

1 **NATIONAL INSTITUTE FOR HEALTH AND CARE**
2 **EXCELLENCE**

3 **Scope for guideline update (starting 2023)**

4 **Suspected sepsis: recognition, diagnosis and early**
5 **management – source control, rapid antigen tests for**
6 **sepsis, indicators of organ hypoperfusion, intravenous**
7 **fluids, and vasopressors, in the NEWS2 population**

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9 NICE is further updating its guideline on [Suspected sepsis: recognition, diagnosis](#)
10 [and early management NG51](#). The guideline originally published in July 2016.

11 There are 2 other ongoing updates to the sepsis guideline:

- 12 • In early 2023, NICE consulted on updated recommendations for stratifying the risk
13 of severe illness or death from sepsis to incorporate the National Early Warning
14 Score (NEWS2). The recommendations on antibiotic treatment in people with
15 suspected sepsis were also updated.
- 16 • In late 2023, NICE carried out a further update of the recommendations on the
17 initial management of suspected sepsis for people covered by NEWS2 (people
18 aged 16 and over who are not and have not recently been pregnant). The
19 consultation dates for this update are 8 November to 22 November 2023, and
20 [registered stakeholders can comment on this update](#).

21 Both of these updates are expected to publish in January 2024.

22 During these earlier updates, the guideline committee indicated that
23 recommendations on source control, rapid antigen tests for sepsis, indicators of
24 organ hypoperfusion, intravenous fluids, and vasopressors may also need updating.
25 These areas will be considered in this update.

26 The update will be developed using the methods and processes outlined in:

- 27 • [Developing NICE guidelines: the manual](#)

- 1 • [Appendix M: Interim principles for methods and processes for supporting digital](#)
- 2 [living guideline recommendations](#)
- 3 • [Appendix N: Multi-criteria decision framework for deciding whether to develop or](#)
- 4 [update recommendations and which methods to use.](#)

5 In the future, we plan to review the use of the paediatric early warning score (PEWS)

6 and maternity early warning score (MEWS) tools, and consider making

7 recommendations on them in the guideline.

8 **1 Who the guideline update covers**

9 The update will focus on people aged 16 or over with suspected sepsis in acute

10 hospital and ambulance settings, except people who are or have recently been

11 pregnant.

12 ***Equality considerations***

13 The [equality impact assessment](#) for this update:

- 14 • lists the equality issues identified and how they have been addressed and
- 15 • explains why any populations were excluded from the scope.

16 This update will consider equality and health inequality issues in people aged 16 or

17 over with suspected sepsis in acute hospital and ambulance settings.

18 **2 Activities, services or aspects of care covered by**

19 **this guideline update**

20 **Areas considered by this update**

21 We will look at the evidence and consider making new recommendations or updating

22 existing recommendations on:

- 23 • rapid antigen testing
- 24 • indicators of organ hypoperfusion
- 25 • intravenous fluid therapy
- 26 • vasopressors

1 We will also consider amending the recommendation on source control (1.10.5 in the
 2 2016 guideline), to make it easier to implement. We will not review the evidence in
 3 this area.

4 **Proposed outline for guideline**

Area of care in the 2016 guideline	What NICE plans to do
1.1 Identifying people with suspected sepsis	No evidence review: retain recommendations from existing guideline
1.2 Risk factors for sepsis	No evidence review: retain recommendations from existing guideline
1.3 Face to face assessment of people with suspected sepsis	No evidence review: retain recommendations from existing guideline
1.4 Stratifying risk of severe illness of death from sepsis	Updated and consulted on in March 2023 . Publication planned for January 2024.
1.5 Managing suspected sepsis outside acute hospital settings	Updated and consulted on in March 2023 . Publication planned for January 2024. Intravenous fluid therapy: review evidence and update existing recommendations as needed.
1.6 Managing and treating suspected sepsis in acute hospital settings	Antibiotic management: updated and consulted on in March 2023 . Publication planned for January 2024.

	<p>Non-antibiotic management: updated and open for consultation until 22 November 2023.</p> <p>Rapid antigen tests: review evidence and update existing recommendations as needed.</p> <p>Indicators of organ hypoperfusion and worsening sepsis: review evidence and update existing recommendations as needed.</p> <p>Intravenous fluid therapy: review evidence and update existing recommendations as needed.</p> <p>Vasopressors: review evidence and update existing recommendations as needed.</p>
1.7 Antibiotic treatment in people with suspected sepsis	Antibiotic management: updated and consulted on in March 2023 . Publication planned for January 2024.
1.8 Intravenous fluids in people with suspected sepsis	<p>Intravenous fluids: review evidence and update existing recommendations as needed.</p> <p>Timing and route of administration of vasopressors: review evidence and update existing recommendations as needed.</p>

1.9: Using oxygen in people with suspected sepsis	No evidence review: retain recommendations from existing guideline
1.10: Finding the source of infection in people with suspected sepsis	Amend existing recommendations as needed, without an evidence review.
1.11: Information and support for people with sepsis and their families and carers	No evidence review: retain recommendations from existing guideline
1.12: Training and education	No evidence review: retain recommendations from existing guideline

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2 We may amend recommendations outside of the update areas if needed for
3 consistency.

