AHRQ evidence-based Care Transformation Support (ACTS) Initiative

A Roadmap for AHRQ and Other Stakeholders

AMIA Annual Conference
November 18, 2019
Town Hall Agenda

• Brief overview of ACTS Initiative/Roadmap
  ► Related slides being presented to >40 organizations

• Brief comments by ACTS Participants/Presenters
  ► Activities, expected benefits

• Open Discussion
  ► How might you engage/benefit/contribute?
Project Goals

• Better Dissemination/Use of AHRQ/Other Resources, to
• Support Evidence-informed Care Transformation, via a
• National Learning Health System (LHS), that
• Achieves the Quadruple Aim
ACTS Stakeholder Community

>120 individuals from:
• Care Delivery Organizations (CDOs)
• Quality Organizations / Consultants
• Health IT/CDS/EHR Suppliers
• Government Agencies
• Informatics/Researchers
• Specialty Societies
• Other Membership Organizations/Accreditors
• Patient Advocates
• Guideline Developers
• Payers
• AHRQ
• Others groups

The ACTS Project Team, Stakeholder Community, and Workgroup members are listed in the Acknowledgements (currently undergoing validation).
ACTS Stakeholder Workgroups

**Future Vision**
Develop Future State Vision grounded by finalizing compelling case examples, or Care Scenarios, focusing on 4 Perspectives:
- Care Delivery
- Care Transformation
- Learning Health System, and
- Resource Development.

**Evidence / Knowledge/ Tools Marketplace**
Outline current state of Marketplace(s) & identify gaps.
Provide recommendations for how collective assets can be aggregated, organized to achieve future state vision.

**Infrastructure/ Standards**
Outline current state of Infrastructure/ Standards & identify gaps.
Map technology infrastructure needed to achieve future state vision.

**Concept Demonstration**
Define/refine concept demonstration protocols, activities, tools, etc.
Define high value, potential follow-on pilot implementations.
Integrate results into and inform Roadmap.

**Roadmap**
Create Roadmap template. Create process for continuous integration of feedback from above WGs. Develop and finalize Roadmap to support organizations’ care delivery, care transformation, learning health system and resource developer efforts. Recommend projects, challenge grants, pilots, research agenda, next steps.
Coordinated with Other Related Activities & Initiatives

- Mobilizing Computable Biomedical Knowledge (MCBK)
- AHRQ CDS Connect Project and Workgroup
- AHRQ Patient-Centered CDS Learning Network (PC-CDS-LN)
- USPSTF Digital Health Forum
- AHRQ/NIH-NIDDK eCarePlan project for MCC
- CDC Adapting Clinical Guidelines for the Digital Age (CDC-ACG)
- HL7
- Logica Health (HSPC)
- OMG BPM+
- NLM, VHA
- Many others
Why Does This Matter To You?

- Success in achieving your goals depends on actions by others but your current approaches to driving these actions are [likely] suboptimal

- This Roadmap outlines shared stakeholder goals that are interdependent with yours, and provides a collaborative path for all of us to achieve them better

- AMIA Implications???

Desired Presentation Outcome: You consider ways to leverage ACTS Roadmap & related collaborations to enhance progress toward your goals and join the initiative!
Interdependent Stakeholder Groups: Current Efforts Typically Siloed with Suboptimal Results

Where Are You?
Creating a National LHS to Meet Everyone’s Needs Better

AHRQ evidence-based Care Transformation (ACTS) Initiative

- Improve access to/use of AHRQ and other evidence-informed resources
- Roadmap for a National LHS virtuous cycle to achieve the Quadruple Aim
- Deliver information/tools how, when, where needed throughout the cycle
ACTS Approach

• Create a **Stakeholder Community** and **workgroups** to produce (and ultimately foster execution of) a **Roadmap** that:
  
  ► Defines a **shared future vision** for evidence-informed, health IT-enabled care - including better development, dissemination, use of resources from AHRQ/others
  
