

# Sepsis: Identification of suspected sepsis



*Waitemata*  
District Health Board

Best Care for Everyone

# Summary

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- qSOFA
- Definition of sepsis and septic shock
- Possible Sepsis Pathway
  - Accelerated Pathway
  - Red Flags
  - SIRS

# QSOFA score

- It is an screening tool that helps to identify infected patients who are likely to be septic
- 3 clinical criteria assigning 1 point for each criteria:

Quick

Sepsis Related

Organ

Failure

Assessment

Respiratory Rate  $\geq 22$

Mental state: GCS  $< 15$

Systolic BP  $\leq 100$ mm Hg

# Sepsis VS Septic Shock

- Sepsis is defined as an infection complicated by life-threatening organ dysfunction due to a dysregulated host response
- Clinical Criteria to consider sepsis:

Suspected Infection + Change in:



Quick  
Sepsis related  
Organ  
Failure  
Assessment

≥2

# Septic Shock

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- Sepsis associated with a particularly profound circulatory, cellular and metabolic abnormalities
- Can be identify clinically by:
  - Vasopressors requirement to keep MAP of 65 mm Hg
  - Serum Lactate level greater than 2mmol/L after adequate fluid resuscitation

# Possible Sepsis Pathway

- Early recognition
- Escalation
- Treatment priorities

1/2020 [1] Possible Sepsis Pathway Jul 17.pdf

**Waitemata District Health Board**  
Best Care for Everyone  
 YES  NO

(PLACE PATIENT LABEL HERE)  
SURNAME: \_\_\_\_\_ NH: \_\_\_\_\_  
FIRST NAMES: \_\_\_\_\_  
DATE OF BIRTH: / / SEX: \_\_\_\_\_

### POSSIBLE SEPSIS PATHWAY

This pathway is designed to facilitate timely care. It supports and does not replace clinical judgment.

<b>INCLUSION CRITERIA</b>	<b>EXCLUSION CRITERIA</b>
<input type="checkbox"/> Suspected or confirmed infection <b>AND / OR</b> <input type="checkbox"/> Temp $\geq 38$ or $\leq 36$ °C	<input type="checkbox"/> Age < 15 <input type="checkbox"/> Neutropenic patients - use Neutropenic sepsis pathway
<input type="checkbox"/> Select 'Possible Sepsis' Treatment Pathway on Whiteboard	<b>STOP!</b> Not suitable for this Pathway Continue usual nursing care

**qSOFA:** Score one point for each criteria met

Respiratory rate <input type="checkbox"/> $\geq 22$	qSOFA: <input type="text"/> enter the score here
Mental state <input type="checkbox"/> GCS < 15	
Blood pressure <input type="checkbox"/> Systolic BP $\leq 100$ mmHg	

**qSOFA  $\geq 2$**  Sepsis likely → **accelerated pathway**

**qSOFA < 2** Sepsis still possible → continue

**POSSIBLE SEPSIS ACCELERATED PATHWAY**  
Aim < 15 mins

Bloods:  General bloods  VBG  
 Blood cultures  Lactate  
 Glucose

Urine:  MSU or  CSU

Radiology:  CXR if any chest symptoms

Notify SMO for urgent review

**Treatment priorities:**

 IV fluids: 0.9% saline  
 Source identification & control  
 Consider further imaging  
 Early antibiotics: refer 'Antibiotic guide' (DoDD5) for most appropriate antibiotic choice

Continuous re-assessment and re-evaluation of qSOFA and potential de-escalation

**RED FLAGS** Any red flags present?

<input type="checkbox"/> AGE $\geq 65$	<input type="checkbox"/> Multiple comorbidities
<input type="checkbox"/> Diabetes	<input type="checkbox"/> Reproductive
<input type="checkbox"/> IVDU	<input type="checkbox"/> Immunocompromised
<input type="checkbox"/> Fall	<input type="checkbox"/> Recent surgery / delivery
<input type="checkbox"/> Medical device	<input type="checkbox"/> Clinical concern

Yes → Apply SIRS  No → continue usual care

**SIRS:** Score one point for each criteria met

Temp <input type="checkbox"/> $\geq 38$ or $\leq 36$ °C
Respiratory rate <input type="checkbox"/> $\geq 20$
Heart rate <input type="checkbox"/> $\geq 90$ bpm
White Cell Count <input type="checkbox"/> $\geq 12$ or $\leq 4$

**SIRS  $\geq 2$**  → accelerated pathway

**SIRS < 2** → check perfusion

Systolic BP  $\geq 100$  mmHg **and / or** Lactate  $\geq 2$

**YES** Sepsis possible → accelerated pathway

**NO** Sepsis unlikely → continue usual care

POSSIBLE SEPSIS P

7/14/2017 10/1/2017

# Possible Sepsis Pathway

- Inclusion Criteria
  - Suspected or confirm infection
  - Temp  $\geq 38^{\circ}$  or  $\leq 36^{\circ}$
  
- Exclusion Criteria
  - Age < 15
  - Neutropenic patients (use Neutropenic Sepsis pathway)

