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# In-situ Simulation: A Continuing Training & Education in Paediatric Resuscitation

Ang SLL, Lee SK, Lee AN, Aw Yong A, Kwek CP, Lim LN, Lim SJR  
Division of Nursing

Sam Koh, Annellee Camet  
Quality, Safety & Risk Management

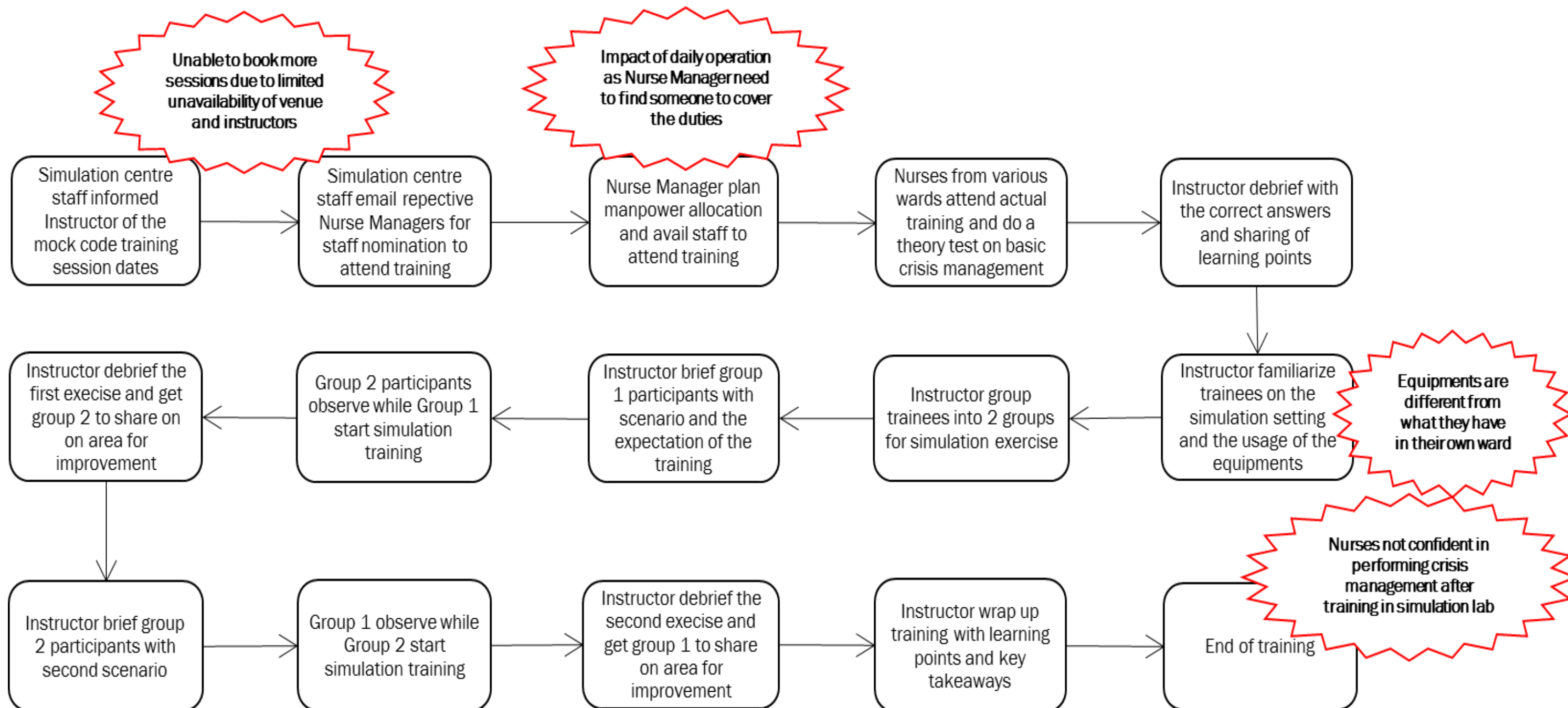


## Aims

Simulation trainings for Paediatric Resuscitation have been studied extensively and demonstrated its effectiveness in ensuring learning in a 'SAFE' environment.

