# Sepsis FAQ: counting and coding of activity

February 2018

## Financial impact of new national guidance on counting and coding of activity, including NHS Digital's guidance on coding of sepsis for trust implementation on 1 April 2017

Our original FAQ response[1] to the issue of national guidance on counting and coding sepsis activity has led to further queries. This document expands on our original response to:

- more fully explain why any financial impact from NHS Digital's sepsis coding guidance must be 'neutralised' for the financial year 2017/18
- provide a model methodology for assessing the financial impact, for use as a starting point in local discussions.

## Explanation

The national tariff itself does not set rules for how patient activity is to be recorded – these are contained in the NHS Data Dictionary[2] published by NHS Digital. Rather, the national tariff sets the basis on which recorded activity is to be grouped into different categories (eg healthcare resource groups (HRGs) for inpatient spells) and the prices which are to apply to those categories.

[1] Published in the *Enquiry and frequently asked questions log,* a supporting document to the national tariff: https://improvement.nhs.uk/resources/national-tariff-1719/
[2] www.datadictionary.nhs.uk/

The national prices in the National Tariff Payment System (and under Payment by Results (PbR) before that) have always been based on historic actual reference costs submitted by providers. So national prices are a product of:

- the historic actual costs of providing specific forms of patient activity
- the way in which providers have, historically, actually recorded that patient activity.

When each new national tariff is designed, the impact of changes to that design – such as the new grouping structure of HRG4+ for the 2017-19 tariff – is carefully modelled at national level, alongside other important factors such as inflation uplifts and efficiency requirements. This informs the eventual national prices, which aim to strike a reasonable balance between commissioners and providers.

For any national tariff to achieve its intended financial impact, it is fundamental that patient activity continues to be recorded on broadly the same basis that informed the calculations underpinning the tariff's development. Changes in recording practice could, under an activity-based payment system such as the national tariff, have destabilising financial effects. For this reason, there have always been provisions in national guidance for managing changes in recording practice. These provisions were originally included in the PbR code of conduct and then, when that was discontinued in 2013, transferred into Service Condition 28 of the NHS Standard Contract.[3]

The contract provisions cover **both**:

- the provider or commissioner suggesting a recording change locally
- the provider having to implement a recording change after updated guidance from NHS Digital.

Although the provisions around notice periods for implementation differ between nationally mandated and locally proposed changes, the fundamental requirement for a payment adjustment to neutralise any financial impact applies equally to both types of change.

[3] www.england.nhs.uk/nhs-standard-contract/

## Next steps

The national expectation, therefore, is that commissioners and providers will work together in good faith, using the model methodology (see page 4) as a starting point, to assess whether local implementation of NHS Digital's national guidance on sepsis coding has had a financial impact on levels of payment between commissioner and provider. If they find such an impact, payment between commissioner and provider should be adjusted accordingly, to render the impact neutral.

The following further points should be noted.

- NHS Digital published its guidance on sepsis on 22 December 2016 for trusts to implement on 1 April 2017. We therefore expect the period of financial neutralisation should normally run until 31 March 2018.
- Assessing the financial impact of counting and coding changes is not always an exact science. Local parties may need to agree a reasonable estimate for the impact, rather than a 100% accurate figure.
- The local parties will need to take into account the impact of the national CQUIN indicator on sepsis. This has encouraged better screening of hospital patients, so it is likely that more will be identified as having sepsis and receive better prophylactic treatment as a result. This is a genuine change in service provision, rather than a change in recording practice – and its financial impact should take full effect. Local analysis will therefore need to separate:
  - any growth in volume of patients identified with sepsis through better screening as a result of the CQUIN initiative (which commissioners must fund in full)
  - any increase in average casemix price of patients with sepsis caused by implementing NHS Digital's coding guidance (for which a payment adjustment must be made so as to render the impact financially neutral between commissioner and provider).

## Model methodology for calculating any necessary financial adjustment

Where commissioners and providers have already been able to reach agreement on the calculation of any necessary financial adjustment, they should of course honour that agreement.

Where it has not yet been possible to reach an agreed resolution on the impact of sepsis coding changes,[4] the local parties should apply the broad methodology below.

