# OT to ICU Handover



# Singapore Healthcare Management 2021

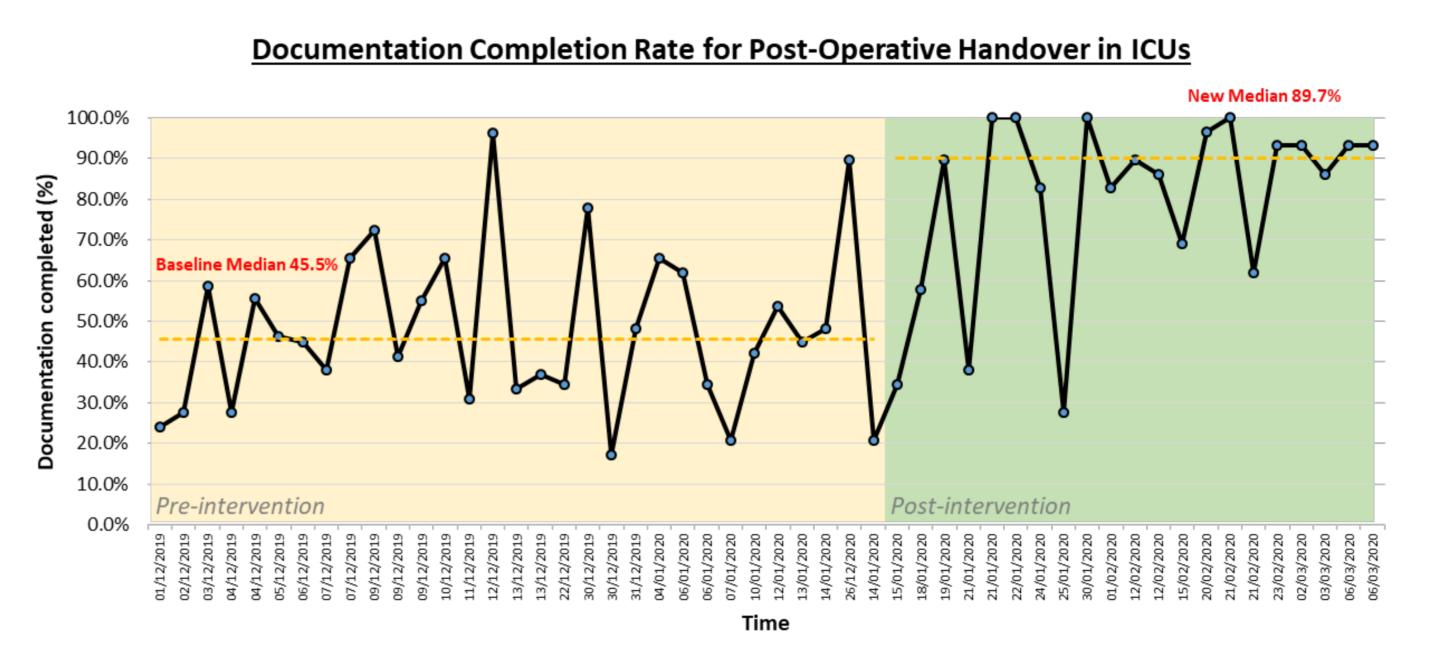
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#### **Project Background**

Postoperative transfer of care from operating theatres (OTs) to intensive care units (ICUs) is a **pivotal moment in peri-operative care** of critically ill patients. Omission of key clinical detail during handovers may result in suboptimal care and potential lapses in patient safety.

