

DcomplX: Developing a True Measure of Quality in Physician Centric Evidence Based Practice Management

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Background:

Healthcare quality is primarily driven by the input of patients, care providers and healthcare administration (including third party payers). The inability of those player to obtain commonly shared and transparent information regarding best practices, actual practices and knowledge tailored to achieve accountability hinders effective evaluation of healthcare quality and increases healthcare costs for all. Tools by which the financial, service and clinical quality aspects of healthcare quality can be measured are in relative abundance, but the data produced fails both in terms of accessibility and in terms of actionably. These tools currently produce a fatally fractured body of knowledge that is so disjointed as to be essentially unusable for research into better methods of providing care and needlessly creates further division between those that receive care, those that provide care, and those that pay for care. The only viable solution to the healthcare quality problem lies in provision of actionable information which integrates financial, service and clinical quality aspects of care in such a manner as to produce behavior change in the industry.

Purpose:

DcomplX is a result of three years of extensive and unique research and design, spearheaded by University Physicians (UP. It created an open information system for business intelligence resulting a holographic reporting, incorporating all necessary practice management parameters required to enable rapid and conclusive decision-making regarding medical practice behavior.

Methods:

DcomplX (D_x) provides an intuitive practice management tool, health care education, discussion forums and other information through a single information portal. Unique features include:

- Incorporation of data from institutional data and extra- institutional sources in a single metric.
- Adaptation of non-healthcare business improvement and quality indicators from best of breed.
- GUI designs developed specifically for end users through shop floor development and natural environment testing.
- A base measurement unit at the individual physician's medical practice level.
- A Clinical Efficiency Model that allows each metric to be weighted according to it importance to the medical practice and provides a composite quality score.
- Leverage of technology including DTS as a component of SQL server to automate extraction of data from diverse databases and XML as its mode of data transfer.
- Single Sign On to avoid exacerbating the "many password" syndrome.
- Medical Terminology used to describe financial and quality metrics.
- A logic model based on the medical differential diagnosis model, including the use of metrics presented as signs, symptoms and syndromes.
- Presentation of metrics in paneled reports clearly delineating the impact each has on each other and the impact that occurs at the practice and organizational levels.
- Intensive graphical representation of data, including data plotted on maps.
- Evidence based definition of metrics and evidence based actionable steps enabling physicians to address issue uncovered in those metrics.

Results:

DcomplX represents a new innovation in the area of benchmarking for health care quality. It is a step beyond the balanced score care concept in that it provides inter-related metrics and evidenced based “treatment” in the form of actionable steps for improvement. Preliminary study results show higher than expected adoption and use driven by physician’s satisfaction with the application. The GUI and logic model incorporated resulted in a user learning curve of 10-15 minutes to achieve mastery of the application. A complete ROI is pending at this time but preliminary data suggests that the actual ROI may be considerably larger than expected.