

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

3 **Guideline**

4 **Suspected sepsis in people aged 16 or over:**
5 **recognition, assessment and early**
6 **management**

7 **Draft for consultation, June 2026**
8

This guideline covers the recognition, diagnosis and early management of suspected sepsis in people aged 16 or over who are not and have not recently been pregnant. It includes recommendations on recognition and early assessment, initial treatment, escalating care, finding and controlling the source of infection, early monitoring, information and support, and training and education.

NICE has also produced guidelines on:

- [suspected sepsis in pregnant or recently pregnant people](#) and
- [suspected sepsis in people under 16](#).

This guideline will update NICE guideline NG253 (published November 2025).

Who is it for?

- people aged 16 or over with suspected sepsis who are not and have not recently been pregnant, their families and carers
- healthcare professionals working in primary, secondary and tertiary care

What does it include?

- the recommendations
- recommendations for research

- rationale and impact sections that explain why the committee made the 2026 recommendations and how they might affect practice.

Information about how the guideline was developed is on the [guideline's webpage](#). This includes the evidence reviews, the scope, details of the committee and any declarations of interest.

Full details of the evidence and the committee's discussion on the 2026 recommendations are in [Evidence review J](#). Evidence for the 2025 and earlier recommendations is in [Evidence reviews A to I](#) and in the [full version](#) of the 2016 guideline.

New and updated recommendations

We have reviewed the evidence on procalcitonin testing. You are invited to comment on the new and updated recommendations. These are marked as **[2026]**.

We have not reviewed the evidence for the recommendations shaded in grey, and cannot accept comments on them. In some cases, we have made minor wording changes for clarification.

See [update information](#) for a full explanation of what is being updated.

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1 Using this guideline

2 People have the right to be involved in discussions and make informed decisions
3 about their care, as described in [NICE's information on making decisions about your](#)
4 [care](#).

5 Health care professionals should follow our general guidelines for people delivering
6 care:

- 7 • [Babies, children and young people's experience of healthcare](#)
- 8 • [Decision making and mental capacity](#)
- 9 • [Medicines adherence](#)
- 10 • [Medicines optimisation](#)
- 11 • [Multimorbidity](#)
- 12 • [Patient experience in adult NHS services](#)
- 13 • [Service user experience in adult mental health](#)
- 14 • [Shared decision making](#)

15 [Making decisions using NICE guidelines](#) explains how we use words to show the
16 strength (or certainty) of our recommendations, and has information about
17 prescribing medicines (including off-label use), professional guidelines, standards
18 and laws (including on consent and mental capacity), and safeguarding.

19 Managing suspected sepsis

20 1.8 In acute hospital settings

21 NICE has also produced a [visual summary on managing risk of severe illness or](#)
22 [death in acute hospital settings with NEWS2](#).

23 High risk of severe illness or death from sepsis

24 A person is at high risk of severe illness or death from sepsis if they have suspected
25 or confirmed infection and a NEWS2 score of 7 or above.

26 A person is also at high risk of severe illness or death from sepsis if they have
27 suspected or confirmed infection, a NEWS2 score below 7, and:

- 1 • a single parameter contributes 3 points to their NEWS2 score and a medical
2 review has confirmed that they are at high risk (see [recommendation 1.6.2 on](#)
3 [evaluating risk of severe illness or death from sepsis](#)) or
4 • there are any other clinical reasons for concern (see [recommendations 1.6.3 and](#)
5 [1.6.4 on taking causes for clinical concern into account when evaluating risk of](#)
6 [severe illness or death from sepsis](#)).

7 1.8.2 For people aged 16 or over who are at high risk of severe illness or death
8 from sepsis:

- 9 • arrange for a clinician with core competencies in the care of acutely ill
10 patients (FY2 level or above) to urgently assess the person's condition
11 and think about alternative diagnoses to sepsis
12 • carry out a venous blood test, including for:
13 – blood gas, including glucose and lactate measurement
14 – blood culture
15 – full blood count
16 – C-reactive protein
17 – urea and electrolytes
18 – creatinine
19 – liver function tests
20 – a clotting screen
21 • consider procalcitonin testing **[2026]**
22 • give antibiotics in line with recommendation 1.8.3 and the
23 [recommendations on choice of antibiotic therapy](#)
24 • refer to the [senior clinical decision maker](#) as soon as possible
25 • use clinical judgement to decide whether to discuss with a consultant.
26 **[2024, amended 2026]**

For a short explanation of why the committee made the 2024 and 2026 recommendation and how it might affect practice, see the [rationale and impact section on managing suspected sepsis in acute hospital settings: high and moderate risk of severe illness or death from sepsis](#).

