

## Briefing Note for the Member Forum, Content Managers Advisory Group, Clinical Leads and Community of Practice

### 06 February 2026

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## Revision of Sepsis Modelling and Descriptions

### Purpose

This briefing note seeks feedback on how to implement a new modelling approach and description format for 91302008 [Sepsis (disorder)] and its subtypes, while aiming to minimise disruption to users. These updates align content with the Sepsis-3<sup>1</sup> definition.

### Background

In 2016, the Society of Critical Care Medicine and the European Society of Intensive Care Medicine convened a task force to update the definitions of sepsis and septic shock, resulting in the Sepsis-3 standard. In sepsis, the infectious agent triggers a maladaptive immune response. It is this systemic host response, rather than the pathogen itself, that causes direct injury to tissues and organs.

### Redefined Pathobiology

- **New Definition:** Sepsis is now defined as life-threatening organ dysfunction caused by a dysregulated host response to infection.
- **Redundancy of "Severe Sepsis":** The task force concluded that the term "severe sepsis" is redundant because the new definition of sepsis inherently requires organ dysfunction.
- **Septic Shock:** Septic shock is a subset of sepsis with profound circulatory, cellular, and metabolic abnormalities.

### Issues/Problem Statement

- **Semantic Inconsistency:** Approximately 63 concepts use the format "Sepsis caused by X organism" for their FSN, which suggests the organism is the direct cause of the sepsis itself, a phrasing that does not fit the clinical definition. An additional 17 concepts have

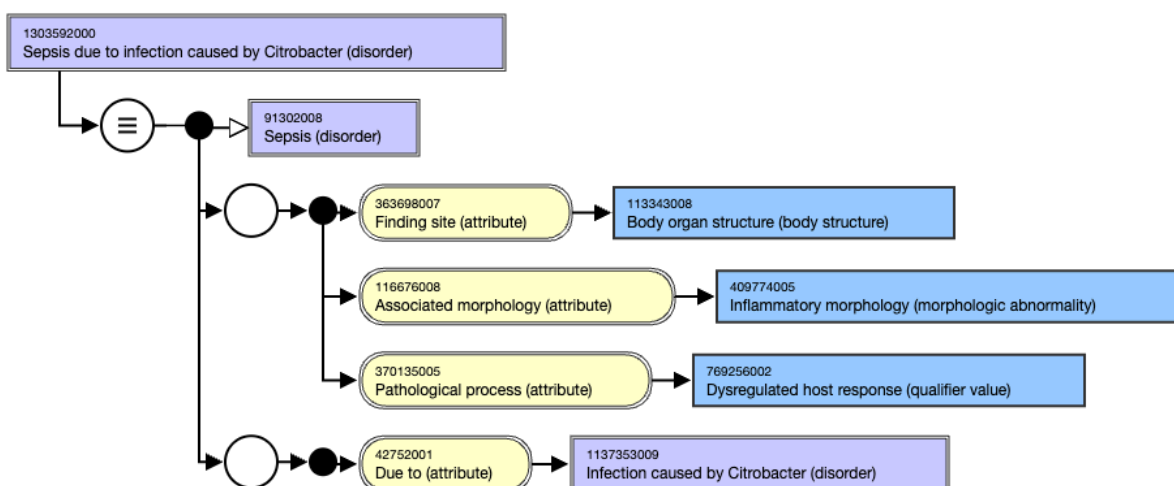
FSNs in the format “Organism X Sepsis” or “Sepsis due to Organism X” which are also incorrect and would be included in this work.

- **Incorrect modelling:** Existing concepts using 246075003 [Causative agent (attribute)] do not fit the clinical definition outlined in the Sepsis-3 standard. In sepsis, the infectious agent triggers a maladaptive immune response. It is this systemic host response, rather than the pathogen itself, that causes direct injury to tissues and organs.
- **Incorrect classification:** Inconsistent use of 246075003 [Causative agent (attribute)] is causing subsumption issues where concepts fail to classify correctly e.g. 1092601000119103 [Sepsis caused by Gonococcus (disorder)] is not currently a subtype of 10001005 [Bacterial sepsis (disorder)].

