Let's Collaborate to Achieve a Global Learning Health System!

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Healthcare Today: Obligatory Depressing Statistics

SUBOPTIMAL PATIENT OUTCOMES

Patients receive only 50% of recommended care

Preventable harm results in many deaths per day

WASTE FROM POOR FLOW OF INFORMATION/EVIDENCE

$210 billion wasted on unnecessary services

$130 billion wasted on inefficient services

80-90% of healthcare costs influenced by physician decisions, not evidence-driven decisions
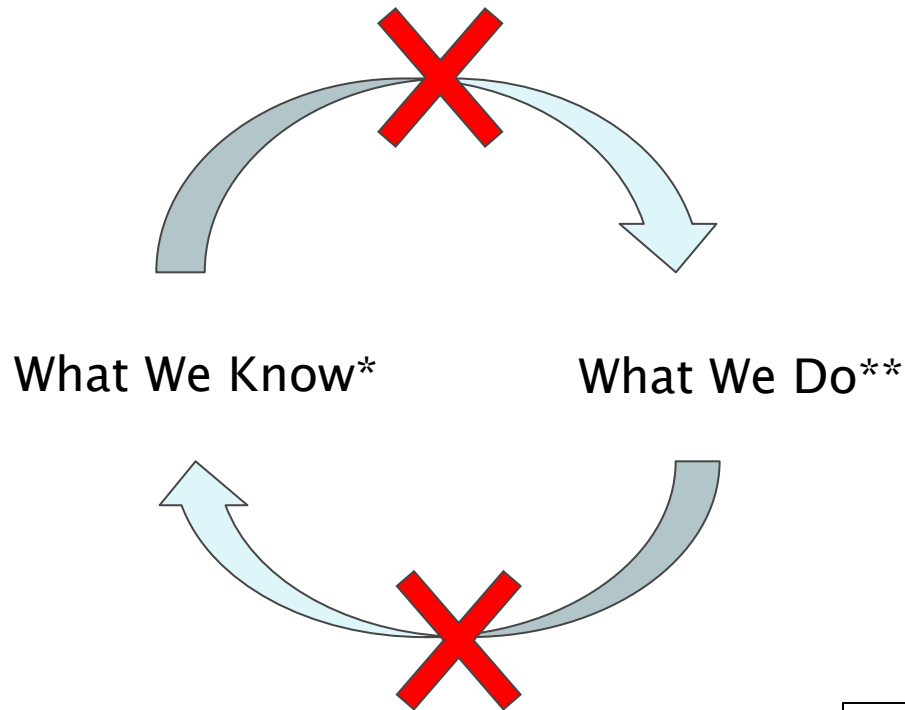
CLINICIAN BURNOUT

Pressure to meet quality measures and address public health crises without resources/support

Physician turnover and reduced clinical hours leads to reduced quality of care and $billions wasted

These problems are **global…**

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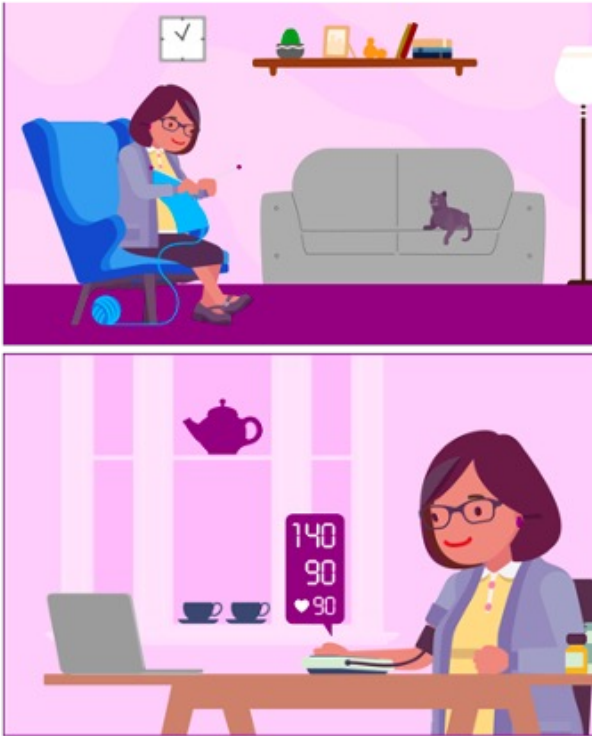# Why We're Here – A Root Cause

What We Know*   What We Do**

* e.g., in 2018, US spent $194B on health/medical R&D

** e.g., US has worse health outcomes of developed countries and spends the most

No organization or country has figured out how to do this robustly!

