

### **Project Title**

Simulated Critical Care Physiotherapy Training to Improve Staff Knowledge And Confidence

### **Project Lead and Members**

Project Lead: Preetha Kamath

Project Members: Vivien Lee Jie Qi, Lim Kian Chong

### **Organisation(s) Involved**

Ng Teng Fong General Hospital

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

Allied Health

### **Applicable Specialty or Discipline**

Physiotherapy

### **Aims**

The aim of this quality improvement project is to improve the knowledge and confidence levels of newly joined physiotherapists covering critical care unit to at least a score of 3/5 in 8 months.

### **Background**

See poster appended/ below

### **Methods**

See poster appended/ below

### **Results**

See poster appended/ below

### **Lessons Learnt**

The use of a simulator and seeing actual patients are both beneficial in developing confidence. Reading materials enhance learning and allows for easy future reference.

### **Conclusion**

See poster appended/ below

### **Project Category**

Training & Education

Education Platform (Virtual Learning Platform)

### **Keywords**

Critical Care Unit, Physiotherapy, Simulation,

### **Name and Email of Project Contact Person(s)**

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# SIMULATED CRITICAL CARE PHYSIOTHERAPY TRAINING TO IMPROVE STAFF KNOWLEDGE AND CONFIDENCE

PREETHA KAMATH, VIVIEN LEE JIE QI, LIM KIAN CHONG

- SAFETY
- PRODUCTIVITY
- QUALITY
- COST
- PATIENT EXPERIENCE

## Problem, Aim

### Problem/Opportunity for Improvement

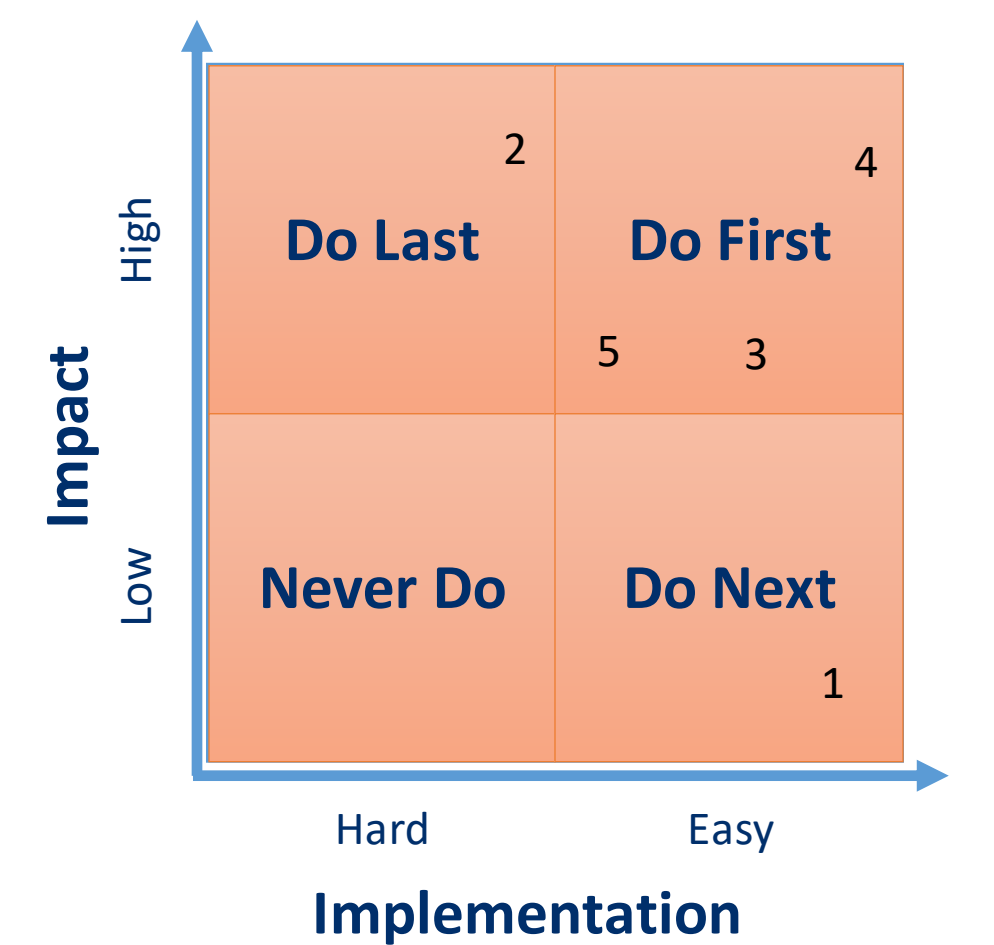
Intensive care physiotherapy is an advanced practice area that is not covered in undergraduate curriculum. Physiotherapists are rostered to cover critical care unit during on call/weekend duties. In particular, newly joined and non-ICU working Physiotherapists, unfamiliar with the ICU environment, tend to face a lot of anxiety leading to their duties.

