# GLIDES PROJECT

## GuideLines Into DEcision Support

Sponsored by
The Agency for Healthcare Research and Quality

Yale New Haven Health · Yale School of Medicine · Nemours.

GEISINGER · The Children's Hospital of Philadelphia

AMERICAN ACADEMY OF OTOLARYNGOLOGY– HEAD AND NECK SURGERY · ECRI Institute

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN

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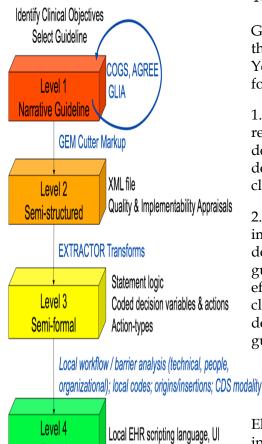
## GLIDES Year One and Two

In years One and Two, GLIDES' core work was the transformation of knowledge contained in narrative clinical guidelines into computer-mediated decision support (CDS).

A *centralized* project team organized and managed the project and performed analysis and decomposition of the targeted clinical guidelines. *Local* implementation teams at Yale-New Haven Health system and Nemours were responsible for CDS design, system development and implementation. This process was performed for two guidelines, at eight clinical sites and on two different Electronic Health Record (EHR) systems. CDS solutions were implemented for specialists and primary care physicians. GLIDES conceptualized the transformation process as a document-centered, 4-layer "knowledge stack".



Identify Clinical Objectives
Select Guideline

Level 1 Narrative Guideline — COGS, AGREE GLIA

GEM Cutter Markup

Level 2 Semi-structured — XML file · Quality & Implementability Appraisals

EXTRACTOR Transforms

Level 3 Semi-formal — Statement logic · Coded decision variables & actions · Action-types

Local workflow / barrier analysis (technical, people, organizational); local codes; origins/insertions; CDS modality

Level 4 Formal — Local EHR scripting language, UI

## Year Three Focus

GLIDES is now funded for a third year of work. Focus in Year Three will be on the following goals:

1. Using systematic and replicable processes, continue to design, develop, implement, and demonstrate guideline-based clinical decision support.

2. 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

3. Update the Guideline Elements Model (GEM) and increase GEM adoption nationally and internationally.

## New Implementations

### Geisinger, Low Back Pain

Dr. Walter Stewart at the Center for Health Research, Geisinger Health System, will collaborate with GLIDES in Year Three. The objective is to translate low back pain clinical guidelines using GEM into highly specific rules that can be used to operate on specific data reported by the patient, or that is available from Geisinger's existing EHR.

The rules will deliver a choice (for example, deployment of a best practice alert) that supports an action (for example, CDS tool visible in a web-display or tailored after-visit-summary (AVS) letter), and/or to trigger an action (for example, mailing of the AVS or creation of an order).

Geisinger has selected the Institute for Clinical Systems Improvement (ICSI) as the dominant source of guidelines for this project, specifically the ICSI "Adult Low Back Pain" guideline.

Geisinger Health System (GHS) is a vertically integrated system providing services to more than 2.6 million people in 43 counties in Pennsylvania.

### CHOP, Pre-Term Infants

Dr. Robert Grundmeier at the Children's Hospital of Philadelphia (CHOP) will also collaborate with GLIDES, focusing on improving primary care for preterm infants using CDS. Opportunities to improve the medical home for vulnerable infants using CDS methods will be defined, including interactions between primary care and selected subspecialists such as ophthalmology, audiology and neurology.

CHOP benefits from a strong primary care network. This primary care network is also an AHRQ funded practice-based research network (PBRN), known locally as the Pediatric Research Consortium (PeRC). This network consists of 4 urban academic practices that also serve as the continuity clinic for pediatric residents, an urban faculty practice, and 24 suburban practices. All these practices use the EPIC EHR.

## Guideline Development

In addition to implementations, GLIDES will "swim upstream", to collaborate with guideline developers: The American Academy of Pediatrics (AAP) and The American Academy of Otolaryngology – Head and Next Surgery (AAO-HNS).

Our focus will be on developing methods and tools to improve "implementability" of guidelines produced by these and other organizations.

**BridgeWiz** is a software program designed to help guideline committees write recommendations that are decidable and executable. AAP and AAO-HNS will pilot BridgeWiz for new guidelines (Acute OtitisMedia, Sinusitis, Fever, Sudden Hearing Loss). GLIDES will review resulting action statements and consider ways that BridgeWiz can be used to train guideline authors to create more actionable statements.

**Implementation Tools:** The GuideLine Implementability Appraisal (GLIA) tool can help improve a guideline's implementability and transparency. GLIDES is updating GLIA (and its electronic version eGLIA) in response to user suggestions and analysis of use. AAP and AAO-HNS will work toward applying these tools in policy development, leading to more implementable end products.

## GEM Improvement

GLIDES is also improving GEM and increasing its adoption. We have systematically reviewed GEM usage experience from a wide number of current or past users. We have identified 30 publications which reflect substantial experience of using GEM for guideline knowledge transformation. This feedback will inform the design of the next GEM release, targeted for 2011.

We are also working with ECRI to markup a wide range of existing guidelines and are exploring the feasibility of including "GEMified" guidelines on the National Guidelines Clearinghouse website.

The next AHRQ-sponsored **Technical Expert Panel (TEP)** meeting, to review AHRQ's CDS-related projects, will be held in Rockville in September. The theme of the meeting is *"Creating Clinical Knowledge for Implementation in Health IT Decision Support Systems: Perspectives from Guideline Developers and Knowledge Vendors"*