



GLIDES Update

Technical Expert Panel Meeting, February 2011

GLIDES PROJECT

GuideLines Into DEcision Support

sponsored by

The Agency for Healthcare Research and Quality



YALE NEW HAVEN
HEALTH



Yale School of Medicine

Nemours.

 The Children's Hospital of Philadelphia®

GEISINGER



AMERICAN ACADEMY OF
OTOLARYNGOLOGY-
HEAD AND NECK SURGERY

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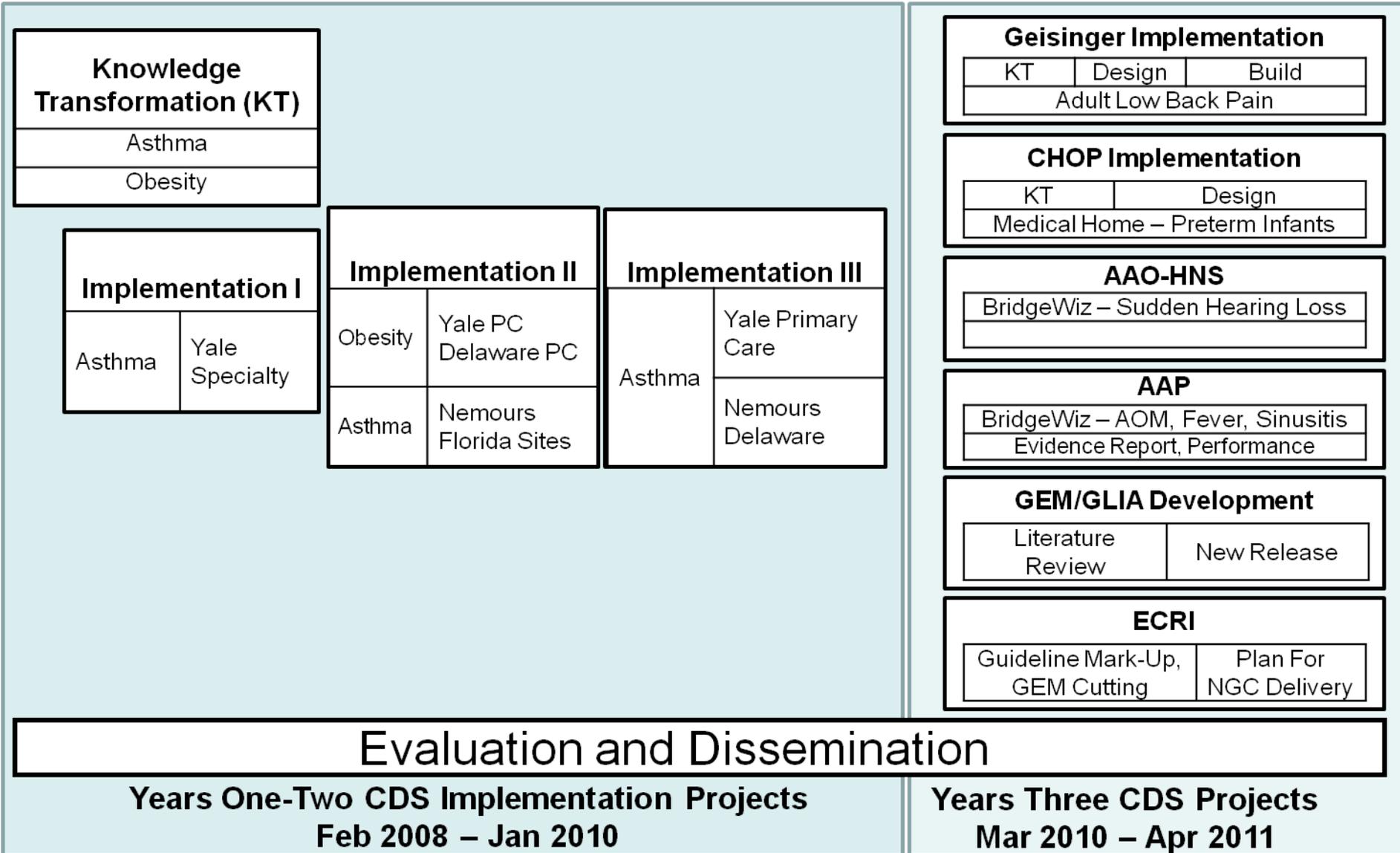
Contents

- Recap Of Year 3 (OY1) Goals and Timeline
- Current Project Status
- Proposed Areas of Focus For OY2