### Aim

The aim of this quality improvement project is to improve the knowledge and confidence levels of newly joined physiotherapists covering critical care unit to at least a score of 3/5 in 8 months.

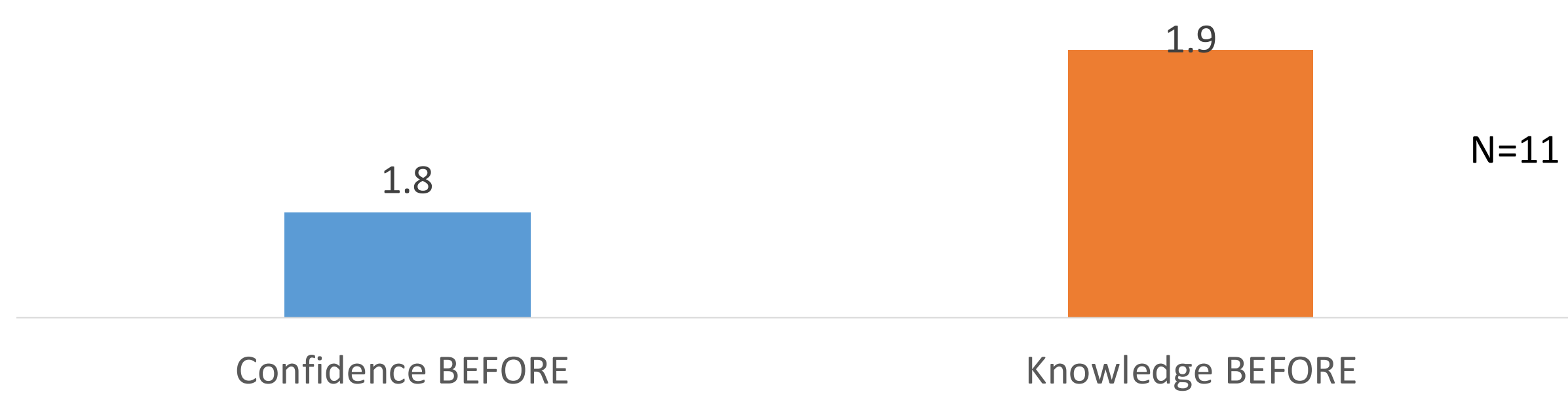
## Select Changes

ROOT CAUSE	POSSIBLE SOLUTIONS (PS)
Lack of ICU experience in seeing patients	1. Create supportive environment for them to ask questions
	2. Create opportunity to shadow experienced ICU Physiotherapist and learn from their expertise
	3. Encourage them to participate in decision-making
	4. Provide regular feedback and support
Lack of equipment training	5. Provide training of ICU equipment



## Establish Measures

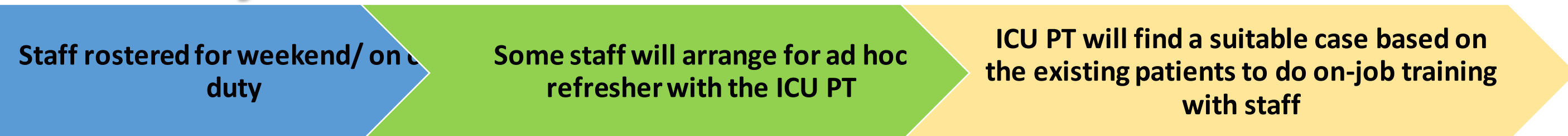
Staff self-rated confidence and knowledge scores  
(0 for low confidence or knowledge; 5 for high confidence and excellent knowledge)



