

FIGURE 304-3 Schematic of the importance of accurate, easy-to-use criteria for sepsis and its components, infection and organ dysfunction. In the ideal case (*left*), criteria clearly distinguish sepsis patients from other patients with uncomplicated infection or organ dysfunction. The reality (*right*), however, is that existing criteria fail to make clear distinctions, leaving a significant proportion of patients in areas of uncertainty. (*Reproduced with permission from DC Angus et al: A framework for the development and interpretation of different sepsis definitions and clinical criteria. Crit Care Med 44:e113, 2016.*)

To aid in early identification of infected patients, the quick SOFA (qSOFA) and the National Early Warning Score (NEWS) scores are proposed as clinical prompts to identify patients at high risk of sepsis outside the ICU, whether on the medical ward or in the emergency department. The qSOFA score ranges from 0 to 3 points, with 1 point each for systolic hypotension (≤ 100 mmHg), tachypnea (≥ 22 breaths/min), or altered mentation. A qSOFA score of ≥ 2 points has a predictive value for sepsis similar to that of more complicated measures of organ dysfunction. The National Early Warning Score (NEWS) is an aggregate scoring system derived from six physiologic parameters, including respiratory rate, oxygen saturation, systolic blood pressure, heart rate, altered mentation, and temperature. Recent work has also shown that, although SIRS criteria may be fulfilled in sepsis, they sometimes are not and do not meaningfully contribute to the identification of patients with suspected infection who are at greater risk of a poor course, ICU admission, or death—outcomes more common among patients with sepsis than among those without.

Septic shock is a subset of sepsis in which circulatory and cellular/metabolic abnormalities are profound enough to substantially increase mortality risk, but the application of this definition as a criterion for enrollment of patients varies significantly in clinical trials, observational studies, and quality improvement work. For clarity, criteria are proposed for septic shock that include (1) sepsis plus (2) the need for vasopressor therapy to elevate mean arterial pressure to ≥ 65 mmHg, with (3) a serum lactate concentration > 2.0 mmol/L after adequate fluid resuscitation.

Arterial lactate is a long-studied marker of tissue hypoperfusion, and hyperlactemia and delayed lactate clearance are associated