Full details of the evidence and the committee's discussion are in [evidence review C: early management of suspected sepsis \(except antibiotic therapy\) in the NEWS2 population, in acute hospital settings](#) and [evidence review J: procalcitonin testing](#).

1 **Antibiotics**

- 2 1.8.3 Give people aged 16 or over who are at high risk of severe illness or
3 death from sepsis broad-spectrum intravenous antibiotic treatment, within
4 1 hour of calculating the person's NEWS2 score on initial assessment in
5 the emergency department or on ward deterioration. Only give antibiotics
6 if they have not been given before for this episode of sepsis (see
7 [recommendations 1.7.7 and 1.7.8 on managing the condition while](#)
8 [awaiting transfer](#)).
- 9
- 10 Also see the [recommendations on finding and controlling the source of](#)
11 [infection](#) and [choice of antibiotic therapy](#). **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the [rationale and impact section on managing suspected sepsis: type and timing of antibiotics](#).

Full details of the evidence and the committee's discussion are in [evidence review B: managing and treating suspected sepsis in acute hospital settings; antibiotic treatment in people with suspected sepsis](#).

12 **Intravenous fluids**

- 13 1.8.4 Give an intravenous fluid bolus without delay (within 1 hour of identifying
14 that they are at high risk) to people aged 16 or over with a high risk of
15 severe illness or death from sepsis, unless contraindicated. **[2025]**

16 **Type of fluid**

- 17 1.8.5 If people aged 16 or over need intravenous fluid resuscitation, use an
18 isotonic electrolyte crystalloid solution (a balanced solution such as
19 Hartmann's, or 0.9% saline if a balanced solution is not available). **[2025]**

1 **Volume of fluid**

2 1.8.6 Give an initial bolus of 250 ml. Ideally, give this over 10 to 15 minutes.
3 **[2025]**

4 1.8.7 Give further 250 ml boluses if needed, up to 1,000 ml total (including any
5 fluids previously given). **[2025]**

6 1.8.8 Reassess after each fluid bolus. **[2025]**

7 1.8.9 If the person has not improved enough (for example, increased blood
8 pressure, improved consciousness level) after 1,000 ml has been given,
9 get advice from a senior clinical decision maker. **[2025]**

10 1.8.10 If using a pump or flow controller to deliver intravenous fluids for
11 resuscitation to people over 16 years with suspected sepsis who need
12 fluids in bolus form ensure the device is capable of delivering fluid at the
13 required rate for example at least 2,000 ml/hour in adults. **[2016]**

For a short explanation of why the committee made the 2025 recommendations and how they might affect practice, see the [rationale and impact section on fluids](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review F: Indicators of organ hypoperfusion in people with suspected sepsis](#)
- [evidence review G: intravenous fluids for resuscitation](#).

14 **Vasopressors**

15 1.8.11 Discuss with the critical care team or, if not available, with the senior
16 clinical decision maker:

- 17
- whether vasopressors should be given and, if so
 - whether they should be started peripherally, if central access is not available. **[2025]**
- 18
- 19

20 1.8.12 Before starting vasopressors, make a shared decision with the person
21 and, if appropriate, their family and carers (and, if possible, their specialist

1 or critical care team) about whether escalation is appropriate. Take into
2 account:

- 3 • their overall condition
- 4 • any advance care or treatment escalation plans (also see the [NICE](#)
5 [guidelines on end of life care services](#) and [care of dying adults in the](#)
6 [last days of life](#))
- 7 • how urgently they need critical care – some of these discussions may
8 not be possible in the time available. **[2025]**

9 1.8.13 If starting vasopressors peripherally:

- 10 • follow local policies on choice of vasopressor, dose, concentration, and
11 monitoring
- 12 • ensure the peripheral line and cannula are visible and
- 13 • monitor them for any signs of adverse events (in particular
14 extravasation). **[2025]**

15 Note: not all vasopressors are licensed for this indication, so use would be off-label.
16 See [NICE's information on prescribing medicines](#).

For a short explanation of why the committee made the 2025 recommendations and how they might affect practice, see the [rationale and impact section on vasopressors](#).

Full details of the evidence and the committee's discussion are in:

- [evidence review G: intravenous fluids for resuscitation](#)
- [evidence review H: safety of peripheral administration of vasopressors](#).

