

Wishard Health Services

Organization Name:

Wishard Health Services

Organization Address:

1001 W 10th St
Indianapolis, IN 46202
(317) 639-6671
www.wishard.edu

Organization Contact:

Schema Archetype

Inpatient, Community Hospitals

Schema Factors

Urban, Inpatient, Hospital Setting, >200 Beds, Academic

Organization Summary

Wishard Health Services (WHS) is affiliated with the Indiana University School of Medicine and includes a safety-net teaching hospital, a Level 1 trauma center, and a primary care network composed of nine community health centers with integrated mental health services. WHS is run by the county tax-supported Health and Hospital Corporation of Marion County, IN which is also responsible for the county health department. WHS is renowned for its use of technology.

IT Environment

In partnership with the Regenstrief Institute, Wishard Memorial Hospital has been a National leader in clinical information systems since 1972. Over this 40 year period, its electronic health record has evolved into one of the Nation's most successful health information exchanges, Indiana Health Information exchange, with agreements to share data across more than 70 hospitals. These information systems and clinical data have led to more than 300 peer-reviewed scientific publications.

The IT environment supports research activities in clinical informatics, public health informatics and biosurveillance, bioinformatics, clinical decision support, clinical epidemiology, pharmacoepidemiology and pharmacovigilance, comparative effectiveness research, and health informatics to support prospective clinical research.

CDS Achievement

Per a 2006 systematic review, Regenstrief investigators and Wishard information systems are among the world's top four systems responsible for high-quality, evidence-based research proving the impact of information technology on the quality of health care.

Through Wishard's relationship with the Regenstrief Institute, investigators also (a) collaborate with the Veteran's Administration (another of the top four health informatics research systems), and (b) participate in the CDS Consortium that also includes Brigham and Women's Hospital, Harvard Medical School, Partners HealthCare Information Systems, the Veterans Health Administration, University of Texas School of Health Information Science, Oregon Health Sciences University, Kaiser Permanente, Mayo Clinic, NextGen, Siemens Medical Solutions, and GE Healthcare.

Lessons Learned

The results of 40 years rigorously testing the effects of information systems within Wishard's health system are summarized in scores of related published peer-reviewed journal articles.

Landmark findings have included:

- 1976 – Computer reminders reduce clinical errors, such as those related to hypertension and medications
- 1984 – A medical record system integrated with computer reminders increases preventive care in the outpatient setting
- 1988 – Displaying prior diagnostic test results reduces test ordering
- 1990 – Displaying the charges for diagnostic tests reduces test ordering
- 1993 – Inpatient computerized physician order entry (CPOE) lowers hospital costs
- 1998 – Computer reminders increases advance directive discussions
- 2001 – Computer reminders increases inpatient preventive care
- 2002 – Sharing data between institutions decreases Emergency Department charges
- 2007 – Computer reminders increases appropriate contact isolation rates and decreased the time to isolation.
- 2010 – CPOE can reduce adverse drug events by 80% (submitted for publication).

This partnership has also amply demonstrated that not all CDS works, and that workflow, human factors associated with CDS tools, and physicians' attitudes towards computers and guidelines are critical in maximizing its effects.

Awards, Recognitions, and Citations

National Association of Public Hospitals (NAPH) President's Health Reform Readiness and Leadership Award 2010

Davies Award Winner 1997

McDonald CJ, Hui SL, Smith DM, Tierney WM, Cohen SJ, Weinberger M, McCabe GP. Reminders to physicians from an introspective computer medical record. A two year randomized trial. *Ann Intern Med* 1984; 100:130-138.

Tierney WM, Miller ME, Overhage JM, McDonald CJ. Physician inpatient order writing on microcomputer workstations: Effects on resource utilization. *JAMA* 1993; 269:379-383.

Dexter PR, Perkins S, Overhage JM, et al. A computerized reminder system to increase the use of preventive care for hospitalized patients. *N Engl J Med* 2011; 345:965-970.

Mamlin BW, Overhage JM, Tierney WM, Dexter PR, McDonald CJ. Clinical decision support within the Regenstrief Medical Record System. Book chapter – Clinical Decision Support Systems - Theory and Practice - Series: Health Informatics, Berner, Eta S. (Ed.) 2nd ed., 2007, 190-214.

McDonald CJ, Overhage JM, Barnes M, Schadow G, Blevins L, Dexter PR, Mamlin BW. The Indiana network for patient care: a working local health information infrastructure (LHII). *Health Affairs* Sept/Oct 2005; 24(5):1214-1220.