

**Project Title**

Implementation of ICU Outreach Nursing Services for Improving and Facilitate the Continuity Care of Hospitalised Patient

**Project Lead and Members**

Project lead: Agnes Chong YH

Project members: Ong YM, Rebecca Lim, Tan ST, Low TJ, Dr Faheem AK

**Organisation(s) Involved**

Ng Teng Fong General Hospital, Jurong Community Hospital

**Healthcare Family Group(s) Involved in this Project**

Nursing

**Applicable Specialty or Discipline**

Intensive Care Unit

**Project Period**

Start date: Jul 2018

Completed date: Aug 2021

**Aims**

The aim is to ensure that potential high risk and unstable patients will receive a timely and appropriate care in general ward. An early identification of central line bloodstream infection (CLABSI) will prevent worsening of the infection and a proper management will be rendered on time. Supporting general ward nurses to manage secretion burden for patients with tracheostomy, will reduce mucus plugging and hypoxia.

The post-ICU discharge follow up will promote a seamless transition from critical care to general ward setting. The recent implementation of automated red zone trigger

will also help in recognizing / managing deteriorating patients and assist the general ward nurses for the escalation of care appropriately.

## **Background**

See poster appended / below

## **Methods**

See poster appended / below

## **Results**

See poster appended / below

## **Lessons Learnt**

1. Expansion of an outreach nurse's role,

Eg: order CXR, allow to give IV fluid boluses during hypotension, Neb for wheezing pt. facilitate NIV/ABG with RT.

2. Continue regular Outreach sharing with foundation group - new nurses joining NTFGH

3. Start data collection for all outreach nursing services, as previously we only collected data for red zone trigger.

4. Introduction of outreach services via sharing videos on the intranet

5. Officially upload nursing outreach services on the intranet under ICM care.

6. Continue outreach training program and simulation training to better equip ICU outreach nurses.

7. Conduct training and support ward staff in regards of assessing and identifying deteriorating patient.

## **Conclusion**

See poster appended / below

**Project Category**

Care & Process Redesign, Quality Improvement, Workflow Redesign, Job Effectiveness, Value Based Care, Care Continuum, Inpatient Care

**Keywords**

Continuity Of Care, Post-Operative, Escalation

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# IMPLEMENTATION OF ICU OUTREACH NURSING SERVICES FOR IMPROVING AND FACILITATE THE CONTINUITY CARE OF HOSPITALISED PATIENT

MEMBERS: AGNES CHONG YH, ONG YM, REBECCA LIM, TAN ST, LOW TJ, DR. FAHEEM AK

## Define Problem, Set Aim

### **Problem/Opportunity for Improvement**

There are cases of unplanned ICU/HD admissions of patients who had transferred out from ICU/HD to General ward and this is due to the number of factors that contributes to clinical deterioration.

The common factors include inadequate clinical assessment, sub-optimal response to symptoms, delay in escalation of care which leads to inaccurate treatment and may result in code blue activation, death or prolonged hospital stay. For instance, code blue activation for hypoxia among patients with tracheostomy, who developed mucus plugging due to inadequate tracheostomy care. Furthermore, the different in practices of frequency in monitoring the patient in the general ward setting is also another factor contributing to adverse events which is often preceded by derangements in commonly measured vital signs.

### **Project Scope**

The purpose of this project is to “break down the walls” of critical care by extending ICU outreach nursing services to all patients who are outside the boundaries of intensive care. Thereby, reducing the morbidity and mortality rate of patients in general ward who are at risk of deteriorating or in need of close observation after transferring out from ICU/HD.

ICU Outreach Nursing Services covers the following:

- Invasive line tracking such as dialysis/central line,
- Tracheostomy care,
- Post-ICU discharge follow up for patient who intubated for >5 days during ICU stay,
- Automated Code Red (used to be called as red zone) triggering.

### **Aim**

The aim of the above mentioned services is to ensure that potential high risk and unstable patients will receive a timely and appropriate care in general ward. An early identification of central line bloodstream infection (CLABSI) will prevent worsening of the infection and a proper management will be rendered on time. Supporting general ward nurses to manage secretion burden for patients with tracheostomy, will reduce mucus plugging and hypoxia.

The post-ICU discharge follow up will promote a seamless transition from critical care to general ward setting. The recent implementation of automated red zone trigger will also help in recognizing / managing deteriorating patients and assist the general ward nurses for the escalation of care appropriately.

## Select Changes

### **Invasive central venous lines tracking:**

- Reviewing line tracking at least once daily especially CVC lines inserted in ICU/HD.
- ICU outreach nurse will document necessary or specific intervention rendered. Escalate as appropriate.
- Check with Primary Team if line can be removed.
- Handover to primary nursing at the end of intervention and document it.

### **Tracheostomy Care:**

- Reviewing patient with tracheostomy who is transferred to GW from ICU/HD once per shift or when necessary for 7 days or as appropriate.
- ICU outreach nurse will document necessary or specific intervention rendered. Escalate as appropriate.
- Handover to primary nursing at the end of intervention and document it.

