Resuscitating Code Sepsis in the nursing workforce [Editorial]

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Title: Resuscitating '*Code Sepsis*' in the Nursing Workforce

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Sepsis ranks among the top global health threats, responsible for approximately one in every five deaths and accounting for over 30 million cases and 5.3 million deaths annually (Rudd et al., 2020). Clinically, sepsis arises from a dysregulated host response to infection that features both hyperinflammation and immunosuppression, leading to organ dysfunction and, too often, shock and death if recognition and treatment are delayed. Sepsis is not always immediately apparent, and its recognition can be complicated when patients present with other acute illnesses or underlying chronic conditions. Comorbid conditions may blur the clinical picture, delaying suspicion of sepsis until the illness has progressed. More than half of patients with sepsis also experience delirium, a condition that can distract from or mask the underlying infection. These overlapping presentations highlight the need for heightened vigilance and structured assessment to avoid missed or delayed diagnosis (Australian Commission on Quality & Safety in Health Care, 2025).

From Surviving Sepsis to COVID-19: Disrupted Momentum

In the early 2000s, sepsis care was energised by global and national initiatives that framed it as a time-critical emergency (Evans et al., 2021). The Surviving Sepsis Campaign (SSC) was launched in 2002 as an international collaboration to reduce sepsis mortality by 25% by 2009, publishing guidelines with regular revision every few years (Evans et al., 2021). These guidelines incorporated sepsis bundles (e.g., coordinating antibiotics, fluids, and vasopressors) to translate complex care into actionable steps. Many hospitals introduced structured sepsis pathways to support early recognition and treatment, as a coordinated response to standardise care and improve patient survival (WHO et al., 2020).

COVID-19: Confounded Protocols and Outcomes

By the mid-2010s, sepsis-related mortality was declining (Evans et al., 2021) despite the initial positive momentum for standardised sepsis care waning. Debate about bundle mandates and documentation burden grew, compliance plateaued, and then COVID-19 disrupted progress (Unterberg et al., 2022). For patients with COVID-19, aggressive fluids or early broad-spectrum antibiotics were not always appropriate, leading to deviations from pre-COVID care protocols (Evans et al., 2021). Distinguishing severe viral pneumonia from bacterial sepsis was difficult, and infection control measures delayed routine protocol implementation. Patient safety analyses confirmed that standard sepsis pathways were interrupted by the arrival of COVID-19, delaying critical interventions (Unterberg et al., 2022).

The COVID-19 pandemic profoundly disrupted healthcare delivery, forcing widespread restructuring of resource allocation, rapid workforce upskilling, and interruption of usual care. In vulnerable populations, such as individuals with neurodevelopmental disabilities, efforts to improve baseline respiratory health stalled as respiratory specialists were redeployed to frontline care and essential resources were redirected. Nurses had to urgently adapt to maintain continuity of care under extreme strain, while educational programs and sepsis training were suspended amid staffing shortages and illness (Unterberg et al., 2022). The diversion of personnel and training resources led to reduced clinical preparedness, with less experienced staff managing complex cases and documented increases in non-COVID sepsis mortality (Unterberg et al., 2022). These systemic pressures highlighted the pandemic's cascading effects on workforce capability, clinical education, and patient safety across already fragile care

systems. Importantly, these disruptions mean that simply returning to pre-COVID workflows is insufficient; pre-pandemic sepsis systems relied on stable staffing, regular education, and predictable escalation pathways; conditions that may no longer hold. We argue that in the post-COVID environment, there is a need for workforce-aligned sepsis strategies designed to compensate for ongoing turnover, skill-fade, and system fragility.

Consequences of Delayed Sepsis Recognition

Delayed recognition directly increases acute mortality in the context of sepsis. Each hour without effective antimicrobials narrows the survival window. Sepsis survivors endure greater ischemic organ injury and long-term disabilities. Many experience post-sepsis syndrome, with physical weakness, cognitive impairment, and psychological distress. Longitudinal research shows survivors have significantly reduced odds of independent living six months post-illness (Draeger et al., 2025).