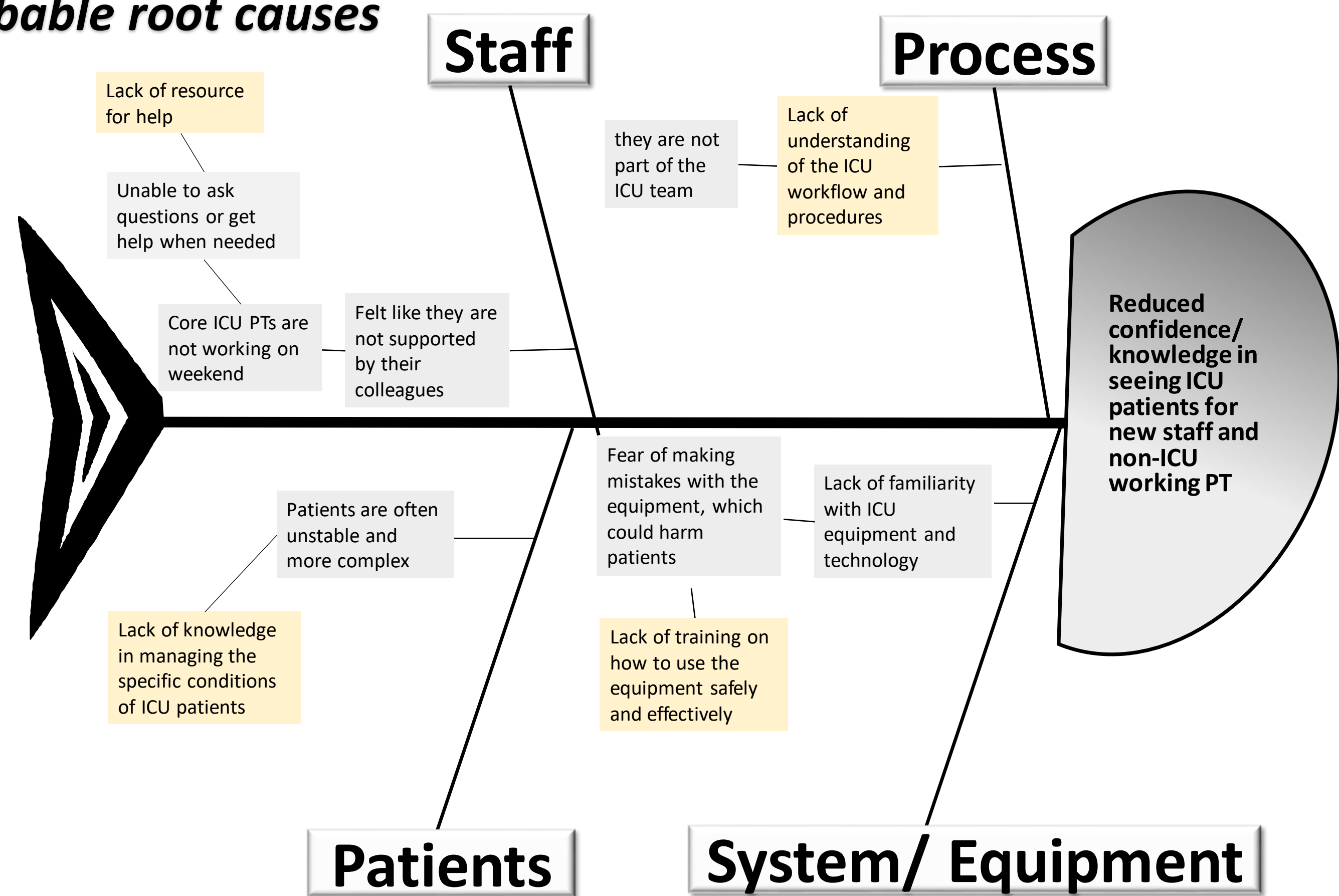
Average: 2 out of 5 for both self-rated confidence and knowledge

