

INTRODUCING ELECTRONIC PRESCRIBING TO SIMULATION TEACHING IN UNDERGRADUATE MEDICAL EDUCATION

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INTRODUCTION

Electronic prescribing (e-prescribing) and medicines administration systems are being introduced to all NHS hospitals, and will replace outdated paper prescriptions. The NHS are committed to eliminate paper prescribing across the entire NHS by 2024¹.

The move from paper-based pharmacy records to electronic systems have been shown to reduce the risk of medical errors, eliminates transcription errors, standardised safe prescribing and save time².

We introduced e-prescribing to undergraduate medical education to provide final year medical students with an opportunity to experience electronic prescribing in a safe and controlled environment.

AIMS

- To establish if the addition of e-prescribing to a simulation session increased students' confidence in the scenario and in using the software.
- To establish if e-prescribing increased the fidelity of the simulation.
- To explore students' views around e-prescribing within simulation.

METHODS

The electronic prescribing simulation was trialed in 18 sessions, with 56 final year medical students. First an appropriate acute simulation scenario was created - this was a case of anaphylaxis, one of the core presentations for the final year medical students. This involved the students performing an ABCDE assessment followed by prescribing multiple medications and researching anaphylaxis guidelines. Following the session, Mentimeter was used to collect both qualitative and quantitative data, allowing students to anonymously give feedback via their mobile phones or tablet devices. Qualitative data was thematically analysed and triangulated with quantitative data. Quantitative data was also collected via Mentimeter and collated to create Figure 1.

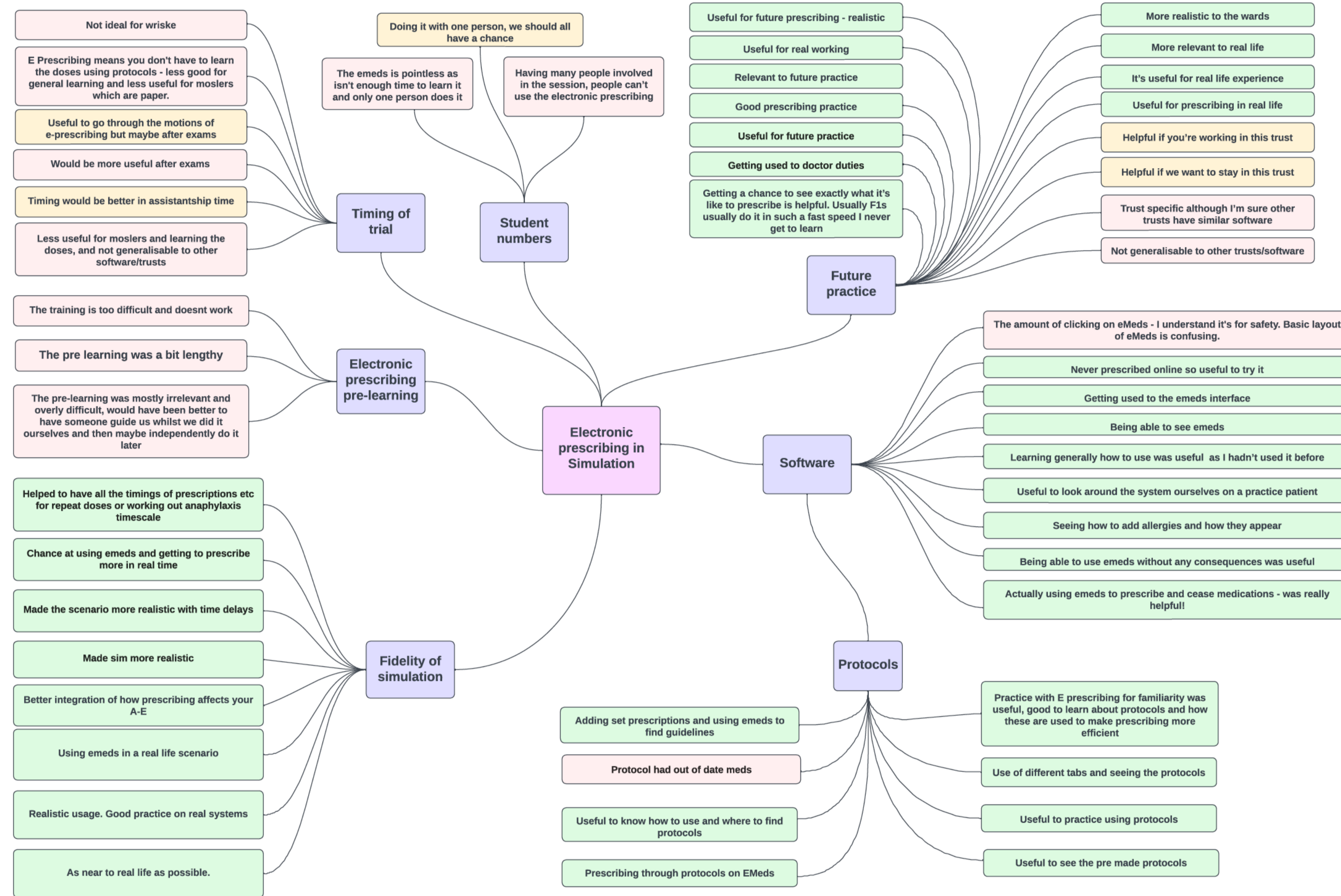


Figure 2: Thematic map of qualitative results, produced in LucidApp. Positive comments in green, negative in red and neutral in orange.

