



## Service Priorities and Programmes Electronic Presentations

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### **Developing a Patient-based Dashboard - Patient Information Display System in North Lantau Hospital**

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#### **Introduction**

In daily operation, multi-disciplinary healthcare professional will approach patient to perform their assessment, treatment and care as well as intervention so as to restore patient's health and enhance their recovery. Currently, many wards are using laminated labels to display key information including dietary restriction, infection control precaution, drug as well as special alert which was inserted in an acrylic display board over patient's bedhead for other caregivers' information. However, the update of displayed information, daily maintenance and disinfection of laminated labels will unavoidably utilize extra manpower to handle it.

#### **Objectives**

The objectives of developing a patient-based dashboard namely Patient Information Display System (PIDS) are:

1. use of electronic display device to replace existing laminated labels and acrylic display board
2. provide key information to caregiver when they approach patient e.g. Infection Control precaution and allergy status etc.
3. alert caregiver to take special precaution so as to minimize the occurrence of clinical incidents e.g. No Blood Pressure Taking over patient's arm with A-V shunt done.
4. save the manpower for any update of displayed information, daily maintenance and disinfection of laminated labels.

#### **Methodology**

To collect users' requirement on what type of information to be displayed in the PIDS, a survey had been conducted in Princess Margaret Hospital (PMH) from December 2011 to February 2012 with 30 nursing staff from various clinical departments and IT Interest Group participated. According to the survey result, 6 main categories of patient information will be displayed in the PIDS which includes:

1. Diet and Fluid Intake
2. Activities
3. Specimen Collection
4. Observation and Record
5. Allergy and Risk Alert
6. Others e.g. Special Instruction

In addition, graphic icon is used to illustrate special alert e.g. Fall Risk and Infection Control Precaution. There is also an empty label for free text entry by users. Factors including security issue, mounting device as well as charging method have also been considered during the system development.

### **Result**

With the use of PIDS, the workflow of insertion, change and removal of laminated labels in acrylic board over patient's bedhead was streamlined. With a pilot study in Emergency Medicine Ward of PMH from March 2013 to Feb 2014, it was estimated that 294 hours i.e. 37 man-days would be saved from 6693 In-patient Admission and 6456 In-patient Discharge in the study period. In addition, the majority of nursing staff agreed that the displayed information in PIDS is relevant to their daily care. Currently, PIDS has been installed in the 5B ward of North Lantau Hospital in December 2015. Loss of electronic display device and other security issue has not been reported. Feedback on system development and layout design is continuously collected from users for system fine tune.