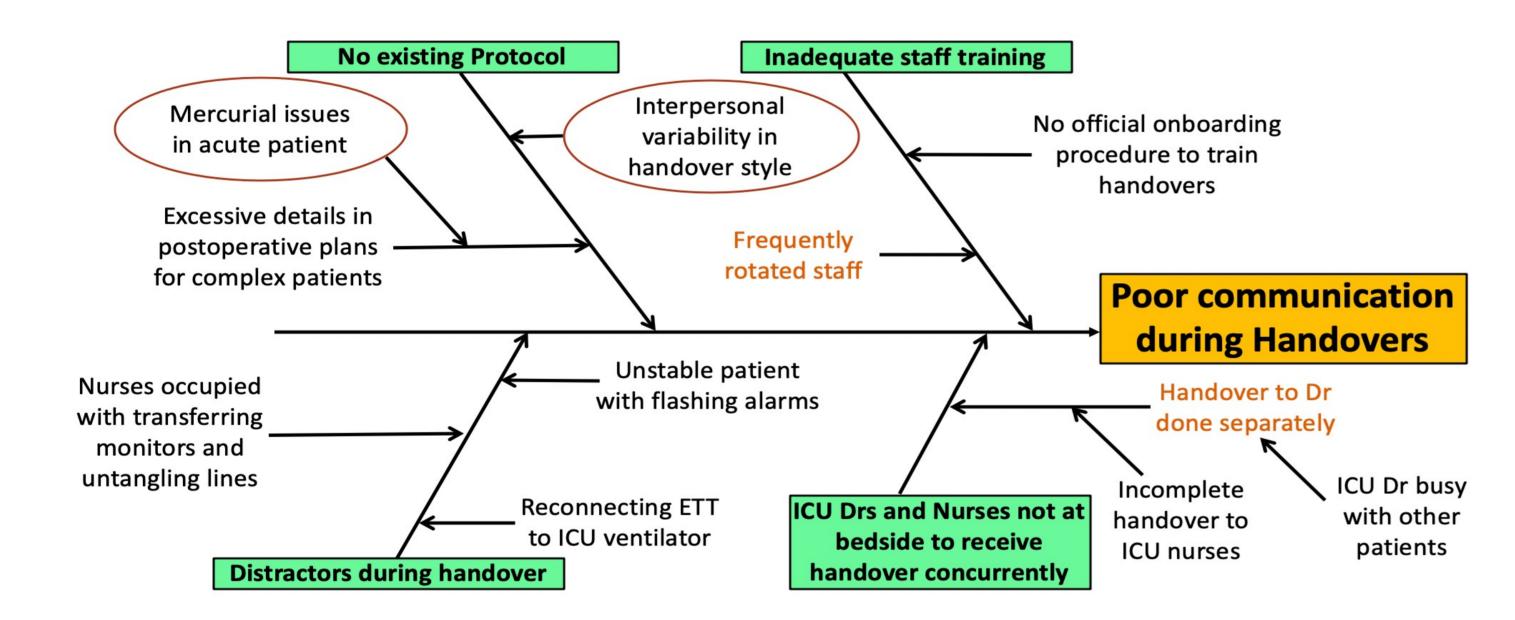
#### **Results and Analysis**



#### **Mission Statement**

**To improve communication and increase the completion rate of post-operative handover items** at MICU, NICU and SICU in our institution from 45.5% to 68.3% over 2 months.

## **Analysis of Problem**



Total of 52 handovers requiring admission to ICUs post-operatively were examined. Pre-intervention (32 cases), they achieved a median completion rate of 45.5% for key handover information. Post-intervention (20 cases) the completion rate rose to 89.7%, amounting to <u>an improvement of 97%</u>, surpassing our goal of 50%.

Statements with upswing post intervention	P-Values
"The information conveyed was concise and clear."	0.000522
"I have to look elsewhere for information after the handover."	0.016144
"There were opportunities to ask questions and clarify."	0.004761
"Description of the patient matched our subsequent patient clinical assessment."	0.027137
"At the end of the handover, I was aware of the postoperative plan of this patient."	0.000598
"Overall, I am satisfied with the handover in terms of content and how it was communicated."	0.002991

Analysis of factors contributing to poor communication was performed via Cause and Effect Diagram, with conclusion that "interpersonal variability" and "mercurial issues" were root causes to be addressed by the standardised checklist. This would also tackle secondary causes such as "frequently rotated staff" and "handovers to doctors done separately", thus achieving our primary goal.

### **Interventions / Initiatives**

Post-operative handovers of patients who had underwent elective or emergency operations were **assessed by an independent assessor and nurse receiving the handover** in our institution's Surgical, Medical and

Neuroscience ICUs.

This baseline data was collected from 1st Dec 2019 to 14th Jan 2020. Our "OT to ICU Handover Checklist" (*shown on right*) was launched on 15th Jan 2020.

Singapore General H	ospital OT to ICU Handover Checklist
SingHealth	Patient's name label
<ul> <li>*** Please refer to Surgical Op</li> <li>Situation         <ul> <li>Admission diagnosis</li> <li>Operation performed</li> <li>Reason for ICU adm</li> </ul> </li> </ul>	
Background Relevant history	<ul> <li>Name, age, gender</li> <li>Concise past medical history</li> </ul>
Intraoperative events	Anaesthetic complications     Surgical complications
Assessment	
A - Airway	<ul> <li>ETT/tracheostomy size</li> <li>ETT depth anchored at lips/nostrils</li> <li>Any airway difficulty</li> </ul>
B - Breathing	<ul> <li>Current ventilator settings</li> <li>Ventilation/oxygenation issues</li> </ul>
C - Circulation	<ul> <li>Intraoperative and current haemodynamics</li> <li>Need for inotropes/vasopressors</li> <li>Fluids and blood products given</li> <li>Blood loss</li> <li>Urine output</li> </ul>
D - Drugs/Disability	<ul> <li>Analgesia</li> <li>Antibiotics</li> <li>Ongoing infusions and fluids</li> <li>Neurological issues (eg preoperative GCS/neurological deficits</li> <li>Last dose of paralysis</li> </ul>
E - Environment	<ul> <li>Temperature control</li> <li>Lines</li> <li>Surgical drains/tubes</li> </ul>
Medication orders	o OT Pls indicate NA if not applicable
landed over by (Anaestheti	
Anacoulen	Contact no: Date & Time:
landed over to (ICU Dr)	Name, MCR & Signature:
landed over to (ICU Nurse)	Name & Signature:

Analysis of the qualitative feedback statements showed <u>positive</u> <u>changes which are statistically significant</u> across the board. We also noted that there is no correlation between number of staff present and the quality of the handover.

# **Conclusion / Future Plans**

Our project's success can be attributed to our team's belief in the merits of effective inter-professional communication during handovers. During the course of this project, we were encouraged by the **strong mandate from our ICU nursing colleagues**, who were aware of the deficiencies of the incumbent modus operandi and appreciated the need for change to ensure patient safety.

This is **essential in the current COVID-19 climate** where there is redeployment of medical staff to various ICUs, making good clinical handovers even more vital to safety and good clinical outcomes.

We have integrated this checklist successfully into department standard of practice (SOP). It is available on the Intranet, for better accessibility and reference. Department education and promotional campaigns are underway to increase awareness and ensure compliance. Support from our fellow colleagues will also be paramount, to ensure the continued success of our project: attain better communication and improve ICU handovers for our postoperative patients.

The completion rate of handover information as well as qualitative feedback, and pre post intervention, was analyzed via the checklist and evaluation form. This study concluded on 6th March after achieving 2020, 13 consecutive data points above **baseline median**, reflecting system change of statistical significance.

"Effective teamwork begins and ends with good communication"