



Electronic Medical Record: Extending the benefits

Hospital Name: Royal Children's Hospital (Melbourne)

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Key Problem

Problem: Lack of access to patients' medical record information.

- The Royal Children's Hospital launched its Electronic Medical Record (EMR) on 30th April 2016. We were the first Paediatric Hospital in Australia to replace paper-based medical records with a comprehensive state-of-the-art electronic record.

Before implementation:

- Limited access to patients' full medical records – Clinicians, health information managers and other staff had to spend time tracking down patient record information.
- Considerable patient information was not captured electronically and therefore not easily shared with staff and other systems.
- Information was not centralised. Patient data was spread across multiple systems with limited interfaces.
- Very limited electronic information captured for direct medical and nursing interventions.

Aims of this innovation

- Improve access to all information by centralising the patient medical record
- Make real-time electronic patient information available for support with clinical decision making
- Allow interfacing with other clinical systems, e.g. pharmacy
- Provide patient record information for business intelligence reporting
- Improve resource measurement of patient activity for costing.

Baseline Data / Current Situation

Centralised system and improved data capture

- Previously, all medical records were paper based.
- Information about patient interventions were previously stored in feeder systems, which were best of breed and chosen for local needs.
- Key interventions, such as nursing time, were all paper based.

Key Changes Implemented

Centralised system and improved data capture

- All paper record forms were removed and replaced with COWs (Computers On Wheels).
- All orders must now be placed in the EMR, so that feeders are linked centrally.
- The information is automatically exported to a separate data warehouse designed for analytical reporting.

Outcomes so far

- New extracts now capture ECG Exercise tests and EEG patients. These are mapped to Inpatients, Emergency and Outpatients, allowing better GL allocation for Cardiology.
- Theatre staff duration in the OR is now captured for each individual staff member. Previously only a maximum of three per theatre case were captured.
- TPN data now extracted directly from the EMR allowing us to link on date of service to the correct episode.
- Improved data capture for VINAH (Vic Non Admitted) reportable data means we can reconcile our data with the Department of Health's collection.
- Collecting greater number of contacts per service event, including staffing resources.

Outcomes so far

- Pharmacy extract to capture charges is still a work in progress.
- Pathology and Radiology orders are in EPIC. But no charges are recorded so we still rely on staff knowledge and external reference files.

Unrealised benefits

- Pharmacy extract to capture charges
 - Still a work in progress.

- Pathology and Radiology orders are in Epic.
 - However no charges are recorded for them so we still rely on staff knowledge and external reference files.

- Nursing Acuity
 - EMR captures all ward observations and procedures but extracting them is difficult.

- Private patient billing
 - Capture all ward medical interventions and observations.

- Operating theatre consumables
 - Allocate all consumables used in theatre based on patient consumption.

- Ward and Emergency Consumables
 - Allocate all consumables used in emergency and ward based on patient consumption.

Lessons Learnt

- Understanding a new system takes time:
 - The full benefits of the EMR for clinical costing and other areas are still being realised.
- Data is not information:
 - Understanding what all the new data points captured mean and how they reconcile with past information can be a challenge.
- Adjusting to a permanently enriched data environment:
 - Much of the EMR is self service but the potential availability of data means that report requests from costing and other staff will likely continue to grow.
- Losing the distinction between clinical research and business intelligence:
 - With patient record information now electronic, report requests can include virtually any data.
- Costing is the last cab off the rank:
 - Capturing all activities can give an accurate costing but until a full financial year of data is captured the benefits will not be realised.

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Contact for this Innovation

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EMR: Extending the benefits

Royal Children's Hospital, Melbourne

Problem:

Lack of access to patients' medical record information.

Solution:

The Royal Children's Hospital launched its Electronic Medical Record (EMR) on 30th April 2016. We were the first Paediatric Hospital in Australia to replace paper-based medical records with a comprehensive state-of-the-art electronic record.

Results:

Improved extracts for

- ✓ Cardiology services
- ✓ TPN
- ✓ Theatre
- ✓ Non admitted activity

Potential improvements:

- Ordering charges for radiology and pathology
- Nurse interventions
- Medical interventions

