Critical Success Factors For Guideline Transformation

A plethora of issues regularly face implementers charged with creating guideline-based decision support, all of which will need to be faced and tackled successfully during the knowledge transformation process:

- Tierney and coworkers described their frustration in creating a computer-based implementation for an evidence-based guideline to assist with management of heart failure. That guideline—like many others—lacked explicit definitions, focused on omission errors (rather than errors of commission), and did not account for co-morbid conditions, concurrent drug therapy, or timing of interventions.

- The language used to define recommendations is often undecideable, i.e., it fails to specify in a clear, consistent manner the parameters upon which decisions are based. Likewise, actions may not be executable as written. Grol found that clinicians were considerably less likely to adhere to vague and non-specific recommendation.

- Often, the level of abstraction at which decision variables and actions are described is inappropriate for implementation. We have described a taxonomy of ambiguity, vagueness, and under-specification as it applies to guideline recommendations, and plan to apply it in this work to avoid and remediate the problem.

- Guidelines are often incomplete, i.e. they regularly fail to describe appropriate behavior for an exhaustive set of situations that may befall practitioners.

- For optimal implementation all guideline recommendations must be integrated within clinical workflow.

- Therapeutic recommendations for patients with multiple coexisting conditions are not prioritized.

- Attention to knowledge deficits and attitudinal issues is also critical in the design of successful systems. Cabana has created a useful conceptual framework that describes critical barriers to successful implementation, including awareness of, familiarity, and agreement with guideline content, and clinicians' self efficacy, outcome expectancy, and ability to overcome inertia of previous practice.