In KKH, the mock code simulation is conducted off-site about 3 times a month for new Nurses and staff who needs refresher course. The current session can only accommodate maximum of 6 participants, with KKH having a total of more than 4000 nurses, it takes a long time for all the staff to be trained.

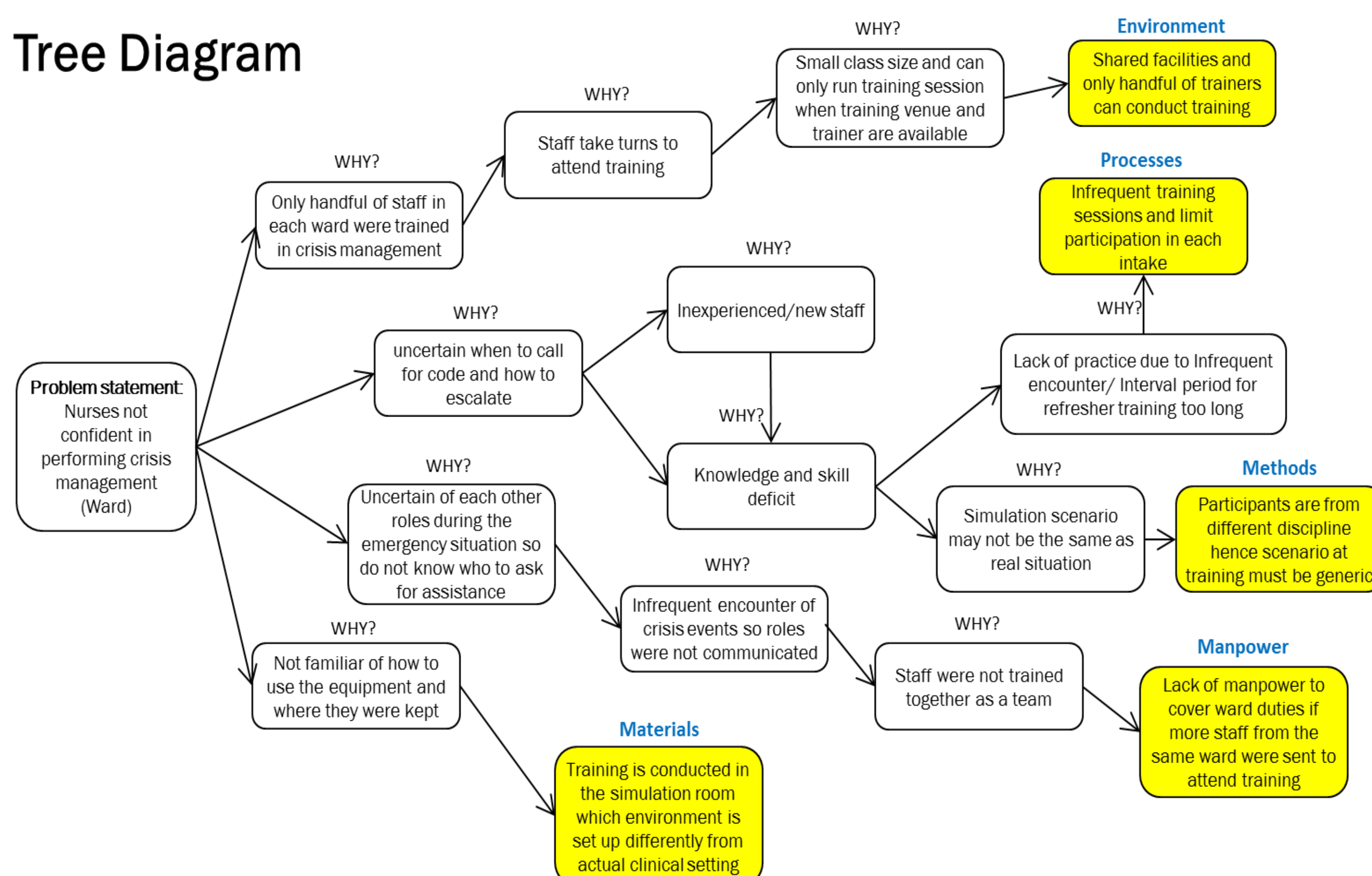
A workgroup was formed to look into opportunities to improve the current mock code simulation training process for nurses and also increase training opportunities and improve knowledge and skills in managing crisis in the clinical setting. A flow chart was used to mapped out and list down all the possible areas for improvement to enhance the current training process.