Year 3 Goals

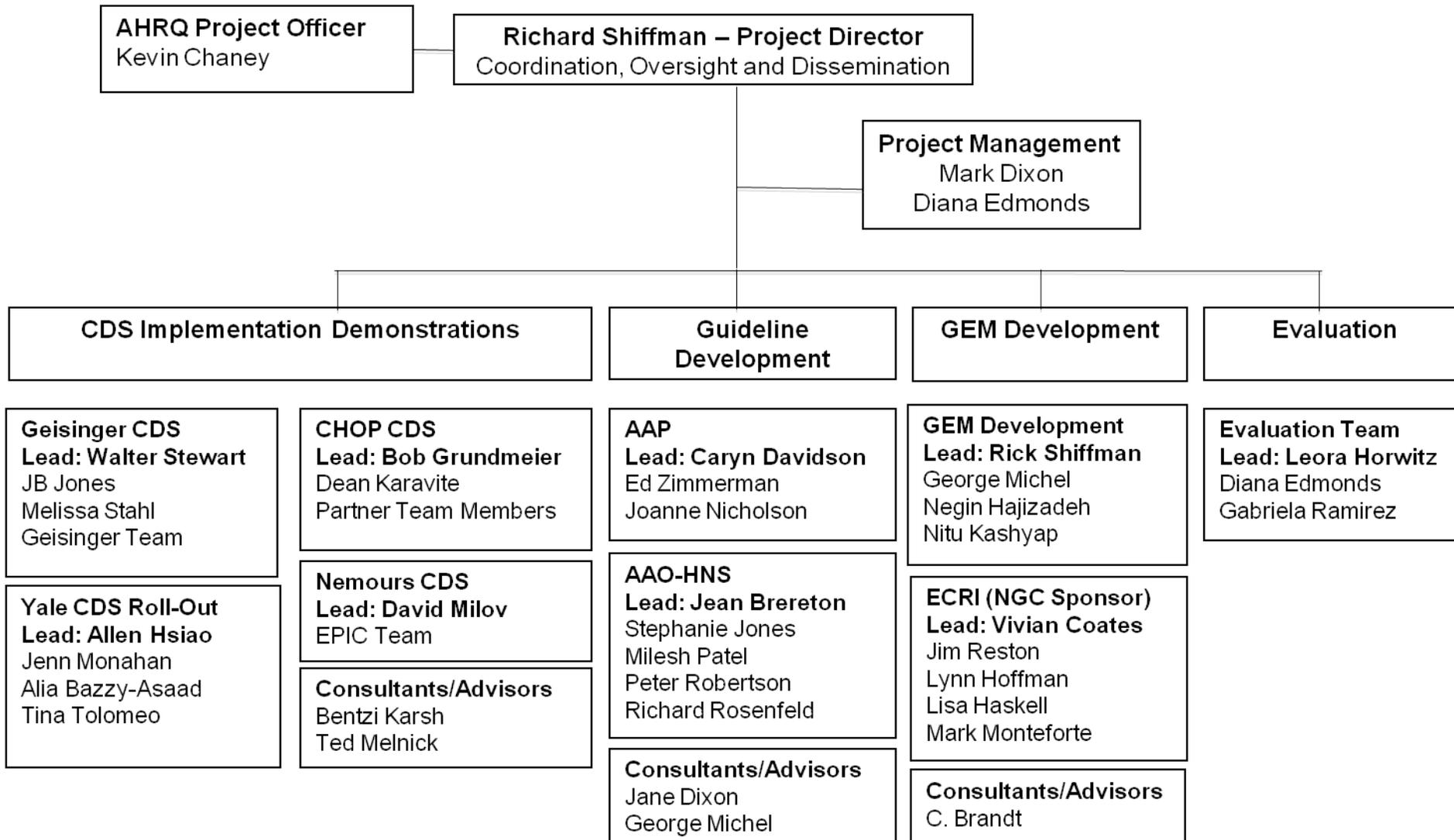
- Using systematic and replicable processes
 - Continue to design, develop, implement, and demonstrate guideline-based clinical decision support
 - Focus on new guidelines and implementation partnerships
 - Enhance and improve the CDS already produced at Yale and Nemours
- Recognizing the critical importance of transparently developed and clearly stated guideline recommendations for effective implementation, work closely with guideline developers to provide tools and guidance to improve guideline development and reporting processes
- Update the Guideline Elements Model and increase GEM adoption nationally and internationally
- Continue evaluation of both existing and newly developed CDS implementations
- Disseminate the findings and lessons learned via a variety of modalities

Project Timeline



GLIDES Project Organization

Year Three



Progress

Year 3, Quarter 3

- Guideline development (knowledge acquisition and representation)
- Knowledge dissemination
- Knowledge implementation and evaluation

