

# Paediatric emergencies in General Practice-organisational change following Activity Theory analysis of an in-situ study

Dr Sarah O'Hare, Professor Gerard Gormley, Dr Richard Conn  
Sarahmary.ohare@qub.ac.uk

## Introduction

The ability of staff in General Practice (GP) to collaborate effectively as a team and provide emergency care is an expected competency; but attaining such proficiency is difficult, emergencies do not happen frequently enough for staff to gain and maintain such competencies. Previous research using in-situ simulation (ISS) to train for GP emergencies has been limited by outcome measures such as improved confidence. GP is a complex environment; Cultural historical activity theory (CHAT) is useful as a methodological framework for the vital task of studying practice-based learning in complex learning environments. We introduced a longitudinal programme of ISS and applied the theoretical perspective lens of CHAT to an ethnographic observation of a microcycle of 'SimLab' to help our understanding of simulation and emergency processes in GP.

## Methods

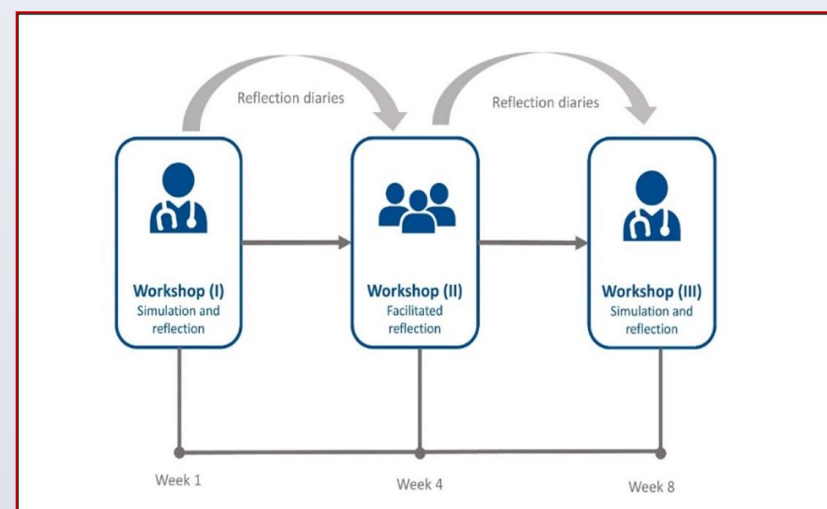


Figure 1: Multidisciplinary ISS programme with scheme of data collection points.

### Workshop 1

The team took part in a paediatric emergency simulation followed by a team discussion, video-footage of the simulation was used as a 'mirror' data, the team discussed best practice of managing such a clinical emergency.

### Workshop 2

An in depth facilitated reflection and discussion guided by the key elements CHAT. Participants were asked to consider adaptations to the practice that would best prepare for such emergencies.

### Workshop 3

The team participated in a new paediatric emergency simulation followed by a debrief exercise through a process of reflection, negotiation and reconceptualization of the activity system of managing emergencies. The team observed if the changed implemented had an impact on the organisational preparedness.

## Data Collection

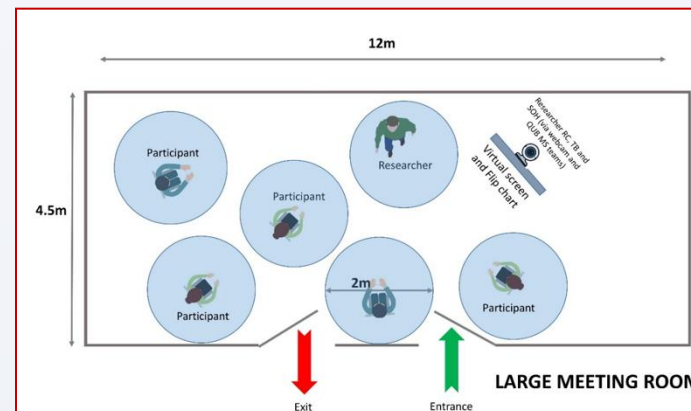


Figure 2: Layout of the reception and treatment room used in the study



Figure 3: Reflection diaries used in the study

A large meeting room was set up to conduct interviews with participants, this included 2 dictaphones, and a screen to replay the video footage from the simulation exercise. [Figure 2]. The video-footage of the simulation was used as a 'mediating tool' to encourage reflection and participants were provided with a visual summary of the recognised best practice of managing such a clinical emergency. Through facilitation, researchers will explore identifying disruptions in the process of managing such emergencies. A rich data set obtained included reflection diaries (Figure 3), reflection wall notes and audio recordings of the group discussions.

