2018 ACTION III Project Summaries

ACTION III Project Summary: Advancing the Collection and Use of Patient-Reported Outcomes Through Health Information Technology

ACTION III Prime Contractor: MedStar Health Research Institute

Principal Investigator/Project Lead and Project Director: Deliya Wesley, Ph.D., and Raj Ratwani, Ph.D.

Key Personnel and Subcontractors

- Key Personnel:
    - Kathryn Kellogg, M.D.
    - Andrew Lincoln, Sc.D.
    - Amy Will
    - Alexandra (Sacha) Burn, M.S.
    - Laura Schubel
    - Joseph Blumenthal
    - Robin Littlejohn, M.S.
- Subcontract: Georgetown University
- Vendor: OBERD

Project Period: 4/30/2018–10/31/2019

Total Cost: $1,383,876

AHRQ Contracting Officer's Representative: Chun-Ju (Janey) Hsiao, Ph.D, M.H.S.

Project Purpose, Goals, and Objectives

The purpose of this task order is to support development and testing of technical tools (i.e., electronic applications using specified health information technology [IT] requirements and standards) for use with electronic health records (EHRs) or other health IT systems to collect patient-reported outcomes (PROs) for clinical use and research. More specifically, we will:

- Collect and report stakeholder input regarding the functionality and usability requirements for the development of user-friendly applications that collect standardized PRO data and factors affecting their implementation.
- Design and execute a plan for pilot testing the winning application from a separately administered challenge competition in nine ambulatory care settings (including primary and specialty care). The pilot test will be used to determine how well the application enables the collection and integration of standardized PRO data in diverse healthcare systems for clinical, quality improvement, and research purposes.
- Enable the capture of an additional physical function PRO measure in an additional nine primary and specialty care settings by modifying an existing PRO data collection application using the technical specifications provided by AHRQ.

Background and Significance

The patient's perspective is central to healthcare decisions affecting prevention, diagnosis, treatment, and long-term care. PROs critically inform patient-centered outcomes research (PCOR) and can inform clinical management of individuals, shared decision making, patient self-management support, care planning, goal setting, and goal attainment. PROs offer a complementary perspective to that of clinician assessments and may provider greater insights into health status, function, symptom burden, adherence, health behaviors, and quality of life.

These types of self-report measures provide broadly applicable sets of tools for use across diseases and settings. Functional status measures can be used to assess the net effect of one or all health problems and treatments on multiple domains of health. Overall, the standardized collection of PROs for functional status through electronic assessment and integration in EHRs or other IT systems would allow systemwide comparisons. It also would strengthen our national capacity to survey and monitor population health over time and advance our ability to evaluate the effectiveness of alternative interventions and treatments.

The limited inclusion of PRO data in EHRs and other IT solutions reduces the understanding and use of the patient's perspective in research and clinical care. Further, while some major EHR vendors have developed and released PRO assessment tools, including many of the Patient Reported Outcomes Measurement Information System (PROMIS) instruments funded by the National Institutes of Health, barriers to regular use are common. Successful, sustained implementation often requires customization and is often limited to specialty care. Thus, these data are not routinely available for both clinical care and research. Moreover, standards do not exist for collecting and integrating PRO data into health IT systems, thereby limiting the ability to easily share these data across health systems for research or other purposes, such as benchmarking for quality improvement.

To begin to fill these gaps, AHRQ is supporting the development of electronic applications that will enable the collection of diverse PRO measures in a standardized manner across health providers and systems. These applications also will enable broader data sharing for purposes of research and benchmarking.

As a first step toward this end, AHRQ will conduct a challenge competition (separate from this project) to promote the development of applications to enable patients across diverse ambulatory care settings to report their physical function data. The winning application from the challenge competition will be selected through a multiphase process and will then be pilot tested in a mix of primary and specialty care practices through this project.

In a separate series of pilot tests, the MedStar team will test an existing app currently used to collect physical function PRO data within the MedStar system and will modify it according to Office of the National Coordinator and AHRQ technical and security standards. MedStar will pilot test the modified app with patients in nine diverse primary and specialty care settings. For both phases of pilot testing, MedStar will examine the feasibility of the technical implementation, assess the usability and functionality of both apps, and assess the provider-facing EHR interface.

Methods

1. Obtain and report feedback from end users (patients and providers) and other key stakeholders (e.g., IT staff).
2. Develop a plan for pilot testing the winning application from a separately run challenge competition in a mix of primary and specialty ambulatory care practices to assess the winning application's utility for clinical use, quality improvement, and research.
3. Develop and execute the plan for pilot testing the winning application, including recruiting practice sites, preparing the sites (e.g., developing any necessary communication materials for providers and patients) and creating the technical platforms to conduct the test.
4. Develop and execute a plan to modify a PRO data collection app already in use in the MedStar Health system to collect PRO data, by adapting the technical specifications used in the challenge competition to enable data collection from an additional physical function PRO measure.
5. Report findings and lessons learned.

