerships to better align their priorities, resources, and strategies to meet the needs of rural and frontier health-care providers. SORH often partner with the following organizations to leverage resources for TA services.

- State Associations
- Primary Care Associations
- Hospital Associations
- Rural Health Clinic Association
- Nursing Associations
- Community Health Associations
- Rural Health Associations
- State Agencies
- State Departments of Health
- Public Health Offices (county and state levels)
- Quality Improvement Organizations
- State Flex Programs
- Rural Health Networks
- Health Information Technology
- Regional Extension Centers
- Telehealth Resource Centers
- Health Workforce Programs
- Colleges and Universities

Partnerships and collaboration take a variety of forms based on the kinds of organizations involved and the level of interdependence desired. A key to establishing and maintaining effective partnerships is to find a way to build on the strengths of all partners. Examples of different partnerships are listed below.

Collaboration

- Characteristics: Greater autonomy, no permanent organizational commitment
- Example: Organizational partnerships:
- Sharing information
- Coordinating efforts
- Does not include shared, transferred, or combined services, governance, resources, or programs

- Has no integration of operations

Strategic Alliance

- Characteristics: Decision-making power is shared or transferred
- Examples: Joint programming
- Management of a program of mutual interest to participating organizations' missions
- Administrative consolidation
- Being agreement-driven
- Ongoing partnerships involving joint management of one or more functions, e.g., administrative or program-related
- Partners still operate independently

Integration

- Characteristics: Involves changes to structure and control
- Examples: Management service organizations:
- Established to provide some or all administrative functions, e.g., fundraising, accounting /billing functions

Funding Alliances Established to Provide or Share Funds

- Separate organizations come together in a recipient-donor relationship or share a larger grant/donation
- Issues of fiscal and administrative management can be a great hindrance
- In order to mitigate issues, a separate body can be created to manage the funds and allocate them to each partner organization as determined in the original agreement

Cost-sharing/Grant-match Partnerships

- Cost-sharing occurs when one organization provides certain resources and the other organization provides different resources, e.g., the universities provide the facilities, faculty, and the new environment in which the Federal government selectively invests
- Grant-match occurs when one organization provides a grant and the recipient provides a match in services, cash, maintenance, voluntary effort, or supplies
- Both partners share the benefits; both share the costs

Less Common and Unique Partnerships

A few examples of less common partnerships and unique collaborations that have been formed among TA service providers include collaboration with State Nonprofit Associations, Health Foundations, Health Extension Rural Offices (HEROs) and the U.S. Department of Agriculture. Below are descriptions about these unique partnerships and the TA services offered.

State Nonprofit Associations

The National Council of Nonprofits is a trusted resource and consists of a powerful network of over 40 State Nonprofit Associations. According to the Council website, the top challenges for charitable nonprofits in the near future will continue to be: limited resources; increased demands on nonprofits stemming from increased needs in communities; and state and local governments looking to nonprofits to fill their own budget holes or gaps in services. Figure 1 shows a map of member organizations (National Council of Nonprofits, 2015).

Figure 1: National Council of Nonprofits and State Associations. www.councilofnonprofits.org

Health and human services comprise nearly 50 percent of the nation's 501(c)(3) nonprofit organizations. This fact, combined with recent interest and financial investment in improving health-care systems, has led state nonprofit associations to provide capacity building services with more focus on nonprofit HSOs. Capacity building and TA topics typically offered by State Nonprofit Associations include: strategic planning, leadership development, evaluation, marketing and communications, program management, grant writing, and fund-raising. In

addition, SORH and other TA providers have begun to partner with their state nonprofit associations to provide TA services to nonprofit HSOs.

Health Foundations

Rural Health Philanthropy Partnership

The Rural Health Philanthropy Partnership is an ongoing collaboration among almost 40 federal and philanthropic stakeholders dedicated to improving health care in rural America. The impetus for the Rural Health Philanthropy Partnership came from the White House Rural Council, which has engaged in a government wide effort to better support rural communities. Since its inception in 2011, the Council has encouraged a broad range of public-private partnerships to support rural America. In 2013, the Federal Office of Rural Health Policy, in partnership with Grantmakers In Health and the National Rural Health Association, formed the Rural Health Philanthropy Partnership to create an ongoing forum for collaboration and information sharing designed to improve health care in rural communities.

The Rural Health Philanthropy Partnership currently has two initiatives:

- *Rural Health Philanthropy Partnership Webinar Series.* Webinars that focus on an issue or area that presents opportunities for public-private collaboration to improve rural health. Topics align with the work of foundations and rural stakeholders and feature program experts from government, philanthropy and healthcare. All webinars are recorded and available for review. Suggestions for topics and presenters that address successes and challenges to improving health in rural and frontier communities are encouraged.
- *Rural Health Care Coordination Network Partnership Program.* HRSA recently released a funding opportunity announcement to assist formal rural health networks to improve health outcomes through care coordination strategies. As a part of the ongoing private-public partnership in rural health, 11 participating health foundations have furthered their dedication to improving health outcomes in rural communities and are interested in potentially supporting this investment in care coordination innovation.

