



FOCUS HOME CARE
We Focus On Care At Home

CLINICAL LEAD AND TRAINING DIRECTORS' NEWSLETTER AUGUST 2024 - **Theme; SEPSIS**

Sepsis is the body's extreme response to an infection. It is a life-threatening medical emergency. Sepsis happens when an infection you already have triggers a chain reaction throughout your body. Infections that lead to sepsis most often start in the lung, urinary tract, skin, or gastrointestinal tract.



Sepsis is a life-threatening reaction to an infection. It happens when your immune system overreacts to an infection and starts damaging your body's tissues and organs. You cannot catch sepsis from another person. Sepsis is sometimes called septicemia or blood poisoning.

The first signs of sepsis

These can include:

- feeling dizzy or faint.
- a change in mental state – like confusion or disorientation.
- diarrhea.
- nausea and vomiting.
- slurred speech.
- severe muscle pain.
- severe breathlessness.
- less urine production than normal – for example, not urinating for a day.



Three symptoms of sepsis

- Change in mental status.
- Systolic blood pressure — the first number in a blood pressure reading — less than or equal to 100 millimeters of mercury (mm Hg)
- Respiratory rate higher than or equal to 22 breaths a minute.



SEPSIS PATHWAY



RECOGNISE



Does your patient have risk factors, signs or symptoms of infection?

Immunocompromised	Skin: cellulitis, wound
Indwelling medical device	Urine: dysuria, frequency, odour
Recent surgery/invasive procedure	Abdomen: pain, peritonism
History of fever or rigors	Chest: cough, shortness of breath
Red Flags in ambulance handover	Neuro: decreased mental alertness, neck stiffness, headache

AND

Does your patient have 2 or more yellow criteria?

- Respirations ≤ 10 or ≥ 25 per minute
- SpO₂ < 95%
- Systolic blood pressure ≤ 100 mmHg
- Pulse ≤ 50 OR ≥ 120 per minute
- Altered LOC or change in cognitive status
- Temp ≤ 35.5 or $\geq 38.5^{\circ}\text{C}$

NO

Re-assess

Treat and re-assess simultaneously:
Sepsis may still be a concern

YES

Perform venous blood gas if available

Does your patient have any red criteria?

- SBP ≤ 90 mmHg
- Lactate ≥ 4 mmol/L
- Base Excess < - 5.0
- Age > 65 years
- Immunocompromised



SIGNS OF SEPSIS:

T **EMPERATURE**
higher or lower than normal

I **NFECTION**
may have signs & symptoms

M **ENTAL DECLINE**
confused, sleepy, difficult
to rouse

E **XTREMELY ILL**
"I feel like I might die,"
severe pain or discomfort

Who's more likely to get sepsis

- babies under 1, particularly if they're born early (premature) or their mother had an infection while pregnant.
- people over 75.
- people with diabetes.
- people with a weakened immune system, such as those having chemotherapy treatment or who recently had an organ transplant.



Severe sepsis: This is when sepsis causes your organs to malfunction. This is usually because of low blood pressure, a result of inflammation throughout your body. **Septic shock:** Septic shock is the last stage of sepsis and is defined by extremely low blood pressure, despite lots of fluids.

It's clear that sepsis doesn't occur without an infection in your body, but someone may develop sepsis without realizing they had an infection in the first place. And sometimes, doctors never discover what the initial infection was.

But sepsis is one of the top 10 causes of disease-related death in the United States. The condition can arise suddenly and progress quickly, and it's often hard to recognize. Sepsis was once commonly known as "blood poisoning." It was almost always deadly.

As sepsis worsens, blood flow to vital organs, such as your brain, heart and kidneys, becomes impaired. Sepsis may cause abnormal blood clotting, resulting in small clots or burst blood vessels that damage or destroy tissues. Most people recover from mild sepsis, but the mortality rate for septic shock is about 40%.