Project Settings

Pilot testing sites will include:

- MedStar Medical Group at Adams Morgan.
- MedStar Medical Group Washington Primary Care Physicians.
- MedStar Medical Group at Bethesda.
- MedStar Medical Group Primary Care Physicians at Alexandria.
- MedStar Medical Group at Olney.
- MedStar Shah Rheumatology.
- MedStar Shah Cardiology.
- MedStar Family Medicine Spring Valley.

Pilot testing for challenge competition winners: sites are still being recruited.

Key Tasks/Activities

- Conduct stakeholder interviews to identify end-user preferences for the PRO application and clinical visualization.
- Conduct usability testing on the following interfaces to optimize the user experience:
- Set up a FHIR (pronounced "Fire," which stands for Fast Healthcare Interoperability Resources) server within MedStar to allow data from OBERD to be integrated into the EHR.
- Build an EHR visualization to display patient's PRO score for physical function.
- Collect data from nine clinical sites on the usability of the PRO application and the EHR visualization.

Key Deliverables

- Stakeholder Feedback Report
- Pilot Test Findings Report
- Expert Panel Input on Findings
- App Integration, Implementation, and Development

ACTION III Project Summary: Quantifying Efficiencies Gained Through Shareable Clinical Decision Support Resources

ACTION III Prime Contractor: MedStar Health Research Institute

Principal Investigator (PI)/Project Lead and Project Director: Kristen Miller, Ph.D. (Co-PI), Zach Hettinger, M.D., M.S. (Co-PI)

Key Personnel and Subcontractors

- MedStar Health: Sacha Burn, M.S.; Raj Ratwani, Ph.D.; Joseph Blumenthal; Mark Call; Christian Boxley; Derek Delia, Ph.D.
- Children's Hospital of Philadelphia (CHOP): Jeremy Michel, M.D.; Dean Karavite, M.S.; Kavya Sundar
- Medical University of South Carolina (MUSC): Ken Catchpole, Ph.D.; Myrtede Alfred, Ph.D.
- Hahnemann Hospital: Ryan Arnold, M.D., M.S.

Project Period: 7/30/2018–7/29/2019

Total Cost: $451,863

AHRQ Contracting Officer's Representative: Shafa Al-Showk, Ph.D.(c), M.P.H., CHES

Project Purpose, Goals, and Objectives

- To understand the role of shareable clinical decision support (CDS) resources in CDS development and implementation, including answering from a healthcare systems perspective:
    - What factors may contribute to more efficient CDS development and implementation processes?
    - Do shareable CDS resources lead to greater efficiency in developing and implementing CDS? Why or why not?
- To gain this understanding by using shareable CDS resources available through AHRQ's CDS Connect, including describing and quantifying efficiencies gained by a healthcare system. Efficiencies and potential cost savings identified through this task order will contribute to a business case healthcare systems can use to promote use of shared CDS within their organizations.

Background and Significance

There is growing recognition that CDS, when designed and implemented well, holds great potential to improve healthcare quality, increase efficiency, and reduce healthcare costs. Despite its potential, CDS implementation and actualization remain nascent due to the many barriers to realizing the full benefits of CDS-facilitated value improvement. A key barrier is the need for most organizations to independently develop, deploy, and manage CDS content, leading to high costs and redundant work across the system.

CDS Connect represents AHRQ's long and important history of investment in CDS. The initiative is based on legislative requirements from the Patient Protection and Affordable Care Act. CDS Connect, led by MITRE, is a web-based repository that offers structured data, aggregated resources, and the ability to leverage the international standard Clinical Quality Language (CQL) to provide a tool that promotes a collaborative model of CDS development.

Shareable CDS resources highlight strategies that enable content development (CDS authoring), platform integration (technical implementation), functionality and measurement (operations), and dissemination (distribution). The CDS authoring tool allows teams to publish CDS tools in a systematic and replicable way (shareable prototype infrastructure), contributing CDS artifacts to the repository.

Methods

This project is designed to evaluate the CDS lifecycle in its current state ("Isolated CDS Build") and future state ("Shareable CDS Resources Build") through the application of CDS Connect artifacts and the authoring tool available on the AHRQ CDS Connect platform. Analyses will occur at two primary healthcare systems (MedStar Health and CHOP) and two secondary healthcare systems (MUSC and Hahnemann University Hospital) providing robust implementation and testing. These sites represent different electronic health records (EHRs) and informatics capacities relative to CDS development and implementation. This approach allows systematic comparisons and a rigorous evaluation that demonstrates within-site and between-site analyses to test the efficiencies of shareable CDS resources in multiple healthcare settings.

Various methods will be used to identify and quantify potential efficiencies gained by healthcare systems using the CDS Connect platform compared with developing CDS in the absence of such externally developed resources. These methods include stakeholder interviews, task analysis and process mapping, qualitative data collection from CDS designers and developers, heuristic evaluation, and think-aloud protocols.