## Analyse Problem

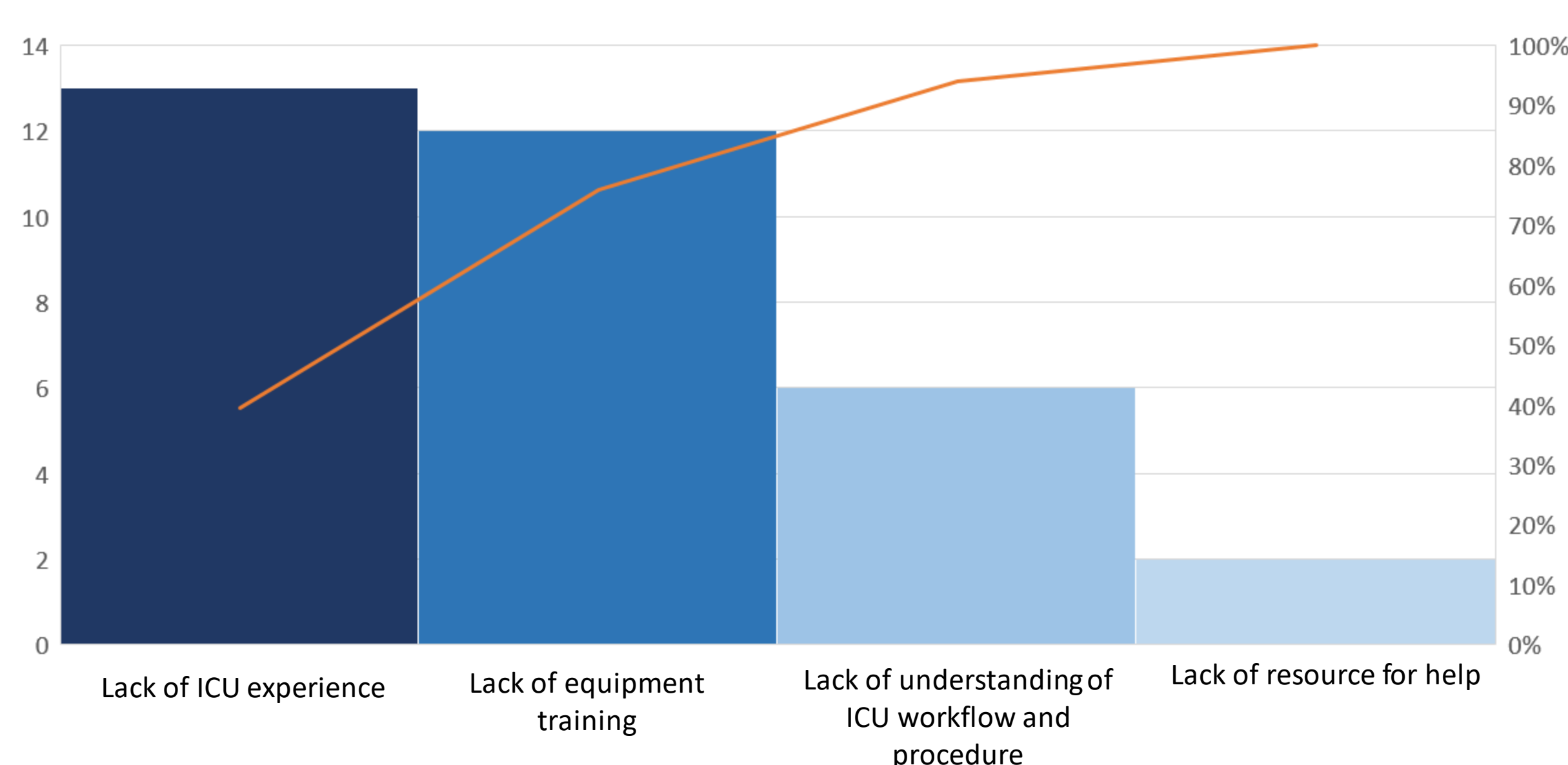
### Process before interventions



### Probable root causes



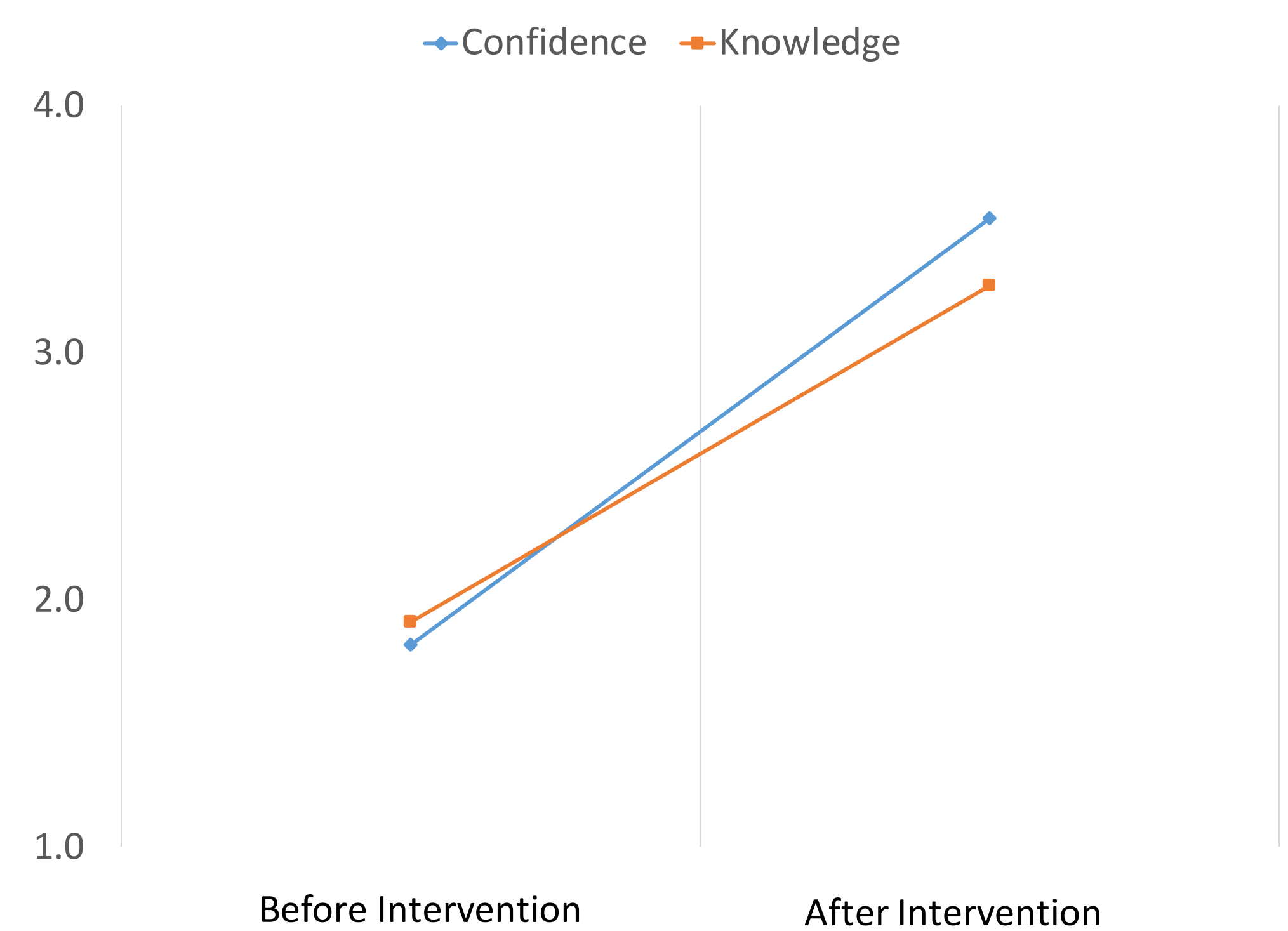
### Pareto Chart



## Test & Implement Changes

CYCLE	PLAN	DO	STUDY	ACT
1	Simulation training with ICU set-up at simulation centre, followed by case practice with feedback (PS 1, 3, 4, 5)	October 2022 1. Use of manikin with ETT set up to conduct suctioning practice first 2. See a real intubated ICU patient under supervision	Feedback collected: - Not enough intubated cases - Asked for reading materials and guidelines	<b>ADOPT</b> - staff are grouped or paired up. - Split into 2 x 1hr session on separate days - If intubated cases are not available, additional training session was arranged. - Staff can Tigertext ICU PTs for support.
2	Training of ICU equipment (PS 5)	November 2022 Introduce reading materials and photos of equipment.	Feedback collected: - Staff found it helpful to have a guide. - Staff requested for soft copy	<b>ADOPT</b> - Reading materials were printed for staff to see. - Pictures of machine shared on Tigertext

Average Knowledge and Confidence Score (taken from Oct 2022 – Jun 2023)



Confidence score improved from average of 1.8 to 3.5  
Knowledge score improved from average of 1.9 to 3.3

## Spread Changes, Learning Points

### What are/were the strategies to spread change after implementation?

- Planning of simulation training dates were done 3 months in advance.
- Reminding the rostered staff 3 months before their scheduled duty to attend simulation training.
- Encouraged staff to attend more than 1 training if they think they need it.

### What are the key learnings from this project?

- The use of a simulator and seeing actual patients are both beneficial in developing confidence.
- Reading materials enhance learning and allows for easy future reference.