Patients often require mechanical ventilation, dialysis, and vasopressors, which can be challenging in resource-strained scenarios. Progressed sepsis also necessitates broader-spectrum antibiotics, fueling antimicrobial resistance (Evans et al., 2021). Psychological consequences affect both families and providers. Delayed recognition carries a triple cost: in mortality, survivor disability, and health system strain (Rudd et al., 2020).

Beyond the statistics, every life lost to sepsis leaves behind a devastated family grappling with grief, shock, and unanswered questions. For partners, children, and parents, the suddenness of these deaths can feel particularly cruel, as sudden and lethal deterioration can unfold in hours. Some sepsis deaths occur after patients and families have made multiple attempts to seek help, with symptoms overlooked or misattributed

until it is too late. These stories reveal not only the devastating personal toll but also the cracks in systems of recognition and escalation. Strengthening sepsis pathways to ensure they are consistently followed offers a safeguard against these failures, creating a clear, reliable process for timely action when patients present with warning signs. Not only do these failures result in death, grieving patient families are left carrying burden of endless *"what-ifs",* especially when delays in recognition are suspected. The human cost is therefore immeasurable: each death reverberates far beyond the hospital walls, disrupting lives, relationships, and communities (see for example: Mon, 2025).

Emphasising the Role of Nurses in Sepsis Response

Nurses occupy a uniquely decisive position in sepsis recognition because they are the clinicians who observe patients most continuously, detect subtle physiological and behavioural changes, and initiate escalation long before medical review occurs. Successful models of nursing-led sepsis teams highlight the potential for nurses to lead early identification, resuscitation and bundle compliance. Embedding sepsis pathways in emergency practice depends on continuous education and strategies that address workload pressures, cognitive bias, and system constraints. In order to promote consistent, timely care nurses must have opportunities for sustained training, feedback, and support. Leadership and culture also directly shape whether staff and patients feel safe enough to escalate patient safety concerns. That cultivating, collaborative environment is essential for both improving patient safety and reducing avoidable harm.

Some action items to begin resuscitating *Code Sepsis* within the nursing workforce may include:

1) Regular, high-quality, simulation-based sepsis education delivered across all appropriate levels and settings in the nursing workforce. Unlike pre-COVID, these sessions should be maintained as a standing cadence of micro-drills and post-event debriefs, not one-off trainings, to counter staff turnover and skill-fade and sustain bundle adherence (Gustad et al., 2024).
2) Nurses are actively empowered by leadership and the organisation to activate *Code Sepsis* protocols leading to immediate, decisive action. This aligns with evidence from nurse-forward Sepsis Emergency Response Team (SERT) models, which improve bundle compliance and enable more individualised care while preserving timeliness (Nunnally et al., 2024).
3) Organizations embed routine safety huddles and reflective debriefs after sepsis events to strengthen situational awareness, cultural recognition, and collective learning. These structures directly address long-standing barriers such as alarm fatigue, communication gaps, and variable knowledge across disciplines by turning real cases into interprofessional learning cycles (Nunnally et al., 2024).
4) Sepsis improvement initiatives are integrated within broader staffing and wellbeing strategies, recognizing that clinical vigilance depends on a supported and sustainable workforce. Evidence shows that sepsis and sepsis-associated delirium increase nursing workload by nearly two hours of additional care per patient, linking safe ratios and wellbeing to quality outcomes (Alıcı & Öztürk Birge, 2025).

5) Nursing leadership and research are elevated within both national and international sepsis prevention programs to inform both policy and practice, while partnering with interdisciplinary teams and informatics specialists to steward technology to assist early detection without amplifying alarm fatigue or inequities (Nunnally et al., 2024).

These action items may help provide a practical direction for restoring momentum in sepsis recognition and response by placing nurses, once again, at the heart of lifesaving action.

Conclusion

Sepsis remains a critical patient safety issue. The evidence is clear: organised, nurse-driven care saves lives in patients with sepsis. Thus, reestablishment of sepsis as a priority means both recovering ground lost to the pandemic as well as building stronger systems that put empower nurses to drive recognition and response effectively. True transformation demands both a cultural and educational resuscitation of sepsis as a patient priority. With the right tools, training, and support, preventable sepsis death and injury can become increasingly rare…and the reverberating grief they leave behind, far less common.