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Imagine a world where…

Future Patient Experience

Easily used, **current**, **evidence-based** tools support:

- **Team-based**, **patient-focused**, **proactive, convenient care**

- Comprehensive shared **care plans** that drive **shared** decisions, **goal-oriented** actions

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Future Care Team Experience

Easily used, **current**, **evidence-based** tools foster efficient, satisfying workflows and help:

- Gather, integrate, prioritize, review **critical data** for proactive healthcare

- Make effective, shared **decisions / actions, documentation** *easy*

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Future Care Delivery Organization Experience

Efficient / effective care-related **information flows** within and in/out of organization support**:**

- **Agility** responding to challenges: margins, pandemics, staff shortages / burnout

- **Excellence** in Quintuple Aim, Learning Health System, High Reliability

Future Society Experience

A robust **knowledge ecosystem** fosters **Learning Health Systems** that:

- Promote **wellness,** achieve patient and population **health goals**

- Use **healthcare resources** efficiently to optimize individual and collective **benefit**

Today's Conversation

Goal

- Strengthen collaborations (via **LHS Collaborative**) to help:
  - Achieve **your goals**
  - Accelerate progress toward a *global* **Learning Health System**

Agenda

- LHS Collaborative Background
  - Predecessor (ACTS)
  - Overview (Health Service Blueprints)
  - Pain/Opioid LHS Learning Community
- Discussion
  - Advancing collaboration to achieve shared goals

*LHS=Learning Health System

LHS Collaborative Predecessor: The ACTS Initiative

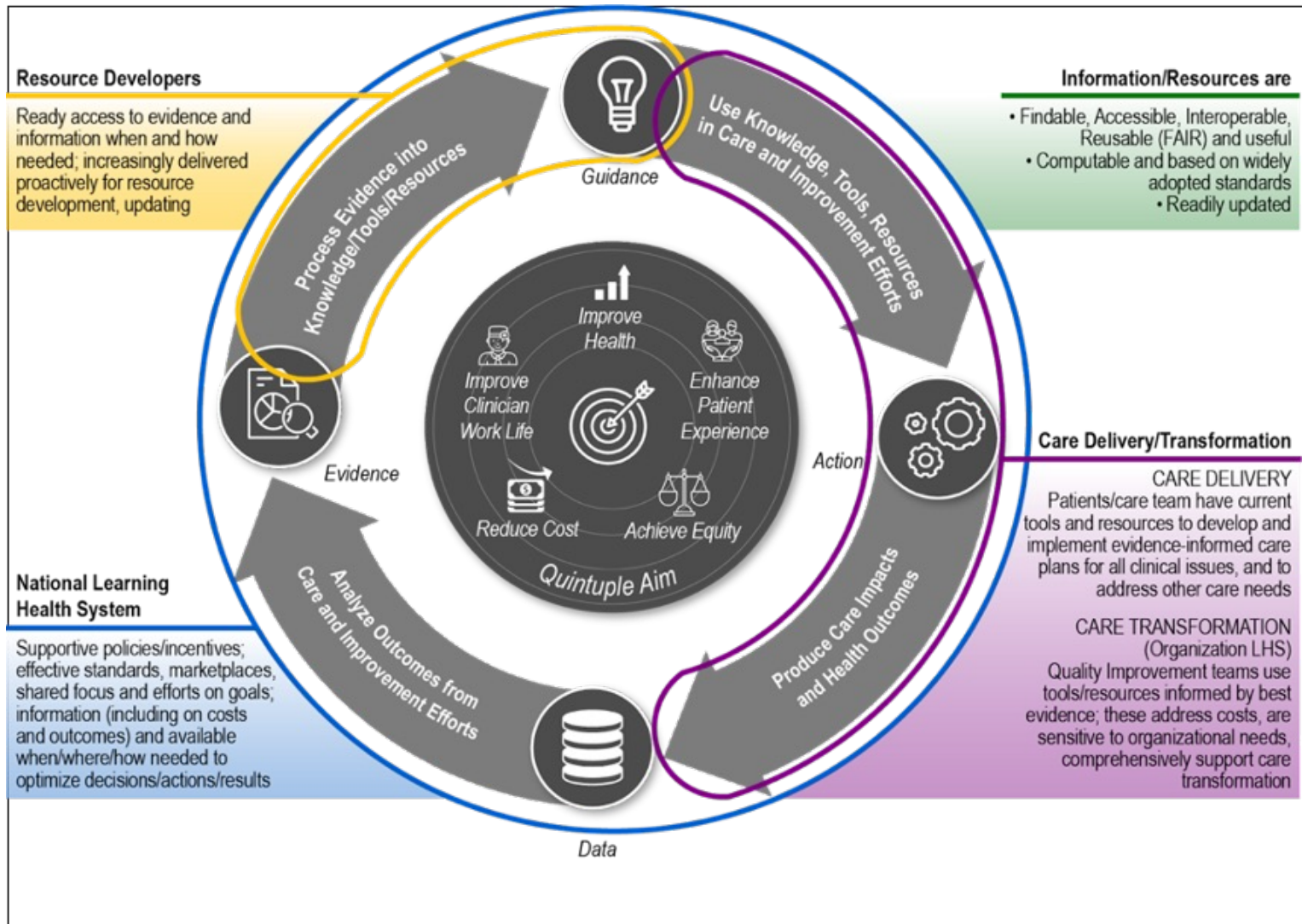# AHRQ evidence–based Care Transformation Support (ACTS) Initiative