Hopefully, the Rural Health Philanthropy Partnership and funding opportunities will continue to grow in years to come.

Grantmakers in Health

Grantmakers in Health is the professional home to dozens of health grantmakers and others seeking expertise and information on the field of health philanthropy. Grantmakers in Health generates and disseminates information about health issues and grantmaking strategies that work in health by offering issue-focused forums, workshops, and large annual meetings; publications; continuing education and training; technical assistance; consultation on programmatic and operational issues; and by conducting studies of health philanthropy. Additionally, the organization brokers professional relationships and connects health grantmakers with each other as well as with those whose work has important implications for health. It also develops targeted programs and activities, and provides customized services on request to individual funders.

Health Extension Rural Offices (HEROs)

Health Extension Rural Offices (HEROs) is a method of helping communities, and the primary care practices that serve them, to overcome barriers to practice transformation. HEROs share common resources including local expertise coupled with the TA resources of universities, health departments, social services agencies, and other TA providers. HEROs is a community engagement strategy that has emerged at academic health centers around the country, in collaboration with the agricultural Cooperative Extension Service and public health departments. The term "Health Extension" refers to:

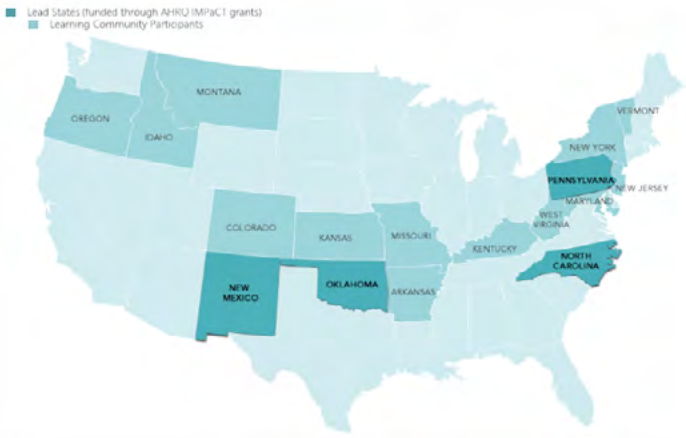
- *A person:* Agents, coordinators and champions who live in rural and underserved communities, possesses community health empowerment skills, and build bridges between communities and the university
- *A place:* A regional hub connecting health systems, higher education, and community organizations
- *A model:* A model based on agricultural cooperative extension of academic health center engagement in rural communities

- *A strategy:* Community health improvement through addressing the social determinants of health, priority health conditions, and health workforce.

Health Extension agents are, in essence, community health practitioners, with deep roots in their local communities. They are active in community organizations, and work to link higher education, health systems, philanthropy, and community partners to address priority health issues.

Figure 2 ("Health Extension Toolkit | tools for implementing the health extension model," 2015) shows a map of states participating in HERO. Learn more about HERO participating states and the HEROs Learning Community.

Figure 2: HERO Participating States. Source: www.healthextensiontoolkit.org



Six core functions are carried out by health extension agents:

- Technical Assistance
- Training and Education
- Facilitation and Coaching
- Addressing Priority Health Needs
- Advocacy and Informing Policy
- HEROS Toolkit

An on-line Health Extension (HEROs) Toolkit has been developed to assist a growing number of institutions, agencies, and organizations from around the country that are seeking information about health extension. The toolkit was put together from the experiences of 18 states from all regions of the country that are pioneering the health-extension concept.

United States Department of Agriculture (USDA)

SORH and other technical assistance providers acknowledge the growing role of the USDA in supporting rural health. USDA's health and wellness programs encompass a broad array of issues including agricultural health and safety, consumer nutrition and health education, health literacy, health in relation to the environment, access to health care and preventive services, and community health planning. Results are achieved through partnerships with the land-grant universities and the health community at the local, state, and federal levels.

The USDA's rural development programs address rural health issues by funding technical assistance services, broadband infrastructure, healthcare facilities, health planning, work and school wellness programs, and rural economic development efforts that promote the health of individuals and communities. In Iowa, for example, USDA is a strong partner and funder of rural health efforts. Both the USDA county extension and rural development programs in New Mexico are working hand and hand with health and food advocates to improve the access to healthy foods in rural and frontier areas of the state. More information can be found at USDA Programs and Services.

References

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