17 **Monitoring and escalation**

18 1.8.14 Recalculate the NEWS2 score periodically, in line with the
19 [recommendations on when to recalculate a NEWS2 score](#). **[2024]**

20 1.8.15 If a person aged 16 years or over who is at high risk of severe illness or
21 death from sepsis [does not respond](#) within 1 hour of any intervention:

- 1 • ensure the [senior clinical decision maker](#) attends in person and
- 2 • refer to or discuss with a [critical care specialist or team](#) and
- 3 • inform the responsible consultant. **[2024]**

For a short explanation of why the committee made these recommendations and how they might affect practice, see the [rationale and impact section on managing suspected sepsis in acute hospital settings: high and moderate risk of severe illness or death from sepsis](#).

Full details of the evidence and the committee's discussion are in [evidence review C: early management of suspected sepsis \(except antibiotic therapy\) in the NEWS2 population, in acute hospital settings](#).

4 **Moderate risk of severe illness or death from sepsis**

5 A person is at moderate risk of severe illness or death from sepsis if they have
6 suspected or confirmed infection and a NEWS2 score of 5 or 6.

7 A person is also at moderate risk of severe illness or death from sepsis if they have
8 suspected or confirmed infection, a NEWS2 score below 5, and:

- 9 • a single parameter contributes 3 points to their NEWS2 score, and a medical
10 review has confirmed that they are at moderate risk (see [recommendation 1.6.2](#)
11 [on evaluating risk of severe illness or death from sepsis](#)) or
- 12 • there are any other clinical reasons for concern (see [recommendations 1.6.3 and](#)
13 [1.6.4 on taking causes for clinical concern into account when evaluating risk of](#)
14 [severe illness or death from sepsis](#)).

15 1.8.16 For people aged 16 or over with a moderate risk of severe illness or death
16 from sepsis:

- 17 • carry out a venous blood test, including for:
 - 18 – blood gas, including glucose and lactate measurement
 - 19 – blood culture
 - 20 – full blood count
 - 21 – C-reactive protein

- 1 – urea and electrolytes
- 2 – creatinine
- 3 – liver function tests
- 4 – a clotting screen
- 5 • consider procalcitonin testing **[2026]**
- 6 • arrange for a clinician with core competencies in the care of acutely ill
- 7 patients (FY2 level or above) to review the person’s condition and
- 8 venous lactate results within 1 hour of the person being assessed as at
- 9 moderate risk. **[2024, amended 2026]**

For a short explanation of why the committee made the 2024 and 2026 recommendation and how it might affect practice, see the [rationale and impact section on managing suspected sepsis in acute hospital settings: high and moderate risk of severe illness or death from sepsis](#).

Full details of the evidence and the committee’s discussion are in [evidence review C: early management of suspected sepsis \(except antibiotic therapy\) in the NEWS2 population, in acute hospital settings](#) and [evidence review J: procalcitonin testing](#).

10

11 1.8.17 For people at moderate risk of severe illness or death from sepsis, a
12 clinician with core competencies in the care of acutely ill patients (FY2
13 level or above) should consider:

- 14 • deferring administration of a broad-spectrum antibiotic treatment for up
- 15 to 3 hours after calculating the person’s first NEWS2 score on initial
- 16 assessment in the emergency department or on ward deterioration and
- 17 • using this time to gather information for a more specific diagnosis (see
- 18 [recommendations on finding and controlling the source of infection](#) and
- 19 [choice of antibiotic therapy](#))
- 20 • discussing with a [senior clinical decision maker](#).
- 21

1 Once a decision is made to give antibiotics, do not delay administration
2 any further. **[2024]**

3 1.8.18 For someone with a NEWS2 score of 5 or 6 and a single parameter
4 contributing 3 points to their total NEWS2 score, use clinical judgement to
5 determine the likely cause of the 3 points in one parameter. If the likely
6 cause is:

- 7
 - 8 • the current infection, manage as high risk and give broad-spectrum
9 antibiotic treatment in line with [recommendation 1.8.3](#)
 - 10 • something else (such as a pre-existing condition), manage as moderate
 risk and follow recommendation 1.8.17. **[2024]**

For a short explanation of why the committee made the 2024 recommendations and how they might affect practice, see the [rationale and impact section on managing suspected sepsis: type and timing of antibiotics](#).