4 Procalcitonin (PCT) testing was also indicated by the guideline committee as a
5 possible area for update. However, PCT testing is covered by the [NICE diagnostics
6 guidance on procalcitonin testing for diagnosing and monitoring sepsis](#). The ongoing
7 [PRONTO](#) trial is comparing PCT-supported assessment with standard care for
8 suspected sepsis in adults at emergency departments, to measure whether this
9 approach reduces antibiotic prescriptions without increasing mortality. We will decide
10 whether to update our recommendations on PCT testing once this trial completes.

11 **3 Draft review questions**

12 We have identified the following draft review questions:

13 1 In people aged 16 or over with suspected sepsis, what is the diagnostic
14 accuracy of rapid antigen tests for diagnosing specific infections?

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16 2 In people aged 16 or over with suspected sepsis, what is the clinical and cost
17 effectiveness of rapid antigen tests for guiding treatment?

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- 3 In people aged 16 or over with suspected sepsis, what indicators of organ hypoperfusion and worsening sepsis should be used (in addition to the NEWS2 score) to guide the urgency of referral to, or discussion with, a critical care specialist or team?

- 4 In people aged 16 or over with suspected sepsis, what indicators of organ hypoperfusion and worsening sepsis should be used (in addition to the NEWS2 score) to guide the administration of intravenous fluids for resuscitation (including when to start and stop IV fluids, what volume of fluid is appropriate and how quickly should fluids be provided)?

- 5 In people aged 16 or over with suspected sepsis, when should IV fluids for resuscitation be started, what volume of IV fluid is appropriate, how quickly should IV fluids be provided, and when should they be stopped?

- 6 In people aged 16 or over with suspected sepsis, what is the most clinically and cost-effective timing and route of administration of vasopressors?

20 **Draft PICO for review question 1**

Population	People aged 16 or over with suspected sepsis and who are not and have not recently been pregnant.
Tests	Rapid antigen tests
Reference Standard / Comparison	Microscopy and culture
Outcome	Sensitivity and specificity Likelihood ratios

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22 **Draft PICO for review question 2**

Population	People aged 16 or over with suspected sepsis and who are not and have not recently been pregnant.
Intervention	Rapid antigen tests
Comparison	Standard care
Outcome	Length of hospital stay Admission to ICU

	Mortality
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2 **Draft PICO for review question 3**

Population	People aged 16 or over with suspected sepsis in acute hospital settings and who are not and have not recently been pregnant.
Intervention	Indicators of organ hypoperfusion and worsening sepsis (in addition to the NEWS2 score) to guide the urgency of referral to a critical care specialist or team
Comparator	Different indicators and thresholds as recommended in existing guideline
Outcome	Length of hospital stay Admission to ICU Mortality

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4 **Draft PICO for review question 4**

Population	People aged 16 or over with suspected sepsis in ambulance or acute hospital settings and who are not and have not recently been pregnant.
Intervention	Indicators of organ hypoperfusion and worsening sepsis (in addition to the NEWS2 score) to guide the administration of IV fluids
Comparator	Different indicators and thresholds as recommended in existing guideline
Outcome	Length of hospital stay Admission to ICU Administration of intravenous fluids Mortality Admission to hospital

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6 **Draft PICO for review question 5**

Population	People aged 16 or over with suspected sepsis in acute hospital settings and who are not and have not recently been pregnant.
Intervention	Intravenous fluid therapy including: <ul style="list-style-type: none"> • Time of initiation • Total volume • Time of stopping IV fluid resuscitation
Comparator	Immediate initiation, later initiation High volume, low volume Different stopping times
Outcome	Length of hospital stay

	Admission to ICU Mortality
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2 **Draft PICO for review question 6**

Population	People aged 16 or over with suspected sepsis in acute hospital settings and who are not and have not recently been pregnant.
Intervention	Timing of vasopressors and route of administration (central or peripheral venous access)
Comparator	Initiation of vasopressors at other time points using other route of administration (central or peripheral venous access)
Outcome	Indicators of worsening condition Length of hospital stay Mortality

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4 **4 Economic aspects**

5 We will take economic aspects into account when making recommendations. We will
6 review the economic evidence and carry out economic analyses, using an NHS
7 perspective, as appropriate.

8 **5 NICE guidance and quality standards that may be** 9 **affected by this guideline update**

- 10 • [COVID-19 rapid guideline: managing COVID-19](#) (2023) NICE guideline NG191
- 11 • [Sepsis](#) (2020) NICE quality standard QS161
- 12 • [Pneumonia \(community-acquired\): antimicrobial prescribing](#) (2019) NICE
13 guideline NG138
- 14 • [Pneumonia \(hospital-acquired\): antimicrobial prescribing](#) (2019) NICE guideline
15 NG139
- 16 • [Intravenous fluid therapy in adults in hospital](#) (2017) NICE guideline CG174
- 17 • [Intravenous fluid therapy in adults in hospital](#) (2014) NICE Quality Standard QS66
- 18 • [Procalcitonin testing for diagnosing and monitoring sepsis](#) (2015) NICE diagnostic
19 guideline DG18

1 **6 Further information**

2 NICE guidelines cover health and care in England. Decisions on how they apply in
3 other UK countries are made by ministers in the [Welsh Government](#), [Scottish](#)
4 [Government](#) and [Northern Ireland Executive](#).

This is the draft scope for consultation with registered stakeholders. The
consultation dates are 8 November to 23 November 2023.

The guideline update is expected to be published in 2024.

To follow the progress of the update, see the [guideline in development page](#).

Our website has information about [how NICE guidelines are developed](#).

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