The approach will use the CDS authoring tool and at least one currently available artifact on CDS Connect for analysis. The goal is to actually use the CDS authoring tool and the CDS artifacts to inform analyses and models, not to simply make hypothetical or generic estimations. While it is not expected that any CDS developed through this task order will be deployed into production IT systems, the development will occur in a test environment for future use. The usability of the CDS Connect site will have a significant impact on the ease of use of the site and its artifacts for the end-user.

While research suggests an ideal CDS process exists, many complications arise due to organizational differences; this project will better define these challenges. Importantly, a usability evaluation, which may be an unidentified barrier to shareable CDS use, will provide high-yield recommendations to optimize both the CDS Connect authoring tool and artifacts to maximize the potential for efficiencies. Collectively, these analyses can be used as the strategic evidence needed to build a business case that considers key aspects of an organization's clinical and business strategies.

Target Audiences

The target audiences include clinicians at the point of care; CDS designers, including technical development teams; healthcare leaders and administrative staff who may benefit from our ability to leverage existing CDS resources; other members of the care team; and patients and families.

Project Settings

The primary sites include MedStar Health and CHOP. MUSC and Hahnemann will serve as backup sites if either of the primary healthcare systems cannot participate for any reason. Sites were selected based on demonstrated collaboration, geographic proximity for site visit logistics, and characteristics of the healthcare systems to ensure diverse settings and comparative evaluations. The selected sites represent a cross-section of healthcare settings to support generalizable findings. The health systems differ from each other relative to the technologies used and capacity to develop and use shared CDS resources.

Key Tasks/Activities/Deliverables

- Convene virtual *consensus development panel* to formulate metrics to (1) quantify efficiencies of shareable CDS resources and (2) to develop strategic plans for data collection of these metrics.
- Develop methods and perform analyses to describe and quantify efficiencies, from a healthcare system perspective, associated with use of shareable CDS resources.
- Embed members of the project team into the current state CDS lifecycle in at least two healthcare systems with different EHRs and capacities relative to CDS development and implementation to serve as case studies for the analyses.
- Report findings, including producing a final report, preparing a manuscript suitable for peer-reviewed publication, and conducting an in-person briefing for AHRQ staff and others identified by AHRQ.

ACTION III Project Summary: AHRQ Evidence-based Practice Center (EPC) Learning Health Systems Panel To Inform and Encourage Use of Evidence Reports

ACTION III Prime Contractor: American Institutes for Research (AIR)

Principal Investigator/Project Lead and Project Director: Susan Baseman

Key Personnel and Subcontractors

- Key Personnel:
    - Susan Baseman, Dr.N.P., M.S., R.N.
    - Rachel Shapiro, M.P.P.
    - Lee Thompson, M.S.
    - Sarah Mossburg, Ph.D., R.N.
    - Kathryn Paez, Ph.D., M.B.A., R.N.
    - Susan Heil, Ph.D.
    - Emily Elstad, Ph.D., M.P.H
- Subcontractors:
    - Lucy Savitz, Ph.D., M.B.A., Kaiser Permanente Northwest
    - Andrew Bindman, M.D. University of California, San Francisco
    - Kathleen Lohr, Ph.D., M.Phil., M.A., Lohr Consulting

Project Period 9/28/2018–9/27/2021

Total Cost: $2,555,637

AHRQ Contracting Officer's Representative: Amanda Borsky

Project Purpose, Goals, and Objectives

The specific goals of the project are to:

1. Develop and refine products to help learning health systems (LHSs) use findings from AHRQ EPC evidence reports to improve clinical decision making.
2. Promote adoption of evidence by LHSs.
3. Generate ideas for topics for future AHRQ EPC evidence reports.

Background and Significance

Access to and usability of high-quality knowledge is a linchpin for making healthcare safer, higher quality, and more accessible, equitable, and affordable. For more than 20 years, through its Evidence-based Practice Center (EPC) program, AHRQ has sought to synthesize research to inform evidence-based healthcare practice, delivery, policies, and research.

EPC evidence reports were expected to be of particular use to LHSs, health systems that seek to routinely and systematically apply clinical evidence in delivering care to their patients. Yet, although systematic reviews of medical evidence abound, delivering relevant evidence to clinicians in accessible, easily understandable, timely, and actionable ways remains challenging. Four main mismatches exist:

1. Systematic review focus and content may not appear relevant to LHSs;
2. The delivery format does not easily convey key takeaways for clinical practice;
3. There is a gap in availability of additional tools and resources to help use evidence-based practices; and
4. The current evidence grading system may lead to ambiguous findings, tends to emphasize clinical trials, and may exclude LHS-generated knowledge about quality improvement and other dynamic areas. This mismatch is important, because care based on the best evidence improves quality and outcomes and may reduce costs.

