Approved Costing Guidance – Standards

Integrated costing methods

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NHS England and NHS Improvement

Contents

CM2: Incomplete patient events[1]

Purpose: To cost incomplete patient events, in-year costs are allocated to in-year activity.

Objectives

1. To ensure consistent costing of episodes:
   - started in a previous costing period and completed in the current costing period (ended)
   - started in a previous costing period but not completed in the current costing period (open)
   - started in the current costing period but not completed in the current costing period (open).

2. To address other issues relating to incomplete patient events – for example, where a medicine is dispensed or a diagnostic test is carried out in a costing period different from the one to which it relates.

3. To ensure:
   - there is full reconciliation to the audited accounts
   - the cost of completed events is not inflated by the costs of incomplete events
   - when the multi-year events are completed, the full costs can be derived.

Scope

4. This standard should be applied to all activity relating to all patients who are:

[1] These are often known as 'work in progress'. Our change in terminology acknowledges that as the NHS is a service organisation it is not appropriate to use manufacturing terminology.

- not discharged at the end of the costing period or
- admitted before the beginning of the costing period.

5. This includes admitted and non-admitted patient care, and A&E attendances.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

6. Episode is the most detailed recorded level of admitted patient care, and all sectors with admission units should cost at this level.

7. As defined in the NHS Data Dictionary, an episode is a period of activity during which a named care professional is responsible for the patient. See also Standard IR1: Collecting information for costing.

8. An episode starts when the patient is admitted or when their care is transferred. Examples of transfers of care are:

   - A consultant transfer occurs when the responsibility for a patient transfers from one consultant (or general medical practitioner acting as a consultant) to another within a hospital provider spell. In this case, one consultant episode (hospital provider) will end and another one will begin (from NHS Data Dictionary).
   - A transfer of responsibility may occur from a consultant to the patient's own general medical practitioner (not acting as consultant) with the patient still in a ward or care home to receive nursing care. In this case, the consultant episode (hospital provider) will end and a nursing episode will begin (from NHS Data Dictionary).

- A consultant leaves the organisation and the patient is transferred to another care professional. A long-stay patient may have many such transfers:
  - when the named care professional changes due to a change in the responsibility for the patient, a new episode may start under the newly responsible care professional – for example, when a patient transfers from a paediatric to an adult service
  - when the named care professional changes due to a change in the patient's condition, a new episode may start under the newly responsible care professional.

9. Community care and some other settings may record a named care professional who is not a consultant. In this case, a consultant name is not required for costing, and the most appropriate costs of the named care professional should be allocated to the patient.

10. A spell is defined as a currency, representing the period between admission and discharge from a hospital unit.[2] Each spell will include at least one episode. This is important to understand, as this is the measure that is submitted for the PLICS collection.

11. An incomplete patient event is defined as one where the patient's current **episode** is ongoing – that is, they are still in a bed at midnight – on the last day of the current costing period.

12. If an episode is incomplete, the spell will also be incomplete, but the incomplete episode will not be costed separately from the complete episodes within the same spell. A spell may have one or more complete episodes and an incomplete episode.

13. Costing an episode based on its start and end dates means a patient whose care started in an earlier costing period will be recognised as having costs incurred during the costing period; and patients discharged after the end of the costing period can be identified and costs allocated according to when they were incurred.

[2] As defined in the NHS Data Dictionary.

14. If costs in the current costing period are allocated to discharged patients only, those yet to be discharged will not incur any cost. Incomplete episodes will be under-costed, and the costs of complete episodes inflated by those absorbed from the incomplete episodes.

15. Note: A change of ward does not start a new episode. See Mental health and Community standard CM13: Admitted patient care, for further information.

Approach

16. To accurately cost your organisation's activities, it is important that only resources consumed in delivering the event are allocated to the event. To achieve this, costs need to be allocated to all patient events regardless of whether they are complete or incomplete at the end of the costing period.

17. We know that 'work in progress' is included in the financial accounts. Organisations are required to follow the principles of IAS18 in relation to revenue recognition; for example, income relating to partially completed episodes at the financial year-end should be apportioned across the financial years on a pro-rata basis. Costs of treatment are then accumulated as they are incurred.