How Can I Get Ahead of Sepsis

- Prevent infections. Talk to your healthcare professional about steps you can take to prevent infections that can lead to sepsis, including: ...
- Practice good hygiene. Wash your hands.
- Know the signs and symptoms of sepsis.
- ACT FAST.





Hand-washing technique with soap and water



1 Wet hands with water



2 Apply enough soap to cover all hand surfaces



3 Rub hands palm to palm



4 Rub back of each hand with palm of other hand with fingers interlaced



5 Rub palm to palm with fingers interlaced



6 Rub with back of fingers to opposing palms with fingers interlocked



7 Rub each thumb clasped in opposite hand using a rotational movement



8 Rub tips of fingers in opposite palm in a circular motion



9 Rub each wrist with opposite hand



10 Rinse hands with water



11 Use elbow to turn off tap



12 Dry thoroughly with a single-use towel



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Adapted from World Health Organisation Guidelines



INFECTION PROTECTION



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Prevention and control of infections

Infection prevention and control measures aim to interrupt the chain of transmission.

Hand hygiene

Hand hygiene is one of the most important ways of controlling the spread of infections, especially those that cause diarrhea or vomiting and respiratory infections.

Ensure all individuals have access to liquid soap, warm water, and paper towels. Bar soap should not be used. Alcohol hand gel can be used if hands



are not visibly dirty. Alcohol hand gel is not effective against organisms that cause gastroenteritis, such as norovirus.

Advise all individuals to clean their hands after using the toilet, before eating or handling food, after playtime, and after touching animals.

All cuts and abrasions should be covered with a waterproof dressing.

Educate children and young people on why hand hygiene is so important. Free resources to support this have been developed by the UK Health Security Agency (UKHSA) with teachers for ages 3 to 16 and are available at e-bug.eu.

Respiratory and cough hygiene

Coughs and sneezes spread diseases. Covering the nose and mouth when sneezing and coughing can reduce the spread of infections.

Discourage spitting.

Encourage all individuals, particularly those with signs and symptoms of a respiratory infection to follow respiratory hygiene and cough etiquette, specifically, to:

- Cover nose and mouth with a tissue when coughing and sneezing, dispose of used tissue in a waste bin, and clean hands
- Cough or sneeze into the inner elbow (upper sleeve) if no tissues are available, rather than into the hand
- Keep contaminated hands away from their eyes, mouth and nose
- Clean hands after contact with respiratory secretions and contaminated objects and materials

Educate children and young people on why respiratory hygiene is so important. Free resources to support this have been developed by UKHSA with teachers for ages 3 to 16 and are available at e-bug.eu.



Cleaning

Keeping settings clean, including equipment, reduces the risk of transmission. Effective cleaning and disinfection are critical in any setting, particularly when food preparation is taking place.

Cleaning with detergent and water is normally all that is needed as it removes most germs that can cause diseases.

Essential elements of a comprehensive cleaning contract include daily, weekly, and periodic cleaning schedules.

In the event of an outbreak of infection at your setting, your health protection team (HPT) may recommend enhanced or more frequent cleaning, to help reduce transmission.

Advice may also be given to increase cleaning of areas with particular attention to hand-touch surfaces that can be easily contaminated such as door handles, toilet flushes, taps, and communal touch areas.

- ✚ Clean surfaces that people touch a lot. Regularly clean and disinfect all areas or surfaces in contact with food, dirt, or bodily fluids.
- ✚ In cleaning schedules, clearly describe the activities required, the frequency of cleaning and who will carry them out.
- ✚ Develop plans for situations where additional cleaning will be required (for example in the event of an outbreak) and how the setting might carry this out.

Ensure cleaning staff are appropriately trained and have access to the appropriate personal protective equipment (PPE), such as household gloves and aprons.

Use color-coded equipment in different areas with separate equipment for the kitchen, toilet, bedroom, and office areas (for example, red for toilets and washrooms; yellow for hand wash basins and sinks; blue for general areas, and green for kitchens).

