

Education in evidence-based health care: never a greater need

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Shaping the who, what, when and how for the teaching of evidence-based healthcare in the next 20 years—COVID-19 era

When we first published¹ our call for revisiting efforts to teach the skills of evidence-based health-care (EBHC) back in November 2019, “COVID-19” was absent from society’s vocabulary. The aim of our call was to discuss, debate and demonstrate effective teaching of the knowledge, skills and competencies underpinning evidence-based practice in medicine and healthcare. We wanted to challenge current practice and consider the next paradigm shift in teaching and practice. Who knew how much the world would change in the months that followed.

The COVID-19 pandemic has undoubtedly been the paradigm shift to end all others. It has arguably provided the greatest stress test of evidence-based medicine, both from a public health perspective and clinical care, since the term was coined three decades ago. It has brought to the surface long-standing issues with unprecedented levels of exposure—not least the role of evidence for addressing uncertainty.

COVID-19 has been the exemplar of both the best and worst in evidence-based health decision-making. Profound examples of ‘the best’ include the RECOVERY, SOLIDARITY and PRINCIPLE trials—rapid, high-quality evidence acquisition overcoming the usual red tape that comes with clinical trials. Acting on evidence not fit for purpose and the lack of acknowledgement of uncertainty are my candidates for ‘the worst’—hydroxychloroquine, ivermectin and other drug cocktails as examples of the former and the role out of non-drug interventions as an example of the latter.

A key issue from an “evidence-based” perspective has been the test of our collective ability to use research evidence to inform effective decision-making. The urgency of the pandemic has raised many questions. We might then ask what is the value of a series of articles in answer to the question “What next for education in EBHC?” that was asked in a ‘pre-COVID-19’ era?

The pandemic has highlighted the need for high-quality evidence-based decision-making. Asking the right questions; acquiring the best-available evidence to answer them; rigorously, explicitly and fairly appraising the available evidence; clearly expressing if and how it helps reduce our uncertainties; being clear if and how the available evidence applies to practice and

what needs to happen if it does not. All of these remain important if not crucial steps even during a pandemic. We just need to perform these steps with more urgency and more efficiently.

The pandemic has also re-emphasised the need for teaching the skills underpinning evidence-based decision-making and that the way we teach them may need to change. Many of the changes already made during this pandemic are likely to stay.² Online education has taken centre stage and ‘traditional’ ways of teaching and learning increasingly have been challenged, including in medical education.³ I think this gives educators of evidence-based health care an interesting perspective for reflecting on the impact of the pandemic on evidence to inform better decisions and teaching the skills to do this well.

Our series of 18 selected articles submitted during the pandemic period offer insights into developments of not only the what but also the how and why in the education of evidence-based decision-making skills which remain pertinent, if not even more so, in the COVID-19 era. The topics covered read as if the authors already had their fingers on the pulse—ranging from randomised controlled trials, observational studies and evaluations of online, digital and distance EBHC learning interventions and programmes^{4–11} to provocative debate articles on the competencies of evidence-based decision-making that we should (and should not) focus on for educating our health professionals¹² and frameworks¹³ and professional consensus¹⁴ to support effective education of these competences in health professional curricula.

Programme evaluation is a critical process in ensuring curricula are fit for purpose—included articles provide detailed evaluations of EBHC curricula over a 15-year period,¹⁵ the impact of different curriculum pathways¹⁶ and important endeavours to educate EBHC skills outside of the formal curriculum.¹⁷ Another key aspect of any curriculum is assessment—it drives learning after all. If assessment drives learning, what drives teaching? Rashid *et al* encourage educators to consider how accreditation standards and procedures can facilitate EBHC teaching.¹⁸

The pandemic brought to the fore another issue of our times—the unprecedented power of the media to disseminate health claims. This power can be used in many ways but what about as a resource for teaching EBHC? Oxman *et al* describe early development of an intervention to use media stories and headlines for educating professionals how to think critically about health information.¹⁹



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Prominent educators have spent decades developing, refining and educating on how to apply the principles of EBHC to help improve healthcare decision-making. Arguably, one of the most successful examples is the Grading of Recommendations Assessment, Development and Evaluation (GRADE) working group approach which aims to determine the confidence we can have in a body of evidence and any recommendations based on it. Kumar and Taggarsi provide a timely and positive overview of the GRADE method as a useful launchpad to discuss its relative strengths and weaknesses and how these hold up in times of greatest need.²⁰

The pandemic has highlighted the importance of health science and research that is efficiently produced, evaluated and acted on. Hand in hand with this comes the ability to ask, find, appraise and apply evidence to support effective decisions. These abilities are essential skills—skills that need to be taught. Where there is a need to be taught, there is a need for people to teach. The final article in the series aims to aid EBHC educators in this mission. Through collaboration and consensus, our peers come together to provide aspiring EBHC teachers a resource of their go-to articles in support of effective and inspirational teaching and education.²¹

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