### **Post ICU/HD discharge follow up**

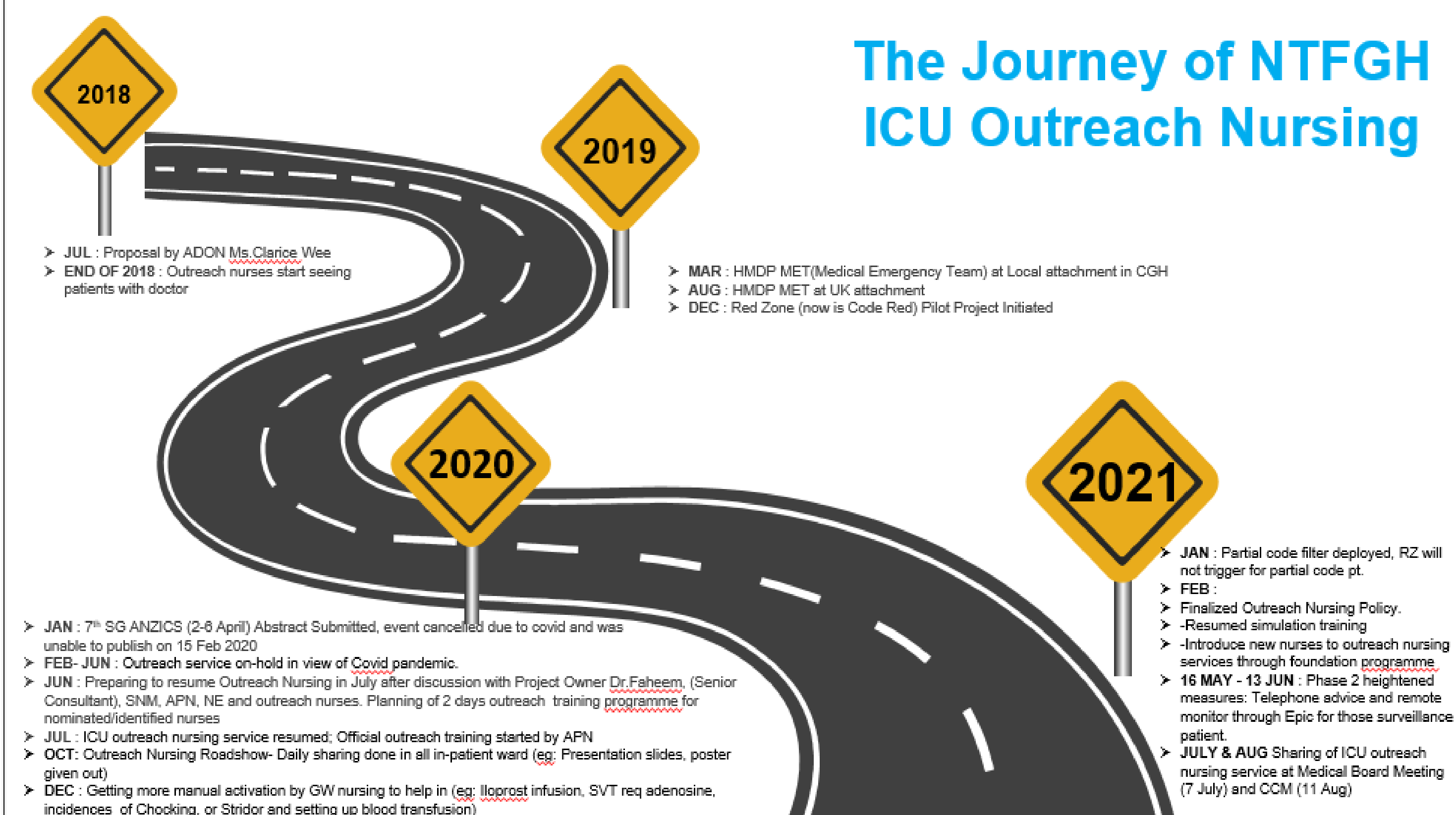
- ICU Outreach nurse will review and identify those ICU patients who have stayed in ICU at least > 5 days and of “ICU” status prior to transferring to GW.
- Outreach Nurse will include the patient’s name into the shared patient list folder.
- ICU Outreach will handover these patients to the on-coming assigned ICU Outreach nurse.
- Conduct training and support ward staff in regards of assessing and identifying deteriorating patient
- ICU Outreach Nurse will discharge patient from the list after patient review > 24 to 48 hours. If patient is stable and there are no further issues, review can be stopped at 24hrs.
- ICU outreach nurse will document necessary or specific intervention rendered. Escalate as appropriate.

### **Respond to Automated Code Red trigger**

- Review patient within 30 minute.
- Assess and assist to stabilized patient condition.
- Assist ward nurses in escalating of care to senior doctors.
- Initiate management plan according to protocol and algorithm to prevent further deterioration
- Inpatient hypoglycemia, inpatient hyperkalemia, hypotension, bradycardia and tachycardia, abnormal resp rate and desaturation, altered mental state.
- Lighten ward nurses' workload/ support ward nurses in managing deteriorating patients.
- Coordinate and provide seamless transfer to ICU/HD if patient required higher level of care.