Guideline Development

- ***Goal: Improve the quality, transparency, and validity of guidelines as knowledge sources.***
- “Awaiting” publication of IOM report
- Convened AAP “Mega-Meeting” December 10-11 to address common issues facing professional groups that develop guidelines.
Sessions:
 - Transparency & the Current State of AAP Policies
 - How do we assure that AAP policies are evidence-based when evidence exists?
 - What are we doing now in grading evidence quality and recommendation strength and what are other developers doing?
 - Staying ahead of the curve: 21st century policy development
 - How can we improve adoption of AAP policies?
 - How should implementation of these changes be staged?
- Delivered white paper to Advisory Committee to the AAP Board
- AAP has adopted BRIDGE-Wiz into its guideline development process

Development Activities

- ***Goal: Demonstrate and integrate Bridge-Wiz and GLIA tools into current guideline development processes***
- ***BRIDGE-Wiz and National Guideline Panels:***
 - Obstructive Sleep Apnea (AAP) Nov 6-7, 2011
 - Sudden Hearing Loss (AAO-HNS) January 21-22, 2011
 - BRIDGE-Wiz was operated completely by AAO staff
 - Resubmission of manuscript pending
- Completing update of GuideLine Implementability Appraisal (GLIA) v 2.0 incorporating feedback from users
- Overhauled user interface to eGLIA. Preparing for release

Development: Knowledge Representation

- ***Goal: Create a new version of GEM reflecting input from key users***
- **Status**
 - Documenting concepts and requirements for a new release, reflecting literature search, needs for integration with BRIDGE-Wiz and other models
 - Participating with other national initiatives in understanding unique aspects of each project's knowledge modeling efforts
 - ECRI interviewing and evaluating partners' use of GEM (Geisinger, CHOP, Nemours)
 - Researching options to accommodate GEM-parsed guideline content on NGC
- **Next Steps**
 - Complete new release of GEM and related tools for Q2 2011

Knowledge Dissemination

- Best practices for developers discussed at AAP Mega-Meeting
- Planning IOM Workshop May 10-11 to discuss Report
- ECRI: Vivian Coates spoke at Council of Medical Specialty Societies
- Discussions begun with Silver Chair regarding dissemination of GEM-cut guidelines via NGC
 - Which guidelines?
 - Push or pull?
 - Raw XML or XSL Transforms or both?
 - Which data elements?
 - Developers want many elements (purpose, methodology, etc.)
 - Implementers want knowledge components

Implementation Activities

Yale “iPad Kiosk” Status

- ***Goal: Pilot ability to capture patient information directly from patients using iPad technology (for Asthma CDS); improve use of CDS by pediatric pulmonologists***
- **Status**
 - Development completed for iPad message to Centricity
 - Development in progress for iPad application
 - Reviewed system design with Yale’s IT infrastructure team, who are configuring infrastructure for pilot testing and operating
- **Current Challenges**
 - Working in a pilot mode with new technology within a corporate IT infrastructure
 - Design of architecture
 - Agile vs waterfall development
 - Security: privacy, theft, damage, access to system for external programmers
 - Interface engine requirements
 - Database specification and hardware/software acquisition
- **Next Steps**
 - Complete integration and end to end testing
 - Plan for implementation of pilot application with clinical users

CHOP CDS Implementation

- ***Goal: Design, develop and implement CDS for several guidelines associated with coordination of care for premature graduates in primary care practices***
- Status
 - Finalized knowledge specifications for the Hearing Screening guidelines
 - Programming DROOLS rules engine using GemCutter output for ROP and Synagis
 - Applying iterative Human Computer Interaction methods to design the intervention
 - Engaging Faculty Practice clinic (20 clinicians, 5 sites) in design activities
- Current Challenges
 - Resolving local experts' differences in interpretation of the Synagis guideline for prevention of respiratory syncytial virus in premies
 - Controlling vocabulary and translation of concepts from "guideline-speak" to DROOLS engine/"EPIC-speak"
- Next Steps
 - Complete rules programming for guidelines to screen for hearing loss
 - Create user interface mockups and CDS/EMR workflow, review with user groups
 - Expect to implement CDS applications from mid-2011

Nemours-CHOP-ECRI Meeting

Jan 27-Snowed Out

- Nemours
 - Demo EMR functionality (in light of recent Davies award)
 - Step through the CDS implementation techniques used to meet GLIDES objectives (Asthma and Obesity Prevention)
 - Speak directly with those that implement the CDS while viewing issues in their development environment
 - Understand user feedback of these tools and how this feedback is used to modify the tools
 - Understand the relationship among the CDS tools and the central role to achieving measurable outcomes from a 45-provider Obesity Improvement Collaborative
- CHOP
 - Review the history of CDS at CHOP, including the migration to web-based approach; look at organizational structures supporting / hindering CDS, discuss past projects (data, demos, etc.)
 - Review CHOP's new "knowledge stack" focusing on GEM / Drools elements
 - Discuss "level 5" in the knowledge stack: clinical presentation of CDS output (user-centered design)
 - Observe CDS in use by real pediatricians in their natural habitat
 - look at a GEM-ified guideline from ECRI, try to write "Drool rules" together for portions of the GEM output, discuss varying interpretations of the document's meaning

