Quality Improvement and Patient Safety

1555 TARGETED LEARNING THROUGH PAEDIATRIC SIMULATION
Emma Elizabeth Spencer, Jennifer Shepherd. Sherwood Forest Hospitals NHS Trust
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Background Simulation is regularly run with the paediatric multi-disciplinary team at a district general hospital. This facilitates learning on an individual and team level, while improving processes of patient care in a safe environment. In this quality improvement project themes were noted in simulation involving paediatric resuscitation, therefore targeted interventions were put in place to make improvements.

Objectives Intervention One:
Covid-19 has altered healthcare professionals approach to patient contact through the use of personal protective equipment (PPE) to ensure infection control. The Advanced Life Support Group endorsed guidance that in emergencies the patient should be assumed to have Covid-19 and full PPE should be used by responders. In paediatrics breathing support is essential; therefore unplanned simulation was run with staff to practice this skill while maintaining the safe use of PPE.

Intervention Two:
In simulated cardiac arrest the time taken to administer the first Adrenaline dose was over 13 minutes. Delays in administering Adrenaline in paediatric, in-hospital cardiac arrest with a non-shockable rhythm is associated with decreased survival, ROSC and survival with a favourable neurological outcome.

‘The Arrest to Adrenaline Race’ was launched with the aim to decrease the time taken to administer Adrenaline; so that in a real life scenario the patient would have the best chance of survival.

Methods

Intervention One:
In simulation it took 156 seconds until the patient was first bagged after responders correctly donned PPE, which would have a detrimental impact to successful resuscitation. ‘The Amber Bagging Race’ was launched where teams of healthcare professionals practiced the procedure in a race scenario; from recognition of a deteriorated patient, to the correct use of PPE and then successful bagging.

Intervention Two:
Healthcare professionals engaged in race scenarios with a manikin, where they timed the process taken from recognition of an arrested patient, initiating resuscitation, obtaining interosseous access and administering Adrenaline at the correct prescribed dose for weight.

Results

Over two weeks thirteen teams participated and the average time to bag was reduced to 56 seconds in week one and 41 seconds in week two. In a second unplanned paediatric resuscitation following ‘The Amber Bagging Race’ the time taken to bag the patient was 46 seconds; a significant improvement in clinical practice.

Intervention Two:
Over two weeks fourteen teams participated and the average time taken to administer Adrenaline reduced to 324 seconds in week one and 138 seconds in week two. In further simulation scenarios following ‘The Arrest to Adrenaline Race’ the time taken to administer Adrenaline averaged 5 minutes and 23 seconds.

Conclusions Conclusion:
Simulation identified key areas for improvement in paediatric resuscitation and targeted interventions enabled specific practice of skills, with the aim to improve patient care in a real life scenario. Learning was disseminated to the wider team and processes were altered to further improvements in patient safety. The races brought an atmosphere of fun to the ward, improving engagement and morale. People are often fearful of simulation; an environment of fun rather than fear is conducive to more effective learning.

British Society for Paediatric Dermatology

1559 ROLES OF EARLY-LIFE SKIN MICROBIOTA ON NATURAL COURSE OF INFANTILE ECZEMA
Yehao Chen, Jiaying Xi, Yuying Song, Kate Ching-Ching Chan, Agnes Sze-Yin Leung, Apple Chung-Man Yeung, Brian Hei-Long Tung, Wing Hung Tam, Zigui Chen, Paul Kay-Shueun Chan, Ting Fan Leung. The Chinese University of Hong Kong; Department of Paediatrics, The Chinese University of Hong Kong; Department of Microbiology, The Chinese University of Hong Kong; Department of Obstetrics and Gynaecology, The Chinese University of Hong Kong

Background Eczema is a common skin inflammatory disease during infancy. Most paediatric patients develop eczema within 6 months of age, but the severity and persistence vary. While infantile eczema in most cases could improve or get resolved with age, some children may follow a relapsing and persistent...