## Methodology

In order to find out the contributory factors, a Root Cause Analysis using 5-Whys was conducted to find out the reason of Nurses not confident in performing crisis management.

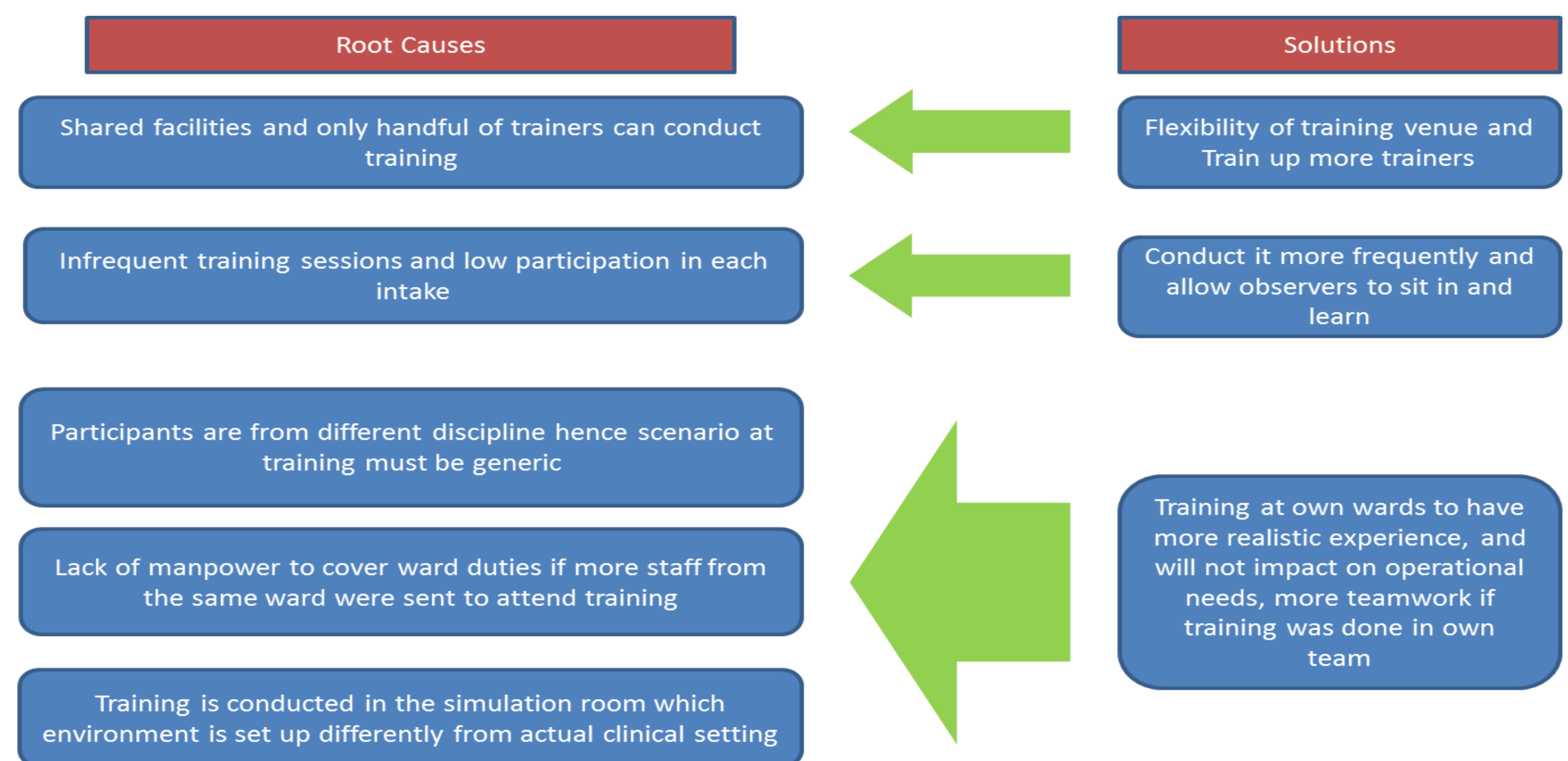
### Tree Diagram



There were 5 main contributing factors that the team has identified which were categorized into Environment, Processes, Methods, Manpower and Materials.

