Resilient practical assessment—Looking forward following a sociomaterial case study of a disrupted high stakes clinical assessment held during the COVID-19 pandemic.

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Introduction
Practical skills assessment is prevalent in many degree programmes, particularly those associated with healthcare education. The COVID-19 pandemic severely disrupted assessment due to social distancing restrictions, maximum room occupancy and movement around spaces rules. In addition, within healthcare, simulated patients were not able to be used in assessments. In this study, using a sociomaterial perspective, we aimed to explore the factors pertaining to a disrupted undergraduate medicine high-stakes Objective Structured Clinical Examination (OSCE). Study findings elicited important themes around building a resilient assessment system. These findings will enable educators and assessment coordinators to consider how to develop resilient assessment processes going forward.

Sociomateriality
Sociomateriality considers that all things, human and non-human are equal in terms of agency in that the thing under study can affect and be affected by other things. For example in the OSCE rooms, spaces, equipment, actors, students, ipads, checklists, blueprints can all exert actions.

The OSCE format
The OSCE is a circuit where students complete various timed tasks (e.g. history taking, clinical examination) within a station before moving onto the next station. All students complete all stations on a site. The exam will be conducted simultaneously on multiple sites either in the same building or at another location. There will usually be a student, examiner & patient/mannequin in each station. [Figure 1]. In 2021, for the first time & due to the pandemic half the exam was also completed on an iPAD with free text questions held in a lecture hall.

Methods
Qualitative Case study1 of final year OSCE held during COVID19 pandemic. • Documentary evidence (field notes, floor plans, paperwork). • Photographic evidence of OSCE. • Semi-structured interviews (including photoelicitation) of purposively sampled “under represented” voices (e.g. technicians, building manager, OSCE coordinator) within practical assessment organisation. • Thematically analysed using sociomaterial framework on the background of COVID19 acting as a “magnifier” which identified issues of importance.

Results
Six semi-structured interviews lasting a total of 264 minutes were conducted, transcribed and analysed alongside documentary evidence & 32 digital images from the exam setup using qualitative methodologies. Key themes relating to assessment resilience were evident at both the planning stages and when looking towards the future especially with increasing student numbers being present for practical assessment.

-“The OSCE can be framed as a sociomaterial assemblage where human and material components are meshed together producing multiple effects”

-“Moving to video conferencing/paired logistical challenges so we built in extra time during the OSCE itself”

-“I purposefully built in extra time in case we had to re-insert a student due to technical failure.”

-“So normally our university machines [computers] time out after an hour. So we had to have IT come and turn off all the timeouts on the televisions and the AV equipment because it does timeout normally, so that was a bit of a concern.”

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-“Moving over two floors has its challenges because especially if mannequins are needed, they’re stored on the 1st floor, so if they’re needed upstairs, we always have to take up spares.”

-“The app crashed. I predicted that this might be a problem so I had created a backup system to use with a different password and [when this happened] I was able to log on and get the student up to the right place”

-“But we’ve always got a member of staff trained in each of the scenarios, it’s the same if they were in person and patient fall ill, we can’t always put the patient in, and so we’ve got a member of staff who can step in for a minute or three until we sort it out.”

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Conclusion
Learning from a sociomaterial case study of a ‘disrupted’ OSCE can help make future OSCEs more resilient as we understand the complex sociomaterial entanglements present in practical skills assessments. Multiple data types within this case study methodology illuminated different issues and aspects which would not have been identified by interviews alone.