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CORRESPONDENCE

# Vital signs: the first step in prevention and management of critical illness in resource-limited settings

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Dear Editor,

We read with great interest the article by Dr. Riviello and colleagues highlighting the underappreciated burden and largely undefined epidemiology of acute respiratory distress syndrome (ARDS) in resource-limited settings [1]. We fully agree that initiatives to improve recognition of ARDS in such settings are urgently needed, both to facilitate the implementation of feasible therapies and guide the development of context-specific clinical and translational investigations. However, we also believe there is an opportunity to improve care and survival from severe respiratory distress and related critical illness in resource-limited settings with tools that are available now.

At present, the majority of patients with severe respiratory distress in low-income countries, particularly those in sub-Saharan Africa, remain cared for on hospital wards not only as a result of limited intensive care facilities but because of under-recognition of severe illness in general. As we have observed while working as clinicians and researchers on such wards in Uganda, early identification of evolving critical illness remains challenged by infrequent vital sign monitoring and lack of standardized management practices for patients with severe respiratory distress and sepsis syndromes, a leading cause of ARDS in resource-limited settings [1, 2]. As prompt recognition and aggressive treatment of early clinical deterioration can often prevent illness progression and death, there remains an ongoing need for the development, validation, and implementation of basic triage tools to systematically guide identification and emergent treatment of severely ill patients in such settings. One such tool that is available now is the "Quick Check" protocol included in the World Health Organization's Integrated Management of Adolescent and Adult Illness (IMAI) District Clinician Manual. Available as a standalone wall chart and accessible through mobile phone platforms, the "Quick Check" offers clinicians in austere environments a rapid, standardized approach to triage and initial management for patients arriving to the health facility [3]. In the "Quick Check," for example, all patients with severe respiratory distress are to be placed on supplemental oxygen while vital signs are collected and indications for other emergent therapies are evaluated (e.g., empiric antimicrobials for patients with fever and judicious volume resuscitation for those with concomitant shock) [3]. In addition, recent data from Uganda suggest that "early warning" scores, which allocate points for derangements in vital signs and mental status, can be applied at the bedside to identify hospitalized patients at high risk for decompensation and death from sepsis and other severe illness, thereby providing opportunities for similar targeted interventions [4, 5].

As a result of work done by Dr. Riviello and colleagues, our understanding of the global impact of ARDS and other critical illness continues to improve. As it does, we must remain focused on the need to bolster implementation of basic monitoring measures and interventions to improve outcomes now for the sickest patients in the most resource-limited settings.

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**Compliance with ethical standards**

**Conflicts of interest**
The authors declare that they have no conflict of interest.

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