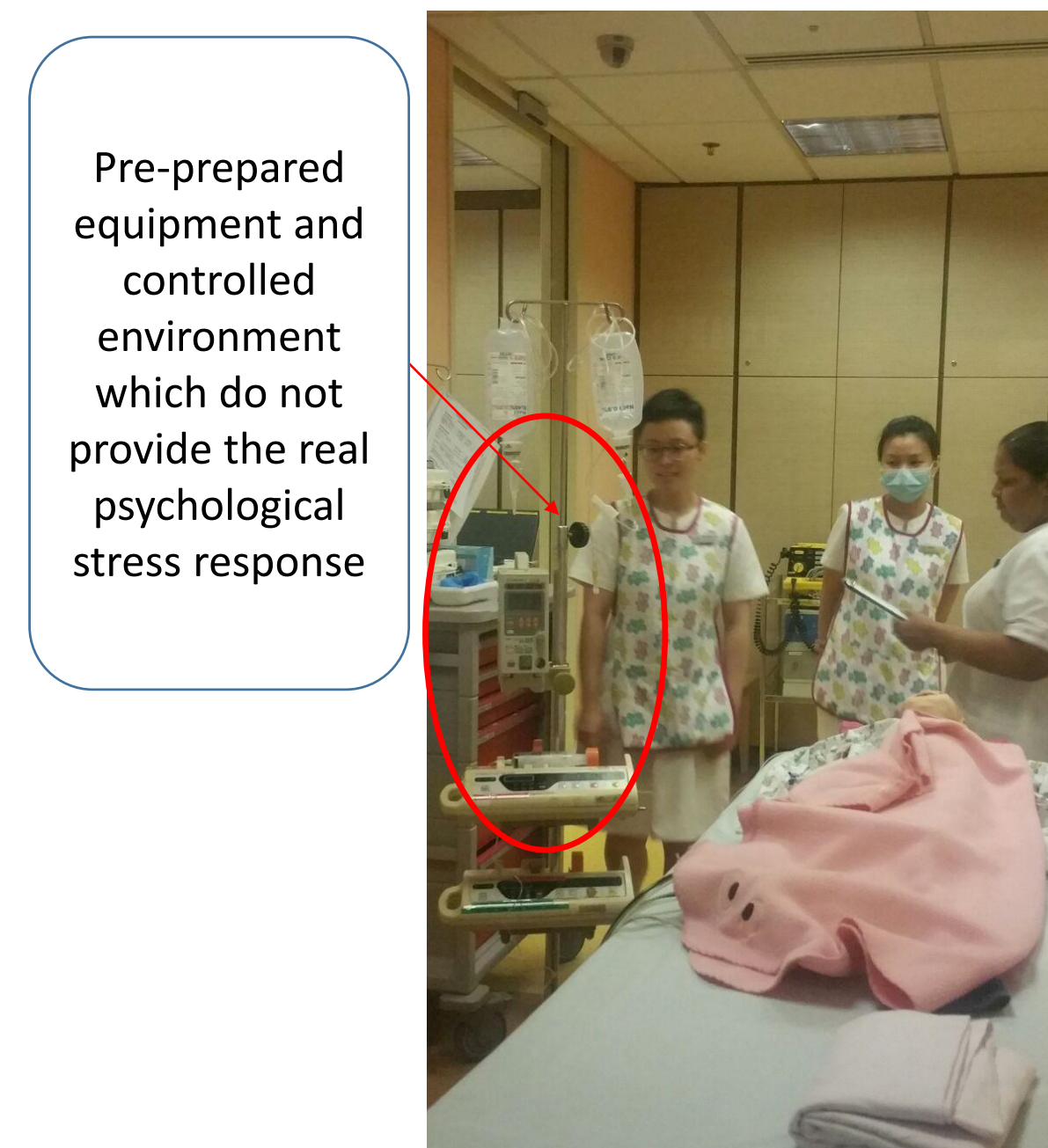
A quantitative questionnaires were sent to all participants to evaluate their knowledge on identifying a child with deteriorating condition and managing a crisis situation, the objective of this data collection is to ensure that by changing the current training process and increasing the frequency of training will not compromise the quality of the training.

