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CARLETON UNIVERSITY

McGill

A Collaborative Health Research Project

Performance Management at the Point of Care
*Secure Data Delivery to Drive Clinical Decision Making
Processes for Hospital Quality Control*

April 2008 – March 2011

Many Canadian hospitals are developing data warehouses (DW) that integrate clinical and administrative data from multiple sources to support decision makers and researchers in improving the effectiveness of health services. Decision support systems (DSS) can be used to monitor hospital processes related to antibiotics utilization, patient discharge, and adverse events, and enable appropriate actions. However, providing consistent, timely and secure access to decision support in a systematic manner to address hospital quality control is not well understood. Compliance with privacy legislation, hospital policies, and ethics rules is problematic and integration into existing business processes is complex.

The long-term goal of the proposed research is to improve hospital quality control by developing methodologies, with tool support, for securely delivering the right performance management analyses, reports and data to the right clinicians, health researchers and administrators in a comprehensive fashion throughout hospital business processes. Our approach will combine research in clinical decision support, hospital quality protocols, data warehousing, business process modeling, privacy and secure data delivery in a novel way that addresses these issues up front and investigates how best to integrate this combination into day-to-day hospital operations at the point of care. We will evaluate our research against different healthcare business processes, namely:

- Collection and distribution of information on medical errors and complications
- Oversight of high risk and expensive antibiotics

The evaluation will be done in two different hospitals in different provinces:
- The Ottawa Hospital (Ontario)
- McGill University Health Center (Québec)

These contributions will not only have a direct impact on the hospitals involved but also on other healthcare facilities across Canada that are developing new DWs. End users will more easily access relevant performance and clinical information to improve quality of care, and IT personnel will take advantage of our tools and methodologies to implement secure data delivery infrastructure.

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