



# Prevention of Self-Extubation with the Introduction of A Nursing Driven Extubation Protocol.

Singapore Healthcare Management 2016

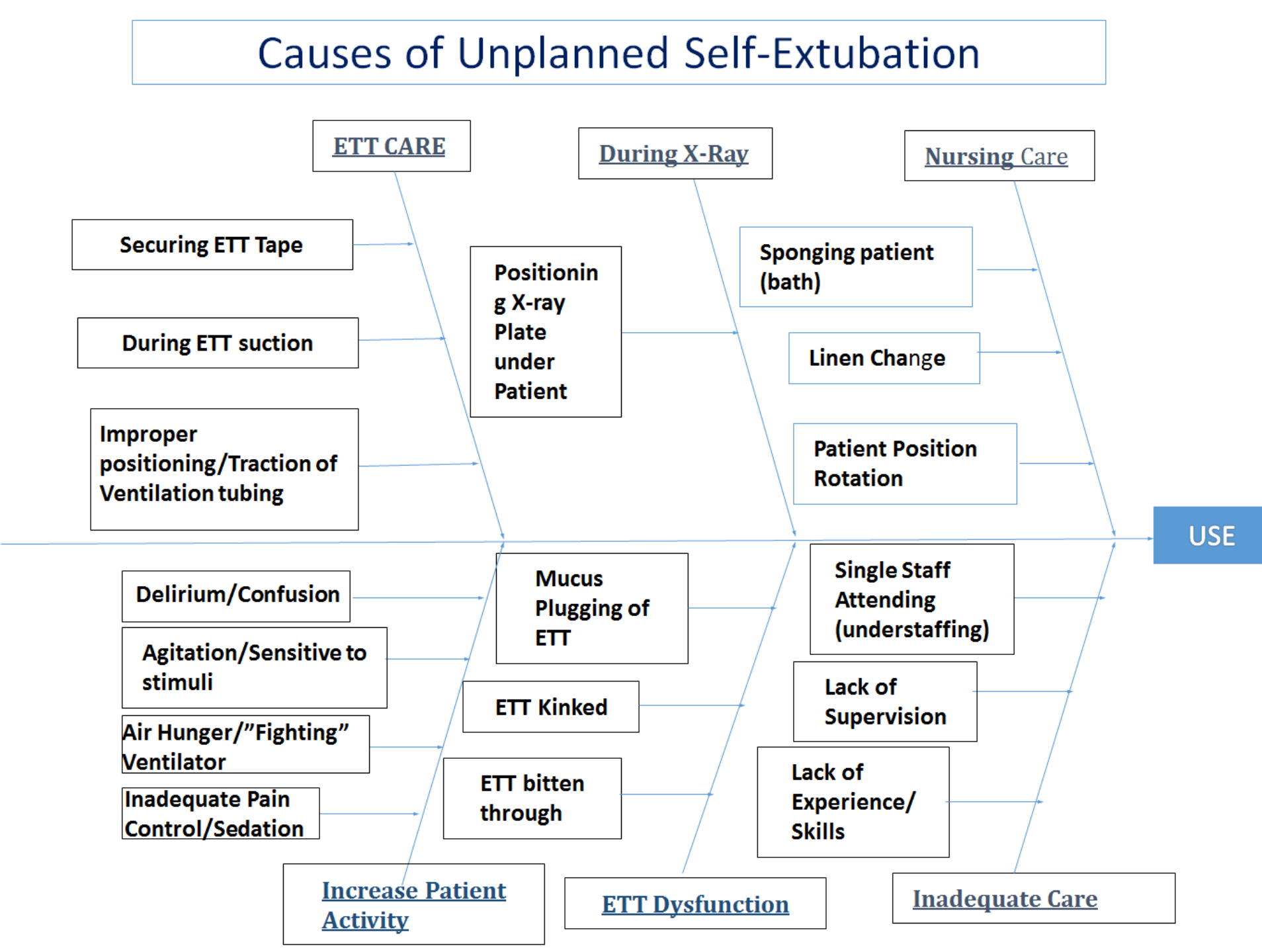
Team Creative Thinking Squad(CTS)  
Leader: Dr Tan Ann Kheng  
Members: Sazali Bin Arif, Goh Su Yin, Tok Kim Lian Anne, Goh Sye Lin and Ismail Bin Mohamed Tahir Sheriff.

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



### CTSICU EXTUBATION ALGORITHM



### Explanation of CTSICU Extubation Algorithm

- Dark Blue- Objective
- Light Blue- Criteria
- Green- Proceed
- Amber- Pause and Immediate Action
- Red- Informed PACU doctors to review and get action plan from Surgeon in charge (Nurses can and encourage to call surgeon directly if situations demand it.) Red also denotes automatic limbs restraints on order, which our unit's restraints are in red.

2015	March	83
	April	76
	May	77
	June	75
	July	85
	August	87
	<b>TOTAL</b>	<b>483</b>
	September	82 (Starting on 1 <sup>st</sup> September Introduction of protocol)
	October	84
	November	88
	December	69
2016	January	83
	February	87
	March	73
	<b>TOTAL</b>	<b>566</b>



### Solutions:

- 1)Development of extubation algorithm for CTSICU
- 2) Nursing Driven Protocol –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 protocols 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:

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