In other words, bridging the gap between evidence and practice requires tools to deliver evidence that is timely, trustworthy, actionable, flexible, contextualized, and integrated. Even if a systematic review topic addresses LHS-specific evidence needs, the information still must be translated into a format that promotes LHS evidence-based decision making.

Preliminary research suggests that current systematic review formats are considered too long and complicated; preferred formats include short summaries written in plain language emphasizing results and interpretation. This project is intended to develop and refine products that can address known barriers and challenges LHSs face in their efforts to implement evidence.

Methods

Stakeholders from 11 LHSs will be engaged to serve on a panel to guide all aspects of the project. The panel will guide the EPC program in developing and iteratively refining two products, tools, or resources to help LHSs use the findings from EPC evidence reports. (A new tool or resource might include a range of products, such as continuing medical education webinars, a shared decision-making tool, an evidence template, a platform for communication between an LHS and EPC, or clinical artifacts from CDS systems.)

Cognitive and usability testing will be conducted with LHS panelists and identified end-users, focusing on ways to make the products more effective, ways the products would tie into current processes within health system practices, barriers to use, and implementation supports.

The products will be implemented within the health systems represented on the panel to determine the effects of the product implementation on LHSs and their staff and to assess the following implementation domains:

- Acceptability, based on stakeholders' knowledge of or direct experience with various dimensions of the product;
- Adoption (i.e., intention, initial decision, or action toward the product);
- Appropriateness (i.e., perceived fit, relevance, or compatibility of the product);
- Feasibility (i.e., extent to which the product can be used successfully in a given setting);
- Fidelity (i.e., degree to which the product was implemented as prescribed and intended);

- Implementation cost;
- Product penetration; and
- Sustainability.

The Consolidated Framework for Implementation Research (CFIR) will be used to guide the development, refinement and implementation of the products, as well as the development of an evaluation plan. Evaluation results will inform final recommendations to AHRQ, describing strategies to overcome implementation challenges, including contextual information about audience characteristics that might affect usability and adoptability. We will include recommendations for additional testing or adaptations to foster broader adoption of the products among LHSs. AHRQ intends to present or publish results, making no claims of generalizability to all health systems.

Target Audiences

The intended target audience is LHSs, which are expected to use the end products to help systems use findings from AHRQ EPC evidence reports, which in turn hope to improve clinical decision making.

Project Settings

Representatives of the following 11 diverse LHSs serving a range of patient populations will participate in the panel, which will be convened multiple times over the course of the project.. Products will be implemented at each participating LHS.

Learning Health System	Description	Locations
Denver Health Medical Center	Safety net hospital	Colorado
Hawaii Pacific Health	Nonprofit health system	Hawaii and Pacific Region
Intermountain Healthcare	Integrated nonprofit health system	Utah and Iowa
Kaiser Permanente Northwest	Integrated nonprofit health system	Oregon and Washington
Lehigh Valley Health Network	Includes an accountable care organization	Northeast Pennsylvania
Mayo Clinic	Integrated, nonprofit group practice	Arizona, Florida, and Minnesota
Northwell Health	Secular, nonprofit health system	New York
Dartmouth-Hitchcock	Nonprofit health system	New Hampshire
Sutter Health	Nonprofit health system	Northern California
University of California, San Francisco Medical Center	Public health system	Northern California
Baylor Scott & White Health	Nonprofit health system	Texas

Key Tasks/Activities/Deliverables

- **Convene an LHS panel.**
- **Develop products** LHSs can use to assess and integrate EPC systematic review findings into routine operations.
- **Develop implementation and evaluation plans** to tailor implementation of the new products or tools to the local context and needs of the participating LHSs.
- **Implement and evaluate products and tools.**
- **Revise products and tools based on evaluation results.**

ACTION III Project Summary: Six Building Blocks Team Approach To Improve Opioid Management in Primary Care

ACTION III Prime Contractor: Abt Associates

Principal Investigator/Project Lead and Project Director: Sarah Shoemaker-Hunt, Ph.D., Pharm.D.

Key Personnel and Subcontractors

- Abt Associates:
    - Jaclyn Rappaport, M.P.P., M.B.A.
    - Olivia Bacon
    - Holly Swan, Ph.D.
    - Leigh Evans, Ph.D.
    - Doug McDonald, Ph.D.
- Kaiser Permanente Health Research Institute
    - Michael Parchman, M.D., M.P.H.
- University of Washington
    - Laura-Mae Baldwin, M.D., M.P.H.
    - Brooke Ike, M.P.H.
    - David Tauben, M.D.

