Consultation Results for the Proposed Update to DChS.I.1
Sepsis

We would like to thank everyone who completed the consultation and contributed their feedback, which has helped us to refine the update to DChS.I.1: Sepsis, septic shock, severe sepsis and neutropenic sepsis.

The update to the standard will be published in the ICD-10 National Clinical Coding Standards Reference Book, available for download from Delen shortly, for implementation on 1 April 2018.

There were a total of 1412 downloads of the proposed update and we received feedback from 41 respondents.

The feedback was generally positive with respondents stating that they much prefer the update to the current standard. It is clear, transparent and there shouldn’t be any difficulty in applying it. The extra ‘real-life’ examples were welcomed as was the guidance which will support coding teams to engage with clinical staff in different Trusts; the emphasis that accuracy will only occur if clinicians work with coding departments is helpful.

The ‘Coding of Sepsis at SUHNFT’ document was also welcomed as it will give organisations a good idea of how to proceed with the recording of sepsis.

The feedback has resulted in changes being made to the updated standard which include clarifying that the primary diagnosis definition applies for the second and third paragraphs in the standard, correcting the text and codes assigned in some of the examples and minor text changes in the standard and guidance.

Where individual comments were made that either affect other areas of the classification or affect the standards more widely, these have been recorded on our development log and will be researched and progressed as appropriate.

Some concerns and issues were raised by respondents as follows:

Consistency between organisations

There are concerns regarding consistency between organisations, due to the differing opinions of consultants and documentation. It was acknowledged that there is not an easy way of creating a national standard that would be applicable to all scenarios. It was also noted that it seems strange to alter current, clear coding guidance to a more vague standard, which risks the under recording of sepsis, from the current standard which allows coders to code a documented diagnosis of sepsis as sepsis, including when terms such as urosepsis, biliary sepsis, chest sepsis are used.
Some respondents said that the coding is being ineffectually used to improve the documentation, that the standard should reflect correct clinical guidelines and not be swayed by the fact that doctors do not adhere to this, and that this is a clinical issue and we should not change coding practices to adjust for this as it masks the clinical issue.

However, the changes have been made because the current standard is too constrictive for many Trusts; if a clinician uses sepsis to mean something other than sepsis (such as infection only) then this lead to the incorrect assignment of codes that classify sepsis in a patient who does not have sepsis. By making the instructions in the standard clear on how to code patients with sepsis rather than restraining how certain terms must be coded, this gives Trusts the ability to ensure that the coding correctly reflects the meaning of the terms used by the clinicians (which the first consultation on sepsis indicated differs from Trust to Trust).

The changes made in the update put the responsibility on the organisation to ensure that practices are put in place to ensure that only patients with sepsis are recorded and coded as such, because documentation and recording issues cannot be compensated for by national coding standards. Only if clinical and coding teams work together can organisations ensure accurate and consistent data. This is proven by the feedback we have received from Trusts who already do this and as shown in the ‘Coding of Sepsis at SUHNFT’ document.

By ensuring the responsibility lies with the organisation to identify patients with sepsis so that they are coded correctly, this should improve consistency between organisations in the figures they report on sepsis.

The local and national data on Sepsis from 2018 onwards should be more reflective of the incidence of sepsis.

**Consulting clinicians about ‘organ sepsis’**

Respondents said that the removal of the specific instruction on the coding of ‘organ sepsis’ (urosepsis, biliary sepsis etc) would mean that coders will have to ask the clinician every time these terms are used to understand if the patient has sepsis or not, placing undue pressure on the coder.

As stated in the guidance in the update; to ensure patients with sepsis are coded accurately, Trust coding departments should work with their clinical teams and Medical Directors to agree an internal process to clearly identify which patients have sepsis.

This should help to reduce the burden of seeking clarification from the responsible consultant for individual patients, because the processes should result in it being clear which patients have sepsis and should mean that the need to consult the clinician for clarification for individual patients is not necessary.

We acknowledge that this can be difficult, but it is possible as is evidenced in the ‘Coding of Sepsis at SUHNFT’ document.
Severe sepsis and SIRS

Respondents commented that under the new clinical guidelines and definitions severe sepsis and SIRS do not exist so should be removed from the standard. It was noted that some Trusts are still using this term even though they should not be.