## Solutions

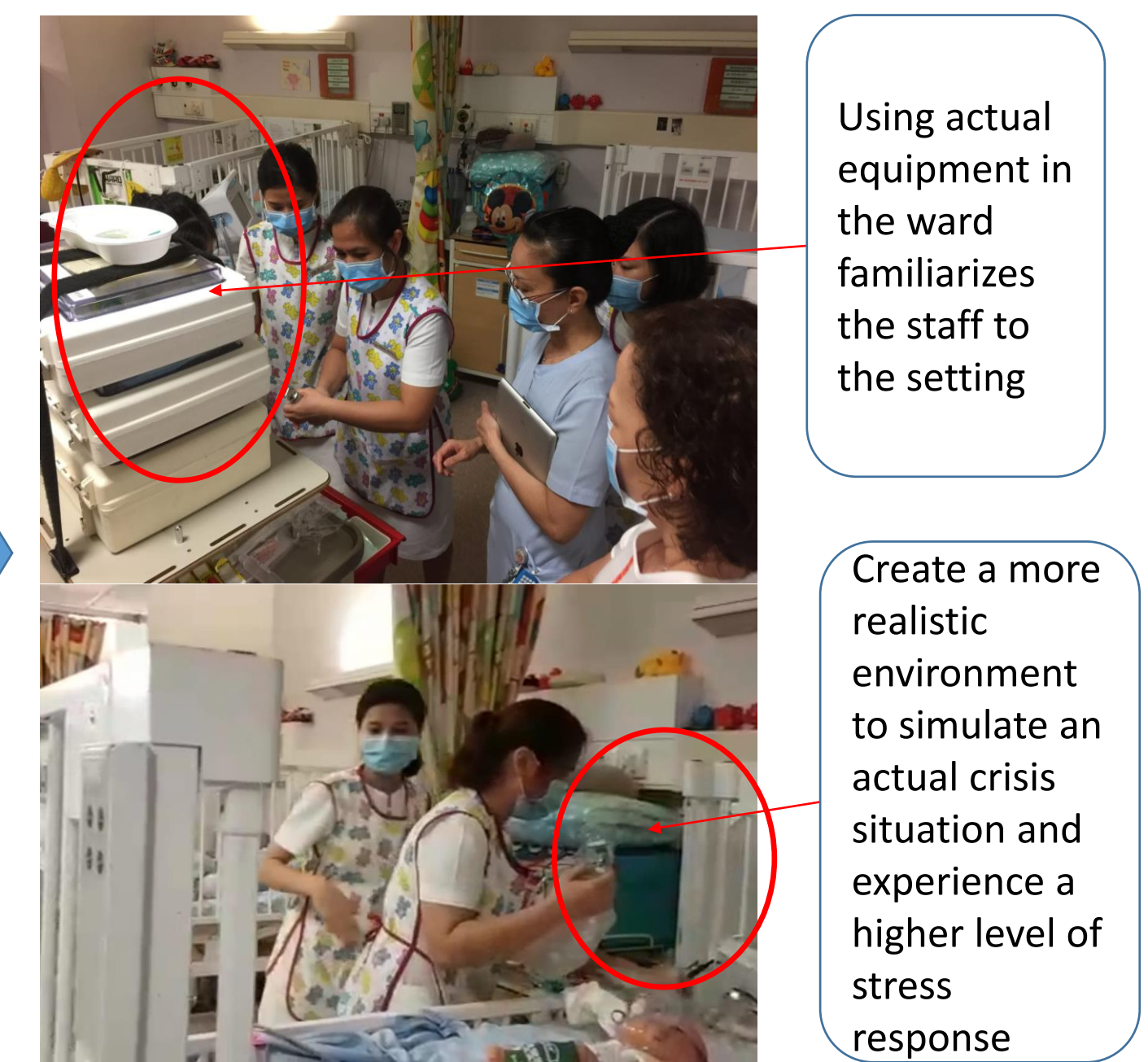


Our team has brainstormed various solutions to tackle on the root cause and found that in-situ simulation is one of best approach, in order to carry out this approach the workgroup has requested for representative from each wards to be trained as instructor.

