Postgraduate medical education after COVID-19: reflections on decision-making and the state of UK medical Grand Rounds

INTRODUCTION

Postgraduate medical education will need to adapt in light of the healthcare and educational reset that the COVID-19 response has necessitated. The ongoing uncertainty of the pandemic, and the proliferation of data from many sources, used by many actors with different frames, has meant that the importance of unbiased decision-making is now central in pulling together a unified response.

As two aspiring academic clinicians in the UK with protected time to develop and explore ideas alongside our clinical training[1], we became curious about clinical decision-making. We initially examined decision-making from the lens of our research experiences of evaluating the rise of artificial intelligence (AI) algorithms in healthcare.[2] Our thesis was that their increasing use would profoundly affect how clinicians made decisions. As we began to unpack the existing literature of clinical decision-making, we focused on the current educational provision for clinicians in understanding what makes for good decisions—and the biases that may warp them.

We were surprised to uncover such a paucity of assessment and formal training in these areas—for instance, the terms 'clinical decision-making' and 'bias' appear only twice each in the UK's general internal medicine curriculum.[3] As a result, we designed an educational intervention in the form of a series of Grand Rounds with a TED-style presentation.[4] Our aim was to increase the awareness of biases that can affect decision-making among our peers, consultant colleagues and other allied health professionals.

Using our experiences of delivering the presentation 'Biases in clinical reasoning: *I'll think to that!*', we reflect on the wider implications for clinicians, not only in terms of the need for future educational interventions but also in terms of the format that they will need to take, and the increasing role of trainee agency in driving innovations that can have an impact on the healthcare systems that they train and work within.

METHODS

The steps in designing our pilot educational intervention have been described previously.[5] Between 14 February 2019 and 21 November 2019, Grand Rounds at 11 different NHS hospitals in London were delivered. The talk consisted of a 29-slide presentation—including a clinical case highlighting common cognitive biases[6–8]—and a subsequent open question-and-answer (Q&A) session. The numbers of attendees were manually counted by the authors, and an optional online, anonymous form was used to collect feedback.

RESULTS

A total of 366 people attended the Grand Rounds, representing a mix of students, trainees, consultants and other members of the multidisciplinary team (table 1). Of note, in 2019 no Grand Round had the facility to offer live streaming, video dial-in or recording of the lecture for later use.

82 of 366 attendees completed a short feedback form representing a 22% response rate. The cumulative results are outlined as follows:

1. What was your familiarity with cognitive biases BEFORE the talk on a 5-point scale ranging from 1 (very unfamiliar) to 5 (very familiar)? The mean response was 2.7 (SD 1.0).
2. What was your familiarity with cognitive biases AFTER the talk on a 5-point scale ranging from 1 (very unfamiliar) to 5 (very familiar)? The mean response was 4.2 (SD 0.7).
3. Should there be more teaching on this topic on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree)? The mean response was 4.5 (SD 0.7).

Table 1 Total attendance at Grand Rounds in 2019 by individual hospital

Hospital	Date	Attendees
North Middlesex University Hospital	14 February	36
Newham University Hospital	18 February	41
Whipps Cross University Hospital	19 February	40
Whittington Hospital	20 February	30
St Bartholomew's Hospital	5 March	35
Royal London Hospital	2 April	37
Northwick Park Hospital	2 May	34
Charing Cross Hospital	10 May	42
Ealing Hospital	23 May	14
Chelsea and Westminster Hospital	20 June	22
University College London Hospital	20 November	35

DISCUSSION

Our self-directed experiences raise the following points. First, relative to the potential audience at each hospital, physical attendance at London Grand Rounds in 2019 was low. The reason for this may vary from hospital to hospital but could include rota gaps, a lack of interest and a non-mandatory attendance requirement. Harnessing the power of digital technology to democratise education is a point well made by others[9] and represents a cost-effective and efficient way of increasing access to educational opportunities for all learners.

COVID-19 has already seen a swift move towards webinars and online education, championed by the Royal Society of Medicine and others. It is vital that moving forward, an electronic platform is offered so that greater attendance at Grand Rounds can occur, as well as the opportunity for local trainees to have a regional or even national impact.

Second, of a diverse audience who self-selected to attend Grand Rounds, our feedback suggested enthusiasm for the topic of cognitive biases and decision-making, reinforcing the idea that there is a gap in current postgraduate curricula for such educational resources. Given the context of increasing AI and the scrutiny behind decision-making during COVID-19, the case for expanding the provision of decision-making education and training is compelling.

Third, our experience suggests that giving trainees more time to foster external interests can provide several benefits. We were able to improve our public speaking confidence, present our findings at a national conference and develop our agency in spreading awareness of cognitive biases to others. The Q&A sessions allowed us to hear views from a spectrum of professionals to whom we might not otherwise have been exposed.

There are several limitations to consider when drawing conclusions from our Grand Round experiences. Principally, we had not intended to examine our findings using formal qualitative analysis, or with a mixed methods design.[10] In addition, the feedback response rate among attendees was modest compared to the literature[11]—we opted to collect feedback via an electronic link and focused more on an engaging Q&A session rather than prompting all attendees to diligently complete feedback. Two areas for improvement include using a QR code link in the future to boost feedback rates by making it easier to access the form and ensuring structural processes such as strong and reliable Wi-Fi signals are

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present in all areas of a hospital site, something which will have implications extending far beyond collecting feedback of educational sessions given to staff.

Lastly, these Grand Rounds were delivered in London only and may not have been representative of the national or international picture in 2019. More rigorous assessment of (virtual) Grand Round attendance and feedback will be an important part of evaluating the future state of UK and international postgraduate medical education.

At the time of writing, medical training and postgraduate exams are slowly re-emerging from the hiatus triggered by the response to the COVID-19 surge.[12] During the recovery phase, there will be significant productivity and capacity challenges for the health service that could cause tension with the priority for continuing medical education. Supposedly marginal (or at the very least not mandatory) educational activities such as Grand Rounds may therefore suffer as a result.

Although forecasting what the clinical model will be for healthcare systems is complex and influenced by the time horizon of any prediction, certain assumptions seem concrete—the challenge of multimorbidity,[13] future pandemic proofing and better healthcare worker recruitment, retention and support. Our contention is that high-quality postgraduate education will play a vital role in meeting all of these challenges. Therefore, the collective response to ensuring how Grand Rounds maintain their place within the hearts and minds of our community will be seen as an exemplar of how education may be conducted and regarded in the future. For us, its value is immeasurable and it must not be jettisoned away.

CONCLUSION

Before COVID-19, we demonstrated low attendance rates at Grand Rounds in London, as well as an unmet need for more exposure to training in handling biases when making clinical decisions. As the healthcare response to COVID-19 now moves away from the initial surge phase to a more long-lasting adaptation, harnessing digital solutions to release the full potential of the workforce will become a mission critical aim of all healthcare systems. Postgraduate education and the institution of Grand Rounds must be protected so that it can survive and thrive in the future, whether in person, online or a hybrid of both.

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