- Funded by AHRQ 2018-21

  ○ Project description on AHRQ website is here

  ○ Aimed to coordinate (not duplicate) initiatives focused on LHS components

  ○ Work driven by Stakeholder Community: >330 people from many different groups

  ○ AMIA helped drive 'Roadmap Workgroup'

  ○ AHRQ Blog about ACTS (October 2021)

- ACTS Goals

  ○ Make AHRQ/other resources more FAIR*, computable, useful

  ○ Roadmap for knowledge ecosystem that fosters LHSs, realizing quintuple aim

- Key ACTS Product

  ○ ACTS LHS Concept Demonstration microsite

*FAIR=findable, accessible, interoperable, reusable

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ACTS LHS Concept Demonstration Microsite

'Container' (not polished or approved) for ACTS work products, e.g.,

- Future vision for knowledge ecosystem-enabled LHSs -> quintuple aim
  - Including role for patients, families, caregivers
- Starting page for concept demo of collaboration / tools to achieve vision, e.g.,
  - Service Blueprint template concept demo (with VA)
  - AHRQ Knowledge Portal (Demo), Recommendation Summary Browser (Demo)
  - University of Minnesota LHS case study
- Stakeholder-driven LHS Phase 1 Plan
  - Builds on LHS Concept Demo with plan to drive progress toward future vision
- ACTS overview, presentations
- Indicators of broad and deep stakeholder engagement in ACTS
  - ACTS acknowledgements, Support Letters

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Overview of ACTS Future Vision Perspectives*

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

Information/Resources are
- Findable, Accessible, Interoperable, Reusable (FAIR) and useful
- Computable and based on widely adopted standards
- Readily updated

National Learning Health System
Supportive policies/incentives; effective standards, marketplaces, shared focus and efforts on goals; information (including on costs and outcomes) and available when/where/how needed to optimize decisions/actions/results

Care Delivery/Transformation

CARE DELIVERY
Patients/care team 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

Process Evidence into Knowledge/Tools/Resources

Use Knowledge, Tools, Resources in Care and Improvement Efforts

Analyze Outcomes from Care and Improvement Efforts

Produce Care Impacts and Health Outcomes

Guidance — Action — Data — Evidence

Improve Health
Improve Clinician Work Life
Enhance Patient Experience
Reduce Cost
Achieve Equity
Quintuple Aim

*links to extensive future vision details are here; all activities include deep engagement of patients/families/caregivers

