

1997 Davies Winner

Regenstrief Institute for Health Care

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The Regenstrief Institute was founded in 1969 because of the belief that industrial engineering principles should be applied to health care. Shortly thereafter, Clement McDonald came to Indianapolis with the vision of developing a longitudinal, integrated inpatient and outpatient electronic record that would provide the feedstock for clinical decision support and other applications. Today, that vision is nearly realized and expanded to include comprehensive clinical data. Most of the information needed for patient care is available and coded in the Regenstrief Medical Record System (RMRS) in a form appropriate for decision support, research, and other applications.

In carrying out the Regenstrief mission, two kinds of tasks were faced. The first task, on the input side, was to capture the needed data. Initial goals were modest – to capture a subset of the medical record, i.e., diagnoses, test results, medications, etc. The second task on the output side was to develop programs that would organize, display and "think about" the medical record content in useful ways. At the outset, it was believed that most of the work would be on the thinking and output side, e.g., the development of automatic reminders, decision aids, etc. Yet, complicated problems and long struggles were found in the input side as well. Nonetheless, over the last 24 years the Institute has enjoyed success with both aspects. The Institute now believes it has a decent computer-stored record, still in the development stage. At the beginning, the computer system was seen as the goal and energy was invested in making the best possible system. The clinical data was the "incidental" grist to the system. The reality is the opposite. All of the work and all of the value are in the data, and the computer system is but a vessel for the data. Systems are replaced every five years; the data stays forever.

The RMRS is built upon three crucial foundations – each of which may be considered a three-legged stool: committed support of the leadership and close collaboration between the Regenstrief Institute, Wishard Memorial Hospital, and the Indiana University School of Medicine with its faculty and the affiliated clinical practices. The tripartite mission of an academic medical center – teaching, research, and public service – provides the second leg. Finally, careful analysis and improvement of processes, technical excellence, and responsiveness to use, form the third leg. Clement McDonald has provided visionary leadership and served as the overall architect for the system.