Project Period: 9/28/2018–9/27/2020

Total Cost: $1,036,877

AHRQ Contracting Officer's Representative: Deborah Perfetto

Project Purpose, Goals, and Objectives

The goal of this project is to further validate and expand the Six Building Blocks to Safer Opioid Management (6BBs) and its associated resources and guidance to support primary care providers in safer opioid prescribing using a 6BBs How-To Guide. Objectives include implementing the toolkit in 15 primary care practices:

- Understand the barriers and facilitators to implementing the 6BBs How-To Guide.
- Understand the barriers and facilitators to implementing each of the 6BBs (i.e., leadership and consensus; policies, patient agreements, and workflows; tracking and monitoring patient care; planned, patient-centered visits; caring for complex patients; and measuring success).
- Evaluate the effect of 6BB implementation on processes of care and intermediate outcomes.

Background and Significance

Opioid overdose deaths have increased dramatically since 1999,[1] and despite recent decreases in the national opioid prescribing rate, prescribing rates remain high in many U.S. counties.[2] Primary care providers are responsible for about half of all dispensed opioid pain relievers.[3] To address the emerging opioid epidemic, the 6BBs toolkit has been developed to support primary care providers in safer opioid prescribing, largely concordant with the Centers for Disease Control and Prevention's Guideline for Prescribing Opioids for Chronic Pain.

The 6BBs is a structured, systems-based approach to improving management of patients on long-term opioid therapy that targets six work areas a primary care practice needs to redesign in order to improve their clinic's management of patients on long-term opioid therapy.

Given the sustained rate of opioid prescribing and the major role of primary care providers in this trend, having the appropriate tools and resources to support patients' safe use of opioids is critical in the primary care setting. The focus of this project is to support practice-level adoption of the 6BBs How-To Guide to support specific changes that can make opioid prescribing and management safer.

The ultimate beneficiaries of this project will be patients on long-term opioid therapy and with opioid use disorder and their caregivers. At a macro level, effective management and curtailment of the opioid epidemic has considerable public health management and resource use benefits for local, State and Federal health departments, providers, and payers.

Target Audiences

The target audience includes primary care clinicians and staff (e.g., quality lead, medical director, information technology staff, front desk staff, refill manager, behavioral health provider, addiction specialist, Suboxone-waivered clinician, alternative therapy provider).

Methods

This mixed-methods evaluation is a hybrid implementation-effectiveness design that combines quantitative and qualitative methods to examine the goal and aims listed above via:

- Practice staff participation in interviews and surveys, as well as periodic responses to a 6BB implementation monitoring questionnaire ("Milestone Worksheet"),
- Documentation of implementation progress, and
- Access to quality measure data to enable an outcomes measure analysis.

An adaptation of the Consolidated Framework for Implementation Research (CFIR)[4] and Proctor's Outcomes for Implementation Research[5] will guide the evaluation.

The evaluation will include a sample of 15 healthcare organizations. The sites' responsibilities include agreeing to implement the toolkit in a manner they devise with the support of the project team and to participate in all evaluation activities outlined above. A site agreement between the research team and each site will outline and govern this agreement.

Project Settings

Fifteen primary care organizations located across the country, including a diverse group of healthcare organizations with respect to geographic location, size, number of associated clinical sites, federally qualified health center status, and teaching affiliation.

Key Tasks/Activities/Deliverables

1. **Review and Revise Six Building Blocks** to determine whether revisions or adaptations are needed to the 6BBs toolkit and accompanying resources based on prior experience; expert (including AHRQ) guidance from having implemented similar resources; literature on implementing opioid management; and guidance requested by the practices that will be implementing the toolkit, obtained from pilot test interviews with stakeholders.
2. **Recruit and Engage Practices:** Fifteen practices will be recruited to implement and test the toolkit.
3. **Provide Minimal Technical Assistance to Practices as They Implement the Toolkit:** Practices will review the 6BBs, work through the various building blocks, and use the tools and resources aligned with their system's priorities or needs to improve opioid prescribing in their practices. The research team will provide minimal technical assistance in response to practices' needs (that are not addressed in the 6BBs resources and tools) to help to determine if additional resources or guidance—reflective of that assistance— may need to be developed.
4. **Evaluate the Implementation of the Toolkit:** The primary focus of the evaluation will be on the barriers and facilitators practices face in implementing the toolkit. The evaluation will consist of interviews and surveys and two points in time (pre-/early implementation and during implementation) with clinical practice staff and collection of documents and measure data to understand process and outcomes, respectively, over the course of the implementation.
5. **Modify Guidance Materials:** The research team will modify the guidance materials based on evaluation findings (e.g., what worked and what did not, facilitators and barriers to implementation, helpfulness of the guidance and resources). In addition, materials will be further developed or modified based on the experience from providing the minimal technical assistance.
6. **Produce Final Report:** The final report will summarize analyses of the evaluation steps in step 4 above, describing facilitators and common challenges across all or subsets of practices and next steps for dissemination of the 6BBs.