## Proposed modelling approach and description format

Using the 246075003 [Causative agent (attribute)] for sepsis is logically inconsistent with the clinical definition outlined by Sepsis-3. Since the agent does not cause the organ dysfunction directly, but rather initiates the host's dysregulated response, the 42752001 [Due to (attribute)] is the more accurate semantic link to 40733004 [Infectious disease (disorder)] or subtype. This modelling approach would still allow the concepts to be sufficiently defined. Please see the example below of 1303592000 [Sepsis due to infection caused by Citrobacter (disorder)] for the proposed modelling approach. An authoring template will be created to ensure future clarity and consistency in the approach taken.

The modelling approach would be reflected in descriptions, which would have the format “Sepsis due to infection caused by X organism”. The full list of concepts and proposed description changes is available in Appendix A.



## Proposed options for discussion

### Option 1

- Concept inactivation and replacement: This would involve the inactivation of 80 existing concepts and creation of new concepts with updated descriptions and modelling. The full list of concepts and proposed updated descriptions is available in Appendix A. This is currently the agreed inactivation approach as per the Editorial Guidelines.

### Option 2

- Concept reterming and remodelling: This would involve description updates and concept remodelling **without** concept inactivation and replacement (affecting 80 concepts). The full list of concepts and proposed updated descriptions is available in Appendix A. This would create 'churn' in the FSNs but concept identifiers would be retained.

## Impact to content users

Users will experience improved classification and more clinically accurate terminology. By gaining feedback on which option to proceed with regarding the renaming and potential inactivations, our aim is to minimise the inconvenience to implementations.

## Next Steps

1. Please provide feedback on your preference for **Option 1** (concept inactivation and replacement) or **Option 2** (concept reterming and remodelling).
2. Proceed with making the planned updates based on community responses.

## Release date

Following community engagement and approval, changes will be planned for Q2-Q3 2026.

**Request:** Please provide comments, questions, and suggestions on the Briefing Notes page by 6th March 2026.

Approvals	Date	Name
Chief Terminologist	Feb 2, 2026	James T. Case
Director of Content and Mapping	Feb 2, 2026	Monica Harry
CSRM representative	05/02/2026	Kelly Kuru

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Sarah Lukha, 2026-01-28

## References

1. Singer M, Deutschman CS, Seymour CW, et al. The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). JAMA. <https://jamanetwork.com/journals/jama/fullarticle/2492881>
2. NHS England. SNOMED code usage in primary care: 2024-25. NHS Digital. Published 2024. Updated 2024. Accessed October 20, 2024. <https://digital.nhs.uk/data-and-information/publications/statistical/mi-snomed-code-usage-in-primary-care/2024-25>

## Appendix A: Existing concepts and proposed description changes

England SNOMED Code Usage in Primary Care 2024-25 <sup>2</sup>	SCTID	Current Description	Proposed Updated Descriptions
320	10001005	Bacterial sepsis (disorder)	Sepsis due to infection caused by bacteria (disorder)
770	276669000	Bacterial sepsis of newborn (disorder)	Sepsis of newborn due to infection caused by bacteria (disorder)
-	735638009	Fetal sepsis caused by Streptococcus pyogenes (disorder)	Fetal sepsis due to infection caused by Streptococcus pyogenes (disorder)
<10	194394004	Gram positive sepsis (disorder)	Sepsis due to infection caused by Gram-positive bacteria (disorder)