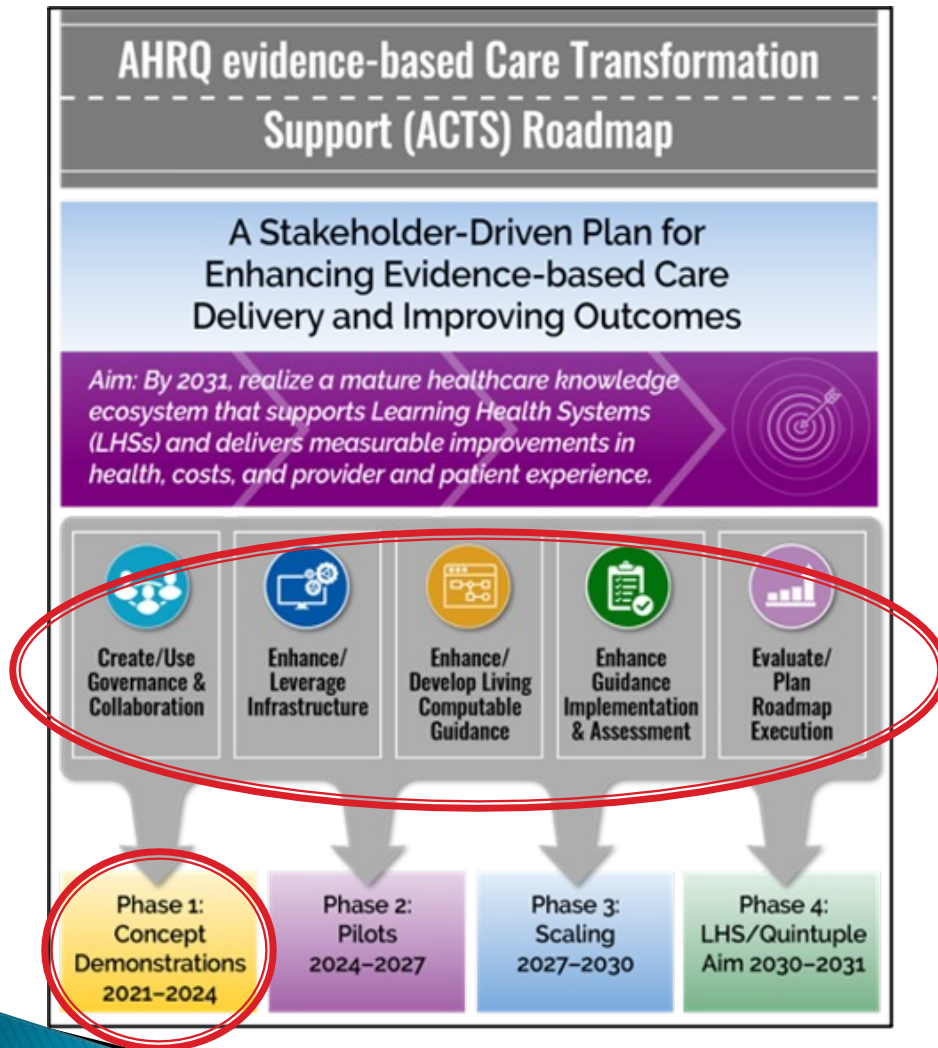# Future Vision Requires Efficient Flow Around LHS Cycle
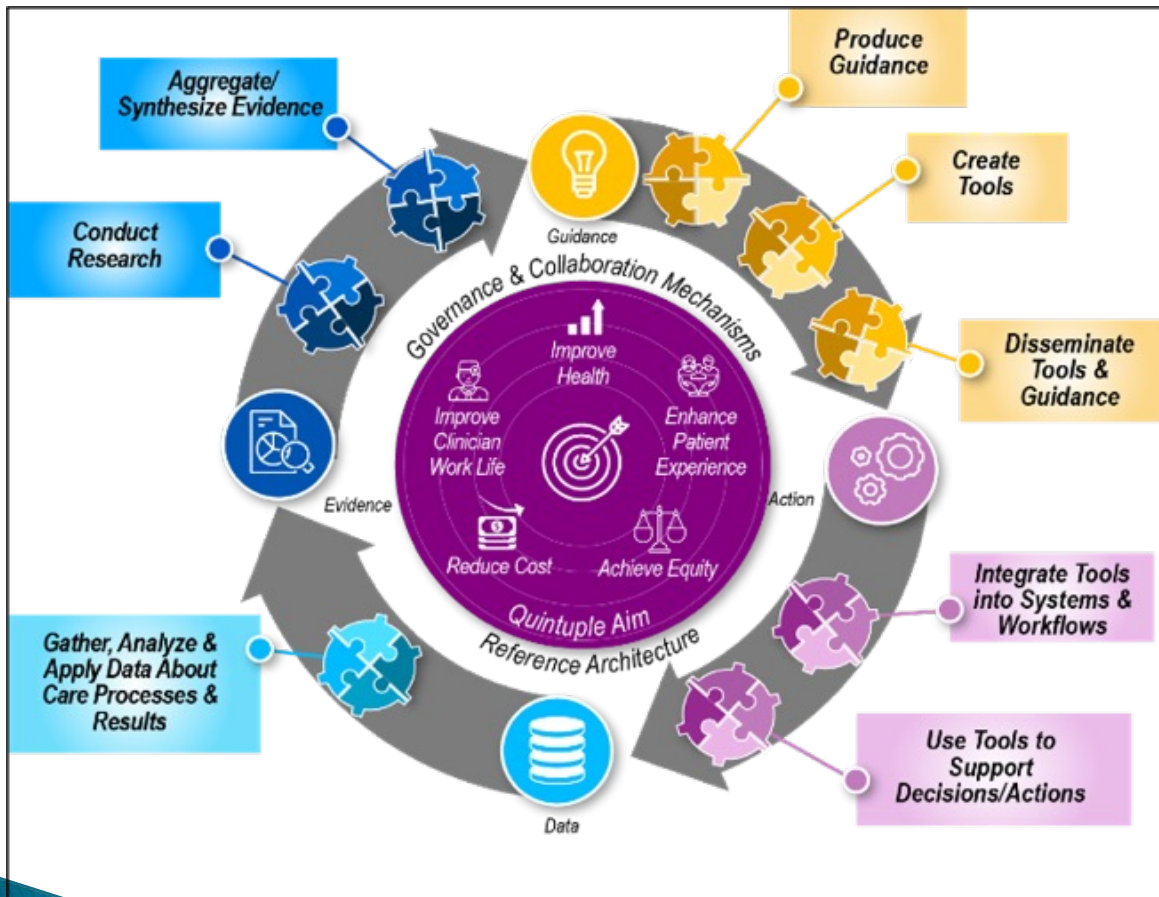
- Need comprehensive, coordinated approach to ensuring cycle improves care delivery / outcomes
  - Address **all** stakeholders, targets, tooling
  - **break down silos**
- All participants produce, consume cycle components
  - goal = make exchanges more efficient/effective to produce desired results