## Establish Measures

### The Journey of NTFGH ICU Outreach Nursing



## Test & Implement Changes

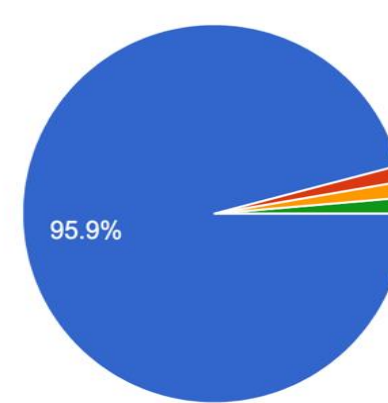
Code Red Outreach Roadshow Daily across inpatient wards in Tower B (except Renal Unit, ISO) and Tower C - C7, C8 and C9. Posters were distributed for each individual ward for reference.



Feedbacks survey were done from 16 Oct 2020 – 24 Oct 2020, total number of 73 responses received. Among the 73 responses, 95.9 % were nurses and the remaining from PCA, doctor and student nurse. 78.1 % of them encountered with ICU outreach nursing services and the remaining did not. According to the feedback, we can see that majority of the responds are agree and strongly agree, indicating positive feedback about ICU outreach nurses when responding to code red, they were able to act as a resource person in escalating of care and also able to support junior doctor / nurses too in managing deteriorating patients .

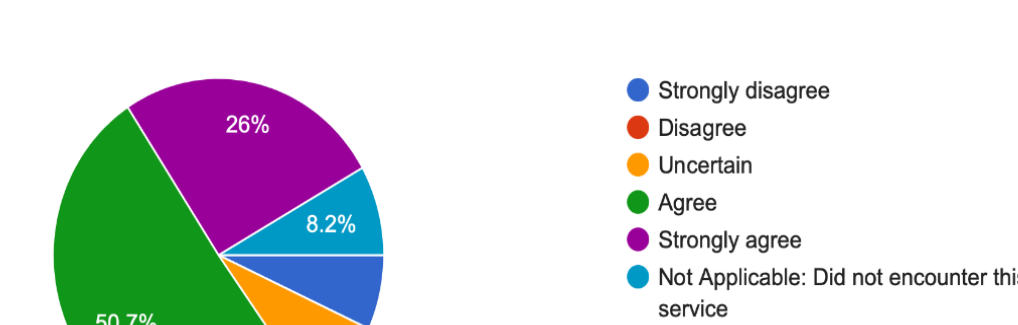
What is your role?

73 responses

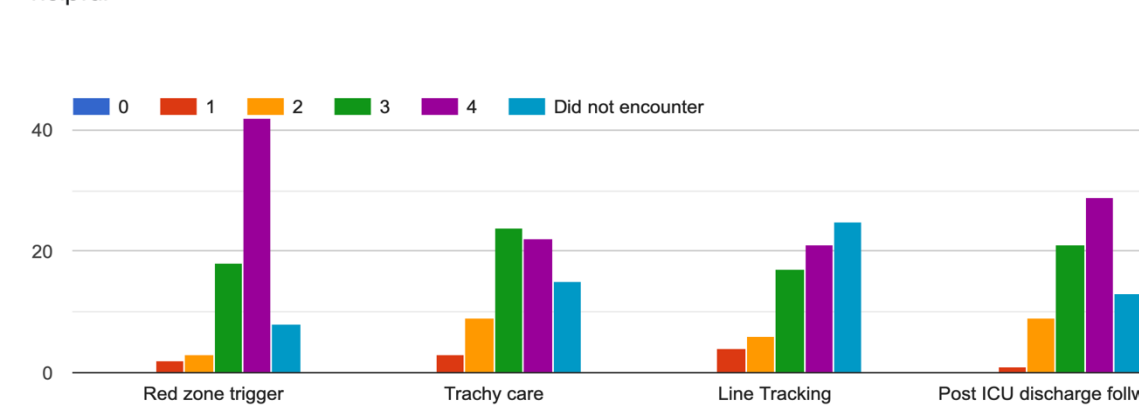


The implementation of ICU Outreach Nursing will help to improve the attitude and practice of nurses and junior doctors in risk assessment and response to deteriorating patient.

73 responses



Please rate in terms of effectiveness on our services. From the scale 0 to 5: 0: Not helpful 4: Most helpful



## Spread Changes, Learning Points

Start collecting data for post ICU-discharge follow up to access if patient needs to be readmitted to ICU/HD.

1. Expansion of an outreach nurse’s role,  
Eg: order CXR, allow to give IV fluid boluses during hypotension, Neb for wheezing pt. facilitate NIV/ABG with RT.
2. Continue regular Outreach sharing with foundation group -new nurses joining NTFGH
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