18. Given the timing of the completion of the final accounts and cost data, the values for work in progress and for incomplete patient events will be different. There is no requirement to reconcile them, though the incomplete patient events cost data may help future assessments of income due for annual accounts purposes.

Calculating incomplete patient events

19. Incomplete events need to be calculated each time you run your costing model to derive patient-level costs. You should work with your informatics team to arrange a suitable way to do this, in conjunction with your costing software.

20. You should ensure that your admitted patient care (APC), ward stay (WS) and other feeds can recognise the incomplete events as valid patient records and bring them into the costing system. They should not be rejected during data

quality checks: for example, validation checks on the discharge date or discharge flag fields.

21. To calculate incomplete events for APC for an in-year costing period, use the APC feed (feed 1a) or APC – mental health feed (feed 1b) and WS feed (feed 4) as required for your sector (see Spreadsheet IR1.2).[3] One way to do this is to put the date of the end of the costing period in the 'discharge date' field.[4]

22. The APC feeds should then include information relating to patients still in a bed at midnight on the last day of the costing period.

23. To calculate incomplete events for emergency department (A&E) attendances for an in-year cost period, use the urgent care (A&E/MIU) feed (feed 2). You should consider the materiality of this information and ensure that incomplete events for the largest service are calculated first.

24. Patients not discharged at the end of the costing period are identified by the derived field 'patient discharge flag' in the APC feeds; see Spreadsheet IR1.2.

25. Incomplete events are then included in the matching process to ensure costed activities such as medicines dispensed can be matched to incomplete episodes.

26. You should ensure that patients admitted before the start of the costing period are also included in the PLICS feeds.

27. For local reporting purposes, patient-level cost users should follow the example in Table CM2.1.

[3] See Standard IR1: Collecting information for costing for more information on this feed.
[4] Ensure this substitute date is replaced with the actual discharge date or a revised substitute date at next calculation.

Table CM2.1: Example of incomplete patient events in a reporting dashboard

Specialty X	Cost (£)	Income (£)
Patients discharged	100	90
Patients not discharged	60	
Total costs incurred in month on delivering patient care	**160**	

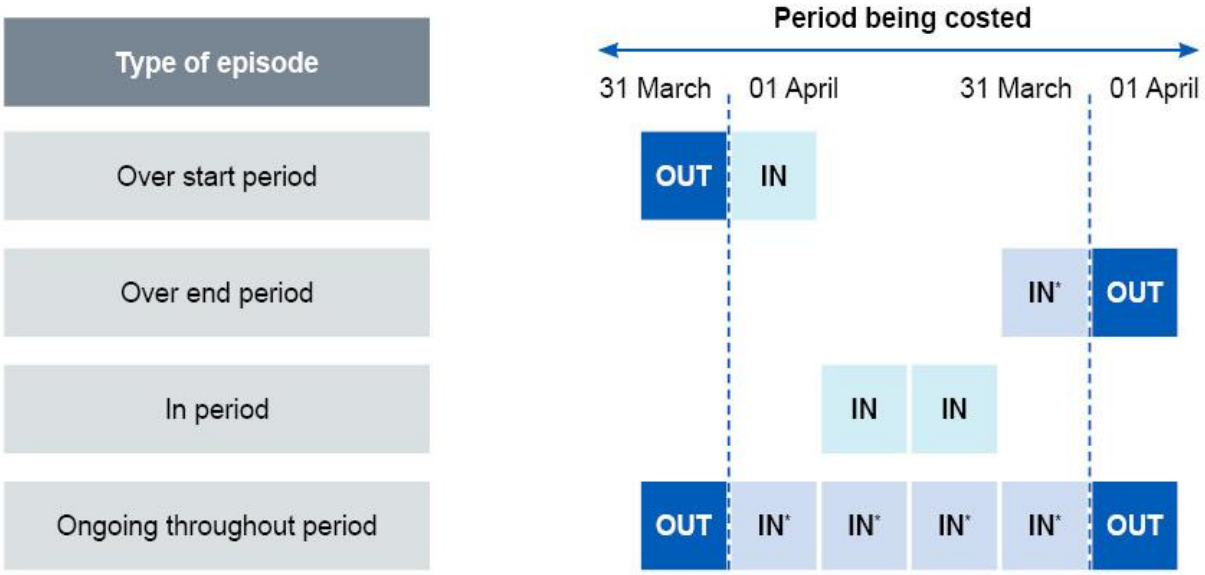
Allocating costs to year-end incomplete patient events