Full details of the evidence and the committee’s discussion are in [evidence review B: managing and treating suspected sepsis in acute hospital settings; antibiotic treatment in people with suspected sepsis](#).

11

12 1.8.19 For people aged 16 or over at moderate risk of severe illness or death
13 from sepsis:

- 14
 - 15 • recalculate the NEWS2 score periodically, in line with the
 [recommendations on when to recalculate a NEWS2 score](#)
 - 16 • if there is further cause for concern (such as deterioration or no
17 improvement), escalate care to a clinician with core competencies in
18 the care of acutely ill patients (FY2 level or above). **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the [rationale and impact section on managing suspected sepsis in acute hospital settings: high and moderate risk of severe illness or death from sepsis](#).

Full details of the evidence and the committee's discussion are in [evidence review C: early management of suspected sepsis \(except antibiotic therapy\) in the NEWS2 population, in acute hospital settings](#).

1 Evidence of hypoperfusion

2 1.8.20 For people aged 16 or over with a moderate risk of severe illness or death
3 from sepsis and evidence of hypoperfusion (for example, lactate over
4 2 mmol/litre or evidence of acute kidney injury), treat their condition as if
5 they were at [high risk of severe illness or death from sepsis](#). [2025]

6 No evidence of hypoperfusion

7 1.8.21 Consider giving intravenous fluids, after clinical assessment, to people
8 aged 16 or over with a moderate risk of severe illness or death from
9 sepsis and no evidence of hypoperfusion. See the [recommendations on
10 type and volume of fluid](#). [2025]

For a short explanation of why the committee made the 2025 recommendations and how they might affect practice, see the [rationale and impact section on fluids](#).

Full details of the evidence and the committee's discussion are in [evidence review F: indicators of organ hypoperfusion in people with suspected sepsis](#).

11 Terms used in this guideline

12 Critical care specialist or team

13 An intensivist or critical care outreach team, or a specialist in intensive care or
14 paediatric intensive care.

15 Not responding to intravenous fluid resuscitation

16 Signs that the person is not responding to resuscitation include lack of improvement
17 or worsening:

- 18 • tachycardia
- 19 • level of consciousness

- 1 • blood pressure
- 2 • respiratory rate
- 3 • blood lactate
- 4 • urine output
- 5 • peripheral perfusion
- 6 • blood gases.

7 **Recently pregnant**

8 Someone is considered to have recently been pregnant:

- 9 • in the 24 hours following a termination of pregnancy or miscarriage
- 10 • for 4 weeks after giving birth.

11 Clinical judgement is needed after miscarriage (particularly in the second trimester)
12 or termination (particularly in the second or third trimester), because it is not clear
13 how quickly people's physiology returns to pre-pregnancy levels in these situations.

14 **Sepsis**

15 Sepsis is a life-threatening organ dysfunction due to a dysregulated host response to
16 infection.

17 **Suspected sepsis**

18 Suspected sepsis is used to indicate people who might have sepsis and require
19 face-to-face assessment and consideration of urgent intervention.

20 **Senior clinical decision maker**

21 A 'senior clinical decision maker' for people under 18 is a paediatric or emergency
22 care qualified doctor of grade ST4 or above or equivalent.

23 A 'senior clinical decision maker' for people aged 18 years or over is a clinician of
24 grade ST3 or above or equivalent.

25 **Rationale and impact**

26 These sections briefly explain why the committee made the updated
27 recommendations and how they might affect practice.

1 **Managing suspected sepsis in acute hospital settings**

2 **High and moderate risk of severe illness or death from sepsis**

3 [Recommendations 1.8.2, 1.8.14, 1.8.15, 1.8.16 and 1.8.19](#)

4 **Why the committee made the recommendations**

5 The committee noted the importance of clear escalation pathways for care of people
6 at high and moderate risk of severe illness or death from sepsis.

7 The committee recommended that clinicians with core competencies in the care of
8 acutely ill patients (FY2 or above) conduct the initial assessment, because they have
9 the competencies needed for this and should be able to assess people more
10 urgently.

11 People at high risk are severely ill and may benefit from additional expertise in the
12 management of their condition. Referral to the [senior clinical decision maker](#) is
13 recommended because these senior doctors would be able to provide a more
14 accurate diagnosis. Consultants can bring further expertise, but they may have
15 limited availability, so the committee recommended that clinical judgement should be
16 used when deciding if a discussion with a consultant is needed. **[2024]**

17 For people at high risk, the committee broadened the 2016 recommendation on
18 escalation to cover lack of response within 1 hour of any intervention (the original
19 recommendation only covered response to fluids and antibiotics). Given the level of
20 risk for this group, the committee also felt it was appropriate to involve the senior
21 clinical decision maker, the responsible consultant and the critical care specialist or
22 team.

