Title
The Virtual Toddler: A comparison of blended learning using a virtual simulated patient, eLearning, and traditional didactic teaching of paediatric development to undergraduate medical students.

Authors
Dr Emma Keeling, Imperial College London
Dr Elinor Gunning, Imperial College London
Dr Senita Mountjoy, Imperial College London
Edward Meinert, Imperial College London
Taylor Bennie, Imperial College London
Dr Emma Metters, Imperial College London
Dr Sonia Kumar, Imperial College London

Background
Paediatric child development is a key component of undergraduate and postgraduate Paediatric curricula. Traditionally, as at our institution, this is taught didactically with additional limited opportunities for paediatric development clinic attendance.

The literature suggests that learning this skill is best facilitated through experiential learning (1), and students consistently perceive child-student interactions as most useful. However, ethical and practical issues limit this as a tool for providing consistent, regular teaching (1). As student numbers increase, this problem intensifies.

We have developed a novel session which simulates a child developmental assessment using facilitated group eLearning: a blended learning approach. We have built upon previous ideas (2), incorporating reflexivity so that students lead examination of a virtual simulated patient (VSP). Blended learning has been shown to improve medical student newborn examination skills (3), but evaluation of virtual patients and blended learning to teach paediatric clinical skills is limited in the literature.

Methods
Year 5 Paediatric students all attend a lecture on child development. Students are then assigned to 3 groups, depending upon their student-selected module choice. Group 1 attend the VSP session. Group 2 independently complete the session online. Group 3 students only attend the lecture.

Attitudes and satisfaction of group 1 will be evaluated via a post-session questionnaire. Knowledge and skills for all groups will be assessed via the module mock-exam.
Results

Comparisons will be made between the:

- Mock-exam results of each group.
- Cost-effectiveness of each approach
- Qualitative assessment will be made of attitudes and satisfaction from the questionnaire results

We will describe our session and informal student feedback.

Discussion

Our novel approach blends eLearning and small-group facilitated teaching within a session.

Virtual simulated patients and blended learning may standardise learning experiences, increase access to child development cases, and could be generalizable to other areas of medical education.

References