  ► Defines **stakeholder-driven actions** AHRQ/others can take to achieve the future vision,

• Have organizations execute Roadmap to **achieve their goals and future vision**
Future Vision Perspectives Addressed

- Care Delivery
  - Giving and receiving care
- Organizational LHS
  - Care transformation in individual CDOs
- Care Resource Developers
  - Creating tools for care delivery and transformation
- National LHS
  - Creating the LHS virtuous cycle throughout the healthcare ecosystem
Shared Future Vision for a National LHS: A Virtuous Cycle Without Obstacles/Silos

Resource Developers
Ready access to evidence and information when and how needed; increasingly delivered proactively for resource development, updating

National Learning Health System
Supportive policies/incentives; effective standards, marketplaces, shared focus and efforts on goals. Information available when/where/how needed to optimize decisions/actions/results

Information/Resources are FAIR
Findable, Accessible, Interoperable, Reusable

Care Delivery/Transformation
CARE DELIVERY
Patients/care teams have current tools and resources to develop and implement evidence-informed care plans for all clinical issues, and to address other care needs

CARE TRANSFORMATION
(Organization LHS)
Quality Improvement teams use tools/resources informed by best evidence; these address costs, are sensitive to organizational needs, comprehensively support care transformation
• **Care is patient-centered, proactive, and effective** - Quadruple Aim achieved by better use of evidence-informed, health IT-enabled tools to support:
  
  ► **Decisions and actions** (e.g., re: preventive care, self-care, managing acute/chronic conditions)
  
  ► **Communication/coordination** among care team members including patients and their caregivers

• **Information flow, workflow, and outcomes are improved**. For example:
  
  ► **Information/resource portals** provide user-focused access to needed information, tools, and resources from AHRQ and other sources
  
  ► **Evidence-based care plans** and shared decision-making tools for preventive care and acute/chronic clinical problems support decisions, actions and outcomes across entire care team, individualized for patient goals, preferences, circumstances (see mockup)
Care Plan Generator

• Proactively bring tools and evidence into care decisions and actions
• Provides templates for evidence-informed care plans
  ► Integrated across patient’s clinical issues, care teams
  ► Customized to each patient
For each patient health issue...

... integrated care plan produced by Care Plan Generator address key care plan elements

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<table>
<thead>
<tr>
<th>Select Conditions</th>
<th>Set Goals</th>
<th>Set Preferences</th>
<th>Set Icons</th>
<th>Schedule</th>
<th>Review CarePlan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypertension</strong></td>
<td><strong>Stage 3 CKD</strong></td>
<td><strong>Osteoarthritis</strong></td>
<td><strong>Depression, possible OUD, loneliness</strong></td>
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</table>

- **Education**
  - DASH diet
  - Mediterranean diet
  - Eat 5 servings of fruit & vegetables a day
  - View other Diet Actions

- **Lifestyle Actions**
  - Walk 30 minutes 5 times a week
  - Swim 30 minutes 3 times a week

- **Prescriptions**
  - Stop atenolol
  - Start ACE inhibitor lisinopril 20mg 1x per day
  - Start statin atorvastatin 20mg 1x per day

- **Messages / Referrals**
  - Reminder via patient portal to record blood pressure daily

- **Select Tests**
  - Basic Metabolic Panel now
  - Serum creatinine and potassium in 2 weeks

*For illustration/discussion purposes only. Not a proposal/recommendation*
• In an ideal future, LHS organizations will (among many other things):

• ...endorse and implement LHS Core Values (person-focused, privacy, inclusiveness, transparency, accessibility, adaptability, governance, cooperative and participatory leadership, scientific integrity, value)

• ...achieve real-time and near real-time data collection and analysis that informs continuous learning and improvement - within and beyond the organization

• ...have a care transformation support toolkit underpinned by socio-technical infrastructure, customized to local circumstances/needs, leveraging national and institutional LHS knowledge, and readily incorporated into systems and workflows
Care Resource Developer Future Vision

• When searching for resource building blocks, developers can readily find all knowledge artifacts (KAs) they need, and easily incorporate and update them.