There are at least four issues to be considered:

1. Implementation of the national CQUIN indicator on sepsis is likely to be causing an increase in the volume of spells with a sepsis diagnosis during 2017/18, compared to 2016/17. (As described above, commissioners must fund the financial effect of this.)

2. NHS Digital's clinical coding guidance may also have had the **general** effect of encouraging the more complete recording of sepsis diagnostic codes, again potentially contributing to an increase in the volume of spells with a sepsis diagnosis.

3. The April 2017 coding standard instructs coders to code terms such as urinary sepsis, urosepsis, biliary sepsis, ocular sepsis and chest sepsis (where recorded in the medical record by the clinician) as sepsis and local infection. However, as some clinicians are using these terms to refer to a local infection only, this may have resulted in some patients being coded as having sepsis when in fact only a localised infection was present. This may have contributed to an increase in volume of spells with a sepsis diagnosis.

4. The April 2017 coding standard has also led to changes in how sepsis and other conditions, particularly pneumonia and skin disorders, are recorded within the same spell. In such cases, before April 2017, conditions such as pneumonia and skin disorders would normally (though not universally) have been recorded in the primary diagnosis position, with sepsis in one of the subsequent positions. Under

[4] For example, where the commissioner has formally contested payment under Service Condition 36.45 of the Standard Contract, or where the commissioner and provider have otherwise noted the issue as unresolved (pending publication of this updated national guidance) with the unresolved issue therefore having been reported as part of the national YTD Contract Alignment exercise.

the April 2017 guidance, this will have been reversed, with sepsis usually coming in the primary position. This may have increased the proportion of such spells grouping to a more expensive HRG.[5]

In practical terms, there is no technical way in which the impact of issue 1 above could be **separately** identified from issue 2 – nor would it be possible to assess how spells newly coded with sepsis in 2017/18 would have been coded in 2016/17. We therefore recommend that local efforts to assess and neutralise the impact of the clinical coding guidance focus solely on issues 3 and 4. There should only be a financial impact if sepsis is now recorded in the primary diagnosis position. If another condition is recorded in the primary position, and sepsis and localised infection are recorded in subsequent diagnosis positions, there is unlikely to be any financial impact and these can be ignored for this purpose.

Use the following broad steps to identify the financial impact of issues 3 and 4.

## Issue 3

### Understanding the baseline recording position

a. Identify all spells in the latest 2017/18 year-to-date activity data that related to urinary sepsis, urosepsis, biliary sepsis, ocular sepsis and chest sepsis (coding combination information to identify these conditions is shown in the Appendix).
b. Run these spells through the 2017/18 HRG grouper and apply the 2017/18 national prices to the output.
c. Calculate the total financial value for these spells.

### Understanding the impact of the clinical coding guidance

d. For the spells identified at (a) above, if the sepsis code is in the primary diagnosis position, remove the sepsis code and move the localised infection code from the secondary to primary diagnosis position (to simulate the impact of issue 3).
e. Run these spells through the 2017/18 HRG grouper and apply the 2017/18 national prices to the output.
f. Calculate the total financial value for these spells.

[5] The difference between issue 3 and 4 is that in issue 3 sepsis would not have been coded before April 2017 but in issue 4 sepsis was coded, though, in many cases, as a secondary diagnosis.

### Calculating the financial impact to be neutralised

g. If (c) exceeds (f) – meaning the commissioner is facing a cost pressure from the specific impact of the clinical coding guidance – a financial adjustment of the value of (c) – (f) should be made in the commissioner's favour.
h. If (f) exceeds (c) – meaning the provider is facing a cost pressure from the specific impact of the clinical coding guidance – a financial adjustment of the value of (f) – (c) should be made in the provider's favour.

## Issue 4

### Understanding whether there has been a change

i. Identify all spells in the latest 2017/18 year-to-date activity data that included both a sepsis diagnostic code and either a pneumonia or a skin disorders diagnostic code (coding combination information to identify these conditions is shown in the Appendix).
j. Identify all spells for the same months of 2016/17 activity data that included both a sepsis diagnostic code and a pneumonia or skin disorders diagnostic code (coding combination information to identify these conditions is shown in the Appendix).
k. Calculate, for each year, the proportion of spells for which the sepsis diagnostic code appears in the primary position.
l. Compare the two years and determine whether there has been a material increase in the proportion of spells where sepsis appears in the primary position in 2017/18, compared to 2016/17.
m. If yes, proceed to (n); if no, take no further action.

