



# Kaizen approach towards to Improve Patient Safety in the Emergency Care setting at Colombo East Base Hospital, Sri Lanka



Clinical teams of ETU, Surgery, Medicine, Anesthesia and Laboratory of Colombo East Base Hospital, Sri Lanka

## Introduction and Justification

Emergency Care is an important component in the health system that anticipates challenging clinical and care environment.

Due to the challenging environment, emergency care setting is at high risk of potential errors and failures. Kaizen activities will be most beneficial to reduce such errors and improve overall quality of care. Prevention of errors in resuscitation, medication and investigations while minimizing Hospital Acquired Infections have been identified as key areas on improving patient safety in the emergency care setting.





## Project report

### Objective:

To improve patient safety in emergency care settings of CEBH through cost effective intervention in improving hand hygiene, reduce pre-analytical errors in lab investigations, reduce medication errors and improve standard of life support in emergency.

**Study period:** 06 months from June 2017-December 2018

### Intervention:

<p><b>A</b></p> <p><b>Improve hand Hygiene compliance</b></p>  <p>Fixing the hand rub and mackintosh at each bed side and Disinfectant, transparent reusable polythene hand towel to prevent contamination</p>	<p><b>B</b></p> <p><b>Resus Team to improve preparedness and reduce delays</b></p> <p>A resuscitation team with defined role when a cardiac event occurs has been developed</p> 	<p><b>C</b></p> <p><b>Readily displayed Infusion rates and details for emergency medicines</b></p>  <p>Drug name, per kilogram dose, diluent and infusion rate</p>	<p><b>D</b></p> <p><b>Special sample carrier to reduce preanalytical errors of sample dispatch and communications with the lab</b></p>  <p>Each patient's sample in separate cabin with requests forms</p>
---	---	--	---

## Discussion

### Intervention component A: Improve Hand Hygiene:

- Pre-intervention compliance rate: 40% Average in all staff categories, Post Intervention: 60-65% average in all staff categories. Reduce contamination of patient hand with blood during cannulation by 60%

### Intervention Component B: A 'Resus team' to reduce delays and improve preparedness

- Designated roles and awareness of the team has been shown reduce delays in starting resuscitation and improve team approach. Continuous Simulation based training is given to teams by a trainer team lead by consultant anesthetist.

### Readily displayed details of emergency infusion medicines

- Intervention has reduced the delays of time for calculation of doses and lapses in communication errors between ordering the dose and administering the drug. Has been disseminated to other clinical units.

### Special sample carrier to accommodate all samples appropriately in one cabin with the request form.

- Has reduced errors of missing request forms, spillage, soiling of labels, miscommunications with the lab. Currently in the process of measuring the outcomes and process effects.

## Conclusion and Way forward

Cost effective simple measures taken by the frontline staff have been shown to reduce errors in the process of managing patients in the emergency situations therefore improving patient safety in the clinical management context.

Identifying process lapses and collaborative team approach of different units involve in patient care will affect positively to sustain these initiatives.