• In the short-term vision, KAs generally will be manually discovered and assembled using search portals that return results tuned to specific needs.

• In the longer-term vision, the search/retrieval process will be more automated.
  - ‘Push’ features will leverage newer technologies (such as AI/ML) to deliver and keep resource building blocks updated (e.g., condition-specific care plan templates within care plan generators).
National LHS Future Vision

National LHS approaches will:

• Be guided by **LHS Core Values**
• **Harmonize policies and incentives** from payers/others to support an LHS virtuous cycle without silos/fragmentation of effort and information/tools/resources
• Be a **national healthcare priority** for policymakers, collaborative agencies and federal and foundational funders, and result in **achieving the Quadruple Aim**
• Prioritize inter- and intraorganizational **continuous learning and improvement as a workforce imperative**
• Facilitate **easy access to curated, actionable tools/resources/data for continuous learning and improvement** that are **adaptable/customizable**, and **optimized for use when, where, and how they are needed**
5 Roadmap Goals to Achieve Future Vision

A Roadmap for Making the Cycle work to Achieve the Quadruple Aim

1. **Shared vision and collaborative approach** used to build the National LHS

2. **Portals and marketplaces** enable discovery, access and implementation for evidence-based LHS content

3. **Standards and interoperability infrastructure** support seamless information flow for the LHS cycle

4. **LHS tools, expertise and best practices** are part of routine training and care delivery for patients, clinicians, and systems

5. **Payments, incentives and policies** encourage LHS and drive care transformation toward quadruple aim
## Roadmap Goals and Strategies/Objectives*

<table>
<thead>
<tr>
<th>Goals</th>
<th>Strategies/Objectives</th>
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<tbody>
<tr>
<td>1. Shared vision and collaborative approach used to build the LHS</td>
<td>• Build on ACTS and other efforts to catalog, enhance, and cross-fertilize initiatives working to define and realize a shared future LHS vision&lt;br&gt;• Establish public/private partnership to drive robust, collaborative efforts to execute Roadmap</td>
</tr>
<tr>
<td>2. Portals and marketplaces enable discovery, access and implementation for evidence-based LHS content</td>
<td>• Build on ACTS Marketplaces WG and other efforts to define, leverage, test, and scale indexes, taxonomies, portals, APIs, marketplaces, repositories, sandboxes, trusted curation, etc. to create “Knowledge Network” that makes content and resources from AHRQ and others FAIR</td>
</tr>
<tr>
<td>3. Standards and interoperability infrastructure support seamless information flow for the LHS cycle</td>
<td>• Build on ACTS Standards WG landscape analysis to drive industry consensus and adoption around standards for content representation, interoperability, and consumption needed to achieve future vision</td>
</tr>
<tr>
<td>4. LHS tools, expertise and best practices are part of routine training and care delivery for clinicians and systems</td>
<td>• Develop mechanism to share examples of future vision elements realized as models to accelerate best practice spread and refinement&lt;br&gt;• Build on current tools and initiatives to create Care Plan Generators and Care Transformation Support Toolkits to make the right thing easy&lt;br&gt;• Expand and coordinate training to support broad LHS implementation</td>
</tr>
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<td>5. Payments, incentives, policies encourage LHS, drive care transformation to Quadruple Aim</td>
<td>• Coordinate/accelerate efforts around LHS policies, incentives, contracts especially with regard to achieving the future vision and other roadmap elements&lt;br&gt;• Support research to quantify and enhance value from LHS efforts</td>
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*RFIs and pilots are key mechanisms for addressing the objectives*
National Digital Healthcare Knowledge Network (KN) Ecosystem (Future State Concept – Draft / Non-vetted) to Achieve a National LHS / Quadruple Aim / CDS 5 Rights