Knowledge Ecosystem Tooling Needed to Optimize LHS Flow, Outcomes
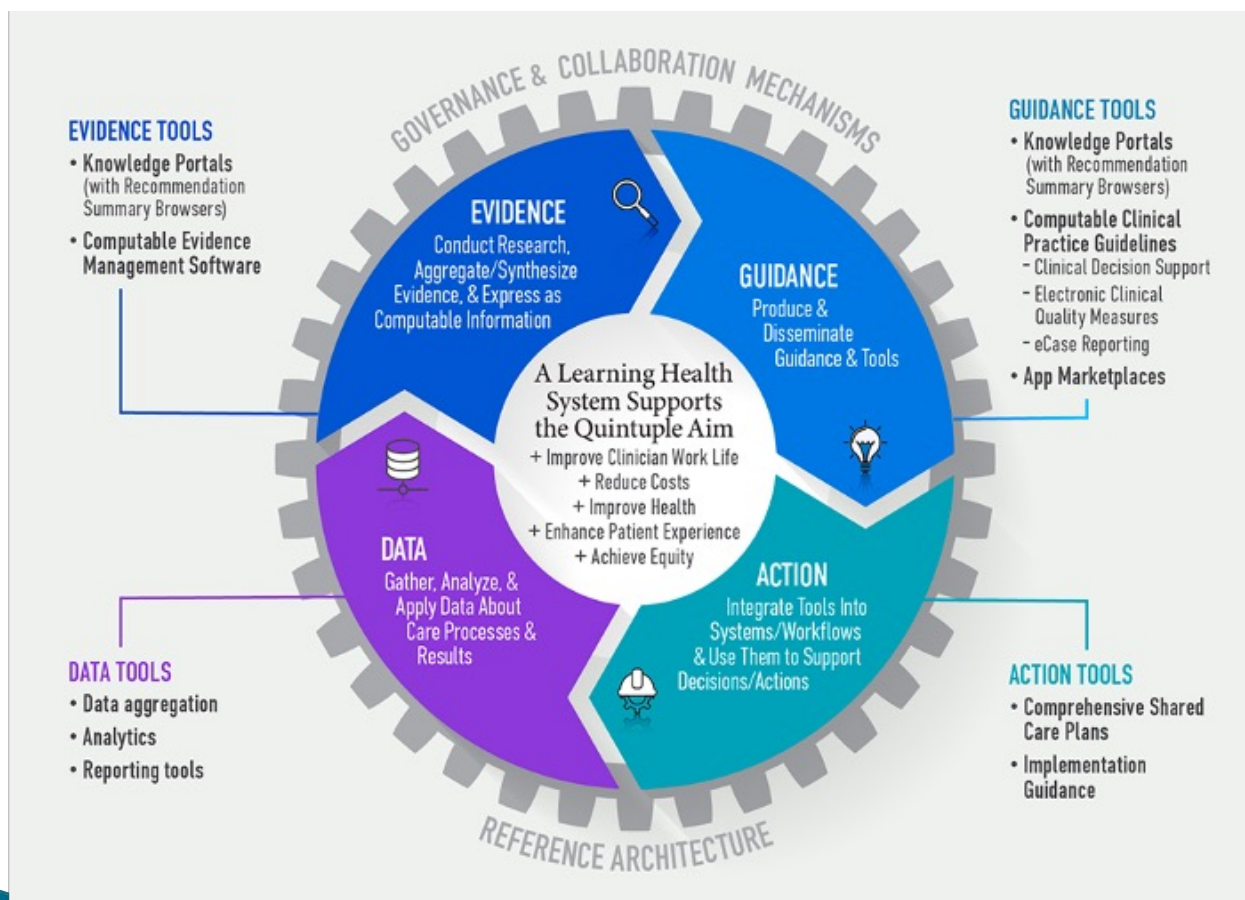
- Better tools / strategies needed to improve flow

