Project Title

OT to ICU Handover Checklist

Project Lead and Members

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- Dr Pamela Chia

Organisation(s) Involved

Singapore General Hospital

Healthcare Family Group Involved in this Project

Medical

Specialty or Discipline (if applicable)

Anaesthesiology, Perioperative Medicine

Project Period

Start date: Dec 2019

Completed date: March 2020

Aims

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

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Conclusion

See poster appended / below

Additional Information

Singapore Healthcare Management (SHM) Conference 2021 – Shortlisted Project (Communications Category)

Project Category

Care Continuum, Acute Care, Intensive Care, Care & Process Redesign, Value Based Care, Safe Care

Keywords

Communication, Peri-Operative Care, Handover Checklist, Medical Intensive Care Unit, Surgical Intensive Care Unit, Neuroscience Intensive Care Unit

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OT to ICU Handover Checklist

Singapore Healthcare Management 2021

Singapore General Hospital

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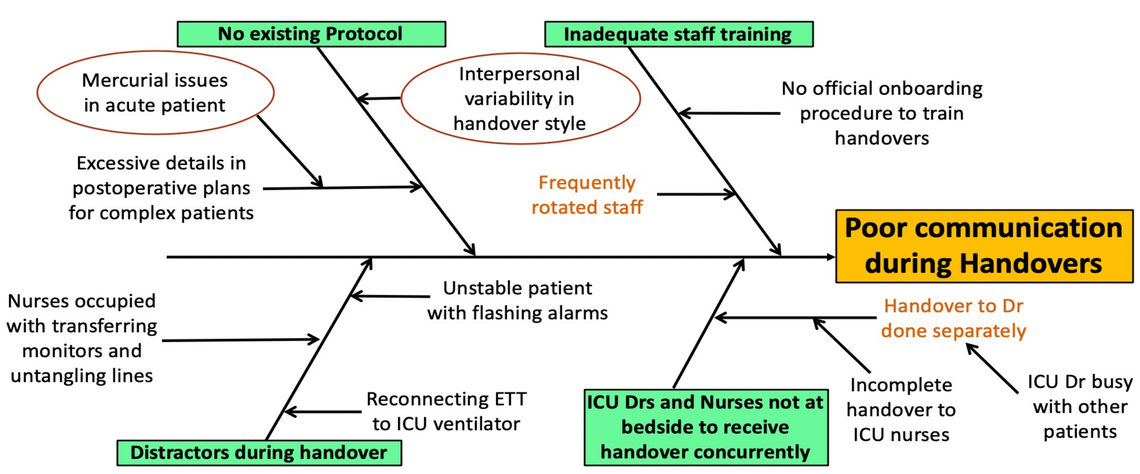
Project Background

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.

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



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.

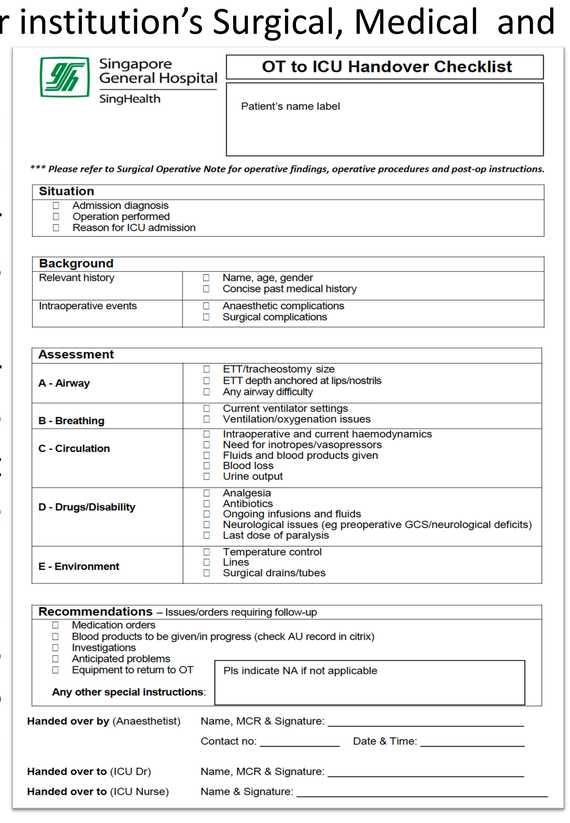
Interventions / Initiatives

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.

