

Health Information Quality and Nursing Decision Making

A research collaboration between DCU School of Nursing, DCU School of Computing, and Beaumont Hospital (Dublin)



Context: Contributing to the Healthcare Reform Programme – Exploiting health information

The primary objective of the health service is to ensure that the highest levels of health and social well-being are achieved for individuals and the whole population. This strategy proposes to exploit information to the fullest in pursuit of this objective. (NHIS 2004)



- Health accounts for an average of 8.4 % of GDP in OECD countries
- In Ireland a major Healthcare Reform Programme is underway (e.g. National Health Information Strategy 2004)
- Health information is a valuable resource for better healthcare delivery and health service management
- High quality information lies at the heart of all good decisions concerning health (NHIS 2004)

Research board funded programme of nursing decision making: The School of Nursing, DCU, and the School of Nursing and Midwifery Studies, UCD

- Development and validation of an Irish Nursing Minimum Data Set (INMDS)
- Comprehensive study of clinical nursing knowledge, clinical judgement and decision making related to patient care
http://www.dcu.ie/nursing/decision_making_shtm

Research Approach: Developing Models and Methodologies to increase the value of health information

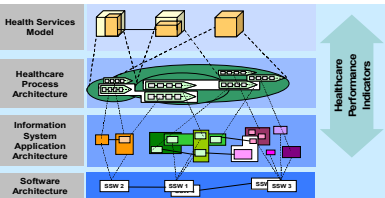
Vision:

The Integrated Architectural Framework for Nursing Care Management provides the reference conceptual design and implementation methodology for an **integrated and secure nursing care and performance measurement system** with specially-configured mobile devices, allowing nurses to access patients' information of high quality required for nursing decision making from anywhere in the hospital in real time.

Objectives:

- Integrated Architectural Framework for Nursing Care Management
- Reference Design and Implementation Methodology

Sample: 'Working Environment' with 'Health Process'



- Nursing Care Performance Management and Optimization
- Information Quality Management

Projects – Current and future:

- Nursing care reference process models
- Nursing care process simulation and optimization
- Patient outcomes and clinical indicators sensitive to nursing
- Cost / Benefit and impact models to analyse the effect of information quality on nursing care
- Health Information Quality indicators
- Health Knowledge Discovery relevant to nursing care
- Analysing the potential of secure integration and mobility technologies (e.g. Web Services, PDA) for improving the quality of nursing care

Education and professional development: Understanding and exploiting health information

CHASEtown – An innovative Virtual Learning Environment for Nursing care



- CHASEtown provides students with generic case studies that are adaptable to problem based learning scenarios and tasks. Its structure allows re-use of clinical information for various levels of expertise in different subject areas.
- Opted for university wide deployment of an open source VLE called Moodle (<http://moodle.org>).
- Funding was awarded to the project team by the Office of the Dean of Teaching and Learning in Dublin City University to deliver a specially designed module within Moodle.



Practice: Improving the quality of nursing care and support evidence based practice

- Beaumont Hospital has an open source philosophy
- Beaumont Hospital has already implemented NDS - Nursing Dependency System, which has also been successfully implemented in other teaching hospitals in Dublin



- Nursing Care Performance Measurement System
- Integrated and secure Nursing Care and Patient Monitoring System

Further Information and Contact:

Pamela Henry – DCU School of Nursing pamela.henry@dcu.ie
Markus Helfert – DCU School of Computing markus.helfert@dcu.ie
Susan Hawkshaw – Beaumont Hospital susan.hawkshaw@beaumont.ie