Digital Healthcare Evidence KN Learning Ecosystem

Knowledge Source Repositories & Marketplaces

PUBLIC SECTOR KNOWLEDGE MARKETPLACE
Federal / Open / Free

- AHRQ, CDC, NIH, CMS NLM (VSAC)
- FDA, SAMHSA, HRSA
- VHA / DoD / IHS
- Other Federal
- Academics
- Non-Profits, Others

Knowledge Creation
L1, L2, L3, L4

COMMERCIALLY KNOWLEDGE MARKETPLACE(S)
/ Private / For Profit

- EHR Vendors
- CDS Services Vendors
- Content / Knowledge Producers
- Publishers
- AI / Big Data / Predictive Analytics Platforms
- Health Systems / CDOs / Others

Outcomes / What Works Best
Feedback to Support a National LHS

Knowledge Consumers

- Patients
- Providers
- Care Teams
- QI orgs
- Payers
- Policy Makers
- Researchers
- Public & Pop Health / States

Marketplaces & Platforms deliver via
- Web services
- PaaS, KaaS
- Open APIs
- Smartphones
- Other methods

FAIR

(Findability, Accessibility, Interoperability, Reusability)

... also need:
- Computability of Evidence/Guidelines,
- Standards to author and deliver knowledge

Outcomes / What Works Best
Feedback to Support a National LHS

RFIs for a PPP & an Alpha version of Public Marketplace??? AHRQ’s role near/long term?

AHRQ one of many sources

AHRQ - Knowledge Objects / Source Repository

- CDS Connect Artifacts
- Guidelines / Recs - USPSTF
- Evidence Reports
- Systematic Reviews
- Quality Improvement Tools
- Decision Aids, Tools & Resources
- Patient Safety Reports
- Quality Measures / Indicators
- National Quality Reports
- Health Systems Performance
- HC Utilization and Costs
- Others

ACTS goal – make AHRQ evidence/ knowledge FAIR / computable in context of larger ecosystem

Public Private Partnership (PPP) Collaborative Consortium

(like W3C and its workgroups) -- establishes / drives
Governance / Standards / Trust

International interest, WHO, NHS, EU, GIN, Dudecim, Magic ???
Roadmap Actions to Advance Business Needs and Future Vision—AHRQ* (Model for Others)

• **Portals/Marketplaces/Knowledge Network** to Improve Information Access
  ▶ Fund development/pilots to make AHRQ/HHS/other resources ‘FAIR’ (Federal/Free Marketplace)
  ▶ Seed initiative to collaboratively develop Knowledge Network that includes support for vendor subscription services; RFI for details

• **Support for Routine Use of Best Tools/Resources/Practices**
  ▶ Foster demos/pilots/scaling of Care Plan Generator and Care Transformation Support Toolkit

• **Standards/Infrastructure to Support Interoperability**
  ▶ Support follow-on work to vet and implement consensus standards recs re: above items

• **Shared Vision/Collaboration** to Build LHS
  ▶ Leverage ACTS stakeholder engagement to seed public private partnership to drive efforts above

• **Payments/Incentives/Policies to Drive Transformation**
  ▶ Support studies to define value from LHS efforts

*This is placeholder only - a more vetted and detailed AHRQ Roadmap is under development*
# Draft/High Level Timeline (AHRQ/Others)*

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Years 2-4</th>
<th>Years 5-10</th>
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<tbody>
<tr>
<td><strong>PPP for KN Ecosystem</strong></td>
<td>RFI; build on ACTS/other collaborations to address shared needs and seed PPP</td>
<td>Launch/leverage PPP to support rows below</td>
</tr>
<tr>
<td><strong>Portal/ Mktplace</strong></td>
<td>RFI, design (metadata, governance, curation, etc.), concept demos/pilots (initial portal to make AHRQ evidence assets FAIR)</td>
<td>Implement/refine with core additional offerings from AHRQ/HHS/VA/others interested</td>
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<tr>
<td><strong>Standards/ Infrrstructre</strong></td>
<td>Shared industry vision of enterprise architecture (build on ACTS S/I appendix)</td>
<td>Implement standards/architecture, refine to address new priority use cases</td>
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<td><strong>New Tools</strong></td>
<td>Define/vet pilot portfolio; begin concept demos for nextgen/integrated offerings (AHRQ/others) care plan generator, transformation support toolkit, etc.</td>
<td>Broad pilot implementation and early scaling; leverage new approaches (AI/ML)</td>
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<tr>
<td><strong>Drivers/ Research</strong></td>
<td>Outline plan to define and advance LHS value through incentives, policy, research</td>
<td>Leverage PPP to begin executing plan</td>
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*Vetting, details, budget underway
Participants in Roadmap development will present it to their organizations to trigger discussion on possible steps to achieve organization and Roadmap goals.