References

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States, 2000–2010. Med Care. 2013 Oct;51(10): 870-8. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3845222/. Accessed February 28, 2020.
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ACTION III Project Summary: Understanding Omissions of Care in Nursing Homes

ACTION III Prime Contractor: American Institutes for Research

Principal Investigator/Project Lead and Project Director: Yael Harris

Key Personnel and Subcontractors

- Rikki Mangrum
- Dilani Logan
- Aaron Ogletree
- Mark Steward
- David Gifford

Project Period: 9/28/2018–9/27/2019

Total Cost: $373,702

AHRQ Contracting Officer's Representative: Linda Bergofsky

Project Purpose, Goals, and Objectives

The purpose of this task order is to support an understanding of the evidence related to omissions of care in nursing homes and identify tools and resources for the field that could improve resident safety if better understood and deployed. The specific objectives of the task order are:

- Determine the current and evolving state of research on omissions of care in nursing homes and more fully document how and why they occur.
- Operationalize a definition of care omissions specific to nursing homes that is meaningful to providers, payers, quality measurement and patient safety organizations, consumers, and researchers.
- Assess commonly available secondary data sources for their utility in supporting more accurate identification and timely reporting of omissions of care in this setting. Engage with stakeholders to share the findings and ask for input on potential tools, research, and technical assistance AHRQ could develop to support providers in delivering safer care in this setting and overcome barriers to implementation.
- Share output with the field as the project progresses.

Background and Significance

Omissions of care, adverse events, and poor health outcomes are continuing challenges for nursing home residents and staff. Residents' complex needs and challenging working conditions for staff increase the probability of these undesirable outcomes, but research has shown that a substantial portion of these harms are avoidable and that omission of care is a significant factor in a large percentage of events. These avoidable harms—for example, healthcare-acquired infections, falls, and adverse drug events—lead to additional harms, such as hospitalizations, prolonged stays, unrecognized pain, and pressure ulcers.

Research on omissions of care in nursing homes, which is in its initial stages, reveals a variety of approaches to defining "omissions of care." The goal of this task order is to review, summarize, and synthesize existing approaches into a single definition and to present the evidence about omissions in ways that are useful for identifying when and how they occur, which omissions lead to which consequences, how they may be monitored, and what strategies are effective for preventing them.

This 1-year task order aims to address a significant issue in nursing home care that leads to increased risk of harm and higher costs of care. By synthesizing the diverse literature and evaluating the utility of existing data sources, the project team also aims to develop guidance for research and practice on ways to expand understanding of omissions and how the field might use the definition and its associated research findings to improve care and patient safety.

At the end of the project, findings from an environmental scan and a proposed operational definition of omissions of care will be shared with the field. Because of the variety of stakeholders interested in the outcomes of this study, one objective of project dissemination will be to provide plain language presentations of evidence that are meaningful to a wide spectrum of stakeholder groups.

Target Audiences

This work will benefit researchers and stakeholders across the field of nursing home care who are endeavoring to understand and address omissions of care.

Methods

The project will consist of an environmental scan to assess the availability and utility of published and gray literature to support the development of a definition of omissions of care in nursing homes and dissemination plans for that definition and associated findings. In addition, periodic engagement with both technical experts and nursing home stakeholders will generate advice and perspectives on the development of the definition, as well as avenues and strategies for disseminating information about the project and its findings.

Key Tasks/Activities/Deliverables

- Conduct an environmental scan to collect and analyze published and gray literature relevant to understanding and defining omissions of care specifically for nursing home care.
- Convene experts and stakeholders to guide the project and develop the definition.
- Submit final report and dissemination plan.

ACTION III Project Summary: AHRQ Safety Program in Perinatal Care (SPPC)-II Phase 2 (Demonstration Project)

ACTION III Prime Contractor: The Johns Hopkins University, Armstrong Institute for Patient Safety and Quality

Principal Investigator/Project Lead and Project Director: Andreea Creanga, M.D., Ph.D.; Lilly Engineer, M.D., Dr.P.H., M.H.A.; Asad Latif, M.D., M.P.H.

Key Personnel and Subcontractors

- Alliance for Innovation on Maternal Health (AIM)

Project Period: 9/2018–9/2022

Total Cost: $1,594,031

AHRQ Contracting Officer's Representative: Emily Chew

Project Purpose, Goals, and Objectives

The goal of this project is to decrease preventable maternal harm and improve perinatal outcomes. The team will work to refine, implement, and evaluate the use of teamwork and communication tools and techniques integrated with the AIM patient safety bundles for obstetric hemorrhage and severe hypertension, as well as associated program infrastructure. The multipronged training strategy will increase the scope of learning, enhance communication, and effect culture change. In addition, it is expected to improve clinical outcomes.

Background and Significance

The United States ranks low among Organisation for Economic Co-operation and Development (OECD) nations in multiple measures of health status.[1] In the past 30 years, maternal mortality (MM) has been rising steadily from 7.2 deaths per 100,000 live births in 1987 to 18.0 in 2014.[2] Severe maternal morbidity (SMM), defined by the Centers for Disease Control and Prevention as any potentially life-threatening condition or complication during hospitalization for delivery, rose from 70 to 160 cases per 10,000 maternity hospitalizations over the same period.[2] A considerable proportion of SMM and MM is attributable to preventable harm or unintended consequences arising from trends in clinical practice and the system of delivering perinatal care, besides other factors.