  - Leverage FHIR and other standards e.g., (CPGonFHIR, BPM+, EBMonFHIR, MedMorph)

- Deep dive on tooling here in ACTS Concept Demo

ACTS 10–Year DRAFT Roadmap Activities / Phases

AHRQ evidence-based Care Transformation Support (ACTS) Roadmap

A Stakeholder-Driven Plan for Enhancing Evidence-based Care Delivery and Improving Outcomes

Aim: By 2031, realize a mature healthcare knowledge ecosystem that supports Learning Health Systems (LHSs) and delivers measurable improvements in health, costs, and provider and patient experience.

Create/Use Governance & Collaboration · Enhance/Leverage Infrastructure · Enhance/Develop Living Computable Guidance · Enhance Guidance Implementation & Assessment · Evaluate/Plan Roadmap Execution

Phase 1: Concept Demonstrations 2021–2024 · Phase 2: Pilots 2024–2027 · Phase 3: Scaling 2027–2030 · Phase 4: LHS/Quintuple Aim 2030–2031

ACTS Capstone was stakeholder-driven LHS Phase 1 Plan

- Springboard for ongoing *stakeholder-driven* execution after AHRQ funding ended

Approach:

- Build on Concept Demo collaborations and tools to achieve shared future vision

- Do this through sharp focus on *addressing stakeholders' key needs*

LHS Collaborative Overview

LHS Collaborative Overview

- Picked up where ACTS left off
  - Execute LHS Phase 1 plan
    - achieve shared vision by *addressing stakeholder needs*
  - Voluntary, stakeholder-driven effort
    - no overarching funding (yet)
  - 1-page overview here
  - 1-page business plan here

- First weekly meeting 11/5/21 – first week after ACTS ended
  - 48 people from diverse organizations / stakeholder groups attended
  - Agenda / recording here

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LHS Collaborative: Approach

- Identify initial target(s) to focus joint effort

  - During first LHS Collaborative weekly meetings pain/opioids chosen

  - On 12/8/21 Pain/Opioid LHS Learning Community was launched

- Find path to making efforts sustainable / scalable

  - Explore funding Steering Committee called for in ACTS LHS plan*

  - Create synergies with public / private transformation / LHS efforts

- Cultivate synergies across targets / stakeholders

  - E.g., Enhance / leverage the ACTS Service Blueprint demo (with VA)

*Also called for but not funded in 2006 Roadmap for National Action on Clinical Decision Support presented to HHS Secretary

Health Service Blueprints (SBPs)

- SBPs are a key LHS Collaborative foundation

  - Cultivating them as enabler for Care Transformation / LHSs *at scale*

- Supports a structured, systematic approach to

  - Analyzing improvement target **current state**, **recommended practices**, and

  - driving change toward **desired state:** improved care processes / outcomes

- Initial primary users are CDO QI / care transformation teams

Intro To SBPs: Foundation

Organizing Framework =
Patient-centered Health / Healthcare Activities

<u>Life / Health</u>

<u>Healthcare</u>

Living Life

"Most of my Health Journey occurs outside interacting with my care team!" (Patient)

