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Interoperability in Action: Leveraging the Power of Health Information Exchanges (HIEs) to Improve Transitions of Care

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Problem Statement: As nursing informatics professionals we seek to improve the health of individuals and our community by optimizing information management and communication to support better decisions regarding our patients' health (American Nurses Association, 2015). Increasing the availability of test results and improving communication between providers is a valuable step in that direction. Our community hospital in Maryland is located near the state border and our patient population includes patients who live in nearby states. We went live with Maryland's Health Information Exchange (HIE), Chesapeake Regional Information System for our Patients (CRISP), in 2011. Our hospital's organizational goals align with the Institute for Healthcare Improvement's triple aim to improve patient experience, improve the health of communities/populations and reduce cost of care (Institute for Healthcare Improvement, 2016). Moving forward with a connection to Delaware's HIE, Delaware Health Information Network (DHIN) supported both the organization's goals and our professional nursing informatics goals. This presentation examines the benefits seen and lessons learned on our HIE journey.
Methods: Union Hospital partnered with an interface vendor to deliver Admission, Discharge and Transfer (ADT), Lab, Radiology and Transcription HL7 interfaces from our existing interface engine. Our implementation team included project managers, analysts, and programmers from DHIN, Union, and the interface vendor. After the initial information gathering stage that included workflow analysis and code set review, implementation took 10 months, and included steps such as establishing connectivity, specification review, and thorough testing. Issues were tracked in spreadsheet format and followed during weekly calls. **Results:** Much time was spent testing different workflow scenarios which helped identify workflow related challenges that otherwise would not have come to light. A thorough review and discussion of interface filters, such as ADT transaction types and documents to include, was necessary, as was diligent documentation of these filters and the transformations implemented. This documentation has been valuable in subsequent testing and maintenance of these interfaces. Challenges included navigating scheduled software updates on both sides, associated technical issues, and revising the project timeline to accommodate these. Since providers are able to access their patients' results in DHIN, we successfully discontinued several direct interfaces with some physician practices. As more practices transition to HIEs, and individual interfaces are discontinued, it can translate to savings for our organization in time and dollars spent maintaining multiple interfaces. Access to error logs on the receiving end has provided opportunities to identify format issues not realized during testing. Additionally, practices have the advantage of seeing results from other organizations. This year we leveraged our existing Maryland Syndromic Surveillance interface with CRISP to send information onwards to Delaware via DHIN, and will look towards the possibility of doing the same for other Public Health interfaces and Continuity of Care Documents (CCD) required by Meaningful Use. **Significance:** Although challenging, this experience added to our expertise, brought forth workflow and message format issues, and opened doors to new opportunities for interoperability, while improving access to information and contributing to the health of our community and the individuals we serve.