### If there has been a material increase

n. For the 2017/18 spells identified at (i), run these spells through the 2017/18 HRG grouper, apply the 2017/18 national prices to the output and calculate the average price per spell.
o. For the 2016/17 spells identified at (j), run these spells through the 2017/18 HRG grouper, apply the 2017/18 national prices to the output and calculate the average price per spell.

**Calculating the financial impact to be neutralised**

p. If the average price per spell at (n) exceeds the average price per spell at (o) – meaning the commissioner is facing a cost pressure from the specific impact of the clinical coding guidance – a financial adjustment should be made in the commissioner's favour. This should be calculated as (n – o) x µ, where µ is the number of spells in the 2017/18 period with a diagnosis of both pneumonia/skin disorders and sepsis, identified in (i).

q. If the average price per spell at (n) is less than the average price per spell at (o) – meaning the provider is facing a cost pressure from the specific impact of the clinical coding guidance – a financial adjustment should be made in the provider's favour. This should be calculated as (o – n) x µ, where µ is the number of spells in the 2017/18 period with a diagnosis of both pneumonia/skin disorders and sepsis, identified in (i).

## Overall financial adjustment

The overall financial adjustment required will be the sum of the two figures at either (g) or (h) and either (p) or (q).

## General points

The above steps assume that:

- payment for the sepsis coding issue has been contested from month 1 of 2017/18; where this is not the case, the methodology will need to be adjusted
- all the activity under (a) to (c) and under (d) to (f) will group to HRGs with national prices; where this is not the case, the 2017/18 local prices should be used, as set out in the agreed local contract. If steps (d) to (f) or (o) generate a U code, it should be assumed the provider would have identified and corrected this, so the parties will need to apply a reasonable proxy price to such cases.

Note also that, in calculating the level of any adjustment, the parties will need to take into account any interaction with the operation of the marginal rate emergency rule and the 30-day readmission rule in the National Tariff Payment System guidance.[6]

[6] https://improvement.nhs.uk/resources/national-tariff-1719/

Implementing the agreed adjustment will depend on the stage by which local discussions can be completed. Once they have completed their initial local analysis, commissioners and providers should make one immediate retrospective financial adjustment in respect of those completed months of 2017/18 for which payment has been disputed. Pragmatically, to minimise the number of separate transactions required, they should then rerun the calculation using cumulative data to give a final year-end figure, with a final financial adjustment made in time to feed into year-end accounts. This will ensure that the correct total adjustment has been made by the year-end.

## Coding sepsis in 2018/19

NHS Digital is about to issue an updated national coding standard for sepsis (*Clinical Coding Standard Update – DChS.I.1: Sepsis, septic shock, severe sepsis and neutropenic sepsis*), for implementation on 1 April 2018. NHS England and NHS Improvement will keep the position under review and will, if required, issue further guidance on how the financial impact of this updated guidance should be managed during 2018/19.

# Appendix: Sepsis code combinations

Listed below are the probable code combinations used to classify the terms ‘urosepsis’, ‘urinary sepsis’, ‘biliary sepsis’, ‘ocular sepsis’ and ‘chest sepsis’ in relation to the national standard used for coding these terms in 2017/18 (ie code the sepsis followed by the localised infection).

## Notes

These code combinations will identify:

- patients who have had one of the terms listed above documented in their medical record and who do have sepsis and infection of the organ/site (where the terms are used to mean the patient has sepsis and an infection of the site/organ)
- patients who have had one of the terms listed above documented in their medical record and have an infection of the organ/site but do not have sepsis (where the terms are used to mean the patient has an infection of the site/organ only, without sepsis)
- patients who have been documented as having sepsis and an infection of the site/organ.

There may be other code combinations that may have been assigned for these terms.

There may be other similar terms that describe ‘organ sepsis’, which we are not aware of and so are not listed here.

The sepsis code may be found in any diagnostic position. The code that describes the infection of the organ/site must be listed after the sepsis code.

