The GLIDES project is now rolling out newly designed Clinical Decision Support (CDS) for the NHLBI EPR3 Asthma guidelines at the Yale Specialty Clinic. We faced two key challenges during the design phase:

Adapting guidelines for local implementation. In the “zone of localization”, we needed to clarify and enhance or in some cases depart from EPR3 recommendations. For example, tightening the logic and connection between Asthma symptoms and assessment of severity and control; allowing clinicians to override CDS recommendations to accommodate exceptional factors; and documenting decisions that varied from CDS. We adopted several design conventions to enable clinicians to distinguish between EPR3 logic and local adaptations, including warning messages and colored text label fonts.

How to integrate revised guidelines into existing clinical workflows and systems. Yale’s Asthma data capture screens are mature and relatively sophisticated, and support variations between the Specialty and Primary Care workflows. However, they were based on NHLBI EPR2 guidelines, which simplified our design work. We integrated new CDS into existing workflows, as shown, and addressed several complicated questions: explaining new CDS concepts in external communications output, such as Asthma action plans and letters for referring physicians; communicating the intent of the new CDS tools and incenting usage; reducing overlap between existing data capture screens and more granular EPR3 data capture screens; and highlighting stronger EPR3 recommendations without changing the “guidance” tone of the current CDS—we used a “critiquing” approach to do so.

Adapting guidelines for local implementation
Asthma CDS Screens

Selected GLIDES EPR3 screens are shown above:

1. The Asthma severity classification screen captures symptom impairment and risk data and applies the EPR3 logic to determine the patient’s Asthma severity. Sections of the form that adapt EPR3 logic are highlighted in purple font.

2. The Asthma severity and control assessment screen presents the EPR3 CDS assessment to the clinician, and enables them to accept this, or to select a different course.

3. The Asthma Plan Steps screen presents the EPR3 treatment options to the clinicians, and enables them to select the recommended option. The system will highlight if they select a path of action inconsistent from the EPR3 recommendation, and allows them to document their reasoning.

Phase II—Obesity and Asthma at Nemours

GLIDES commences Phase II Implementation in November, and the focus of work will shift from Yale to Nemours. Phase II scope is much larger than Phase I, with implementation required for both Obesity and Asthma CDS at five clinical locations and across two EHR systems.

Senior Nemours staff leading the work include Drs. Ian Nathanson, David Milov, Gabriela Ramirez, Sandy Hassink and Lloyd Werk.

Design champions will be assigned to lead the CDS design teams for each guideline. Nemours staff will take the “systematic and replicable” baton from Yale, using the knowledge transformation and design documents used in Phase I, but continuing to improve on them. Teams will be encouraged to generate further creative ideas and solutions in Phase II, and to examine how these can be reused and adapted across guidelines, sites and systems. It is possible that we will select best practices from this Phase II work and finalize a more standardized approach for Phase III, in 2009.

GLIDES Dissemination Events

In the Same Boat: Facing the Challenges of Guideline, Performance Measure, and CDSS Development: NCC/NQMC Annual Meeting 9/7/08

A Systematic and Replicable Approach to Development of Ambulatory Decision Support: NCC/NQMC Annual Meeting 9/7/08

AHRQ National Webinar: 9/9/08

Guidelines International Network Helsinki Finland: 10/1-3/08