23 For people at moderate risk whose NEWS2 score remains the same or goes up
24 following reassessment, there is a higher risk of poor outcomes and prompt
25 intervention may be needed. Because of this, the committee recommended that care
26 for this group should be escalated to a clinician with core competencies in the care of
27 acutely ill patients.

28 In 2026 the committee considered procalcitonin (PCT) testing. The evidence showed
29 that PCT testing was associated with a decrease in mortality. Based on this benefit,

1 the committee decided that PCT tests could be used (in addition to standard
2 assessments) for adults with suspected sepsis who are at moderate or high risk of
3 severe illness or death [2026].

4 The evidence basis for this decision came from 1 RCT which found a clear mortality
5 benefit, but no effect on time to initiation of intravenous antibiotics, duration of
6 treatment, length of hospital stay or admission to intensive care. There was
7 uncertainty about the mechanism by which the mortality benefit came about, which
8 remained unresolved. Despite this uncertainty, the economic analysis indicated that
9 PCT testing is likely to be cost effective [2026].

10 The committee concluded that the reduction in mortality justified recommending that
11 healthcare professionals consider using PCT tests. Because this represents a
12 change in practice and so has resource implications, they limited the
13 recommendation to people at moderate or high risk of severe illness or death from
14 sepsis, as the potential benefit appeared greatest in these groups [2026].

15 **How the recommendations might affect practice**

16 The recommendation on initial assessment will ensure people are assessed quickly
17 by a clinician with core competencies in the care of acutely ill patients and are able
18 to start treatment without having to wait for a more senior doctor. This will allow
19 treatment to start sooner and reduce pressure on more senior doctors.

20 The updated recommendation on escalation will reduce the number of referrals to
21 critical care, as this is now only recommended for people who are not responding to
22 interventions. The involvement of the senior clinical decision maker and responsible
23 consultant is already current practice for people who are not responding to
24 interventions, so this will not have a resource impact.

25 For people at moderate risk whose condition has not improved or deteriorated,
26 escalation to a clinician with core competencies in the care of acutely ill patients is
27 already current practice and so will not have a resource impact.

28 The updated recommendation on PCT testing may increase the use of PCT testing
29 in emergency and inpatient hospital settings for adults with suspected sepsis. This is
30 likely to have a resource impact because PCT is not currently taken in routine

1 practice, and because it would be added to existing blood tests rather than replacing
2 a currently used test. There may also be an impact in processing the test, but the
3 level of the impact of this will depend on current testing practice and the processes
4 to undertake the test within laboratories. Restricting use to moderate and high risk
5 groups may help to limit this impact **[2026]**.

6 [Return to recommendations](#)

7 **Type and timing of antibiotics**

8 [Recommendations 1.8.3, 1.8.17, 1.8.18, 1.8.23, 1.8.24](#) and [1.9.1](#)

9 **Why the committee made the recommendations**

10 **Timing of antibiotics**

11 Given the lack of direct evidence, the committee decided, by consensus, to
12 recommend adopting the initial antimicrobial treatment of sepsis outlined in the [2022](#)
13 [AoMRC statement](#). That is, antibiotics should be offered to people with low,
14 moderate and high risk of severe illness or death from sepsis, within a timeframe that
15 depends on risk level. They should also be offered to people at very low risk, on a
16 need for basis, in line with local practice.

17 The committee highlighted that:

- 18 • the purpose of deferring antibiotic delivery is not to delay treatment, but to have
19 extra time to gather information for a more specific diagnosis, allowing for more
20 targeted treatment
- 21 • the 1-, 3- and 6-hour time limits are a maximum (rather than an aim) for each risk
22 level
- 23 • clinical judgement is key when considering someone's specific care needs.

24 This explains why they also recommended that once a decision is made to give
25 antimicrobials, administration should not be delayed any further.

26 The committee agreed that basing the risk evaluation and antibiotic delivery time on
27 the NEWS2 would ensure due consideration is given to both patient safety and
28 antimicrobial stewardship. **[2024]**

1 **Single parameter contributing 3 points to a NEWS2 score**

2 The committee agreed that a single parameter contributing 3 points to a person's
3 NEWS2 score may be suggestive of organ dysfunction. The dysfunction may be
4 caused either:

- 5 • by something other than the current infection or
6 • by the body's dysregulated response to the infection leading to organ failure (that
7 is, by sepsis).