60	206379003	Neonatal sepsis caused by Escherichia coli (disorder)	Neonatal sepsis due to infection caused by Escherichia coli (disorder)
-	721278008	Neonatal sepsis caused by Malassezia (disorder)	Neonatal sepsis due to infection caused by Malassezia (disorder)
30	206378006	Neonatal sepsis caused by Staphylococcus aureus (disorder)	Neonatal sepsis due to infection caused by Staphylococcus aureus (disorder)
-	127091000119100	Neonatal sepsis caused by Streptococcus agalactiae (disorder)	Neonatal sepsis due to infection caused by Streptococcus agalactiae (disorder)
-	735637004	Neonatal sepsis caused by Streptococcus pyogenes (disorder)	Neonatal sepsis due to infection caused by Streptococcus pyogenes (disorder)
<10	206380000	Neonatal sepsis caused by anaerobic bacteria (disorder)	Neonatal sepsis due to infection caused by anaerobic bacteria (disorder)
-	713866007	Perinatal sepsis caused by Escherichia coli (disorder)	Perinatal sepsis due to infection caused by Escherichia coli (disorder)
-	713865006	Perinatal sepsis caused by Streptococcus agalactiae (disorder)	Perinatal sepsis due to infection caused by Streptococcus agalactiae (disorder)
30	371769008	Endotoxic shock (disorder)	Shock due to infection caused by bacterial endotoxin (disorder)
<10	213255003	Postoperative endotoxic shock (disorder)	Postoperative shock due to infection caused by bacterial endotoxin (disorder)
-	714083007	Recurrent salmonella sepsis co-occurrent with human immunodeficiency virus infection (disorder)	Recurrent sepsis due to infection caused by Salmonella co-occurrent with human immunodeficiency virus infection (disorder)
-	447897005	Sepsis caused by Acinetobacter (disorder)	Sepsis due to infection caused by Acinetobacter (disorder)
-	762529004	Sepsis caused by Acinetobacter baumannii (disorder)	Sepsis due to infection caused by Acinetobacter baumannii (disorder)
10	447898000	Sepsis caused by Actinomyces (disorder)	Sepsis due to infection caused by Actinomyces (disorder)
-	448482003	Sepsis caused by Bacillus anthracis (disorder)	Sepsis due to infection caused by Bacillus anthracis (disorder)
-	1201760007	Sepsis caused by Bacteroides (disorder)	Sepsis due to infection caused by Bacteroides (disorder)
40	447841007	Sepsis caused by Candida (disorder)	Sepsis due to infection caused by Candida (disorder)

-	1092571000119109	Sepsis caused by Chromobacterium (disorder)	Sepsis due to infection caused by Chromobacterium (disorder)
-	1149482004	Sepsis caused by Clostridium (disorder)	Sepsis due to infection caused by Clostridium (disorder)
<10	448483008	Sepsis caused by Enterobacter (disorder)	Sepsis due to infection caused by Enterobacter (disorder)
50	1092591000119105	Sepsis caused by Enterococcus (disorder)	Sepsis due to infection caused by Enterococcus (disorder)
<10	447684006	Sepsis caused by Erysipelothrix (disorder)	Sepsis due to infection caused by Erysipelothrix (disorder)
-	1149494008	Sepsis caused by Erysipelothrix rhusiopathiae (disorder)	Sepsis due to infection caused by Erysipelothrix rhusiopathiae (disorder)
1070	447899008	Sepsis caused by Escherichia coli (disorder)	Sepsis due to infection caused by Escherichia coli (disorder)
-	1092601000119103	Sepsis caused by Gonococcus (disorder)	Sepsis due to infection caused by Neisseria gonorrhoeae (disorder)
570	449082003	Sepsis caused by Gram negative bacteria (disorder)	Sepsis due to infection caused by Gram-negative bacteria (disorder)
40	447685007	Sepsis caused by Haemophilus influenzae (disorder)	Sepsis due to infection caused by Haemophilus influenzae (disorder)
-	449546000	Sepsis caused by Haemophilus influenzae type b (disorder)	Sepsis due to infection caused by Haemophilus influenzae type b (disorder)
10	762528007	Sepsis caused by Klebsiella pneumoniae (disorder)	Sepsis due to infection caused by Klebsiella pneumoniae (disorder)
50	449335002	Sepsis caused by Listeria monocytogenes (disorder)	Sepsis due to infection caused by Listeria monocytogenes (disorder)
-	715070000	Sepsis caused by Peptostreptococcus (disorder)	Sepsis due to infection caused by Peptostreptococcus (disorder)
<10	1149486001	Sepsis caused by Proteus (disorder)	Sepsis due to infection caused by Proteus (disorder)
110	448813005	Sepsis caused by Pseudomonas (disorder)	Sepsis due to infection caused by Pseudomonas (disorder)
-	721572008	Sepsis caused by Pseudomonas aeruginosa (disorder)	Sepsis due to infection caused by Pseudomonas aeruginosa (disorder)
90	449083008	Sepsis caused by Salmonella (disorder)	Sepsis due to infection caused by Salmonella (disorder)
<10	449084002	Sepsis caused by Serratia (disorder)	Sepsis due to infection caused by Serratia (disorder)
190	447894003	Sepsis caused by	Sepsis due to infection caused by