The completion rate of handover information as well as qualitative feedback, pre and post intervention, was analyzed via the checklist and evaluation form.

This study concluded on 6th March 2020, after **achieving 13 consecutive data points above baseline median**, reflecting system change of statistical significance.



Singapore General Hospital
SingHealth

OT to ICU Handover Checklist

Patient's name label

**** Please refer to Surgical Operative Note for operative findings, operative procedures and post-op instructions.*

Situation
- ☐ Admission diagnosis
- ☐ Operation performed
- ☐ Reason for ICU admission

Background

Relevant history	☐ Name, age, gender ☐ Concise past medical history
Intraoperative events	☐ Anaesthetic complications ☐ Surgical complications

Assessment

A - Airway	☐ ETT/tracheostomy size ☐ ETT depth anchored at lips/nostrils ☐ Any airway difficulty
B - Breathing	☐ Current ventilator settings ☐ Ventilation/oxygenation issues
C - Circulation	☐ Intraoperative and current haemodynamics ☐ Need for inotropes/vasopressors ☐ Fluids and blood products given ☐ Blood loss ☐ Urine output
D - Drugs/Disability	☐ Analgesia ☐ Antibiotics ☐ Ongoing infusions and fluids ☐ Neurological issues (eg preoperative GCS/neurological deficits) ☐ Last dose of paralysis
E - Environment	☐ Temperature control ☐ Lines ☐ Surgical drains/tubes

Recommendations – Issues/orders requiring follow-up
- ☐ Medication orders
- ☐ Blood products to be given/in progress (check AU record in citrix)
- ☐ Investigations
- ☐ Anticipated problems
- ☐ Equipment to return to OT

Pls indicate NA if not applicable

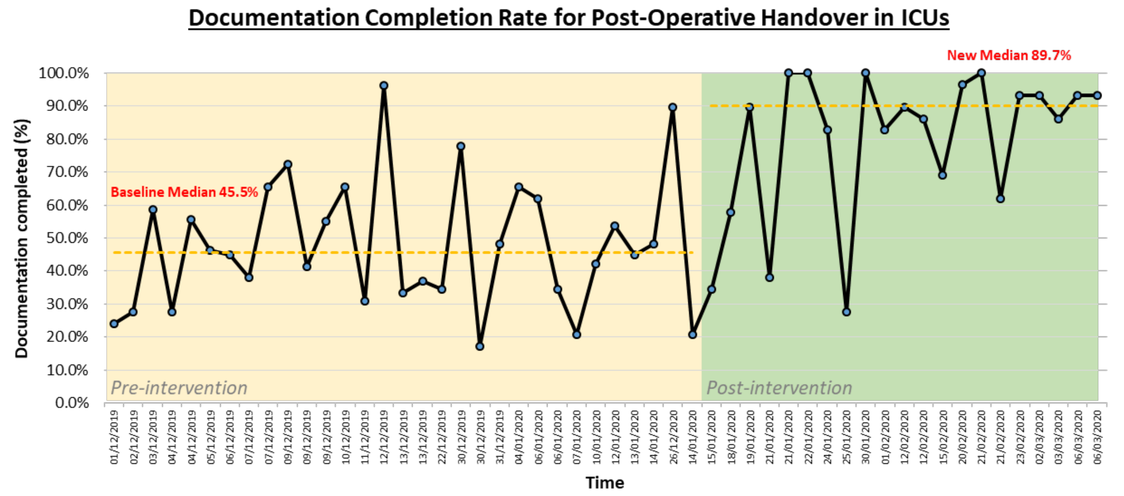
Any other special instructions:

Handed over by (Anaesthetist) Name, MCR & Signature: _____
Contact no: _____ Date & Time: _____

Handed over to (ICU Dr) Name, MCR & Signature: _____

Handed over to (ICU Nurse) Name & Signature: _____

Results and Analysis



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 an improvement of 97%, 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 the qualitative feedback statements showed positive changes which are statistically significant 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 post-operative patients.

"Effective teamwork begins and ends with good communication"