Before Healthcare Encounter

between healthcare encounter activities

healthcare encounter trigger

pre-healthcare encounter activities

During Healthcare Encounter

intake

Arrive at healthcare encounter location

check in process

patient & care team interactions

rooming process

in-room process

wrap up process

discharge

check out process

leave healthcare encounter location

After Healthcare Encounter

post-healthcare encounter activities

Population Management

Population Management Activities

Intro To Health Service Blueprints: Structure

For each group of health / healthcare activities (previous slide):

- *3 layers to optimize:*

  o Patient/Care Team, QI, Broader Ecosystem (see below)

- *Within each layer, consider:*

  o current and recommended practices to identify desired state

Service Blueprint Layers

Front Stage

Healthcare Delivery
Health and Care Processes, Decisions, Actions

Backstage

Quality Improvement (QI)
Optimizing Care Delivery and Learning Health System Function

Back Backstage

Broader Ecosystem
Infrastructure and Activities Outside CDO Affecting Care and QI

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Health Service Blueprint: Benefits

- Address business priorities, opportunities / risks in holistic, patient/outcome-focused manner

- Fosters QI synergies:

  - across targets *within CDOs*

    - e.g., cross-fertilize QI work on chronic disease management

  - *across CDOs*

    - Make emerging best practices / tools more visible, reproducible

    - LHS Collaborative / target-focused communities support sharing

Health Service Blueprint in Action

- Generic SBP Template (used to create target-focused templates) is <u>here</u>

- Enhancements underway to content, use instruction, and platform, e.g.
  - Robust SBP toolkit being developed on Microsoft PowerApps/Teams

- VA is a primary driver for SBP refinement and application
  - Initial VA target is Chronic Kidney Disease

- Other LHS Collaborative-supported QI efforts using SBPs
  - Targets: pain/opioids, hypertension, VTE prophylaxis, sickle cell dz

- Panel proposal on this work for AMIA Annual Symposium '23
  - Endorsed by CDS WG

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Pain/Opioid LHS Learning Community (POLLC)

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POLLC Overview

- Serving as vanguard for LHS Collaborative activities

- Aim:
  - Help participating CDOs / others identify and close pain/opioid care gaps in a scalable/sustainable manner that ultimately improves LHS function

- POLLC Overview / Start Here document is here
  - Includes sampling of participants

- Support
  - IPRO (a CMS QIN-QIO) is funding engaging and supporting CDOs they serve in this effort (one-page overview, recruitment webinar slides)

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POLLC Pain/Opioid Activities, Products

- **Support** for launching CDO QI initiatives

- **Tools/collaborations** to identify, close care gaps

- **Models** for improving LHS function

- **Learning lab** for trainees

  o 3 UTHSC informatics masters students have completed semester practicums

  o MD/PhD (LHS) student from U of Michigan leveraging LHS work for projects*

➢ *These are serving as templates for work on other targets*

*see top center box on 'Towards LHSs in Action' slide

POLLC Overview: Activity Details

Support for launching CDO QI initiatives

- Pitch deck template CDO liaisons using to engage their organizations in POLLC-fostered QI efforts

- Project Charter Template to support CDOs QI activities

- Guide for initial QI launch meeting

- IPRO-led collaborative QI initiative

    - one-page overview, recruitment webinar slides

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POLLC Overview: Activity Details (cont.)

Tools/collaborations to identify and close care gaps

- Query that can be run in Epic to identify patient care with important clinical and / or financial implications

- Service Blueprint Template to help CDOs envision / implement future state care processes based on recommended practices, current processes

- Guidance / support to implement Chronic Pain OneSheet visit navigator

  ○ makes it easier to review, act on patient data during encounter

  ○ initial work toward comparing visit navigator capabilities across CDOs

  ○ exploring adding other health IT transformation enablers, e.g., eCarePlans

- IPRO-driven provider / patient pain management education programs

Care Gap Report

Age ≥ 18, active opioid order for 14 days

- Most recent MME/Day >50
- Absence of Naloxone prescription within past 2 years
- No PDMP check in the past 3 months
- No opioid treatment agreement documented
- Concurrent prescription for opioid and benzodiazepines
- 3 or more hospital admissions in the past 12 months
- Inpatient admission of 4 days or longer in the past year
- More than 2 ED visits in the past year
- No PCP assigned
- No PCP visit in the past 3 months, or fewer than 2 visits in the past year
- Last reported PEG score >= 8
- No urine drug test in last 12 months

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Chronic Pain OneSheet Layout / Sections

Improvement Domains Supported by Sections

- Provider efficiency
  - Pain-related dx, quick orders, appt hx, PEG, goals, UDS, Treatment Tracker
- Operational efficiency
  - Quick orders, e-consents, PEG, goals, UDS
- Regulatory compliance
  - E-consents/tx agreements, PDMP link
- Clinical quality
  - Quick-orders, PDMP, PEG, goals, UDS

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POLLC Overview: Activity Details (cont.)