		Staphylococcus (disorder)	Staphylococcus (disorder)
300	448417001	Sepsis caused by Staphylococcus aureus (disorder)	Sepsis due to infection caused by Staphylococcus aureus (disorder)
370	448418006	Sepsis caused by Streptococcus (disorder)	Sepsis due to infection caused by Streptococcus (disorder)
250	448419003	Sepsis caused by Streptococcus agalactiae (disorder)	Sepsis due to infection caused by Streptococcus agalactiae (disorder)
-	448420009	Sepsis caused by Streptococcus group D (disorder)	Sepsis due to infection caused by Streptococcus group D (disorder)
320	448421008	Sepsis caused by Streptococcus pneumoniae (disorder)	Sepsis due to infection caused by Streptococcus pneumoniae (disorder)
240	449504009	Sepsis caused by Streptococcus pyogenes (disorder)	Sepsis due to infection caused by Streptococcus pyogenes (disorder)
-	448422001	Sepsis caused by Streptococcus suis (disorder)	Sepsis due to infection caused by Streptococcus suis (disorder)
20	447843005	Sepsis caused by anaerobic bacteria (disorder)	Sepsis due to infection caused by anaerobic bacteria (disorder)
-	715071001	Sepsis caused by anaerobic streptococcus (disorder)	Sepsis due to infection caused by anaerobic Streptococcus (disorder)
30	449505005	Sepsis caused by coagulase negative Staphylococcus (disorder)	Sepsis due to infection caused by coagulase negative Staphylococcus (disorder)
-	1149481006	Sepsis caused by coliform bacteria (disorder)	Sepsis due to infection caused by coliform bacteria (disorder)
<10	700054008	Sepsis caused by fungus (disorder)	Sepsis due to infection caused by Fungi (disorder)
-	448812000	Sepsis caused by methicillin resistant Staphylococcus aureus (disorder)	Sepsis due to infection caused by methicillin resistant Staphylococcus aureus (disorder)
-	127331000119101	Sepsis caused by methicillin susceptible Staphylococcus aureus (disorder)	Sepsis due to infection caused by methicillin susceptible Staphylococcus aureus (disorder)
-	1290841000000104	Sepsis caused by monkeypox virus (disorder)	Sepsis due to infection caused by monkeypox virus (disorder)
-	1153534006	Sepsis caused by vancomycin resistant Enterococcus (disorder)	Sepsis due to infection caused by vancomycin-resistant Enterococcus (disorder)
<10	770349000	Sepsis caused by virus (disorder)	Sepsis due to infection caused by virus (disorder)
-	448784003	Sepsis due to herpes simplex	Sepsis due to infection due to herpes

