Development of a Single Organ Non-Invasive Ventilation (NIV) Unit

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Sydney

Key Problem

- Patients with Acute Respiratory Failure Type 2 not managed by a dedicated NIV team, potentially compromising the care of this patient cohort.
- Increased length of stay for patients requiring NIV
- Increased ICU length of stay and subsequent access block
- Inappropriate admissions to CCU and ICU.
- Missed activity/income due to uncoordinated approach to management of NIV and coding.
- Increased risk of patients with respiratory failure requiring intubation if untreated with NIV.
- NIV skill mix deficiency amongst medical , nursing and other allied health staff professionals.

Aim of this innovation

- Improve patient outcomes through better coordinated care, including end of life decision making to provide improved quality of life.
- Decrease ICU length of stay for patients requiring hospitalisation for NIV, but not requiring further ICU management.
- Decrease hospital length of stay for patients requiring hospitalisation for NIV due to better coordinated care.
- Decrease the inappropriate use of CCU and ICU beds.
- Improve coding for NIV patients, capture patient complexity and decrease the potential risk of lost revenue.

Baseline Data

ICU NIV DATA

- September 2012 – August 2013
- 111 patient received NIV in the ICU.
- 93 had complete dataset.
- Average Length of Stay (LOS) ICU admission : 107.09 hours or 4.46 days.
- Average NIV therapy 56.12 hours or 2.34 days.

- Assessment of the 93 patients by the A/Director of ICU determined that 40 patients would have been suitable for transfer to the proposed NIV unit for some or all of their ICU stay.
- 40 patients managed on a dedicated NIV unit, would equate to 178.4 days saved in 12 months for their full stay.

- There was a lack of NIV focussed data collection in the organisation

Baseline Data

CODING ISSUES

Costing data 2012-2013 showed significant percentage of NIV activity were coded incorrectly.

WHY IMPORTANT?

Need to accurately capture complexity in the DRG

E65B COPD w/o Catastrophic CC –	Inlier NWAU 1.0331
E65A COPD w Catastrophic CC –	Inlier NWAU 2.0699
E41Z Respiratory System Diagnosis with NIV -	Inlier NWAU 4.2540

Key Changes Implemented

- **Business Case Developed**
- **Steering Committee formed**
- **Policy and procedures - completed**
  - Stakeholder consultation
- **NIV clinical decision making flowchart - completed**
  - Stakeholder consultation
- **Competency assessment - completed**
- **Patient education brochure - completed**
- **Training and education framework - completed**
- **NIV Model of Care - completed**
- **4 bedded NIV Unit went live 14-07-15**








Outcomes so far

- Coding improved from 20% to over 70%- Activity based funding (Awaiting final calculations).
- 4 bed NIV unit went live 14-07-15.
- Majority of NIV ward staff are NIV educated and trained .
- Admission avoidance to CCU and ICU
- To date we have had 176 patients require NIV.
- Further analysis of the NIV data required

Lessons Learnt

- Medical and Nursing Leadership is imperative
- Stakeholder Engagement essential.
- Diplomacy required - Extensive discussion between ICU / CCU / Respiratory / ED / Clinical Governance / Nursing education – Policy and Procedures
- Education - program instituted – workshops, practical sessions, case discussions, competency assessment.
  - Underestimated time required to complete the education component, this delayed go live date
- Constant reassurance to nursing staff due to ward culture change.


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