## Urosepsis and urinary sepsis

A **sepsis code** from the list below, plus one of the following codes:

- **N39.0** Urinary tract infection, site not specified
- **O23.4** Unspecified infection of urinary tract in pregnancy
- **O23.9** Other and unspecified genitourinary tract infection in pregnancy
- **O86.2** Urinary tract infection following delivery.

## Biliary sepsis

A **sepsis code** from the list below, plus one of the following codes:

- **K80.3** Calculus of bile duct with cholangitis
- **K83.0** Cholangitis

## Ocular sepsis

A **sepsis code** from the list below
- **H44.0** Purulent endophthalmitis

## Chest sepsis

A **sepsis code** from the list below

- **J22.X** Unspecified acute lower respiratory infection

## Sepsis

The following codes specifically classify sepsis:

- **A02.1** *Salmonella* sepsis

- **A22.7** Anthrax sepsis

- **A26.7** *Erysipelothrix* sepsis

- **A32.7** Listerial sepsis

- **A40.0** Sepsis due to *Streptococcus,* group A
- **A40.1** Sepsis due to *Streptococcus*, group B
- **A40.2** Sepsis due to *Streptococcus*, group D
- **A40.3** Sepsis due to *Streptococcus pneumoniae*
- **A40.8** Other streptococcal sepsis
- **A40.9** Streptococcal sepsis, unspecified

- **A41.0** Sepsis due to *Staphylococcus aureus*
- **A41.1** Sepsis due to other specified staphylococcus
- **A41.2** Sepsis due to unspecified staphylococcus
- **A41.3** Sepsis due to *Haemophilus influenzae*
- **A41.4** Sepsis due to anaerobes
- **A41.5** Sepsis due to other Gram-negative organisms
- **A41.8** Other specified sepsis
- **A41.9** Sepsis, unspecified

- **A42.7** Actinomycotic sepsis

- **B37.7** Candidal sepsis

- **O85.X** Puerperal sepsis

- **P36.0** Sepsis of newborn due to streptococcus, group B
- **P36.1** Sepsis of newborn due to other and unspecified streptococci
- **P36.2** Sepsis of newborn due to *Staphylococcus aureus*
- **P36.3** Sepsis of newborn due to other and unspecified staphylococci
- **P36.4** Sepsis of newborn due to *Escherichia coli*
- **P36.5** Sepsis of newborn due to anaerobes
- **P36.8** Other bacterial sepsis of newborn
- **P36.9** Bacterial sepsis of newborn, unspecified

## Codes to identify pneumonia and skin disorders for issue 4

### Pneumonia, codes J100-J189

- **J100** Influenza with pneumonia, seasonal influenza virus identified
- **J110** Influenza with pneumonia, virus not identified
- **J120** Adenoviral pneumonia
- **J121** Respiratory syncytial virus pneumonia
- **J122** Parainfluenza virus pneumonia
- **J123** Human metapneumovirus pneumonia
- **J128** Other viral pneumonia
- **J129** Viral pneumonia, unspecified
- **J13X** Pneumonia due to *Streptococcus pneumoniae*
- **J14X** Pneumonia due to *Haemophilus influenzae*
- **J150** Pneumonia due to *Klebsiella pneumoniae*
- **J151** Pneumonia due to Pseudomonas
- **J152** Pneumonia due to staphylococcus
- **J153** Pneumonia due to streptococcus, group B
- **J154** Pneumonia due to other streptococci
- **J155** Pneumonia due to *Escherichia coli*
- **J156** Pneumonia due to other Gram-negative bacteria
- **J157** Pneumonia due to *Mycoplasma pneumoniae*
- **J158** Other bacterial pneumonia
- **J159** Bacterial pneumonia, unspecified
- **J160** Chlamydial pneumonia
- **J168** Pneumonia due to other specified infectious organisms
- **J170** Pneumonia in bacterial diseases classified elsewhere
- **J171** Pneumonia in viral diseases classified elsewhere
- **J172** Pneumonia in mycoses
- **J173** Pneumonia in parasitic diseases
- **J178** Pneumonia in other diseases classified elsewhere
- **J181** Lobar pneumonia, unspecified
- **J188** Other pneumonia, organism unspecified
- **J189** Pneumonia, unspecified

## Skin disorders

Any codes beginning L (L00X-L998)

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