Cleaning equipment used should be disposable or, if reusable, disinfected after each use.



Nominate a member of staff to monitor cleaning standards. Have a system in place for staff to report issues with cleaning standards and discuss any issues with cleaning staff, or contractors employed by the setting.

Food is handled or prepared

The Food Standards Agency (FSA) strongly advises the use of either a dishwasher, a sterilizing sink, or a steam cleaner to clean and disinfect equipment and utensils.

Operate and maintain equipment according to the manufacturer's instructions and include regular dishwasher interior cleaning cycles.

Follow food hygiene standards from the Food Standards Agency.

Educate children and young people on their role in improving food hygiene.

Free resources to support this have been developed by UKHSA with teachers for ages 3 to 16 and are available at e-bug.eu

Toileting and sanitation

Good hygiene practices depend on adequate facilities and clear processes. Hand hygiene is extremely important to emphasize to individuals who are supporting children and young people with toileting.

Individuals who use continence aids (like continence pads, catheters) should be encouraged to be as independent as possible. The principles of basic hygiene should be applied by both individuals and staff involved in the management of these aids.

For staff

- Have hand wash basins available, with warm running water along with a mild liquid soap, preferably wall-mounted with disposable cartridges.
- Place disposable paper towels next to basins in wall-mounted dispensers, together with a nearby foot-operated wastepaper bin.
- Make sure toilet paper is available in each cubicle (it is not acceptable for toilet paper to be given out on request). If settings experience



problems with over-use, they could consider installing paper dispensers to manage this.

Personal protective equipment

- ✓ PPE can protect individuals and staff from contamination with blood or bodily fluids, which may contain germs that spread disease.
- ✓ PPE should be used in line with risk assessments in all settings, proportionate to the risk identified.
- ✓ Risk assessments look at both the risk of occurrence and the impact, and may need to be dynamic, based on the emerging situation. This ensures that all people, including those with complex or additional health needs, are supported to continue their care and education in the setting, where it is safe to do so.
- ✓ Conduct risk assessments that are dynamic and long-term.
- ✓ If there is a risk of splashing or contamination with blood or bodily fluids during an activity, wear disposable gloves and plastic aprons. Gloves and aprons should be single-use disposable, non-powdered vinyl/nitrile or latex-free, and CE marked.
- ✓ Wear a fluid-repellent surgical facemask and eye protection if there is a risk of splashing with blood or body fluids to the face. If reusable, decontaminate before the next use.
- ✓ Wear eye and face protection, an apron, and gloves to protect against the splashing or spraying of blood and bodily fluids. suspected of being infectious with a respiratory agent (for example respiratory syncytial virus (RSV) or COVID-19), use additional airborne PPE, including a fit-tested FFP3 respirator.

Safe management of the environment

Ventilation

Ventilation is the process of introducing fresh air into indoor spaces while removing stale air. Letting fresh air into indoor spaces can help dilute air



that contains viral particles and reduce the spread of COVID-19 and other respiratory infections.

As part of the COVID-19 pandemic response, the Department for Education provided state-funded education and childcare settings with access to CO2 monitors to help them assess how well-ventilated their spaces were.

Settings can continue to use these monitors as a helpful tool to manage ventilation, sitting alongside the other protective measures in place to manage transmission, such as vaccinations and increased hygiene.

CO2 monitors are portable, enabling settings to move them around to assess ventilation across their full estate, starting with areas they suspect may be poorly ventilated.

Where an area of poor ventilation has been identified, several simple measures can be taken to resolve this. Further information is available: Ventilation to reduce the spread of respiratory infections, including COVID-19.

All settings should keep occupied spaces well-ventilated to help reduce the number of respiratory germs. Open windows and doors as much as possible to let fresh air in (unless it is unsafe to do so, for example, do not keep fire doors open).