Goal is to generate action toward broadly realizing the shared future vision as an immediate byproduct of Roadmap development/vetting.
## Organizations Receiving Roadmap Presentations

<table>
<thead>
<tr>
<th>Federal Agencies (6)</th>
<th>Care Delivery Organizations (13)</th>
<th>Health IT Vendors (9)</th>
<th>Specialty Societies/Associations (3)</th>
<th>Other (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHRQ</td>
<td>Hennepin Healthcare</td>
<td>EBSCO</td>
<td>ACEP</td>
<td>IPRO</td>
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<tr>
<td>NIH (NIDDK)</td>
<td>Rutgers/RWJBarnabas Health</td>
<td>IMO</td>
<td>AAFP</td>
<td>PCCD Learning Network</td>
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<tr>
<td>CDC</td>
<td>University of Chicago</td>
<td>Microsoft</td>
<td>American Hospital Association</td>
<td>Logica/HSPC</td>
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<tr>
<td>Veterans Health Admin</td>
<td>University of Connecticut</td>
<td>Cognitive Medical Systems</td>
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<tr>
<td>ONC</td>
<td>UT Southwestern</td>
<td>Healthwise, Incorporated</td>
<td>Accreditation Council for Continuing Medical Education (ACCME)</td>
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<tr>
<td>NLM</td>
<td>Intermountain Healthcare</td>
<td>Apervita</td>
<td>OMG/BPM+ Health</td>
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<td>Ochsner Health System</td>
<td>Cerner</td>
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<td>MCBK Steering Committee</td>
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<tr>
<td>Northwestern Medicine</td>
<td>Wolters Kluwer</td>
<td></td>
<td>BlueCross Blue Shield CA</td>
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<tr>
<td>City of Hope National Med Center</td>
<td>Epic</td>
<td></td>
<td>NCQA</td>
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<tr>
<td>4 Virginia Ambulatory Care Outcomes Research Network (ACORN) practices: VCU Health System practices; Fairfax Family Practice Centers; Tidewater Physicians Group; Carilion Health System practices</td>
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<td></td>
<td>Cochrane US Network</td>
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Discussion

- Q&A about presentation
- Comments from ACTS participants/presenters
- Open discussion
- Potential next steps
Discussion Questions

• To what extent is the Future Vision aligned with where you’re trying to go? What additions/modifications would increase this alignment?

• Are you involved in any activities that could represent major steps toward addressing the Roadmap goals/strategies for broadly achieving the future vision? If so, how to cultivate?

• Likewise, are there activities outlined in the Roadmap that could support our care transformation efforts (pilots beneficial to us)? If so, which ones, and how might these synergies be cultivated?
Map of Roadmap Sections

NOTE: These Documents are Still Undergoing Active Editing:

- Roadmap Summary Presentation
- Roadmap Report
  - Executive Summary
  - Report Body
  - Appendices
- Future Vision Appendix/Overview
  - Care Delivery
    - Care Delivery Future Vision Vetting
  - Learning Health Systems (National and Organizational)
  - Resource Developer
  - Marketplaces Appendix
  - Standards/Infrastructure Appendix
Contact Info

ACTS Website: [https://healthit.ahrq.gov/acts](https://healthit.ahrq.gov/acts)

Email to ACTS Project Team:
support@ahrq-acts.org