

Geisinger Health System

Organization Name:

Geisinger Health System

Organization Address:

Geisinger Medical Center
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Schema Archetype

Regional/National Health Systems/Networks

Schema Factors

Inpatient, Outpatient, Suburban, Academic,

Organization Summary

A nonprofit, physician-led, integrated health system serving an area with 2.6 million people in 43 counties of rural northeastern and central Pennsylvania through three acute/tertiary/quaternary hospitals and an alcohol/chemical dependency treatment center; a multispecialty group practices; and medical education programs serving medical students, residents, fellows, and other medical professionals. Annual patient volume exceeds 40,000 inpatient discharges and 1.5 million outpatient visits.

IT Environment

Geisinger Health System began using Epic as their EHR platform in 1995. EHRs with "ProvenCare" clinical decision support tools are available throughout all Geisinger hospital and group-practice sites. Geisinger's EHR system is integrated with laboratory and pharmacy services. Geisinger clinicians have access to a PACS system to view radiology images and access to a regional health information exchange. Geisinger patients have access to a portal, which allows them to access health information, schedule appointments, order prescriptions, and e-mail with clinicians.

The Geisinger EHR with ProvenCare supports templates and other decision-support tools such as predefined order lists, automatic health-maintenance and best-practice alerts, automatic patient-reminder letters, drug–drug interaction and drug–allergy warnings, laboratory test alerts, notice of drug and vaccine recalls, and other decision-support tools.

CDS Achievement

ProvenCare is Geisinger’s portfolio of evidence-based quality and efficiency programs addressing both acute and chronic conditions. Care processes have been redesigned to reliably deliver a coordinated bundle of evidence-based (or consensus-based) best practices.

For heart bypass surgery, clinical workgroups established a bundle of 40 evidence-based practices, developed an improved workflow process, and worked with information systems professionals to “hardwire” each element of the bundle into the EHR through templates, order sets, and reminders. The process also includes a “patient compact” to convey the expectation that patients should be active partners in their own care. As a result of these efforts, adherence to the bundle of 40 evidence-based practices increased from 59 percent at baseline to 100 percent after four months and remained at or close to that level indicating a relatively stable process. Improved process of care was associated with improved clinical outcomes including:

- 100% lower in-hospital mortality (which decreased from 1.5% to zero);
- 21% decrease in patients with any complications (from 38% to 30%);
- 45% decrease in readmissions within 30 days (from 6.9% to 3.8%); and
- 10% increase in patients discharged to their homes.

Financial outcomes also improved, including a 16 percent drop in average length of stay (from 6.3 days to 5.3 days) and 5 percent lower hospital charges.

Lessons Learned

- Clinician leadership at all levels, when paired with business partners and engaged clinical champions, supports progress in clinical transformation
- A focus on empirical data mining and direct performance measurement from the beginning of an initiative is essential
- A willingness to actively engage patients in care design and delivery, even when it is unclear how best to do so, can produce substantial progress

Awards, Recognitions, and Citations

McCarthy D, Mueller K, Wrenn J. Geisinger Health System: Achieving the Potential of System Integration Through Innovation, Leadership, Measurement, and Incentives. The Commonwealth Fund, New York, NY, June 2009.

Paulus RA, Davis K, Steele GD, Continuous Innovation in Health Care: Implications of the Geisinger Experience, *Health Affairs*, Sept./Oct. 2008 27(5):1235-45.

Steele GD, Haynes JA, Davis DE, et al. How Geisingers's Advanced Medical Home Model Argues the Case for Rapid-cycle Innovation, *Health Affairs*, 2010 29(11): 2047-2053.