Geisinger CDS Implementation

- **Goal: Design, develop and implement CDS for ICSI low back-pain guideline**
- Status
 - Met with team's expert advisors to review the guideline recommendations and the clinical decision support web display
 - Finalized design of data capture tool screen templates
 - Determined what message to output for each set of decision variables determined as emergent or urgent from the ICSI guidelines
- Current Challenges
 - Clarifying and supplementing vague logic in the original ICSI guideline
- Next Steps
 - Create output messages for each set of decision variables determined as emergent or urgent
 - Create nuanced language tables for each recommendation based on a set of covariates
 - Planning a rolling implementation of the tool from June 2011

Evaluation and Dissemination

- Status
 - Completed audit of 50 charts assessing discrepancies in the calculation of Asthma severity and control at Nemours
 - Commenced analysis of patient outcomes data for Obesity at Nemours. Data sets have been retrieved and organized
 - Prepared Web survey of Nemours providers (sent out January 7th)
 - Prepared for January visit to AIDHC from ECRI leaders
 - Commence initial drafting of Health IT Policy Recommendations
- Papers in process/in press
 - Lomotan: published, QSHC: deontics)
 - Lomotan: (qualitative evaluation of subspecialty use of CDS)
 - Horwitz: (accepted for publication, JAMIA: evaluation of congruence of CDS and specialist decision-making)
 - Shiffman: BRIDGE-Wiz application (in revision)
 - Milov: Obesity CDS at Nemours (in preparation)

Presentations

- Invited Participant, 2010 Conference on Improving Guidelines for Multimorbid Patients
- AAP Mega-Meeting, Chicago, IL, December 10-11, 2010
 - Transparency & the Current State of AAP Policies
 - How do we assure that AAP policies are evidence-based when evidence exists?
 - What are we doing now in grading evidence quality and recommendation strength and what are other developers doing?
 - Staying ahead of the curve: 21st century policy development
 - How can we improve adoption of AAP policies?
 - How should implementation of these changes be staged?
- ONC CDS Meeting Poster: GLIDES Tools to Take CDS to a National Scale
- Building Better Guidelines: AAP OSA, AAO Sudden Hearing Loss

Year 4 Ideas

CDS Implementation

- Consolidate successful practices and lessons learned into a formal recommendations, tools and methods that are systematic and replicable
 - Focus on transforming semi-formal to formal representation (3->4)
- Retain existing partnerships
 - Complete current implementation activity at CHOP and Geisinger
 - Increase interaction and engagement between partners
- Engage advisors and experts in specific areas of controversy to add value and perspective
 - CDS implementation workshops
- Explore the value of broadening our collaborations

CDS Implementation Workshops

- ***Goal: Agree/Document Lessons Learned and Best Practices, with Level 3-4 Focus***
- Themes/Topics
 - Vocabulary for CDS knowledge
 - Mapping GEM output to local design methods/forms
 - Integrating CDS into local policies and workflow
 - Standardization of practice
 - Handling multi-morbidity scenarios
 - Data capture strategies
 - HCI Design and avoidance of alert fatigue
 - Selecting and using Rules Engines
 - Technical delivery – the last mile
 - Engaging clinicians in design and implementation
 - Designing and executing a successful evaluation program
 - Quality measurement

Guideline Development

- Continue to work with AAP and AAO-HNS to integrate BridgeWiz and GLIA tools into their guideline development processes
- Modify BRIDGE-Wiz to accommodate additional development processes (evidence quality and recommendation strength ratings schemes)
- Expand our focus to additional guideline developers, including
 - NHLBI
 - ATS
 - AUA
 - ASCO (Clinical Oncology)
 - ACCP (Chest Physicians)
 - DEcide
- Explore with developers obstacles to adhering to new IOM standards and remedies

GEM Improvement

- Focus on standardization and promotion of the new GEM release
- Consider additional improvements to GEM, reflecting CHOP and Geisinger's experience
- Focus on how BridgeWiz and GEM can be integrated
- Continue to advise other AHRQ knowledge representation projects on knowledge modeling
- Modify NGC website to accommodate GEM-parsed guideline content
- Pilot delivery of GEM-cut output to ECRI implementation partners via a Web services function