8 Based on their clinical expertise, the committee concluded that, if the likely cause of
9 the 3 points in 1 parameter is the current infection, the person's risk of severe illness
10 or death from sepsis is higher than that indicated by their NEWS2 score alone and
11 the timeframe for antibiotic treatment should be adjusted accordingly. **[2024,**
12 **amended 2024]**

13 **When to count time from (time zero)**

14 To guide the appropriate timing for delivering antibiotics, the committee discussed
15 what constitutes time zero. After careful consideration, they agreed to define it as 'a
16 first NEWS2 score calculated on initial assessment in the emergency department or
17 on ward deterioration' and accompanied by suspected or confirmed infection. This is
18 in line with the Academy of Medical Royal Colleges (AoMRC) report.

19 However, the committee raised concerns about possible inequalities and delays in
20 clinical assessment and subsequent reviews that may be due to:

- 21 • geographical variability in transfer time and
22 • the high influx of patients and already strained NHS system. **[2024]**

23 They recognised that a long time might elapse between the moment a patient is first
24 deemed to be at high risk and that of initial assessment in an emergency
25 department, so they also agreed to make recommendations to address this issue. To
26 this end, they wrote a new recommendation and amended, by consensus, an
27 existing recommendation from the 2016 guideline to take account of situations where
28 not only transfer time but also possible delays between arrival and initial assessment
29 in the emergency department take more than 1 hour. For more information, see the

1 explanation of the recommendations on managing the condition while awaiting
2 transfer.

3 **Type of antibiotics**

4 As part of giving due consideration to both patient safety and antimicrobial
5 stewardship, the committee agreed that:

- 6 • for people with suspected sepsis for whom the source of infection is unknown,
7 broad-spectrum antibiotic treatment should be given within the recommended
8 timeframe for the person's risk category
- 9 • once the source of infection is confirmed, source specific antibiotics should be
10 used instead. **[2024]**

11 **How the recommendations might affect practice**

12 For ambulance services, mental health settings, and acute hospitals that are already
13 using the NEWS2, the recommendations will not have a major impact on practice.
14 Basing risk stratification and timing of antibiotics on NEWS2 score will balance
15 patient safety, antimicrobial stewardship and resource capacity constraints. **[2024]**

16 [Return to recommendations 1.8.3, 1.8.17, 1.8.18, 1.8.23, 1.8.24](#)

17 [Return to recommendation 1.9.1](#)

18 **Rapid antigen and rapid PCR testing**

19 **Why the committee did not make recommendations**

20 The evidence for rapid urinary antigen testing was very low quality. The studies did
21 not include people with suspected sepsis, and the evidence only included tests for
22 streptococcus pneumoniae, so the evidence was not generalisable to other
23 infections. The sensitivity of the tests was also too low to support any clinical
24 decision making.

25 The evidence for multiplex polymerase chain reaction (PCR) testing was low quality,
26 as there was only 1 small study on the topic. While the committee thought that there
27 is potential in the use of multiplex PCR, they agreed there was insufficient evidence
28 to make a recommendation. They also noted that the availability of multiplex PCR

1 varies across the country. There was no evidence on how the use of these tests
2 could impact on prognostic outcomes for people with suspected sepsis.

3 Given the limitations of the evidence, the committee agreed they could not make any
4 recommendations for practice, the committee made a [recommendation for further](#)
5 [research in this area](#).

6 **Fluids**

7 [Recommendations 1.8.4 to 1.8.9](#) and [1.8.20 and 1.8.21](#)

8 **Why the committee made the recommendations**

9 **When to give fluids**

10 The committee reviewed evidence on indicators of hypoperfusion, to see if these
11 could be used to guide intravenous fluid administration. The evidence was all low or
12 very low certainty. There was a high risk of bias, and the evidence did not cover all of
13 the indicators of hypoperfusion specified in the review protocol.

14 Evidence was available for lactate, mottled skin and capillary refill time, but the
15 committee agreed that these could not be used to guide treatment decisions in
16 isolation. Lactate could be high for numerous reasons. Assessments of mottled skin
17 can be quite subjective and needs to be interpreted with caution in people with
18 brown or black skin. The committee agreed that the person's risk should be
19 categorised using their NEWS2 score.