Ideally; we would not include instruction on the coding of severe sepsis as this is no longer a recommended term. However, it can take time for outdated terms to stop being used and therefore we have retained the instruction in the standard to aid coding where the term is still used. This should not cause a problem where the term is no longer used, as the coding advised in the standard would not be applied.

Similarly with SIRS, because this is where the concept of severe sepsis is classified within ICD-10, this code must be assigned. Therefore, where severe sepsis is documented in the medical record this code must still be used.

Further effect on finance

There was concern that changing the coding standard will have a further financial impact for CCG’s.

The updated coding standard will not cause an increase in the number of patients coded with sepsis and therefore will not cause an increased financial impact. Any increase in the coding of sepsis will be caused by other reasons such as incorrect documentation/ recording practices and/or an increase in patients diagnosed with sepsis.

We have worked with the National Casemix Office to ensure the HRG’s are reflective of the updated standard and NHS Improvements and NHS England are aware of the update to the standard.
Final Standard

For implementation on 1 April 2018.

**DChS.I.1: Sepsis, septic shock, severe sepsis and neutropenic sepsis**

A code that specifically classifies sepsis must always be assigned when a patient is diagnosed with sepsis in the medical record. Where the code assigned does not specifically classify sepsis (e.g. A54.8 Other gonococcal infections, which includes gonococcal sepsis), the code that classifies sepsis must be assigned in any secondary position, in order to describe the condition fully.

Where clinicians use terms such as urosepsis, biliary sepsis, chest sepsis, intraocular sepsis and urinary sepsis, to mean that the patient has both sepsis and a localised infection of the organ, then both conditions must be coded. Sepsis must not be coded where a patient only has an infection, e.g. a urinary tract infection or a chest infection without sepsis.

Where sepsis is confirmed to be due to a device, implant or graft (e.g. sepsis due to total hip replacement, infusion catheter, tracheostomy stoma, vascular line, haemodialysis catheter, etc.) this means that the patient has both sepsis and a localised infection at the site of the device, implant or graft. In these cases, both the sepsis and the site of the localised infection must be coded.

Sepsis may not always be the main condition treated; therefore, sequencing of sepsis with other infections and conditions (including the situations described in the second and third paragraphs above) must follow DGCS.1 Primary diagnosis (except where a standard states otherwise).

Organ failure must be coded in addition when documented with sepsis: see DCS.IX.10: Heart failure (I50), DCS.X.7: Respiratory failure, not elsewhere classified (J96) and DCS.XVIII.10: Multiple organ failure (R68.8).

**Septic shock**

Whenever septic shock is documented in the medical record by the responsible consultant, code R57.2 Septic shock must be assigned in any secondary position following the code that classifies sepsis.

**Severe sepsis**

The following codes and sequencing must be used for a diagnosis of severe sepsis:
A41.- **Other sepsis** (or the specific type of sepsis recorded in the medical record)

R65.1 **Systemic inflammatory response syndrome of infectious origin with organ failure**

U82.- **Resistance to betalactam antibiotics**, U83.- **Resistance to other antibiotics** or U84.- **Resistance to other antimicrobial drugs** (use only if the severe sepsis is resistant to antibiotics or antimicrobial drugs).

**Neutropenic sepsis**

The following codes and sequence must be used for a documented diagnosis of neutropenic sepsis:

A41.- **Other sepsis** (or the specific type of sepsis recorded in the medical record)

R65.1 **Systemic inflammatory response syndrome of infectious origin with organ failure** (use only if the sepsis is documented as severe)

U82.- **Resistance to betalactam antibiotics**, U83.- **Resistance to other antibiotics** or U84.- **Resistance to other antimicrobial drugs** (use only if the sepsis is resistant to antibiotics or antimicrobial drugs)

D70.X **Agranulocytosis**

If the responsible consultant has documented that the neutropenia was due to a drug, then an adverse effect code from Chapter XX must be assigned after code D70.X, see [DCS.XX.7: Drugs, medicaments and biological substances causing adverse effects in therapeutic use (Y40-Y59)](https://www.nhsdigital.nhs.uk/dcs).