		(disorder)	simplex (disorder)
-	127171000119100	Septic shock co-occurrent with acute organ dysfunction caused by Haemophilus influenzae (disorder)	Septic shock due to infection caused by Haemophilus influenzae (disorder)
-	127181000119102	Septic shock co-occurrent with acute organ dysfunction caused by Meningococcus (disorder)	Septic shock due to infection caused by Meningococcus (disorder)
-	127261000119100	Septic shock co-occurrent with acute organ dysfunction caused by Pneumococcus (disorder)	Septic shock due to infection caused by Pneumococcus (disorder)
-	127201000119101	Septic shock co-occurrent with acute organ dysfunction caused by Pseudomonas (disorder)	Septic shock due to infection caused by Pseudomonas (disorder)
-	127231000119108	Septic shock co-occurrent with acute organ dysfunction caused by Serratia (disorder)	Septic shock due to infection caused by Serratia (disorder)
-	127251000119102	Septic shock co-occurrent with acute organ dysfunction caused by Streptococcus (disorder)	Septic shock due to infection caused by Streptococcus (disorder)
-	127141000119107	Septic shock co-occurrent with acute organ dysfunction caused by anaerobic bacteria (disorder)	Septic shock due to infection caused by anaerobic bacteria (disorder)
-	128381000119104	Septic shock co-occurrent with acute organ dysfunction caused by methicillin resistant Staphylococcus aureus (disorder)	Septic shock due to infection caused by methicillin resistant Staphylococcus aureus (disorder)
-	127191000119104	Septic shock co-occurrent with acute organ dysfunction caused by methicillin susceptible Staphylococcus aureus (disorder)	Septic shock due to infection caused by methicillin susceptible Staphylococcus aureus (disorder)
-	1092471000119105	Septic shock co-occurrent with acute organ dysfunction due to Chromobacterium (disorder)	Septic shock due to infection caused by Chromobacterium (disorder)
-	1092491000119106	Septic shock co-occurrent with acute organ dysfunction due to Enterococcus (disorder)	Septic shock due to infection caused by Enterococcus (disorder)
-	1092501000119104	Septic shock co-occurrent with acute organ dysfunction due to Gonococcus (disorder)	Septic shock due to infection caused by Neisseria gonorrhoeae (disorder)
-	1092511000119101	Septic shock co-occurrent with acute organ dysfunction due to	Septic shock due to infection caused by Gram-positive coccus (disorder)

		Gram-positive coccus (disorder)	
-	1092531000119106	Septic shock co-occurrent with acute organ dysfunction due to Group A streptococcus (disorder)	Septic shock due to infection caused by <i>Streptococcus pyogenes</i> (disorder)
-	1092541000119102	Septic shock co-occurrent with acute organ dysfunction due to Group B streptococcus (disorder)	Septic shock due to infection caused by <i>Streptococcus agalactiae</i> (disorder)
-	127241000119104	Septic shock co-occurrent with acute organ dysfunction due to <i>Staphylococcus</i> (disorder)	Septic shock due to infection caused by <i>Staphylococcus</i> (disorder)
-	1092481000119108	Septic shock co-occurrent with acute organ dysfunction due to coagulase-negative <i>Staphylococcus</i> (disorder)	Septic shock due to infection caused by coagulase-negative <i>Staphylococcus</i> (disorder)
<10	240450004	Staphylococcal toxic shock syndrome (disorder)	Toxic shock syndrome due to infection caused by <i>Staphylococcus</i> (disorder)
<10	240451000	Streptococcal toxic shock syndrome (disorder)	Toxic shock syndrome due to infection caused by <i>Streptococcus</i> (disorder)
-	127421000119109	Toxic shock syndrome caused by methicillin resistant <i>Staphylococcus aureus</i> infection (disorder)	Toxic shock syndrome due to infection caused by methicillin resistant <i>Staphylococcus aureus</i> (disorder)
-	127411000119102	Toxic shock syndrome caused by methicillin susceptible <i>Staphylococcus aureus</i> (disorder)	Toxic shock syndrome due to infection caused by methicillin susceptible <i>Staphylococcus aureus</i> (disorder)