PACU Long Stay: A New Zealand (Aotearoa) approach to an international problem.

ROBERT HAWKER
BCom BA Cant., BN CPIT, PGDip(HealthSci) Auck., NZRN
Associate Clinical Nurse Manager, PhD Candidate
Counties Manukau District Healthboard

» Population of 512,130
» High proportion of Māori, Pacific Islander, Asian, and New Zealand European ethnicities
Primary Centres

Middlemore Hospital
Manukau Surgery Centre
Kidz First

Satellite Centres

Franklin Memorial Hospital
Pukekohe Hospital
Botany SuperClinic
Beds & Procedures

- **800** Beds at Middlemore Hospital
- **200** Beds across rest of DHB
- **40304** Surgical cases in 2014/15
Manukau Surgery Centre (MSC)

- 12 Operating Theatres
- Preop
- PACU
- 2nd Stage PACU
- 2 Inpatient Wards
- Perioperative Care Unit
Middlemore Hospital (MMH)

» 11 Operating Theatres
» Small TADU
» 14 PACU beds
Middlemore Hospital (MMH)

- Opened February 2014
- 14 Operating Theatres
- TADU with 9 consult rooms, 8 pre op bed bays and 13 second stage PACU bed bays
- 2 Procedure Rooms
- 11 Level 3 resourced ICU beds and 6 high dependency beds in the Critical Care Complex
New PACU Opens
New PACU Opens
PACU Staffing at MMH

- Associate Clinical Nurse Manager
- 3 x Clinical Specialty Nurse
- 37 x PACU Registered Nurse
- Nurse Educator
- 2 x NETP
- HCA
Specialities

» Plastics (Regional Reconstructive Service)
» Burns (National Services)
» Hands (Regional Service)
» Maxillofacial
» General Surgery
» Gynaecology and Obstetrics
» Orthopaedics (New National Spine Service)
» Complex Head and Neck Surgeries
» Radiology Services requiring anaesthesia
Long Stay Audit

» What makes up the PACU work load?
» How long were patients staying?
» What types of procedures were causing a PACU long stay?
» What was the role of the Critical Care Complex (CCC)
» What recommendations I can put forward to help manage long stay patients in the PACU better.
Method

» Prospective Quality Assurance Audit
» Data collected over 12 months
» Included:
  » ASA Score
  » PACU Acuity Score
  » Procedure Type
  » Time in PACU
  » Time Ward Contacted
  » Time Patient Left PACU
Total Long Stays

- 770 patients staying longer than 2.5 hours 2011
- 913 patients staying longer than 2.5 hours 2012

18.6% Increase year on year
PACU LOS > 2.5 hours

Hawker, 2013
Long Stay Clinical Indicators

- Severe PONV
- Severe Pain
- CVS issues
- Respiratory issues
- Cardiac or respiratory arrest
- Surgical review
- Low temperature
- PACU length of stay of greater than 2 hours
Patients who stay for 2 hours or more in the 1st stage PACU should be routinely collected and analysed and investigated to ensure quality patient outcomes are maintained.

(ANZCA, 1994; Peskett, 1999)
Long Stay - Top 3 Reasons

- CVS (57%)
- Pain (34%)
- Respiratory (9%)

Hawker, 2013
Role of the Critical Care Unit

- 23% of PACU LS patients had a CCC review
- 10% of the PACU LS patients required admission to the CCC
- 77% of PACU LS patients were not reviewed by the CCC
Issues Identified

- No senior nursing support after hours
- No one responsible for actively managing long stay
- PACU Score used was not adding value – nurses could keep patients longer
- Ward Delay hindered PACU patient flow
- If the ward or Critical Care refuse the patient they stay in PACU
Recommendations

» Clinical Nurse Pathways/progression
» Review the PACU Score
» Daily forecasting with hospital bed management
» Improve communication with in PACU and the Theatre unit as a whole
» Better way to do theatre scheduling
» Review how wards interact with PACU
» PACU Dedicated Anaesthetist
» Perioperative Long stay unit within the PACU
“Works in a narrow field but with more in-depth knowledge and skills than a RN. Enhance health outcomes for clients by working directly with them to provide assessment, care and education within specific area of practice Contributes to development of pathways, protocols and guidelines in the specific area of practice”

(NZNO, 2012, p. 73)
More than a floor coordinator
  - Case management
  - Trouble shooting
  - Mentoring
  - Policy development
  - Audit
  - Contribute to Nursing Annual appraisal requirements

Move towards a Clinical Nurse Specialist in the future
» Attend Hospital Bed Management Meeting
» CSN attends Theatre Supervisors rounds at 1600 hours
» Introduction to Charge Nurse rounds at 1700 hours
Review of the PACU score – PhD study


» Limitations of PAR score at CMH
  » No objectivity
  » Offers little guidance
  » Does not fit well with hospital patient early warning scores
  » Missing Pain, Nausea and surgical bleeding

» No consensus on what should be in a First Stage PACU score (Phillips, Street, Kent, & Cadeddu, 2014)
The Post Anaesthetic Care Score (PACS)

- Airway and breathing
- Respiration rate
- Heart rate
- Blood pressure
- Sedation
- Temperature
- Pain (patient self-reported)
- Nausea and vomiting (patient self-reported)
- Urine output
- Surgical wound
The Study

- PACS trialled in July – September 2014
- Adoption of the Promoting Action on Research Implementation in Health Services (PARiHS) Framework
  (Rycroft-Malone, 2010; Squires et al., 2012; Hawker, McKillop & Jacobs, 2015)
- Further studies to assess the implementation of the PACS and the impact on surgical patient outcomes, the PACU RN, and the institution underway
Are the recommendations working?

» Christchurch Earthquake effects
» Increase theatre capacity – what about other key services?
» Recommendations have reduced patient complaints from the ward
» Communication
Hawker, R. J. (2013). Middlemore Hospital PACU patient long stay report for the period 01 January to the 31 December 2012: Counties Manukau District Health Board.
NZNO. (2012). District Health Boards/NZNO Nursing and Midwifery Multi-Employer Collective Agreement.