### Mock Code Simulation in Simulation Centre

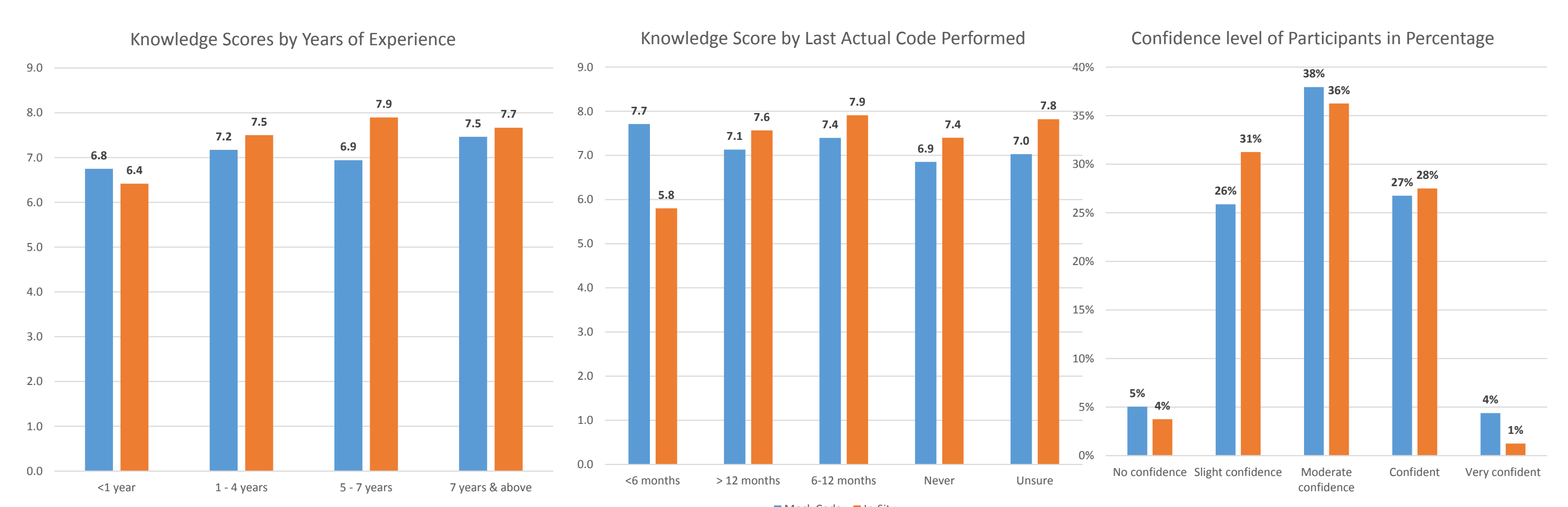


### In-situ Mock Code Simulation



The in-situ simulation training was conducted for the period of January to March 2018 and 82 nurses participated in the simulation training.

## Results



Based on the assessment results from 536 participants (456 Pre and 80 Post) the average knowledge scores (10 max) has been improved from 7.1 to 7.5 which is about 5.6% increased. The confidence level has an insignificant improvement of 1% and the feedback were they were not prepared for the in-situ mock code simulation hence they felt that they didn't do well on the simulation. Overall participation rate has also increased by 50% per month.

## Conclusion

Although the in-situ simulation training may not reflect a significant improvement to the Nurses' confidence level. However it has many advantages that includes: 1) presence of realistic simulation experience to the trainees in their respective area; 2) able to identify local system errors and latent threats; 3) improved teamwork and inter-professional communication; and 4) training can be conducted more frequently.