Aims Medical simulation is a well-recognised tool in reducing anxiety and improving clinical confidence and competence in medical students (1). During the coronavirus pandemic a large proportion of medical students studied virtually with >23.5% of students studying online for >15 hours a week (2), reducing clinical exposure. We appreciate that this may affect confidence in clinical assessment. Studies have shown repeated exposure to simulation is important in building and retaining confidence in medical students (3). We developed a robust simulation programme at a children’s teaching hospital for 20 fourth year undergraduate medical students from one higher education institution, aiming to establish whether simulation could improve students’ confidence in assessing an unwell child.

Methods A seven week programme was developed providing students up to four simulation sessions in total. All students acted as both participants and active observers. We surveyed 20 students on their confidence in assessing a child before and after the implementation of the programme, running alongside their paediatric rotation. The students divided their roles as junior doctors, nurses, and healthcare assistants. We discussed these roles in detail so they could appreciate the interprofessional involvement in such scenarios.

Each scenario involved an introduction to simulation, introduction to the equipment, a pre-brief of the scenario and proposed methods of management, a ten minute acute paediatric scenario, and a debrief as per the diamond debrief model (figure 1).

Scenarios covered included bronchiolitis, sepsis, acute asthma, and anaphylaxis; providing a range of acute paediatrics. APLS guidelines, the BNFC, and local protocols were available; as well as senior support if called. All teachers were trained in simulation teaching and debriefing.

We collected qualitative and quantitative feedback through anonymous surveys. Of note, for 89% of students this programme was their first experience of paediatric simulation. Given the limited exposure of the students to simulation, the first session had a dedicated 10 minute talk on the concepts of simulation including the ‘suspension of disbelief’.

Results Initially, students felt ‘scared’, ‘stressed’, ‘anxious’ and ‘inexperienced’ about assessing a sick child and ‘intimidated’, ‘terrified’ and ‘nervous’ about simulation.

Following the programme (see figure 2):

- 65% of students felt ‘somewhat confident’ in examining children.
- 94.7% of students feel that simulating acute scenarios will benefit their practice.
- 90% of students felt more confident about future simulation.

Students appreciated the opportunity to ‘practice making decisions’. One student commented that this is ‘hard to come by on wards as you’re often just observing rather than assessing’.

Conclusion This seven-week paediatric simulation programme improved student confidence in examining and assessing an unwell child, in addition to improving confidence for future simulation. Alanazi et al proposed five best practice measures of simulation in education: study design, debriefing, integration of interprofessional education values, outcome measures, and student satisfaction. All were practised in this programme. Through ensuring a psychologically safe workspace, with appropriate resources and trained teachers, we believe we have created a non-intimidating and encouraging simulation environment. We look to provide virtual alternatives such as online video based interactive simulation should social distancing affect simulation teaching further.