**See also:**
- [DGCS.6: Infections](https://www.nhsdigital.nhs.uk/dgcs)
- [DCS.I.4: Bacterial, viral and other infectious agents (B95-B98)](https://www.nhsdigital.nhs.uk/dcs)
- [DCS.XVI.5: Group B streptococcus (GBS) bacterial infections in babies](https://www.nhsdigital.nhs.uk/dcs)
- [DCS.XIX.7: Postprocedural complications and disorders](https://www.nhsdigital.nhs.uk/dcs)
- [DChS.XVIII.1: Signs, symptoms and abnormal laboratory findings](https://www.nhsdigital.nhs.uk/dchs)
- [DCS.XXII.2: Resistance to antimicrobial and antineoplastic drugs (U82-U85)](https://www.nhsdigital.nhs.uk/dcs)

Sepsis is the reaction to an infection in which the body attacks its own organs and tissues: it is a time-critical life-threatening condition which requires immediate treatment. Sepsis is not an infection in itself.
The clinical guidelines for the identification/diagnosis and management/treatment of sepsis have changed over time and continue to change. There is variation throughout the country in the understanding, awareness and documenting of sepsis.

Sepsis is difficult to diagnose: there is no published evidence of any specific laboratory test that would quickly and reliably confirm or exclude a diagnosis of sepsis in the timeframe within which treatment should be started for sick patients.

There are a number of different toolkits, scoring systems, early warning screening tools and guidelines used for the identification of patients who are very ill with possible sepsis, and who require immediate treatment.

For example, the UK Sepsis Trust and National Institute for Health and Care Excellence (NICE) introduced the concepts of red flag / high risk sepsis which are a set of criteria to facilitate rapid initiation of care.

Where a patient has a high risk or red flag sepsis criterion, they will be presumed to have sepsis and appropriate treatment for sepsis will commence. However, different Trusts have implemented these flags differently and modified the guidelines on their use. In addition, in a proportion of cases, after further investigations, it may be identified that the patient has an alternative diagnosis such as pancreatitis or poisoning, and it may be unclear whether the patient had sepsis or not.

There are no specific clinical guidelines on the documenting or recording of sepsis in the medical record, and local guidelines will differ between clinicians and hospitals. Clinicians should not use the term “sepsis” to refer to an infection only: however, this is not universally understood. Some clinicians may use terms such as urosepsis, chest sepsis, urinary sepsis, intraocular sepsis and biliary sepsis to indicate the presence of localised infection and sepsis, while others may use these terms to indicate localised infection alone.

These factors combined can make it difficult for the coder to know which patients do actually have sepsis, and it is not possible for a clinical coding standard to compensate for deficiencies in the documentation, recording or coding process.

As well as being a clinical governance issue, inconsistencies and inaccuracies in the recording of sepsis within the medical record will have a negative effect on the reliability of the coded data which in turn will have a statistical and financial impact.

Therefore, in order to ensure patients with sepsis are coded accurately, Trust coding departments should work with their clinical teams and Medical Directors to agree an internal process to clearly identify which patients have sepsis.
An agreed process should also help to reduce the burden of seeking clarification from the responsible consultant for individual patients. (A number of Trusts already have a dedicated Sepsis Team that works alongside the coders as part of their internal data assurance process.) Any such process should be documented in the Coding Department Policy and Procedure manual for reference and clinical coding audit purposes. Where recurring recording issues are evident, the coding manager should refer to local information and clinical governance routes.

See ‘Coding of Sepsis at SUHNFT’ in the Resource Library on Delen, which describes the processes that have been put in place at Southend University Hospital NHS Foundation Trust to ensure sepsis is recorded and coded correctly. This document illustrates the importance and benefits of engaging with clinical teams when coding sepsis.

The clinical guidelines, terminology and tools used for the identification of patients with sepsis are likely to continue to change as further work is done by the Cross-system Sepsis Programme Board to improve the identification, treatment and outcomes for patients with possible sepsis. Continual clinical engagement is important to ensure that coding departments continue to be able to collect sepsis data correctly.

Example(s):

Sepsis following missed miscarriage during the same episode

- O02.1 Missed abortion
- O08.0 Genital tract and pelvic infection following abortion and ectopic and molar pregnancy
- A41.9 Sepsis, unspecified

Bowel resection performed to treat malignant neoplasm of descending colon. During the same episode, the patient developed sepsis secondary to a leaking anastomosis

- C18.6 Malignant neoplasm: Descending colon
- A41.9 Sepsis, unspecified
- K91.8 Other postprocedural disorders of digestive system, not elsewhere classified
- Y83.2 Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure, surgical operation with anastomosis, bypass or graft
Patient with sepsis due to streptococcus A and E.coli, diagnosed with diverticular disease of the colon with perforated abscess (E.coli confirmed as infective organism). Following initial drainage of the abscess the patient underwent bowel resection. The patient developed a post-operative haemorrhage and a post-operative MRSA wound infection.