Both the Agency for Healthcare Research and Quality and Health Resources and Services Administration (HRSA) Maternal and Child Health Bureau (MCHB) have supported important efforts to reduce maternal morbidity and mortality. AHRQ developed and implemented a Safety Program in Perinatal Care (SPPC) program, composed initially of three pillars: Teamwork and Communication (T&C), Patient Safety Bundles, and In Situ Simulation. HRSA/MCHB awarded a grant to the AIM program, which works through a network of State perinatal quality collaborative (PQC) teams and health systems to align quality improvement efforts nationally.

AIM components include a robust infrastructure for data collection and management and peer-to-peer support for implementation at volunteer hospital sites. AIM provides resources and technical assistance for implementation of 10 Maternal Safety Bundles and Tools. The AIM program uses a structured approach of presenting evidence-based or evidence-informed practices organized in a multipronged framework of Readiness, Recognition, Response, and Reporting, collectively known as 4Rs.

AIM supports implementation of the bundles while allowing flexibility in specific clinical practices so that local adaptation and engagement are possible, based on previous experience with these practices. For SMM and MM to be effectively and efficiently addressed, it is critical that initiatives such as SPPC and AIM continue to deliver a consistent message and support to obstetric providers and care teams.

In support of this goal, an AHRQ funded project that was completed in 2018 aimed to integrate the SPCC T&C pillar into AIM bundles for obstetric hemorrhage and severe hypertension, both widely deployed in U.S. States either alone or in combination with other bundles. This new project aims to demonstrate the effect of such coordination between national level initiatives with integrated SPPC and AIM in a phase II of the SPPC program.

Target Audiences

Frontline staff in L&D sites.

Methods

This project will use a mixed-methods implementation and impact evaluations with a quasi-experimental pre-post design, comparing data from the various implementation sites with themselves. Baseline and annual implementation surveys and qualitative interviews the team conducted in the two implementation States will provide key measures of implementation success. The AIM Data Center will provide additional key quarterly standardized process and outcome measures and benchmark data by participating sites.

The team will use the relationships AIM has with State PQC teams in Oklahoma and Texas to recruit hospitals into this program. The team will develop a training toolkit consisting of e-learning modules and will field test it in representative settings before finalizing it.

The final implementation will include further education dissemination, coaching, and cohort building through monthly webinars facilitated by subject matter experts in clinical areas, as well as teamwork and communication, to support hospitals throughout. The project team will collect evaluation data during the pilot and implementation phases, using data collected by the AIM Data Center. Kirkpatrick's training evaluation framework will be used to guide the evaluation of T&C trainings.[3]

Project Settings

AIM sites in Oklahoma and Texas.

Key Tasks/Activities/Deliverables

1. Convene a stakeholder panel.

2. Finalize the SPPC-II toolkit.
3. Prepare for and conduct field test of the SPPC-II toolkit.
4. Finalize implementation, evaluation, and sustainability plans.
5. Implement SPPC-II toolkit and training across AIM sites in Oklahoma and Texas.
6. Conduct implementation and impact evaluations of the SPPC-II phase 2 project.
7. Produce a final report.

References

1. OECD Stat-Health Status-Maternal and Infant Mortality. http://stats.oecd.org/index.aspx?queryid=30116. Accessed February 28, 2020.
2. Centers for Disease Control and Prevention. Maternal and Infant Health Data. Last reviewed September 2019. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/index.html. Accessed February 28, 2020.
3. Kirkpatrick DL. Evaluation of training. In Craig RL, ed.. Training and Development Handbook: A Guide to Human Resource Development. New York: McGraw-Hill; 1967: pp. 18.1-18.27.

ACTION III Project Summary: Program and User Support and Quality Measure Tool Development for CAHPS® and SOPS®

ACTION III Prime Contractor: Westat

Principal Investigator/Project Lead and Project Director: Joann Sorra, Ph.D.

Key Personnel and Subcontractors

- Key Personnel:
  - Joshua Noda, M.P.P.
  - Laura Gray, M.P.H.
  - Daniel Sangria, M.A.
  - Theresa Famolaro, M.P.S., M.S., M.B.A.
  - Stephanie Fry, B.A.
- Subcontractors:
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Project Period: 1/31/2018–1/30/2023

Total Cost: $22,516,387

AHRQ Contracting Officer's Representative: Elma Chowdhury

Project Purpose, Goals, and Objectives

The purpose of this task order is to provide flexible analytic and technical assistance support to AHRQ to extend and support the efforts of the CAHPS grantees. Technical assistance and work products will include a variety of quantitative and qualitative analyses, materials production, assistance with survey development and related materials, program operations, database management, and associated written documents.

