

Clinical Decision Support Technical Expert Panel Meeting

May 1, 2009

3:00 – 5:00 PM ET

Facilitator: Charles Friedman

Agenda

- Welcome
- Review of February 25th Orlando TEP Meeting
- Discussion of Contractors' Status Reports
- Review of Contractors' Evaluation Plans
- Contractors' Questions for TEP
- Recap and next steps

Review of February 25th Orlando TEP Meeting

Discussion of Contractors' Status Reports

CDSC Accomplishments

Highlights

- Encoded content into semi-structured (level 2) and structured (level 3) recommendations for all 3 content areas (CAD, HTN, and DM)
- Functional specification for KM Portal team completed; signed statement of work with the repository contractor
- Decision made to integrate LMR reminders using Reminder platform (rather than Smart Form platform)
- Generic dashboard specification completed and work begun on the PHS-specific dashboard
- Report of Mid-Valley IPA site visit completed; began remaining site visit report for University of Medicine and Dentistry of New Jersey
- Content of Governance Committee (CGC) Charter finalized; began compilation of “top rules” across collaborating institutions

GLIDES Accomplishments

Highlights

- Nemours Asthma CDS system for EPR3 developed and tested; began preparation of a training manual and web-delivered reference materials for roll-out process training
- Peer design review of Nemours Obesity CDS system completed; CDS sized and scoped; enhancements being made to screens and tools
- System development of Yale's Obesity CDS completed; began pilot testing and implementation
- In process of summarizing “lessons learned” from Phases 1 and 2 for incorporation into paper

Review of Contractor's Evaluation Plans

Evaluation in the Clinical Decision Support Consortium

May 1, 2009

3:00 – 5:00 PM EST

CDS

consortium

AHRQ

PARTNERS
HEALTHCARE



KAISER PERMANENTE

SIEMENS



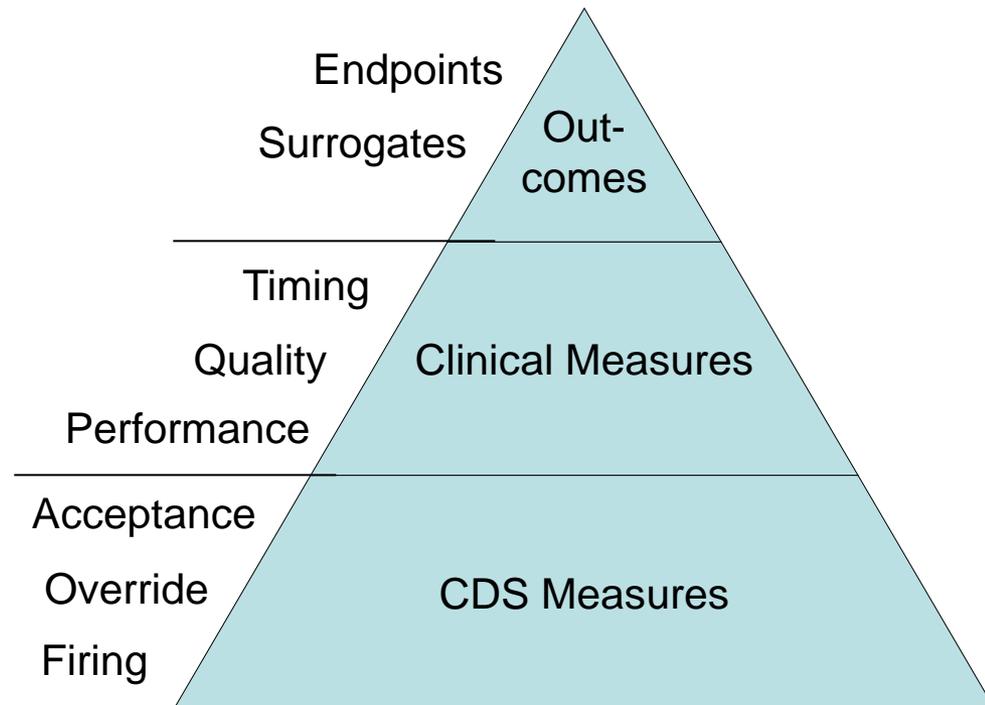
MASSPRO

Knowledge Translation and Portal

- Knowledge Translation
 - Time and cost of translating content through four layers
 - Comparison of implementation costs with content at each layer
 - Collaborative knowledge engineering evaluation
- Knowledge Portal
 - Ability to find, use and localize content
 - KM portal satisfaction survey

Impact of CDS Demonstrations

- Live trial in Partners clinics
- Six month duration
- Replace current reminders with CDSC content
- Compare using analytic framework



CDS Services

- Service publisher side evaluation
 - Evaluation of transition from level 3 knowledge specification to level 4
 - Service-side timing and performance
- Service consumer side evaluation
 - Ease of service insertion
 - Relative cost of service consumption vs. manual development
 - Client-side timing and performance (end-to-end)