- ✚ Try and open higher-level windows to reduce draughts, where it is safe to do.
- ✚ If you have CO2 monitors, use them to balance the need for increased ventilation with maintaining a comfortable temperature.
- ✚ During the colder months, you may consider opening windows more when the room is unoccupied in between lessons.
- ✚ If the above does not help to reduce CO2 levels, settings should explore what remedial works may be required to improve ventilation.

Keeping animals on-site

- Some settings will choose to include pets and other animals to enhance the learning environment or provide respite or support for



people. However, contact with animals can pose a risk of infection including gastrointestinal infection, fungal infections, and parasites.

- Some people may be at greater risk of developing a severe infection. However, sensible measures can be taken to reduce the risk of infection.
- Only consider pets that are mature and toilet trained.
- A knowledgeable staff member needs to be responsible for animals and abide by the Animal Welfare Act 2006, which places a duty on animal owners to ensure their animal's welfare needs are met.
- The responsible person should ensure that the animal has recommended treatments and immunizations, is regularly groomed (including claws trimmed), and checked for signs of infection.
- Where an individual has a support animal, responsibility for implementing infection prevention measures, and supporting the individual to do so, should be allocated to a staff member.

Develop a written agreement within the setting detailing:

- The types of animals allowed in the setting
- How to manage them and permitted behavior whilst on the premises
- Any insurance liability of owners and handlers
- Ensure animals are always supervised when in contact with children and young people and that all persons wash their hands immediately after handling animals or touching their bedding or equipment.

Maintain a clean environment, making sure that:

- Bedding is laundered regularly
- Feeding areas are kept clean and food is stored away from human food
- Food not consumed within 20 minutes is taken away or covered

There are some additional considerations for cats, such as:

- Cat litter trays should be cleaned daily wearing disposable gloves



- Litter trays should not be placed near food preparation, storage or eating areas
- Pregnant staff should not clean litter trays due to a risk of toxoplasmosis
- Reptiles are not suitable as pets in children and young people settings as all species can carry salmonella which can cause serious illness.

Safe management of linen and soft furnishings

Soft furnishings should ideally have a wipeable surface when used.

If there is a need for laundry facilities, designate an area on site that:

- ✚ Is separate from any food preparation areas
- ✚ Has appropriate hand-washing facilities
- ✚ Has a washing machine with a sluice or pre-wash cycle
- ✚ Avoid rinsing clothing by hand as there is a risk of inhaling fine contaminated aerosol droplets. Instead, rinse soiled articles of clothing in a washing machine pre-wash cycle, before washing.

If the setting uses linen then:

- ✚ Ensure that linen is washed at least weekly and when visibly dirty
- ✚ Bedding should be allocated to a named person
- ✚ Launder face flannels after each use
- ✚ Remove dirty and used linen from areas that are accessible to children and young people
- ✚ Carefully dispose of any soiling (feces) found on clothing or linen into the toilet, for example from reusable nappies – note: do not rinse soiled clothing, including reusable nappies
- ✚ Wash all linen at the hottest temperatures specified on the fabric
- ✚ Keep fresh linen in a clean, dry area separate from used linen



- + If staff have uniforms or use cotton tabards, they should change them every day and wash them using normal washing detergent at the hottest temperature specified on the garment.

If clothing is contaminated with blood or bodily fluids:

- + Wear gloves and aprons when handling soiled linen or clothing
- + Remove clothing as soon as possible and place in a named and sealed plastic bag or container
- + Send clothing home with the child or young person with advice for the parent or carer on how to launder the contaminated clothing
- + Wash any contaminated clothing separately in a washing machine, using a pre-wash cycle, on the hottest temperature that the clothes will tolerate
- + Wash hands thoroughly after removing the gloves and aprons

Safe management of blood and bodily fluids

Blood and bodily fluids can contain germs that cause infection. It is not always evident whether a person has an infection, and so precautions should always be taken.