Background and Significance

Under the CAHPS program, AHRQ funds, oversees, and works closely with a consortium of private research organizations to conduct research on patient experience and develop surveys that ask consumers and patients to report on and evaluate their experiences with health plans, providers, and healthcare facilities. The consortium also investigates strategies for improving the reliability and validity of survey results, reporting survey results to interested audiences, and using the results to improve patients' experiences with care.

The CAHPS program enables AHRQ to:

- Further understanding of patients' experiences in their healthcare encounters and with their health plans;

- Advance the measurement of patient experience; and
- Position patient experience in the context of shared decision making, patient safety, care coordination, and patient engagement.

The SOPS program enables healthcare organizations to assess how providers and staff perceive various aspects of patient safety culture in hospitals, medical offices, nursing homes, community pharmacies, and ambulatory surgery centers. Healthcare organizations can use the surveys to:

- Raise staff awareness about patient safety;
- Assess the current status of patient safety culture;
- Identify strengths and areas for patient safety culture improvement;
- Examine trends in patient safety culture change over time; and
- Evaluate the cultural impact of patient safety initiatives and interventions within their organization.

Both the CAHPS and SOPS programs maintain voluntary databases for regular data collection on patient experience and patient safety culture. Database reports and customized feedback reports allow survey users to compare their results against the databases and set goals for improvement.

Significance and Expected Impact

Healthcare organizations are under increasing pressure to show improvements in quality, enhancements in patients' experiences with care, and increases in patient safety and efficiency. Due to ongoing requirements to report on value-based purchasing processes and performance and emphasize meaningful evaluation, healthcare organizations are in great need of standardized, reliable measures that enable valid comparisons across organizations.

The CAHPS and SOPS programs have fulfilled the need for standardized measures. Currently serving more than 70,000 combined users, both programs support AHRQ's mission to produce evidence that makes healthcare safer and of higher quality and to ensure that the evidence is understood and used. In the next 5 years, the CAHPS and SOPS programs will further serve AHRQ's mission by accelerating health system improvement by supporting learning health systems; ensuring better decisions through data; supporting whole person, patient-centered care; and engaging healthcare leaders in research.

Throughout the project, the impact of the CAHPS-SOPS programs will be evident through:

- Ongoing patient experience and patient safety data collection efforts and improvements in survey results;
- User engagement around data collection and improvement efforts;
- Expansion of grantee work on shared decision making and patient engagement;
- Better quality and patient safety in participating organizations; and
- A streamlined process for addressing research data requests.

Moreover, the CAHPS and SOPS programs will prioritize technical assistance and user support in areas such as:

- Web survey design and administration;
- Regular communication and collaboration with key stakeholders;
- Database enhancements and possible new databases;
- Instrument development and refinement;
- Trademark education for users (SOPS); and
- Analyses linking data to outcomes.

Target Audiences

The CAHPS surveys are intended for consumers and patients of health plans and ambulatory and facility-level care. The surveys, including the guidance documents, are accessible to anyone who wants to assess patients' experiences with care. CAHPS surveys are widely used by government agencies and organizations for many different purposes, such as value-based purchasing, public reporting, and accreditation. Users of the survey results include patients and consumers, healthcare providers, quality monitors and regulators, health plans, community collaboratives, and public and private purchasers of healthcare.

The SOPS surveys are intended for providers and staff in hospitals, nursing homes, outpatient medical offices, community pharmacies, and ambulatory surgery centers. The surveys are publicly available, which means anyone can download and use them to assess patient safety culture in a healthcare setting. Healthcare organizations use the surveys to assess how their staff perceive various aspects of patient safety culture. The surveys are also widely used internationally by healthcare organizations and researchers that have been granted permission to use the surveys.

Methods

The project team, AHRQ staff, and CAHPS grantees will work together to develop surveys and supplemental item sets, administration guidelines, and guidance for reporting data to consumers, providers, healthcare organizations, and other audiences. To support the CAHPS and SOPS programs and achieve project objectives, the project team will:

- Conduct quantitative and qualitative analyses;
- Complete literature reviews and environmental scans;
- Produce policy-related issue briefs and white papers, staff briefings, and case studies;
- Convene expert panels, workgroups, and focus groups and conduct individual interviews;
- Construct and enhance databases;
- Manage submissions to the voluntary databases;
- Develop and promote CAHPS and SOPS products and tools; and
- Develop and test surveys and supplemental item sets.

Key Tasks/Activities/Deliverables

- Provide technical assistance to CAHPS users and obtain feedback.
- Promote understanding, adoption, and use of CAHPS products.
- Establish, populate, update, and maintain CAHPS databases and CAHPS database website.
- Establish and support SOPS Technical Expert Panel (TEP) and TEP meetings.
- Provide technical assistance to SOPS users and obtain feedback.

- Promote understanding, adoption, and use of SOPS products.
- Establish, populate, update, and maintain SOPS databases and SOPS database website.