References

Alıcı, Ş., & Öztürk Birge, A. (2025). *The frequency of sepsis-associated delirium in intensive care unit and its effect on nurse workload. Journal of Clinical Nursing, 34*(4), 1383–1397. https://doi.org/10.1111/jocn.17298

Australian Commission on Quality and Safety in Healthcare. (2025). National Sepsis Program. Australian Commission on Quality and Safety in Healthcare. https://www.safetyandquality.gov.au/our-work/national-sepsis-program#what-is-sepsis? Accessed October 8th, 2025.

Draeger, L., Fleischmann-Struzek, C., Gehrke-Beck, S., Heintze, C., Thomas-Rueddel, D. O., & Schmidt, K. (2025). *Barriers and facilitators to optimal sepsis care – a systematized review of healthcare professionals' perspectives. BMC Health Services Research, 25*, 591. https://doi.org/10.1186/s12913-025-12777-8

Evans, L., Rhodes, A., Alhazzani, W., Antonelli, M., Coopersmith, C. M., French, C., … Levy, M. (2021). Surviving Sepsis Campaign: International guidelines for management of sepsis and septic shock 2021. *Intensive Care Medicine, 47*(11), 1181–1247. https://doi.org/10.1007/s00134-021-06506-y

Gustad, L. T., Bangstad, I.-L., Torsvik, M., & By Rise, M. (2024). *Nurses' and physicians' experiences after implementation of a quality improvement project to improve sepsis awareness in hospitals. Journal of Multidisciplinary Healthcare, 17*, 29–41. https://doi.org/10.2147/JMDH.S439017

Mon, J. L. (2025, Sept 15). New development in case of 40-year-old mother who died in emergency department [Digital News Article]. Radio New Zealand. https://www.newstalkzb.co.nz/news/national/new-development-in-case-of-40-

year-old-mother-who-died-in-emergency-department/?utm_medium=Image&utm_source=Facebook&fbclid=IwY2xjawM6zKxleHRuA2FlbQIxMABicmlkETF2SVpDejZsRDRqVllQcFFXAR6L0t3soqtY-4peWb_oOdtuDkov2gcssNgdbcbvJmn_yTjWqkTCes1v-SRerQ_aem_f4TnAZZ6dw6mC9OIOaZUYA#Echobox=1757884754 Accessed November 19th, 2025.

Nunnally, J., Ko, S. M., Ugale, K., Lowe, T., Bond, J., Kenny, J.-E. S., Fargo, R. A., & Haycock, K. (2024). *A nursing-led sepsis response team guiding resuscitation with point-of-care ultrasound: A review and model for improving bundle compliance while individualizing sepsis care. SAGE Open Medicine, 12*, 1–14. https://doi.org/10.1177/20503121241290378

Rudd, K. E., Johnson, S. C., Agesa, K. M., et al. (2020). Global, regional, and national sepsis incidence and mortality, 1990–2017. *The Lancet, 395*(10219), 200–211. https://doi.org/10.1016/S0140-6736(19)32989-7

Unterberg, M., Rahmel, T., Rump, K., Wolf, A., Haberl, H., Busch, A., Bergmann, L., Bracht, T., Zarbock, A., Ehrentraut, S. F., Putensen, C.,Wappler, F., Kohler, T., Ellger, B., Babel, N., Frey, U., Eisenacher, M., Kleefisch, D., Marcus, K., Sitek, B., Adamzik, M., Koos, B., & Nowak, H. (2022). The impact of the COVID-19 pandemic on non-COVID induced sepsis survival. *BMC Anesthesiology, 22*(12). https://doi.org/10.1186/s12871-021-01547-8

World Health Organization. (2020). *Global report on the epidemiology and burden of sepsis.* World Health Organization. https://apps.who.int/iris/handle/10665/334216 Accessed November 19th, 2025.