Cleaning blood and bodily fluid spills

- + Clean any spillages of blood, faeces, saliva, vomit, nasal discharges immediately, wearing PPE.
- + Use gloves and an apron if you anticipate splashing and risk assess the need for facial and eye protection.
- + Clean using a product which combines detergent and disinfectant that is effective against both bacteria and viruses. Manufacturer's guidance should always be followed. Cleaning with detergent followed by the use of a disinfectant is also acceptable. It should be noted that some agents, such as NaDCC (Sodium Dichloroisocyanurate or Troclosene Sodium, a form of chlorine used for disinfection), cannot be used on urine.



- ✚ Use disposable paper towels or cloths to clean up blood and bodily fluid spills. These should be disposed of immediately and safely after use.
- ✚ A spillage kit should be available for bodily fluids like blood, vomit and urine.

Managing cuts, bites, nose bleeds and bodily fluid spills

- ✚ Take standard precautions when dealing with any cuts or abrasions that involve a break in the skin or bodily fluid spills.
- ✚ Be aware of the setting's health and safety policies and manage incidents such as cuts, bites, bleeds and spills accordingly.
- ✚ These policies should include having nominated first aiders who are appropriately trained.

Safe management of waste (including sharps)

- ✚ Under the waste management duty of care, settings must ensure that a licensed waste management company deals with all waste produced.
- ✚ Place any used PPE in a refuse bag and dispose of as normal domestic waste. PPE should not be put in a recycling bin or dropped as litter.
- ✚ Settings that generate clinical waste should continue to follow usual waste policies.
- ✚ Nappy waste can sometimes be produced in large quantities in places such as nurseries. Although considered non-hazardous it can sometimes be offensive and cause handling problems. Contact your local authority if you are a setting that produces significant amounts of used nappies (more than 7kg per collection period) to discuss appropriate disposal arrangements.

Managing prevention of exposure to infection (including needlestick or sharps injuries, and bites)

An exposure is an injury from a used needle or a bite that breaks the skin, and/or exposure blood and body fluids to:



- + Broken skin
- + The eyes, nose, or mouth
- + Human mouths are inhabited by a wide variety of organisms, some of which can be transmitted by bites. Human bites resulting in puncture or breaking of the skin are potential sources of exposure to blood-borne infections, therefore, it is essential that they are managed promptly.

If someone pricks or scratches themselves with a used hypodermic needle or has a bite that breaks the skin:

- + Dispose of the needle safely in a sharps container to avoid the same thing happening to someone else – please contact your local authority or school nurse for help with safe disposal of discarded needles
- + Wash the wound thoroughly with soap and warm running water
- + Cover the wound with a waterproof dressing
- + Seek immediate medical attention or advice from your local accident and emergency department or occupational health provider
- + Record it in the accident book and complete the accident

Use Standard Infection Prevention and Control (SIPC) precautions to reduce the risk of unknown (and known) disease transmission.

These include:

- Wearing gloves when in contact with blood, bodily fluids, non-intact skin, eyes, mouth, or nose (washing grazes, dressing wounds, cleaning up blood after an incident) and wearing a disposable plastic apron
- Carefully clean the wound under running water if possible or using a disposable container with water and wipes; carefully dab dry
- Covering all exposed cuts and grazes with waterproof plasters
- Keeping the dressing clean by changing it as often as is necessary
- Managing all spillages of blood or body fluids



A single diagnostic test for sepsis does not yet exist, and use a combination of tests and immediate and worrisome clinical signs, which include the following:
The presence of an infection
Very low blood pressure
and high heart rate
Increased breathing rate

The NEWS2 Score is based on a simple aggregate scoring system in which a score is allocated to physiological measurements, already recorded in routine practice presentations. Six simple physiological parameters form the basis of the scoring system:

1. respiration rate
2. oxygen saturation
3. systolic blood pressure
4. pulse rate
5. level of consciousness or new confusion*
6. temperature.

