Muhimbili University of Health and Allied Sciences. Dar es Salaam, PO Box 65001, Tanzania (TB, HS, KK); Department of Global Public Health, Karolinska Institutet, Stockholm, Sweden (TB, COS, NR): Perioperative Medicine and Intensive Care, Karolinska University Hospital, Stockholm, Sweden (TB); Centre for Clinical Research Sörmland, Uppsala University, Eskilstuna, Sweden (COS); Department of Internal Medicine, Nyköping Hospital, Sörmland Region, Nyköping, Sweden (COS); Ministry of Health, Community Development, Gender, Elderly and Children, Dodoma, Tanzania (DBP); Department of Emergency Medicine, Zealand University Hospital, Køge, Denmark (DBP); Muhimbili Orthopaedic Institute, Dar es Salaam, Tanzania (KK); Queen Elizabeth Central Hospital, Blantyre, Malawi (SM, EM); Malawi Liverpool Wellcome Trust, Blantyre, Malawi (IR): Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast, Belfast, UK (DFM); Regional Intensive Care Unit, Royal Victoria Hospital, Belfast, UK (DFM); Surgical Unit, WHO Collaborating Centre for Research on Surgical Care Delivery in LMICs, BARC Hospital (Government of India), Mumbai, India (NR); Interdepartmental Division of Critical Care Medicine, Department of Surgery, University of Toronto, Toronto, ON, Canada (JM); International Forum for Acute Care Trialists, Toronto, ON, Canada (JM); Division of Emergency Medicine, University of Cape Town, Rondebosch, South Africa (LW); and University of Malawi College of Medicine, Blantyre, Malawi (EM)

- Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. JAMA 2020; published online Feb 25. DOI:10.1001/jama.2020.2648.
- Adhikari NK, Fowler RA, Bhagwanjee S, Rubenfeld GD. Critical care and the global burden of critical illness in adults. Lancet 2010; 376: 1339-46.
- Reynolds T, Sawe HR, Rubiano A, Sang Do S, Wallis L, Mock C. Strengthening health systems to provide emergency care: DCP3 disease control priorities. Washington, DC: World Bank, 2018.
- Hopman J, Allegranzi B, Mehtar S. Managing COVID-19 in low- and middleincome countries. JAMA 2020; published online March 17. DOI:10.1001/jama.2020.4169.
- Schell CO, Gerdin Wärnberg M, Hvarfner A, et al. The global need for essential emergency and critical care. Crit Care 2018; 22: 284.



Published Online April 2, 2020 https://doi.org/10.1016/ 50140-6736(20)30795-9

See Online for appendix

## Medical student involvement in the **COVID-19** response

Coronavirus disease 2019 (COVID-19) has been formally declared a pandemic by WHO,1 reflecting an inability to contain its spread internationally. The associated harm of the COVID-19 pandemic to populations and health systems cannot be understated. In

this unprecedented situation, perhaps one of the more under-recognised and enduring repercussions will be on medical student training worldwide.

The paradoxical dual role of medical students is that, as the future health-care workforce, we potentially form part of a health-care system's response to public health emergencies but, conversely, are considered non-essential in clinical delivery and might be restricted from clinical learning. Medical schools have had various responses to date.<sup>2,3</sup> Some medical schools have cancelled teaching<sup>3</sup> and medical electives entirely, whereas others continue to encourage clinical placements. Although these measures felt appropriate to protect both patients and the health-care workforce, they nevertheless represent the loss of essential learning opportunities. A clear and unified response at national levels is needed to ensure that all students receive timely and consistent advice and that the impact on their future practice is minimised.

Several governments have alluded that medical students could be used in health systems affected by COVID-19.24 Although there is no question about their willingness, given no recent precedent, the lack of guidance for any students drafted is concerning. In particular, we find an absence of official and unambiguous statements on indemnity, governing body regulation, contractual agreements, expected roles and responsibilities, and the clinical supervision expected. Several health-care systems, such as in Italy and Iran, are in crisis,5 and others expect substantial challenges in the coming weeks and months. In this context, students could be placed in challenging and compromising situations if asked to support healthcare staff in providing care. The case of the British trainee paediatrician, Bawa-Garba,6 who was convicted of manslaughter and temporarily lost her

medical licence despite recognition of systemic failings and extreme pressure that she was under, has eroded trust from health-care professionals that they will be adequately supported in the event of potential mistakes under mitigating factors. These points must be explicitly addressed and conveyed on national levels before any student is used within clinical practice.

Governments, regulatory bodies, and medical schools have a responsibility to both current and future patients to ensure that our future doctors are sufficiently trained and supported to deliver essential patient care, even in crises. Medical students, alongside all health-care staff, are prepared to contribute to patient care in the COVID-19 pandemic, yet in these uncertain times, forethought and transparency are essential.

We declare no competing interests.

Representatives of the STARSurg Collaborative, EuroSurg Collaborative, and TASMAN Collaborative\* k.a.mclean@ed.ac.uk

\*Contributors are listed in the appendix.

Department of Clinical Surgery, Royal Infirmary of Edinburgh, Edinburgh EH16 4SA, UK

- WHO. WHO Director-General's opening remarks at the media briefing on COVID-19—11 March 2020. March 11, 2020. https://www.who.int/dg/speeches/detail/ who-director-general-s-opening-remarks-atthe-media-briefing-on-covid-19-11march-2020 (accessed March 31, 2020).
- Mahase E. Covid-19: Portugal closes all medical schools after 31 cases confirmed in the country. BMJ 2020; 368: m986.
- Medical Schools Council. Advice from Medical Schools Council to UK Medical Schools on actions surrounding Covid-19. 2020. https://www.medschools.ac.uk/ media/2620/msc-covid-19-advice-for-ukmedical-schools.pdf (accessed March 14, 2020).
- Deutsches Ärzteblatt. Corona: Spahn verspricht Krankenhäusern finanzielle Hilfe. March 13, 2020. https://www.aerzteblatt.de/ nachrichten/111050/Corona-Spahnverspricht-Krankenhaeusern-finanzielle-Hilfe (accessed March 14, 2020).
- Remuzzi A, Remuzzi G. COVID-19 and Italy: what next? Lancet 2020; published online March 12. https://doi.org/10.1016/ 50140-6736(20)30627-9.
- Dyer C. Hadiza Bawa-Garba wins right to practise again. BMJ 2018; 362: k3510.