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Scottish Patient Safety Programme Acute Adult: statement regarding recent publications relating to sepsis.

Dear colleagues,

The purpose of this letter is to communicate our revised approach to the identification and management of adults with sepsis following the recent publication of 2 key consensus papers:

- Surviving Sepsis Campaign (SSC, 2021) Guidelines
- The Academy of Medical Royal Colleges' (AoMRC, 2022) Statement on the Initial Antimicrobial Treatment in Sepsis

Building on the successful and established sepsis improvement work in NHS Scotland, The Scottish Patient Safety Programme (SPSP) deteriorating patient driver diagram and change package, launched in 2021, includes sepsis as a core part of recognising and responding to deterioration. We have examined the key recommendations from the SSC and AoMRC, outlined below, and considered their implications for the SPSP approach to sepsis care.

In November 2021 the SSC published revised sepsis guidelines. Key revised recommendations for clinicians include:

- SSC recommend using a performance improvement program for sepsis, including sepsis screening for acutely ill, high-risk patients and standard operating procedures for treatment.
- SSC recommend against using qSOFA compared with SIRS, NEWS, or MEWS as a single-screening tool for sepsis or septic shock.
- For adults with **possible septic shock** or a **high likelihood for sepsis**, SSC recommend immediate administration of antimicrobials, ideally **within 1 hr** of recognition.
- For adults with **possible sepsis without shock**, SSC suggest a **time-limited course of rapid investigation** and if concern for infection persists, the administration of antimicrobials **within 3 hr** from the time when sepsis was first recognized.

In March 2022 the AoMRC published a Position Statement on Initial Antimicrobials in Sepsis. Key revised recommendations include:

- The working group unanimously agreed with the principle that **treatment urgency** for adults should initially be **determined by severity of illness using NEWS2**. A clinical decision support framework was developed based on NEWS2.
- The assessment phase is followed by generic actions in terms of monitoring, escalation plan, senior clinical involvement, and investigation and treatment. In parallel with these activities, the clinician will **consider the clinical likelihood of infection (unlikely; possible; probable or definite).**
- For patients with **possible, probable or definite infection, infection**-specific diagnostic tests and **administration of antimicrobials must be completed within 6, 3, or 1 hour for NEWS2 of 1-4, 5-6, or ≥7 respectively.**

We have discussed the key recommendations with clinical and improvement communities in the context of current approaches to sepsis recognition and management. Informed by the evidence and these discussions SPSP offer the following implications for practice:

The SPSP deteriorating patient and sepsis driver diagrams will continue to include:

- The use of **National Early Warning Score 2 (NEWS2) to identify deteriorating patients**, including those with sepsis.
- **NEWS2 of 5 or more and a suspicion of infection** should prompt consideration of **sepsis**.
- The **'Sepsis 6'** care bundle **should be used** when managing patients with suspicion of sepsis.

In the coming months SPSP plans to review the deteriorating patient and sepsis driver diagrams to reflect the following changes:

- **qSOFA should not be used to screen** for sepsis
- The **timing of antimicrobial therapy should reflect AoMRC guidance** and will be based on the NEWS2 and the clinical likelihood of infection
- In order to aid clinical decision making, **the AoMRC decision support framework should be easily accessible** to front line clinical teams.

SPSP aims to support improved outcomes for people by sharing evidence based guidance to health and care professionals on improvements to care processes. We will continue to review our approach as evidence emerges. It is important to note that decisions on clinical interventions remain the responsibility of professionals delivering direct care to patients and the organisations they work in.

We are extremely grateful for the ongoing support of NHS Scotland boards with this work and, in particular, for the input of the clinicians who have informed this statement.

Yours Sincerely,

Dr Gregor McNeill

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