Chart 1: The NEWS scoring system

Physiological parameter	Score						
	3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO ₂ Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO ₂ Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	



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Observation chart for the National Early Warning Score (NEWS)

NEWS KEY (1-3-1-3)		NAME:	D.O.B.	ADMISSION DATE:	
	DATE TIME				DATE TIME
RESP. RATE	2-25			3	2-25
	21-24			2	21-24
	12-20			1	12-20
	8-11			1	8-11
	55			3	55
SpO ₂	95-98			1	95-98
	92-95			2	92-95
	88-91			3	88-91
	75			2	75
TEMP	35.9°			2	35.9°
	38°			1	38°
	37°			3	37°
	36°			1	36°
	35.5°			3	35.5°
NEW SCORE Uses Systolic BP	230			3	230
	220			3	220
	210			3	210
	200			3	200
	180			3	180
	160			3	160
	150			3	150
	140			3	140
	130			3	130
	120			3	120
BLOOD PRESSURE	110			1	110
	100			2	100
	90			3	90
	80			3	80
	70			3	70
	60			3	60
	50			3	50
	40			3	40
	30			3	30
		>140			3
HEART RATE	130			3	130
	120			2	120
	110			2	110
	100			1	100
	90			3	90
	80			3	80
	70			3	70
	60			3	60
	50			3	50
		30			3
Level of Consciousness	Alert			3	Alert
	V / P / U			3	V / P / U
BLOOD SUGAR					B/d Sugar
TOTAL NEWS SCORE					TOTAL SCORE
Pain Score					Pain Score
Urine Output					Urine Output
Monitoring Frequency					Monitor Freq
Escalation Plan Y/N/S/A					Escal Plan
Initials					Initials

Please see next page for explanatory text about this chart.



Link for how to score on NEWS 2 chart

<https://www.bing.com/videos/riverview/relatedvideo?q=news+2+score&mid=477B6C00D1754DC2656C477B6C00D1754DC2656C&FORM=VIRE>

- ❖ **Low risk (aggregate score 1 to 4)** – prompt assessment to decide on change to frequency of monitoring or escalation of clinical care.
- ❖ **Low to medium risk (score of 3 in any single parameter)** – urgent review by doctor or 111 to determine the cause and to decide on a change to the frequency of monitoring or escalation of clinical care.
- ❖ **Medium risk (aggregate score 5 to 6)** – urgent review doctor or 999 to decide on escalation to the critical care team.
- ❖ **High risk (aggregate score of 7 or over)** – call 999.



Sepsis is a life-threatening condition that requires immediate medical attention. You should call 999 or go to A&E if you or someone else shows any of the following symptoms of sepsis:

For Adults and Older Children:

- ✚ Acting confused, slurred speech, or not making sense
- ✚ Blue, grey, pale, or blotchy skin, lips, or tongue (on brown or black skin, this may be easier to see on the palms of the hands or soles of the feet)
- ✚ A rash that does not fade when you roll a glass over it, similar to meningitis
- ✚ Difficulty breathing, breathlessness, or breathing very fast

For Babies and Young Children:

- ✚ Blue, grey, pale, or blotchy skin, lips, or tongue
- ✚ A rash that does not fade when you roll a glass over it
- ✚ Difficulty breathing (you may notice grunting noises or their stomach sucking under their ribcage), breathlessness, or breathing very fast
- ✚ A weak, high-pitched cry that's not like their normal cry
- ✚ Not responding like they normally do, or not interested in feeding or normal activities
- ✚ Being sleepier than normal or difficult to wake

If you notice any of these symptoms, it's crucial to act quickly. Trust your instincts and seek emergency medical help immediately.



ASSOCIATED DOCUMENTS (MOBIZIO):

- SU – Care plan for infection
- SU – Risk assessment for infection
- SU – Infection form
- SU- MDT form
- Food and Fluid Chart
- NEWS2 score (temperature, pulse, respiration, oxygen saturation)

ASSOCIATED AUDITS (ACCESS CARE COMPLIANCE):

- ✓ Infection prevention Audit
- ✓ Provider Quality Audit
- ✓ Facility Visits



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