GLIDES Evaluation Plan

Overview Of Key Elements

GLIDES PROJECT

GuideLines Into DEcision Support

sponsored by
the Agency for Healthcare Research and Quality



I. Evaluation Of Transformation Of Text Guidelines Into Decision Support

•Plan Overview

- Evaluation of feasibility and replicability of guideline knowledge transformation,
- Compare Yale and Nemours approaches to implementing the same guideline knowledge

•Specifics

- Collect, organize, and report knowledge transformation artifacts using 4-stage model
- Document implementation challenges posed by:
 - “Decidability” and “Actionability” of recommendations
- Feed lessons learned back to guideline developers

II. Evaluation Of CDS Development And Implementation

•Plan Overview

- Evaluate: design and development process/activities; degree to which each decision support system meets requirements; barriers encountered (technical, cultural, design, workflow); and solutions

•Specifics

- Record (at each site) the **technical barriers** encountered in the codification of recommendations in each EHR system
- Collect, categorize and report problems in **codifying guideline concepts** and embedding them in the vendors’ EHR products
- Record **lessons learned** related to the design of clinical decision support tools
- Prepare **recommendations** for the implementation community.



III. Evaluation Of Usability And Clinician Use Of CDS

•Plan Overview

- Evaluate use of CDS by clinicians, including frequency and timing of use, workflow context, clinician workarounds and avoidance, clinician feedback and recommendations, and overall satisfaction.

•Specifics

- Obtain information through **structured queries of CIS, clinician surveys, direct observation, and semi/structured interviews** with key stakeholders
- Survey clinicians to determine **attitudes toward guidelines and CDS** (one year after implementation)
- Query clinical information system to obtain data about **usage** by clinicians
- Quantitative measures: proportion of qualifying clinic visits at each site for which CDS employed; completion rate of each CDS component; satisfaction of clinicians with CDS usability and utility
- Qualitative measures: face time with patients; time spent on computer documentation; workflow patterns during and after clinic; and barriers to CDS use.

IV. Evaluation Of Effect Of CDS On Guideline-Directed Care

•Specifics

- Assess quantitative metrics of guideline adherence, including whether clinicians agree with the guidelines
- Identify reasons for disagreement of clinicians with CDS recommendations
 - Qualitative evaluation through chart review, surveys, interviews and direct observation
 - Perceptions of guideline-based care
- Measure adherence at Yale and Nemours
 - At Yale: a before-after design
 - At Nemours: rolled out in a staged fashion allowing a more rigorous quasi-experimental design
- Obtain post-intervention metrics at least 6 months after intervention and explore the rate of racial/ethnic disparity in these outcomes.

V. Evaluation of Patient Outcomes

- Plan Overview
 - Evaluate the effect of the system on patient outcomes
- Specifics
 - Before-after design
 - Using data from the clinical information systems, we will assess:
 - Rate of asthma-related hospitalizations and ED visits to the study institution
 - Average asthma control level
 - Number of visits/year per patient
 - Number of oral steroid courses per patient per year
 - Asthma-related QOL
 - BMI
 - “5-2-1-0” improvement
 - Use chi-square tests, t-tests or Poisson tests as appropriate for unadjusted analyses
 - Construct nested, mixed effects models to test the hypotheses
 - Explore the rate of racial/ethnic disparity in these outcomes prior to and subsequent to the intervention (hypothesis: guideline-based care should reduce disparities in patient outcomes.)

Contractors' Questions for the TEP

CDSC Questions for TEP

Evaluation

- Besides classic evaluation rates (e.g., override, acceptance, and firing rates) and quality metrics (e.g., the percentage of patients without recorded HgA1c), what other kinds of measures should be used to evaluate our CDS?
- What overarching CDSC measures should we consider in the scope of this project?

Rules

- What should we collect in regards to compiling “top” actionable decision support rules for the Content Governance Committee efforts?

Dissemination

- What are our alternative dissemination channels, as we lost Masspro, our dissemination partner?
- Do you have input/guidance/pointers of other knowledge sharing/research collaboration agreements that might be useful.
- Are there research programs that could use CDSC/GLIDES results to continue our work on the standards?

GLIDES Questions for the TEP

- What is realistic and feasible in terms of encouraging common governance, attitudes and approaches to CDS implementation across the country?
- What is the optimal way to categorize, document and disseminate CDS implementation best practices across the guideline implementation community?
- What is realistic and feasible in terms of expecting a more consistent outlook to CDS among the varied user community at an academic institution?

Closing and Next Steps

Upcoming Meetings:

- June 26th In-Person Meeting at AHRQ Headquarters in Rockville, MD
- August 19th Teleconference (3 to 5 pm ET)
- October 21st In-Person Meeting (location TBD)