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The Wisconsin Health Information Exchange ED Linking Project

The Wisconsin Health Information Exchange's (WHIE) Emergency Department (ED) Linking Project is currently aggregating data across more than 22 hospitals representing five health systems, more than 120 clinics, and Medicaid pharmacy, encounter case manager and lock in data. The WHIE makes this aggregated data available in the emergency departments of participating hospitals.

The WHIE ED Linking Project is providing emergency and ambulatory clinicians, and case managers rapid access to past medical history for patients that register for care at their facilities. Microsoft® Amalga™ Unified Intelligence System (UIS) is the data platform for the exchange, freeing up information from multiple data systems across corporate boundaries and delivering timely health information in an easy-to-use environment. Amalga UIS has been rapidly adopted into the routine workflow of the physicians, and as a result, participating hospitals are realizing improved quality and reduced costs, as indicated by a recent survey of participating physicians.

"Amalga UIS allows us to seamlessly and in a very timely manner bring real-time information from clinical settings, as well as claims information from the state, into a concise collection of information while enabling participating organizations to maintain 'ownership' of their information at the source organization," says Kim R. Pemble, Executive Director, WHIE.

Supporting public health with secondary use of health data. In addition to that primary use of the data, the WHIE also de-identifies the data within Amalga UIS and makes that information available in a public health setting. Public health then can use this data to help support their public health surveillance activities. "The public health use is a critical value-add to the way we have approached health information exchange in the Milwaukee area," continues Pemble.

Comprehensive data makes an impact. The WHIE has been in operation for nearly two years and recently surveyed participants about the value of access to more comprehensive patient medical data.

"I never before had such an appreciation for how often people go to many different facilities for healthcare, particularly emergency departments," says Pemble. "We would always ask patients about their previous experiences and they would do their best to tell, but frankly patients can't always remember. Having the past medical history listed in front of clinicians makes a world of difference in terms of integrating a view of patient history for clinical decision making."

Preliminary results of a survey of physicians, responding on the use of the WHIE on encounter basis, indicate that accessing the WHIE:

- Decreased time spent acquiring data for 47% of cases.
- Altered the workup or treatment of a patient in 42% of cases. Of those:
 - 48% decreased lab orders
 - 53% decreased medication orders
 - 58% decreased imaging orders
- Decreased time to disposition decision in 51% of cases. This has important implications for improving ED throughput.

Non-reliance on data standards.

A key advantage of Amalga is that WHIE can function regardless of which set of standards the different healthcare organizations may be using to communicate their information. "A standard joke in healthcare is that one of the nice things about healthcare standards is that there are so many to choose from," says Pemble. "With Amalga, WHIE has the flexibility and the tools to take any set of transactions and create data views and associated workflow that clinicians need to accomplish their goals related to information sharing and improving health and health care."