28. Figure CM2.1 below shows which part of an episode should be costed in the collection year, and includes four types of event:

    - all episodes that started in a previous year (over start period) and finished in the current collection year; to correctly allocate the right proportion of costs – eg ward costs – to these episodes, in your costing system count the number of in-year days
    - all episodes that started in the current collection year but incomplete at year-end (over end period)
    - all episodes that started and finished in the period (in period); these do not require a specific calculation at year-end
    - all episodes started in a previous year and incomplete at year-end (ongoing throughout period); to cost these long-stay patients, in your costing system count the number of in-year days to ensure the in-year costs are only allocated to in-year activity.

29. Where an expensive prosthesis is used in a cross-year episode, you need to use the 'date of implant' field in the prostheses and other high-cost items feed (feed 15) in column D in Spreadsheet IR1.2 and allocate this cost to the correct part of the episode. For example, if the episode spans 26 March XX to 6 April XY, and the prosthesis was inserted on 26 March XX, the prosthesis cost should be assigned to the part of the episode that falls in year XX.

Figure CM2.1: Parts of episodes to be costed



* Incomplete episodes in costing period (this may be the collection year).

Matching costed activities to incomplete patient events

30. As information regarding incomplete patient events is included in the APC feed (feed 1a) and the urgent care (A&E/MIU) feed (feed 2), and because the auxiliary patient-level feed(s) include all activity in-month, the matching rules in columns H to O in Spreadsheet CP4.1 will ensure costed activities from other patient-level feeds, such as medicines dispensed or diagnostics, will match to the incomplete event.

31. Where activities take place in a different year from the inpatient episode,[5] outpatient attendance or contact to which they relate, this costed activity shows up in the costing system as unmatched. However, this is not a true unmatched activity; rather it cannot be matched because matching is not done across years.

32. Review all activity that is unmatched at year-end to identify why it is unmatched. See Standard CP4: Matching costed activities to patients for more information on this.

33. Where you identify that costed activity is unmatched because the episode, attendance or contact to which it relates is in a different costing year, you

[5] This only applies where diagnostic tests are done for the spell but occur before the spell starts or after it ends.

should flag it as ‘unmatched – incomplete patient event’. Then report this under incomplete patient events, not under unmatched. The time spent doing this should be proportional to the value of the unmatched activity for your organisation, in line with the costing principles.

CM5: Theatres and special procedure suites

Purpose: To ensure all theatre and special procedure suite (SPS) activity is costed consistently.

Objectives

1. To cost theatre and SPS sessions based on the staff in attendance at those sessions.

2. To allocate the cost of the theatre/SPS session to the patients who had surgery during the session, based on their time in theatre or SPS.

3. To describe superior methods which may increase the accuracy of your theatre costing:
    - allocating costs based on the complexity of the procedures performed in theatre/SPS, including the costs of additional medical staff from different specialties
    - allocating the actual pay costs of the staff in attendance at those sessions rather than using an average.

Scope

4. This standard applies to all theatre and SPS activity.

5. SPSs include cardiac catheter laboratories, endoscopy, renal dialysis suites and electroconvulsive therapy suites. Other SPSs can be included as a superior method, eg podiatry and outpatient procedure suites.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities

- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

6. Theatre/SPS session costs must include all appropriate out-of-hours and waiting list costs.

7. Only allocate costs to patients who have had surgery/procedures during the session.

8. You need to identify the costs of all the staff in theatres/SPSs using the general ledger or a payroll source.

Approach

9. Obtain the theatres feed (feed 13), as prescribed in Standard IR1: Collecting information for costing and Spreadsheet IR1.2.[6]

10. This includes the session and procedure information as prescribed in the theatres feed (feed 13) in column D in Spreadsheet IR1.2.

11. The theatres/SPS management should capture information on the planned mix of staff working in individual theatre sessions. As a superior method, you can use the actual staffing in the theatre sessions, although doing so should be carefully considered where the lead surgeon has no control over the staff rostered for that session.