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\begin{array}{ll}
\text{K57.2} & \text{Diverticular disease of large intestine with perforation and abscess} \\
\text{B96.2} & \text{Escherichia coli [E. coli] as the cause of diseases classified to other chapters} \\
\text{A40.0} & \text{Sepsis due to Streptococcus, group A} \\
\text{A41.5} & \text{Sepsis due to other Gram-negative organisms} \\
\text{T81.0} & \text{Haemorrhage and haematoma complicating a procedure, not elsewhere classified} \\
\text{T81.4} & \text{Infection following a procedure, not elsewhere classified} \\
\text{B95.6} & \text{Staphylococcus aureus as the cause of diseases classified to other chapters} \\
\text{U82.1} & \text{Resistance to methicillin} \\
\text{Y83.6} & \text{Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure, removal of other organ (partial) (total)}
\end{array}
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Patient with streptococcal urinary tract infection that progresses to severe sepsis due to streptococcus. Acute kidney injury, hepatic failure and septic shock.

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\begin{array}{ll}
\text{A40.9} & \text{Streptococcal sepsis, unspecified} \\
\text{R65.1} & \text{Systemic inflammatory response syndrome of infectious origin with organ failure} \\
\text{N39.0} & \text{Urinary tract infection, site not specified} \\
\text{B95.5} & \text{Unspecified Streptococcus as the cause of diseases classified to other chapters} \\
\text{N17.9} & \text{Acute renal failure, unspecified} \\
\text{K72.9} & \text{Hepatic failure, unspecified} \\
\text{R57.2} & \text{Septic shock}
\end{array}
\]

Post-operative coagulase-negative staphylococcus sepsis due to coagulase-negative staphylococcus haemodialysis catheter infection

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\begin{array}{ll}
\text{A41.1} & \text{Sepsis due to other specified Staphylococcus} \\
\text{T82.7} & \text{Infection and inflammatory reaction due to other cardiac and vascular devices, implants and grafts} \\
\text{B95.7} & \text{Other staphylococcus as the cause of diseases classified to other chapters} \\
\text{Y83.1} & \text{Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication,}
\end{array}
\]
without mention of misadventure at the time of the procedure, surgical operation with implant of artificial internal device

Urinary sepsis (responsible consultant confirms sepsis and urinary tract infection) due to streptococcus group A, with septic shock and kidney and liver failure

A40.0  Sepsis due to *Streptococcus*, group A
N39.0  Urinary tract infection, site not specified
B95.0  *Streptococcus*, group A, as the cause of diseases classified to other chapters
R57.2  Septic shock
N19.X  Unspecified kidney failure
K72.9  Hepatic failure, unspecified

Urinary sepsis and biliary sepsis (responsible consultant confirms UTI and cholangitis without sepsis)

N39.0  Urinary tract infection, site not specified
K83.0  Cholangitis

Severe gonococcal sepsis resistant to ceftriaxone

A54.8  Other gonococcal infections
A41.5  Sepsis due to other Gram-negative organisms
R65.1  Systemic inflammatory response syndrome of infectious origin with organ failure
U82.8  Resistance to other betalactam antibiotics

Severe MRSA sepsis with septic shock

A41.0  Sepsis due to *Staphylococcus aureus*
R65.1  Systemic inflammatory response syndrome of infectious origin with organ failure
U82.1  Resistance to methicillin
R57.2  Septic shock

Patient with postoperative methicillin resistant staphylococcus aureus (MRSA) wound infection developed severe MRSA sepsis following gastrectomy 2 weeks ago

A41.0  Sepsis due to *Staphylococcus aureus*
R65.1  Systemic inflammatory response syndrome of infectious origin with organ failure
U82.1  Resistance to methicillin
T81.4  Infection following a procedure, not elsewhere classified
B95.6  *Staphylococcus aureus* as the cause of diseases classified to other chapters
U82.1  Resistance to methicillin
Y83.6  Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure, removal of other organ (partial) (total)

*Sepsis due to urinary tract infection in pregnancy*

O98.8  Other maternal infectious and parasitic diseases complicating pregnancy, childbirth and the puerperium
A41.9  Sepsis, unspecified
O23.4  Unspecified infection of urinary tract in pregnancy