Quality of inpatient paediatric and newborn care in district hospitals

Authors' reply

We are grateful to Moise Muzigaba and colleagues for their comments on our recent Viewpoint.1 We have a shared aim of improving the quality of facility-based care, and discussing how to achieve this goal is important so that all stakeholders can be supported in this challenge. We acknowledge that we referred to 1098 paediatric and neonatal quality indicators rather than quality measures and that WHO has undertaken rigorous work to develop a flexible set of prioritised indicators, including the work of Muzigaba and colleagues to produce 25 core paediatric indicators from 520 paediatric quality measures.2 Earlier WHO documents propose that quality measures are useful for assessing, auditing, and monitoring improvements in the quality of care.^{3,4} UNAIDS defines an indicator as "a quantitative metric that provides information to monitor performance, measure achievement and determine accountability", and it was in this spirit that we used the term indicators.5

As people regularly employing quality measurement, one main purpose of our Viewpoint was to widen the discussion on indicators. These often appear to have a straightforward logic: we measure, and we act to improve. Challenges in producing high-quality data, however, might undermine the value of information, and the hard and complex work of improvement action can be rather ignored. In this regard, we bring to the fore areas that WHO includes under the headings leadership, action, learning, and accountability, which remain pertinent even to the use of core indicators.4

The careful work of Muzigaba and colleagues aims to provide core paediatric quality of care indicators that span "critical input, process, outcome, and impact... which

can serve as high level 'signals' of paediatric and young adolescent quality of care", and that "provide strategic and timely information to be used across all levels of the health system (district, regional, national, global levels) for comparable analysis to guide decision-making and planning for quality improvement".2 What challenges must be overcome to achieve these ambitious aims? Muzigaba and colleagues recognise that this quality improvement might require "transformative efforts to reform national health information systems and technologies". These include foundational measurement challenges; for example, varying judgements in assigning diagnoses, or identifying and recording clinical signs that make comparing case-fatality or guideline adherence indicators difficult.2 Challenges of data quality assurance and reporting grow as efforts are made to report indicators for many areas of clinical care and for multiple subgroups. We do not arque that measurement should be abandoned, but that we should continuously reflect on whether measurement efforts are helping us to achieve our desired health system quality outcomes. We must quard against becoming focused on managing only what we can measure, thereby inadvertently creating accountability systems that reinforce that only what is routinely measured matters.

Indicators by themselves do not achieve effects. Effects are only achieved if institutions, organisations, and individuals act thoughtfully in response to indicators. We therefore agree with WHO that being clear about who will receive, analyse, and act on globally, nationally, regionally, or locally collated indicator data is essential, but how should or will different-system level actors operate to support improvement, and over what timescale is this improvement possible? How, for example, do pathways to action align with

monthly or quarterly reporting? What resources are available to develop and continuously strengthen pathways to action? Measurement as part of vertical programmes (eg, for HIV) has helped achieve huge success when linked to dedicated resources for institutional and organisational action. Broad improvements in facility-based care are inherently more complex, requiring coordination and effectiveness across health systems. To date, we have little experience of what works to ensure that measurement of care quality in complex lowincome and middle-income country health systems contributes to better paediatric and newborn care at scale.

WHO is playing a very important role in establishing normative thinking on quality, indicators, and many other areas that support good practice; however, improvement is a long-term systematic and implementation challenge. As WHO acknowledges, this improvement will require skilled personnel at all system levels.4 Truly skilled personnel will be likely to draw on a much broader repertoire of information sources than measured indicators to develop a holistic view of care quality and to inform their management of improvement. Developing, retaining, and supporting these skilled personnel with the ability to manage complex quality and safety challenges will probably be key to progressive health care improvement in low-income and middle-income countries. As we strive for better care, we must consider how to employ measurement in combination with many other strategies, so that we strengthen systems, especially at local levels, and foster professional and organisational cultures and public demand for enhanced quality.

The authors all receive funding as part of research linked to improvement of hospital care in low-income and middle-income countries. ME, TD, JA, and GI have or have had roles as technical advisors to WHO in the fields of newborn and child health. JA is on a trial advisory board funded by the National Institutes of Health and ME is on a trial

oa

Correspondence

advisory board funded by Wellcome. ME is supported by a Wellcome Senior Fellowship (207522). MM is supported by a grant from the National Institute for Health Research (NIHR; NIHR130812). GI receives support from a grant to the NEST360 program from the John D and Catherine T MacArthur Foundation, the Gates Foundation, ELMA Philanthropies, and The Children's Investment Fund Foundation UK under agreements to William Marsh Rice University. The funders had no role in the preparation of the manuscript. The views expressed in this publication are those of the authors and not necessarily those of the Wellcome Trust, NIHR, NEST360, or the UK Government.

Copyright © 2023 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY 4.0 license.

*Mike English, Jalemba Aluvaala, Michuki Maina, Trevor Duke, Grace Irimu

mike.english@ndm.ox.ac.uk

Kenya Medical Research Institute Wellcome Trust Research Programme, Nairobi 00100, Kenya (ME, JA, MM, GI); Health Systems Collaborative, Nuffield Department of Medicine, University of Oxford, Oxford, UK (ME); Department of Paediatrics and Child Health, University of Nairobi, Nairobi, Kenya (JA, GI); Intensive Care Unit, Royal Melbourne Children's Hospital, Melbourne, Australia (TD); Department of Paediatrics, University of Melbourne, Australia (TD); Separtment of Paediatrics, University of Melbourne, Australia (TD); School of Medicine and Health Sciences, University of Papua New Guinea, Port Moresby, Papua New Guinea (TD)

- 1 English M, Aluvaala J, Maina M, Duke T, Irimu G. Quality of inpatient paediatric and newborn care in district hospitals: WHO indicators, measurement, and improvement. Lancet Glob Health 2023; 11: e1114-19.
- Muzigaba M, Chitashvili T, Choudhury A, et al. Global core indicators for measuring WHO's paediatric quality-of-care standards in health facilities: development and expert consensus. BMC Health Serv Res 2022; 22: 887.
- 3 WHO. Standards for improving quality of care for small and sick newborns in health facilities. Sept 2, 2020. https://www.who.int/ publications/i/item/9789240010765 (accessed July 20, 2023).
- 4 Maternal, Newborn, Child & Adolescent Health & Ageing, Quality of Care Network. Quality of care for maternal and newborn health a monitoring framework for network countries. Feb 27, 2019. https://www.who.int/ publications/m/item/quality-of-care-formaternal-and-newborn--a-monitoringframework-for-network-countries (accessed July 20, 2023).
- Joint United Nations Programme on HIV/AIDS. An introduction to indicators. 2010. https:// www.unaids.org/sites/default/files/sub_ landing/files/8_2-Intro-to-IndicatorsFMEF.pdf (accessed July 20, 2023).