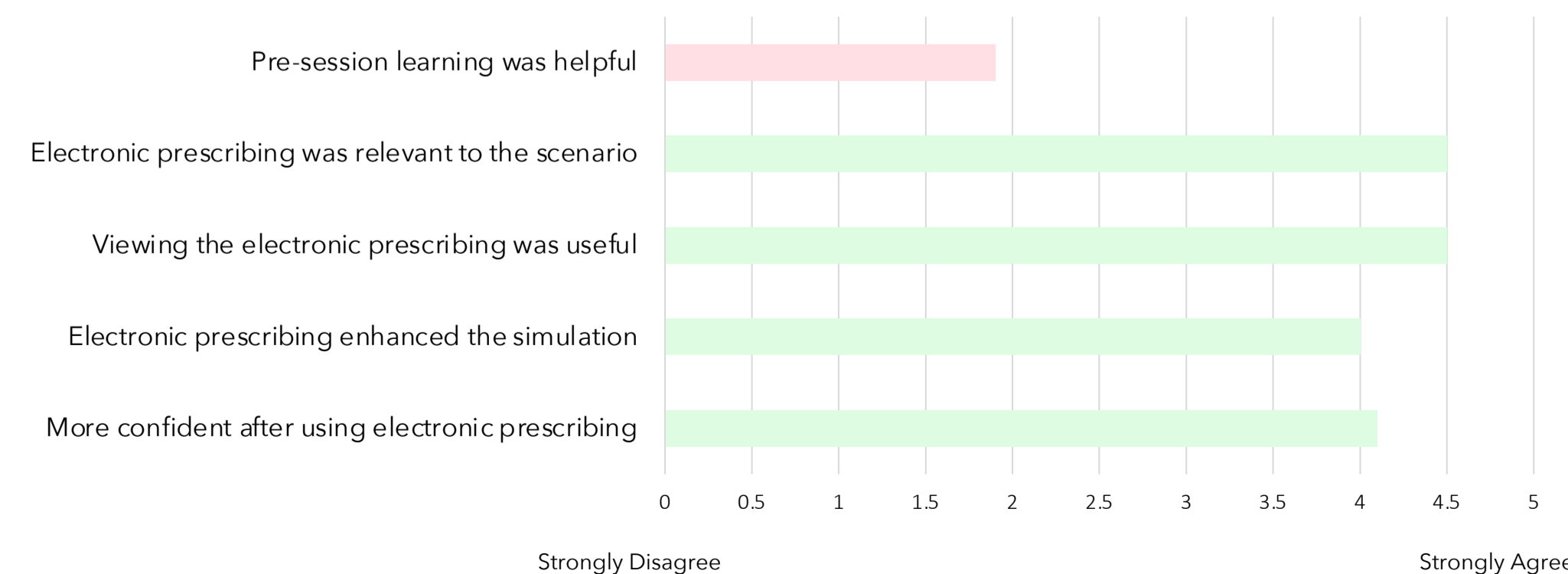


Figure 1: Bar chart showing results from Likert scales used to assess quantitative results.

QUANTITATIVE RESULTS

Likert scales were used in the collection of quantitative data, with 1 being strongly disagree and 5 being strongly agree. Of 41 responses, the average score for the statement 'I found the pre-session learning helpful' was 1.9. The relevance of e-prescribing and usefulness of viewing both scored 4.5, with 51 and 53 responses respectively, and enhancing the simulation experience scored 4.0, with 54 responses. The quantitative results are shown in Figure 1.

QUALITATIVE RESULTS

Qualitative results were thematically analysed, as shown in the map in Figure 2. The main theme for improvement was the pre-session training, which responders found difficult, time consuming and felt did not add to the simulation. The positive themes were that students felt it improved the fidelity of the simulation and felt electronic prescribing was useful for future practice. In general, students felt the software worked well, and appreciated the protocols within it, although some protocols needed updating in line with national guidance.

CONCLUSION

Both qualitative and quantitative results were positive, with comments indicating the use of electronic prescribing increased the fidelity of the simulation and made it more relevant to future practice. Although the electronic prescribing increased the fidelity, we did not directly assess whether this had improved overall learning. The e-prescribing pre-learning and the timing of the trial in relation to students' examinations were the main areas for improvement.

RECOMMENDATIONS

- The e-prescribing pre-learning was created by the software manufacturers and hence less clinically relevant. Creating our own pre-learning session would have been preferable and moving forwards is something which could easily be achieved.
- Introducing e-prescribing at an earlier stage of training and ensuring timing of the sessions does not distract from upcoming examinations where paper prescribing is still currently required.
- Creating further e-prescribing sessions both in acute simulation scenarios and other clinic type settings to ensure a greater number of medical students are offered this opportunity.
- In future, repeating a similar project with the focus being on whether e-prescribing increases overall learning.