## Data Analysis

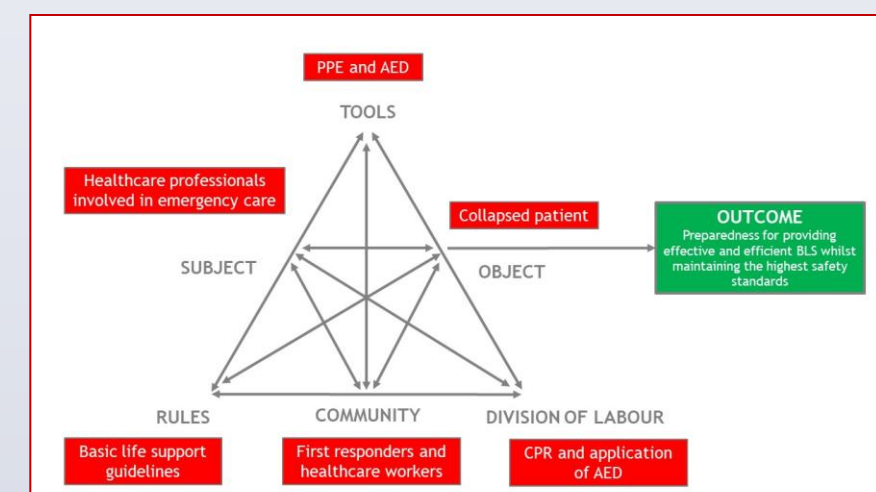


Figure 4: Diagram illustrating the elements of the activity system of emergency care in General Practice

CHAT provides a framework to understand how individuals and systems elements come together in work activities (1). We used CHAT to enable participants to reflect on the simulated paediatric emergencies, identifying problems and developing novel solutions using a systems level view of need to change and enable organisational transformation. Using CHAT, we analysed transcriptions of these discussions and follow-up interviews.

## New work practices

Staff introduced a number of new work practices following their discussions:

### New rules

- All staff are orientated to the location and contents of the emergency trolley; this is repeated on a regular basis.
- Practice policies were updated, the pharmacist would overview the upkeep and maintenance of the emergency drugs stock and nursing staff overview the upkeep of emergency equipment.
- Following an emergency, all members of the team should be afforded the time to debrief about the event.

### New divisions of labour

- Pharmacist provide assistance during emergencies, especially with regard the administration of medication.
- Administrative team had their roles more defined e.g. providing essential communication and liaising with carers.

## New work practices

### Construction of new tools

Development of grab bags and emergency trolley (figure 5 and 6).



Figure 5- Image of newly developed emergency trolley  
Figure 6- Image of newly developed grab bags

## Consolidation and generalization of the new model

A follow up interview two months later observed that many elements of their newly modelled systems had become stable in their organisational structures. Overwhelmingly, their transformed system was considered an enhancement on previous practice.

### Improved emergency preparedness

A staff member reported: "I think there has probably been an increase in our confidence and our readiness to deal with something like that paediatric emergencies."

### Enhanced team working

A staff member noted "I just think we are more of a team now; it is not just like it's the doctors, it's the pharmacists, it's the nurses, we are all one big team." The team worked collectively together with shared input to the organisational changes required.

### Regular simulation training

The practice will implement regular simulation training to refine and adjust as a team.

## Discussion

This study provides proof of concept that CHAT can guide ISS to support primary care organisational preparedness for emergencies with strong potential to translate to real world practice.

## References

1. Hashim N, Jones M. Activity Theory: A framework for qualitative analysis. Faculty of Commerce - Papers. 2014