- 20 • People assessed as being at high risk should be given intravenous fluids, unless
21 giving fluids is contraindicated (for example in people with cardiac or renal failure).
- 22 • For people at moderate risk, the committee agreed that indicators of organ
23 hypoperfusion such as a high lactate or acute kidney injury could be used as
24 additional markers to help decision making. However, the committee also agreed
25 that dependent on the assessment of the individual a moderate risk score without
26 other indicators of hypoperfusion was sufficient evidence of illness for clinicians to
27 consider giving fluids.

28 **Type of fluid**

29 The overall certainty of the evidence on fluid type was very low, because:

- 1 • there was a high risk of bias
- 2 • some of the evidence was indirect: many of the studies looked at people in
- 3 intensive care units, and this group is not covered by the guideline
- 4 • some of the populations in the studies were small.

5 The committee noted that:

- 6 • one systematic review could not differentiate between balanced crystalloids and
- 7 normal saline
- 8 • a post-hoc analysis in the same systematic review favoured balanced crystalloids
- 9 • one feasibility randomised controlled trial comparing 5% human albumin solution
- 10 with balanced crystalloids was unable to differentiate between them.

11 Following discussion of the evidence, and based on their experience, the committee
12 agreed that isotonic electrolyte crystalloid solutions should be used as the initial fluid.

13 Fluid resuscitation can start before people arrive at hospital. Ambulance services
14 usually only have 0.9% saline available, so the committee included this in the
15 recommendation to ensure that ambulance services would continue to give fluids
16 when needed. The recommendations are about initial management, but fluid
17 management may be adapted later in the patient's care pathway as more clinical
18 information becomes available.

19 **Fluid volume**

20 The evidence reviewed was unable to differentiate between lower or higher fluid
21 volumes. The studies used different fluid protocols and measured total fluid volumes
22 at different times. In most of the studies, people had been given initial fluids before
23 randomisation.

24 The committee agreed that the overall volumes needed would differ for each person,
25 and that people need to be reassessed after each bolus and that where there is not
26 improvement, senior clinical advice will be needed. The committee agreed a stepped
27 approach to receiving fluid in boluses of 250 ml. The committee agreed if a person
28 had received 1,000 ml of fluid and there had been no or limited change to indicators
29 of hypoperfusion, then advice should be sought due to the risk of fluid overload.

1 **How the recommendations might affect practice**

2 The 2025 recommendations will not have a substantial impact. People at high risk of
3 severe illness or death from sepsis will be given fluids in practice. Using NEWS2
4 rather than lactate to make decisions on fluids and escalation may support decision
5 making and improve consistency.

6 For people at moderate risk, the recommendation on considering fluids when there
7 are no indicators of hypoperfusion may lead to people getting fluids faster, before
8 possible deterioration.

9 Crystalloids were already recommended; this is not a change in practice. Services
10 that have access to balanced solutions may use these more often, which may be a
11 small cost increase compared with using 0.9% saline.

12 Human albumin solution is not routinely used for initial resuscitation, so removing
13 this recommendation should have little impact.

14 The initial fluid bolus volume has been reduced from the 2016 recommendation
15 (from 500 ml to 250 ml). However, the maximum volume of fluid has not changed, so
16 there should be no extra cost impact. Assessing people after each 250 ml of fluid will
17 ensure they receive the appropriate amount of fluid for their needs. Healthcare
18 professionals should already be closely monitoring the condition of people at high
19 risk of severe illness or death from sepsis, so the time spent doing this is unlikely to
20 increase.

21 [Return to recommendations 1.8.4 to 1.8.9](#)

22 [Return to recommendations 1.8.20 and 1.8.21](#)

23 **Vasopressors**

24 **Why the committee made the recommendations**

25 [Recommendations 1.8.11 to 1.8.13](#)

26 There was limited evidence on the safety of peripheral administration of
27 vasopressors. The committee discussed the evidence and further used their own
28 expertise to develop the recommendations. For some people at high risk of severe

1 illness or death from sepsis, peripheral administration of vasopressors can provide
2 benefits in managing hypotension and septic shock if initial management via fluid
3 administration does not appear to be working. The committee noted that, while
4 vasopressors are not licensed for peripheral administration, they are used in
5 practice. The committee highlighted that decisions about whether to give a
6 vasopressor and whether to administer it peripherally should be made with the
7 critical care team, (and if not available, the senior clinical decision maker) given the
8 potential risks associated with vasopressors.

