

Prevention of Self-Extubation with the Introduction of A Nursing Driven Extubation Protocool



8 Cases of

unplanned

self

extubation

protocool)

82 (Starting on 1st September Introduction of

Zero

cases

Team Creative Thinking Squad(CTS)

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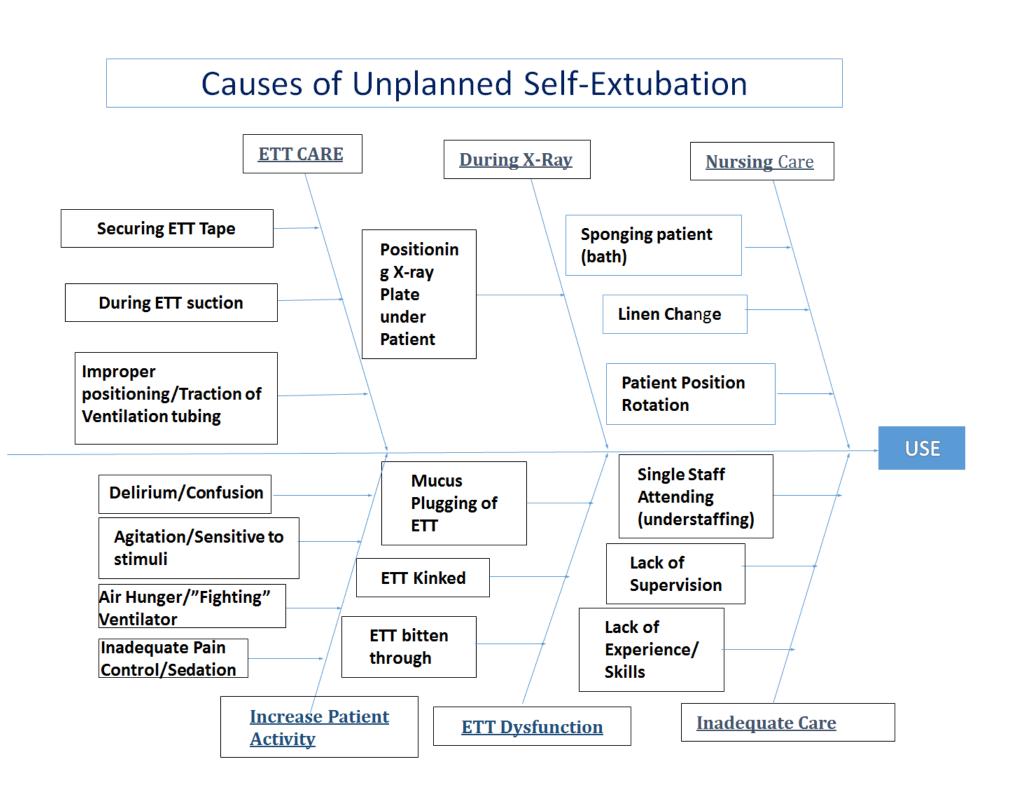
Anne, Goh Sye Lin and Ismail Bin Mohamed Tahir Sheriff.

Background: Between March 2015 to September 2015, 8 cases of unplanned self-extubation (USE) occurred in Cardiothoracic Intensive Care Unit (CTSICU) at NHCS. As our majority of patients underwent cardiac or lung surgery, any interruptions to their ventilation maybe very hazardous and emergent re-intubation expose them to potential airway injury, increase risk of ventilation associated pneumonia and other complications. In addition, experienced nursing staff attrition further worsen our manpower problem to provide adequate care.

Project Goals:

- 1)To reduce risk of patient's self extubation in our CTSICU.
- 2)To allow timely extubation of suitable patients (Improve our KPI for ventilation duration)
- 3)To reduce the risk of re-intubation.

Methodology: To know your weakness



Explanation of CTSICU CTSICU EXTUBATION ALGORITHYM Extubation Algorithym Age≤65 years old Good Haemostasis control intra-op Fast Track Patients • Dark Blue- Objective Aim to Extubate 2-4 • EF≥50 % No chronic Lung disease hrs. Euroscore 2 ≤3% Not ESRF • Light Blue- Criteria Green- Proceed **Complicated Airway: Observed** Amber-Pause and Immediate Action Airway Criteria for SBT and then Send to CTSICU Red-Informed PACU doctors to review and get action plan from Surgeon in charge(Nurses can and Ventilator encourage to call surgeon directly if situations demand Ventilator Airway Requirement it.) Red also denotes automatic limbs restraints on Dependent High: uncomplicated High:Observed and order, which our unit's restrains are in red Send to CTSICU Wean down setting Minimal ventilation setting (FIO2 ≤40%. PEEP≤ 5 cm H20. PS≤10 cm H20) Ventilation of Patient satisfactory (Expiratory TV> 6-8 ml/kg of BWT. Recorded RR≤25/min) Informed Surgeon NOT 2 HARM: NO. edside Criteria for SBT patient condition **Immediate** corrective action for plans NOT 2 HARM: YES No: PACU MO take appropriate xr Criteria For SBT actions i.e inform ICU Registrar If A+B+C all satisfactory then draw ABG YES: CPAP for 30 mins No: Put back to previous ventilator **ABG Criteria** setting and try again • pH: 7.35- 7.36 • pCO2: 35 -45 mm Hg • paO2 ≥ 80 mm Hg • BE ≥ -4.0 YES: Extubate If still NO then

March

April

May

June

July

August

TOTAL

September

October

November

December

January

Feburary

March

TOTAL

Solutions:

1)Development of extubation algorithym for CTSICU
2) Nursing Driven Protocool –Weaning of patient are decided by managing Staff nurse but decision to extubate is a shared decision between Medical and Nursing colleagues base on clear criterion. Studies have shown Nursing staff have much higher compliance to practice protocools than doctors.
3)Clear decision tree allows even junior staffs to quickly learn the intricacies of advance cardiothoracic management and know when to ask for clarifications.

Conclusions:

2015

2016

1)Excellent results on patient safety can be achieved by empowering our nurses to take charge of their patient care (Ownership- instead of top down order to extubate)

83

76

77

75

85

87

483

84

69

83

87

566

- 2)They can develop and continue to evolve a dynamic algorithym to better care for their patients.
- 3)Timely corrections and effective solutions can eliminate a series of complication from the root.