Information Flow and Clinical Outcomes in a Fully Functional Perinatal Continuum of Care

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Information Flow and Clinical Outcomes in a Fully Functional Perinatal Continuum of Care

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Project Summary/Abstract
We are studying the implementation by the Lehigh Valley Health Network (LVHN) of an integrated electronic medical record (EMR) system at its OB/GYN practice groups and the Labor and Delivery (L&D) Unit. In this process, each of the practice groups migrated to a single, vendor-supplied, EMR, and these EMRs were linked to a newly-upgraded system at the hospital’s L&D Unit to form an integrated EMR. Once the system was installed, medical information from each physician office was immediately available when a patient arrives at L&D, and information from a patient’s visits to L&D is sent back to the office.

Our goal is to use both qualitative and quantitative methods to evaluate the impact of this system, so that we can fully assess the ability of an integrated EMR to address a recognized failure to deliver accurate, complete, and timely data to physicians and staff at critical clinical points along the perinatal continuum of care.

Longitudinal, Mixed Methods Analysis

- Quantitative
  - Use quasi-experimental econometric methods to identify impact of interrelate data between perinatal information system and ambulatory EMR on data completeness, health outcomes, patient and staff satisfaction
  - Data completeness surveys in L&D Triage
  - Provider/staff safety and satisfaction surveys
  - Adverse outcomes data and patient characteristics obtained from inpatient databases
  - Patient satisfaction surveys administered by Patti Scanlon

- Qualitative
  - In-depth interviews focusing on organizational and work process changes

Conclusions
- Physicians have difficulty transitioning to EMR as main source of clinical information
- Integrated EMR does improve information availability on L&D Triage
- Improved information availability is associated (in some cases) with fewer adverse pregnancy events
  - Nonstress test, blood pressure, Antenatal problem lists have a statistically significant impact
- Improved information availability alters clinical decision making via more labor inductions

Results
More Complete Data Available in Triage Due to EMR