Models for improving LHS function

- Portion of U of MI chronic pain/opioid guideline encoded in BPM+

- Driving / enhancing / connecting work to make flow around the LHS cycle more computable, standardized, interoperable

Towards LHSs in Action Concept Demo*

BPM+ (John Svirbely) is modeling chronic pain mgt guidance, including buprenorphine use for chronic pain (VA BPM+ Cookbook)

Lead from UMN EPC (Mary Butler) assessing evidence/ guidance for chronic pain; working with FEvIR.net, SRDR as platforms

HEvKA working to accelerate the translation of evidence into guidance; here is an example of measuring this for pain/opioids

Exploring with EBMonFHIR/HEvKA (Brian Alper/others) ways to leverage their approaches and platforms to make pertinent evidence and cohort definitions) computable/ interoperable.

Exploring with BPM+ (Davide Sottara) interplay between BPM+ models and EBMonFHIR/HEvKA

Consider synergies with AHRQ Challenge for combining real world data and systematic reviews

Exploring with the Knowledge Grid group the packaging of BPM+ knowledge artifacts to facilitate FAIRness of chronic pain guidance artifacts amongst stakeholders; leveraging packaging to explore the guideline lifecycle and deployed use cases for BPM+ artifacts (Phil Barrison).
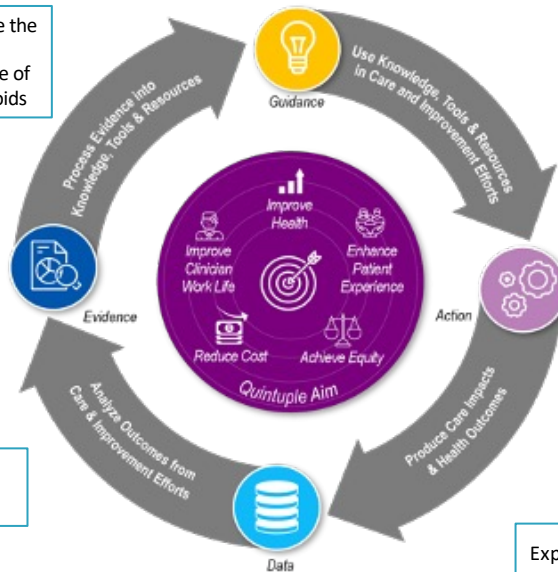
Exploring synergies with ONC/CDC efforts to put 2022 CDC Clinical Practice Guideline for Prescribing Opioids for Pain into practice using CDS

Exploring with CPGonFHIR Community ways to leverage that IG to develop living guidance/CDS on pain/opioids/buprenorphine, put it into action, and monitor care results.

Exploring with BPM+ Community how to prepare organizations to leverage interoperable clinical pathways (Organizational Adoption and Change Management (OACM) WG's - Readiness Assessment and Maturity Model) and leverage BPM+ models (overview) to help CDOs vet and implement these pathways (John Svirbely, OACM WG)

Explore leveraging HL7 Cohort Definition Connectathon track and Da Vinci Gaps in Care Reporting Implementation Guide to help identify and address care gaps in a computable / interoperable manner.

Working with CDOs to identify and close care gaps related to pain/opioids, including leveraging buprenorphine better (see this slide deck)

Explore collection / use of SDoH codes (e.g., from GRAVITY Project domains) (Janice Tufte, patient partner)

Exploring with MedMorph ways to leverage that initiative to gather and leverage pain/opioid care results for public health, new evidence generation

*Pain/Opioid Use case; these are notes for planned MCBK '23 poster (proposal is here)

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POLLC Overview: Collaboration Approach

- Weekly web meetings

  o Meetings optional, participants engage as able / desirable

  o Meeting topics and links to notes and recordings are here

- Documents for shared editing

  o See links above and project overview document

- Online collaboration forum

  o Discussion threads to address topics, e.g., use of care gap report

Synergies with Your Efforts?!

- Initiatives / Priorities / Goals / Needs pertinent to LHS Collaborative activities:

  o You / your organization?

  o AMA BOD / WGs?

- What could valuable win-win-wins look like?

Thank you! To continue conversation, <u>contact me</u>