Don't  
Forget



Select 'Possible Sepsis' Treatment Pathway  
on Whiteboard

# Possible Sepsis Pathway

qSOFA: <i>Score one point for each criteria met</i>	
Respiratory rate	<input type="checkbox"/> $\geq 22$
Mental state	<input type="checkbox"/> GCS $< 15$
Blood pressure	<input type="checkbox"/> Systolic BP $\leq 100$ mmHg
qSOFA: <input style="border: 2px solid red;" type="text"/> <i>write the score here</i>	

qSOFA  $\geq 2$   $\longrightarrow$  Likely Sepsis  $\longrightarrow$  Accelerated Pathway

qSOFA  $< 2$   $\longrightarrow$  Sepsis still possible  $\longrightarrow$  Assess Red Flags



# Possible Sepsis Accelerated Pathway

- Notify SMO for urgent review
- Treatment priorities
  - IV fluids:0.9% NaCl
  - Early antibiotics according to local guidelines
  - Identify source of infection
  - Consider further imaging
  - Monitor space

POSSIBLE SEPSIS ACCELERATED PATHWAY <i>Aim &lt; 15 mins</i>		
<i>Bloods</i>	<input type="checkbox"/> General bloods	<input type="checkbox"/> VBG
	<input type="checkbox"/> Blood cultures	<input type="checkbox"/> Lactate
	<input type="checkbox"/> Glucose	
<i>Urine</i>	<input type="checkbox"/> MSU or <input type="checkbox"/> CSU	
<i>Radiology</i>	<input type="checkbox"/> CXR <i>if any chest symptoms</i>	

# Red Flags

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- Age  $\geq 65$
- Diabetes
- IVDU
- Fall
- Medical device
- Multiple comorbidities
- Representation
- Immunocompromised
- Recent surgery/delivery
- Clinical concern

Apply SIRS  
if any red flag

# Sistematic inflammatory response syndrome

- 4 clinical criteria assigning 1 point for each criteria met

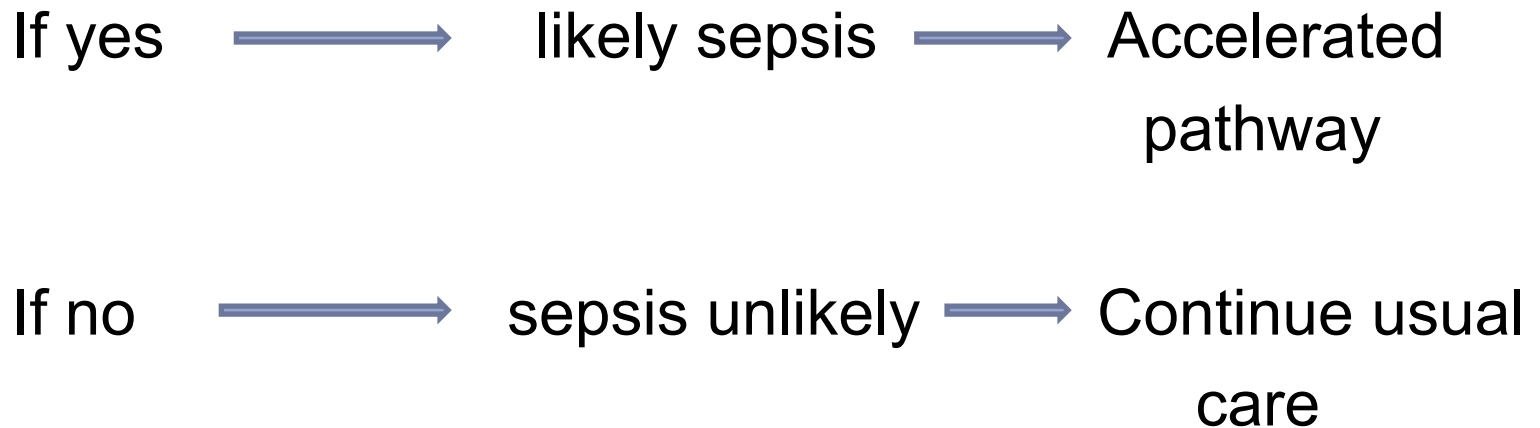
SIRS: Score one point for each criteria met	
Temp	<input type="checkbox"/> $\geq 38$ or $\leq 36$ °C
Respiratory rate	<input type="checkbox"/> $\geq 20$
Heart rate	<input type="checkbox"/> $\geq 90$ bpm
White Cell Count	<input type="checkbox"/> $\geq 12$ or $\leq 4$

SIRS  $\geq 2$   $\longrightarrow$  Likely sepsis  $\longrightarrow$  Accelerated Pathway

SIRS  $< 2$   $\longrightarrow$  Assess perfusion

# Assess perfusion

- Systolic BP  $\leq 100$  mmHg
- Lactate  $\geq 2$



# Key facts

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- Key facts:
  - Affects all age groups
  - Time critical: **GOLDEN HOUR**
  - At Waitemata DHB 44 patients/month are identified as sepsis and/or septic shock and 8 will die
  - No diagnostic test

# References

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- 2019 exceptional surveillance of sepsis: recognition, diagnosis and early management (NICE guideline NG51) and acutely ill adults in hospital: recognising and responding to deterioration (NICE guideline CG50)
- Daniels, R. Nutbeam, T. Laver, K. (2007) *Survive Sepsis Manual. 1st edition. The Official Training Programme of the Surviving Sepsis Campaign*. Available from [www.survivingsepsis.org](http://www.survivingsepsis.org)
- The Third International Consensus Definitions for Sepsis and Septic Shock. Singer (2016)
- Waitemata DHB. Adult Inpatient Suspected Sepsis Guidelines. March 2019.
- Emergency Department Survive Sepsis Project. North Shore Hospital. Waitemata DHB.