Notice of the Final Oral Examination
for the Degree of Doctor of Philosophy

of

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Degree of Specialist in Health Policy (George Washington University, 2000)
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“Evaluation of Health Data Warehousing: Development of Framework and
Assessment of Current Practices”

School of Health Information Science

Tuesday, April 7, 2015
3:00PM
David Turpin Building
Room A144

Supervisory Committee:
Dr. Andre Kushniruk, School of Health Information Science, University of Victoria (Supervisor)
Dr. Alex Kuo, School of Health Information Science, UVic (Member)
Dr. Noreen Frisch, School of Nursing, UVic (Outside Member)

External Examiner:
Dr. Andrew Georgiou, Centre for Health Systems & Safety Research, Macquarie University

Chair of Oral Examination:
Dr. Nigel Horspool, Department of Computer Science, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies
Abstract

If knowledge has been gathered by the practitioners’ community in the area of health data warehousing evaluation, it is mostly relying on anecdotal evidence instead of academic research. Isolated dimensions have received more attention and benefit from definitions and performance measures. However, very few cases can be found in the literature which describe how the assessment of the technology can be made, and these cases do not provide insight on how to systematize such assessment.

The research in this dissertation is aimed at bridging this knowledge gap by developing an evaluation framework, and conducting an empirical study to further investigate the state of health data warehousing evaluation and the use of the technology to improve healthcare efficiency, as well as to compare these findings with the proposed framework.

The empirical study involved an exploratory approach and used a qualitative method, i.e. audio-taped semi-structured interviews. The interviews were conducted in collaboration with the Healthcare Data Warehousing Association and involved 21 participants who were members of the Association working in a mid- to upper-level management capacity on the development and implementation of health data warehousing. All audio-taped interviews were transcribed and transcripts were coded using a qualitative analysis software package (NVivo, QSR International). Results were obtained in three areas. First, the study established that current health data warehousing systems are typically not formally evaluated. Systematic assessments relying on predetermined indicators and commonly accepted evaluation methods are very seldom performed and Critical Success Factors are not used as a reference to guide the system’s evaluation. This finding appears to explain why a literature review on the topic returns so few publications. Second, from patient throughput to productivity tracking and cost optimization, the study provided evidence of the contribution of data warehousing to the improvement of healthcare systems’ efficiency. Multiple examples were given by participants to illustrate the ways in which the technology contributed to streamlining the care process and increase healthcare efficiency in their respective organizations. Third, the study compared the proposed framework with current practices. Because formal evaluations were seldom performed, the empirical study offered limited feedback on the framework’s structure and rather informed its content and the assessment factors initially defined.