junior to senior, and took turns directing the care of the patient sequentially. Slides showed clinical images such as bedside monitoring, blood gases and laboratory blood results. The scenario was proactively facilitated by the host as the clinical reasoning and management became more complex.

Results Overall, virtual simulation was very well received in a time when learning has become much more accessible but also more didactic. Our feedback questionnaire from 12 remote learners showed they both enjoyed and engaged with the scenarios, and particular highlights included capturing the sense and pressure of an emergency in methods 1 and 3, passing team leadership on as a baton in method 3, but also the anonymity and group interactivity of method 2. All scenarios benefitted from debrief in the traditional manner.

Conclusions We believe that virtual simulation has a role in the current healthcare environment, and is both possible and educationally valuable, with many different strengths that can be combined for a blended learning environment.

British Society of Paediatric Endocrinology and Diabetes

677 CUTANEOUS REACTIONS TO GLUCOSE SENSORS: A STICKY PROBLEM

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Background Glucose sensors (GS) are increasingly used in children and young people (CYP) with Type 1 diabetes. Improved outcome has been associated with their use. However since their introduction, cutaneous reactions have been reported. Both irritant and allergic contact dermatitis (ACD) can be caused by constituents of these devices. Manufacturers are not under any legal obligation to disclose the constituents of the sensor. This makes identification of the allergen by patch test challenging and selection of an alternative device difficult.

Since the introduction of these devices in our paediatric diabetes service, we have seen an increasing number of these reactions. All cases are reported to Medicines and Health Regulatory Agency (MHRA) and referred to the Paediatric dermatologist. The relevant manufacturer is contacted to seek details of the constituents. This information has not been forthcoming.

Objectives The purpose of this study was to review our local experience of contact dermatitis and determine if our experience was reflected nationally and whether all teams were reporting cases to the MHRA and referring to dermatologists for investigation.

Methods We reviewed all cases in our service to determine incidence with each device and the results of patch testing if done. In June 2020, we carried out a survey to paediatric diabetes and dermatology teams in England to determine the number of cases of contact dermatitis seen, the devices involved and whether MHRA reporting and referral to dermatology for investigation was routine practice.

Results By 2019, in our service, 12.5% of Dexcom G5 users had experienced a skin reaction, 0% of Dexcom G6, 30% of Medtronic and 3.5% of Free Style Libre (FSL). Since 2019, the FSL formulation has been IBOA free and we have seen no further reactions. Dexcom G6 had a new formulation in

2019 which is IBOA free. Since 2020, we have noticed reactions in 6/55 (10.9%) of our patients. Dexcom has not disclosed the potential allergens in this new formulation, hindering further investigation.

From the national survey, we received responses from 61 out of 173 teams giving data on 10487 CYP. GS were used in 61%(6419). 5% (320) had developed a skin reaction likely to be contact dermatitis. The GS implicated were Dexcom G6 (5% of its users), G5 (7.4%), Medtronic Enlite Sensor(15%), Medtronic Guardian Sensor 3(8.8%),and Freestyle libre (3.7%). Only 5 teams had reported the reaction to MHRA via the Yellow Alert scheme and only 6 teams had referred to dermatology for further investigation and management.

Conclusions Our survey confirmed the problem is widespread, with under reporting of these cases in England to the MHRA. Dermatology referral is often not sought. It is essential that all cases are reported to raise awareness of this problem which is impacting the care of children with Type 1 diabetes. Working closely with dermatology team can help to find ways to manage these patients. Manufacturers must be more transparent in their labelling and modify their formulation if an increased rate of reaction occurs.

British Academy of Childhood Disability

678 BODY SHAPES DON'T DEFINE A PATIENT, SO WHY DOES IT AFFECT BASIC LIFE SUPPORT? AN IN-SITU SIMULATION SCENARIO ON CHOKING FOR A CHILD WITH AN ALTERED BODY SHAPE

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Background A recent article published in *Nursing Children and Young People* outlined how basic life support needs to be adapted for children with altered body shapes (Thomas, 2020). Paediatric basic life support (BLS) courses do not include information on how algorithms, such as choking or chest compressions, can be amended for patients with anatomical deformities to ensure that high quality basic life support can still be delivered.

Objectives The main focus of this simulation was to understand that children with altered body shapes and complex medical needs may not tolerate standard back blows or abdominal thrusts, and how to amend both of these techniques in such instances.

Methods We developed an in situ simulation case, whereby a 10 year old child with spastic quadriplegia and scoliosis presents in our paediatric assessment unit with respiratory distress. As the medical team begin to assess the patient, he vomits and then starts choking. Candidates are expected to recruit help by pulling the bedside alarm, and then begin using the choking algorithm to attempt to dislodge the obstruction.

We used a Diamond Debrief model to debrief candidates and used written feedback, in the form of free text responses and rating scales, to ascertain if the candidates found the session beneficial to their learning.

Results There were 7 candidates ranging from a trainee nurse practitioner, junior doctors in training and clinical fellows. The average confidence in dealing with this scenario increased from 2.5 to 4.2 (whereby 1 denotes very low confidence and 5 represents very high confidence). Every candidate