Sepsis without borders

Sepsis is a global public health problem, accounting for 48.9 million cases and 11 million sepsis-related deaths worldwide in 2020, with the highest burden felt in low-income countries (LICs) (World Health Organization (WHO), 2024a). The main challenge is that as a syndrome and not a disease, the range of signs and symptoms seen can make it difficult to diagnose in its early stages. In consequence, health professionals always need to rule out sepsis rather than rule it in, using the question 'Could it be sepsis?' (Sepsis Trust, 2024). This comment piece highlights the ongoing nature of the burden of sepsis, as countries continue to grapple with this global problem.

Over the past two decades, sepsis recognition and treatment has radically evolved and it is no longer regarded as a condition only seen in the intensive care unit (Kempker et al, 2018). Instead, it is accepted that sepsis transcends borders and, in consequence, strategies need to be developed with transferability to differing healthcare systems. In the UK, the recent change to the National Institute for Health and Care Excellence (NICE) sepsis guidelines (2024) and the introduction of 'Martha's Rule' (NHS England, 2024) demonstrate the evolving nature of sepsis practice. However, it is important to remember that terms such as sepsis, although old, are western (the word is derived from the Greek word 'sepo' meaning 'I rot' and was used in Homer's poetry) (Funk et al, 2009). As a result, there is often no direct translation for sepsis into other languages and cultures, limiting awareness among communities. This illustrates the challenge of the universal use of western terminology, which may not easily translate or be recognised in other languages. This is an important point to consider given the UK's diverse and multicultural communities.

WHO (2024a) indicates that in healthcare systems, sepsis often remains hidden in plain sight. Therefore, initiatives such as the recent World Health Assembly (WHO, 2024b) global strategy for integrating emergency, critical and operative care, provides an opportunity for countries with limited resources to work to improve the patient pathway. Another challenge is that evidence may not translate easily between countries. For example, concerns were raised regarding the Sequential Organ Failure Assessment (SOFA) criteria, which was based on high income countries (HICs) with its application in LICs unknown (Sartelli et al, 2018). Nevertheless, there is some evidence to support the use of the Quick-SOFA (qSOFA) score in resource limited settings (Huson et al, 2017). Also, Rudd et al's (2018) study found the use of the qSOFA score was able to identify patients at risk of death from sepsis in nine low and middle-income countries (LMICs). The predictive validity varied among cohorts and settings, and further research is urgently needed. However, in contrast, Andrews et al's (2017) randomised controlled trial in Zambia revealed that the introduction of a 6-hour sepsis protocol for patients with sepsis significantly increased in-hospital mortality when compared with usual care.

A further cause for concern is rising antimicrobial resistance (AMR), an established international problem. Although some countries are already implementing strategies to reduce the impact of AMR (UK Health Security Agency, 2023), the problem remains high in many LIMCs (Kawale et al, 2022). However, no country, regardless of status, is exempt from AMR; as the WHO (2022) reported, 1 in 3 people in 14 countries in the WHO European Region used leftover antibiotics or obtained them without a prescription, which will further increase AMR. These examples illustrate the importance of developing and understanding context-specific care, but also regional variations.

In recognition of the global burden of sepsis, staff at Birmingham City University saw the need to develop a programme to increase sepsis prevention, recognition and management. Therefore, 3 years ago, an international module was developed and validated for delivery to

a range of health professionals working in all fields of practice. The module has attracted students from across the world, including Asia and Africa, as well as the UK. This has provided an opportunity for students to discuss and compare the prevention, recognition and management of sepsis across healthcare systems and cultures, as they work to develop a case study relevant to their own practice.

Prevention, recognition and management of sepsis requires sound clinical decision-making skills; therefore, this module uses an education rather than a training approach, to enable students to have the knowledge and skills to make proactive informed clinical decisions. Thus, this is a move away from the task-centred checklist that looks at the next step and not the process. The Academy of Medical Royal Colleges (2022) and new NICE guidelines (2024) have also highlighted the importance of clinical decision making.

A key theme identified by students is the time it takes for evidence to be translated into and universally accepted in practice, with some suggestions of timescales of up to 17 years (Morris et al, 2011). Miller et al (2013) demonstrated that implementation of a treatment bundle drastically improved outcomes for patients with sepsis; however, this was shown over a 7-year period and initial data collection started 9 years before publication. HICs have been investigating barriers and facilitators to implementing care bundles for the management of sepsis for some time (Carlbom et al, 2007; Gerber, 2010). Whereas some barriers, such as poor awareness and lack of early recognition of sepsis are acknowledged globally, Taj et al (2022) highlighted a further issue for LMICs in terms of availability of resources, which only exacerbates delays and barriers to being able to implement evidence-based practice.

Another consideration is that, although there is emphasis on treating sepsis as a medical emergency, the ongoing impact of having survived sepsis must not be neglected, as survivors often face long-term adverse health consequences (Shankar-Hari and Rubenfeld, 2016). Post-sepsis care and support urgently warrant more attention, as awareness increases, and sepsis survival rates start to rise. A point supported by the WHO Rehabilitation 2030 Initiative, which identifies rehabilitation as a crucial element of patient care and not an optional extra that is provided when problems become apparent (WHO, 2024c).

This comment piece is designed to increase awareness of the different perspectives on the global impact of sepsis. It aims to promote further research and discussion, to enable health professionals to be able to appraise the evidence and develop individualised care plans. It is essential that health professionals recognise and address the diverse needs of the communities they serve. Only in that way will sepsis prevention, recognition and management improve in terms of survival and patient outcomes in communities, countries and across the world.

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