9 The committee discussed the risk of extravasation, and how various factors might
10 affect this (such as how long the intravenous cannula has been in place, and
11 vasopressor dosage and concentration). However, adverse events were
12 inconsistently reported in the studies, and overall event numbers were usually small,
13 so it was not possible to make more specific recommendations. Based on their
14 experience, the committee recommended that if a peripheral line is used, it should
15 be visible and regularly monitored.

16 The committee agreed that local policies should be followed on the type, dose and
17 concentration of vasopressor used. To address the limited evidence on this area, the
18 committee also made a [recommendation for research on vasopressors](#).

19 Shared decision making is important when discussing possible vasopressor
20 administration. People who are approaching the end of their life may not want more
21 invasive interventions, and they may also have pre-existing advance care or
22 treatment escalation plans that need to be taken into account.

23 **How the recommendations might affect practice**

24 For some clinicians, the use of peripheral administration for vasopressors will be a
25 change in practice. Clinicians may also need to consider which level of care is
26 needed or available for people receiving vasopressors peripherally.

27 [Return to recommendations](#)

28 **Low or very low risk of severe illness or death from sepsis**

29 [Recommendations 1.8.22, 1.8.25 and 1.8.26](#)

1 **Why the committee made the recommendations**

2 The committee agreed, based on their experience, that, all registered health
3 practitioners would be capable of conducting the initial assessment for people at low
4 or very low risk of suspected sepsis.

5 Antibiotics are more likely to be needed for people whose NEWS2 score remains the
6 same or goes up following reassessment. Because of this, the committee
7 recommended that care for this group should be escalated to a clinician with core
8 competencies in the care of acutely ill patients.

9 **How the recommendations might affect practice**

10 The recommendations may free up senior clinician capacity.

11 [Return to recommendations](#)

12 **Discharge**

13 [Recommendation 1.8.27](#)

14 **Why the committee made the recommendation**

15 By consensus, the committee removed recommendations on discharge for people at
16 moderate and low risk of severe illness or death from sepsis. The committee did not
17 think that the initial management period was the right time to consider discharge for
18 people at these risk levels. The section of the 2016 recommendations on providing
19 information and safety netting was retained, as this is applicable to everyone with
20 suspected sepsis when they are eventually ready for discharge.

21 **How the recommendation might affect practice**

22 This change to the recommendations is not expected to have a significant impact on
23 practice, because safety netting information should already be provided to people
24 who have had suspected sepsis.

25 [Return to recommendation](#)

1 **Finding more information and committee details**

2 To find NICE guidance on related topics, including guidance in development, see the
3 [NICE topic pages on sepsis](#) and [antimicrobial stewardship](#).

4 For full details of the evidence and the guideline committee's discussions, see the
5 [evidence reviews](#). You can also find information about how the guideline was
6 developed, including [details of the committee](#).

7 NICE has produced [tools and resources to help you put this guideline into practice](#).

8 For general help and advice on putting our guidelines into practice, see [resources to
9 help you put NICE guidance into practice](#).

10 **Update information**

11 **June 2026:** We have added new elements to recommendations 1.8.2 and 1.8.16
12 based on a review of the evidence on procalcitonin testing.

13 **January 2026:** We have amended the recommendations to refer to 'learning
14 disabilities' rather than 'learning difficulties'.

15 **November 2025:** We have split the sepsis guideline, that covered all age groups,
16 into 3 guidelines (including this one). See also [NICE's guidelines on suspected
17 sepsis in under 16s: recognition, diagnosis and early management](#) and [suspected
18 sepsis in pregnant or recently pregnant people](#).

19 In this guideline, we have reviewed the evidence on rapid antigen testing and PCR
20 tests, indicators of organ hypoperfusion, intravenous fluid therapy, vasopressors,
21 and risk factors for sepsis.

22 Recommendations are marked **[2025]** if the evidence has been reviewed.

23 We have also made some changes without an evidence review:

- 24 • the recommendation on assessing people with communication challenges who
25 might have sepsis has been updated for better inclusivity

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1 • recommendations on managing suspected sepsis in acute mental health settings
2 have been amended to reflect the facilities and expertise available in these
3 settings.

4 These recommendations are marked **[2016, amended 2025]** and **[2024, amended**
5 **2025]**.

6 Recommendations marked **[2016]** or **[2024]** last had an evidence review in that year.

7 In some cases, minor changes have been made to the wording to bring the language
8 and style up to date, without changing the meaning.

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