EDITORIAL

Clinical decision support and digital education for COVID-19

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COVID-19 has had an unprecedented effect on healthcare and health systems around the world. It has changed how we deliver care and indeed what care can be delivered. It has also changed the world outside of healthcare - from how we meet with friends and family to how we work. Inevitably COVID-19 has changed the way we learn and keep our knowledge continually updated.[1] This is not surprising as the pace of change in scientific knowledge of the virus has been rapid and this pace looks set to continue for some time to come. There are already thousands of articles on the subject in the scientific literature - ranging from original research to systematic reviews to clinical guidelines. It is impossible for an individual healthcare professional to learn everything that they might need to know about the disease. Even if it were possible to learn all relevant facts, the knowledge base is changing on a daily basis in any case. This is a strong argument for the need for continuously available online clinical decision support that will work at the point of care. Decision support that works at the point of care means practical and actionable content that works on any device and that is available online and offline via an app. Our own clinical decision support tool - BMJ Best Practice - has had these features for a number of years. However the rapidity of change of scientific knowledge has been challenging. The COVID-19 topic on BMJ Best Practice has been updated every working day for the past eight months - this has required dedicated expert resource to enable this to happen.

BMJ Best Practice has changed in other ways also. COVID-19 infection disproportionately affects people with pre-existing conditions - especially those with chronic non-communicable diseases like diabetes, heart failure or chronic kidney disease.[2] Elderly people with frailty and complex multimorbidity are especially affected and have higher rates of admission to hospital and then to higher levels of care (such as high dependency care). Management of such patients is complex and complicated. Healthcare professionals must carry out the delicate balancing act of managing the acute COVID-19 infection and at the same time ensuring that the patient's chronic disease is actively managed also. The case of COVID-19 and diabetes is one such example. Severe COVID-19 can affect diabetes control as can treatment with dexamethasone. Remdesivir can cause renal impairment and some of the effects of new experimental therapies for COVID-19 on diabetes are still largely unknown. This is all an enormous challenge for healthcare professionals. However the new Comorbidities tool from BMJ Best Practice can help. This tool enables healthcare professionals to add a chronic comorbidity to the treatment algorithm of an acute condition and thus learn how best to deliver holistic care. The tool also covers other acute conditions and other chronic comorbidities. Until now decision support tools, clinical guidelines and most of the medical literature has focussed on patients with single conditions. This is surprising considering the growing burden of multimorbidity among patients and populations amongst many different countries. The new Comorbidities tool from BMJ Best Practice is an attempt to redress this

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shortcoming and provide decision support that will enable better management of all of patients' conditions.

Clinical decision support focuses largely on knowledge and ideally applied knowledge that healthcare professionals will be able to put into practice for the benefit of their patients. However healthcare professionals need more than just knowledge to help them cope with the pandemic. They need skills - such as team working skills to work with interdisciplinary infectious disease teams and communications skills to be able to communicate risk to patients and members of the public. They also need practical skills on how best to put on and take off personal protective equipment. Personal protective equipment is a vital part of preventive management of COVID-19 - but it will only have an effect if healthcare professionals know how to use it properly. For these reasons, our e-learning resource - BMJ Learning - has created learning courses on how to don and doff personal protective equipment and also on other skills - such as how to cope with the stress of a pandemic and all the changes that it brings.

At the same time as doing all of this, we have been working with users and customers to ensure that they get most value out of the resources.[3] This is likely to become increasingly important as the economic effects of the pandemic become apparent.

We have been delighted to make all of these changes in collaboration with our users. We are still in continuous contact with stakeholders in Iraq and are keen to do what we can to make these resources available to stakeholders within the country once again. If you have any questions about the resources or suggestions on how we should make them more widely available, please do not hesitate to get in touch. Please email on kmwalsh@bmj.com.

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Competing interest: KW works for BMJ which produces BMJ Best Practice and BMJ Learning.