12. Map your staff to the appropriate resource. Using the theatres feed (feed 13) and additional information from management, allocate the cost to the relevant theatre/SPS. Use the actual staffing mix of grades, although a permissible alternative is the planned staffing mix, where this data is more reliable.

[6] We appreciate there might not be as much information for SPSs in the feed as for theatres.

Theatres

13. Use the prescribed matching rules in columns H to O in Spreadsheet CP4.1 to ensure the costed theatre/SPS activity is matched to the correct patient episode.

14. You need to identify the theatre activities[7] your organisation delivers from the prescribed activity list in Spreadsheet CP3.2:

    - SGA079 Theatre – anaesthetic care
    - SGA080 Theatre – recovery care
    - SGA081 Theatre – surgical care
    - SGA082 Theatre – general.

15. Table CM5.1 is an excerpt[8] from Spreadsheet CP3.3 showing the resource and activity links you should use for theatres.

16. For each resource and activity combination, a two-step prescribed allocation method is given in Spreadsheet CP3.3. This is based on the time a staff group spends in theatre, eg the duration of the procedure (operation 'cutting time') in minutes for consultant surgeons.

Allocation of staff

17. Identify the staff in the theatre session from the actual or planned staffing levels and allocate costs to the patients using that theatre/SPS session.

18. As a superior method, where the individual staff are recorded at patient-level in the theatre/SPS information, their actual costs, which may be identified from a general ledger or payroll data source, can calculated at an individual level in the costing system and allocated to specific patients.[9]

[7] For SPS activities, please see section in this standard on special procedure suites.
[8] Please note, all excerpts and examples in this standard are for illustration only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.
[9] Using the electronic staff record to allocate appropriate pay costs has been adopted as a superior method for other staff groups. However, this method should be considered carefully where the pay cost of individual staff is not controlled by the service, eg where the surgeon has no control over of rota staffing.

Table CM5.1: Excerpt from Spreadsheet CP3.3 showing the resource and activity links for theatre costs

	Activity						
Resource	**Theatre – anaesthetic care**	**Theatre – recovery care**	**Theatre – surgical care**	**Theatre care – general care**	**Insertion or fitting of a prosthesis, implant or device**	**Perfusion**	**Equipment sterilisation**
Consultant – anaesthetist	£X						
Nurse		£X					
Consultant			£X				
Non-consultant medical staff			£X				
Operating department practitioners				£X			
Cardiac devices					£X		
Perfusionist						£X	
Sterile services							£X

19. The theatres feed (feed 13) has fields to collect staff in each specific operation (see Table CM5.2) – as a minimum, the primary surgeon and anaesthetist, so you should allocate the cost of these staff to the patient.

20. As a superior method, you can use information from the other fields to allocate the cost of these staff to the patient.

    - If the other staff are not included in the theatre information to allow you to calculate the costs of the actual staff over the activity, derive relative weight values from the number and type of appropriate staff in the theatres staffing plan to calculate an average cost per theatre minute.
    - Then use the 'number of staff in theatre' field in column D in the theatres feed (feed 13) to allocate this average cost per theatre minute.

Table CM5.2: Excerpt from Spreadsheet IR1.2 showing some of the fields in which to record the different staff in theatres[10]

Feed name	Field name	Field description
Theatres	Surgeon 1	Name or identifier
Theatres	Anaesthetist 1	Name or identifier
Theatres	Non-consultant medical staff – anaesthetist	Name or identifier
Theatres	Operating department practitioners	Name or identifier
Theatres	Operating department assistant	Name or identifier
Theatres	Perfusionist	Name or identifier
Theatres	Midwife	Name or identifier

Medical staff – additional information

21. The theatres feed (feed 13) information will show the primary surgeon and anaesthetist for the operation. It may also identify second and subsequent surgeons, anaesthetists and other medical staff for the operation.

[10] The full list has been reviewed and in Spreadsheet IR1.2 some staff groups have been moved to 'optional' at the agreement of the Costing Expert Working Group.

22. Some complex operations may require two or more surgeons and several anaesthetists, and last many hours, making them high cost activities. All these staff are unlikely to be recorded on the standard electronic theatres data. So as a superior method, where the expected cost of these additional staff is material, review this issue with the clinical/service leads to see if alternative information can be obtained, and if it can, bring this information into the costed patient record.

23. Consultant anaesthetists may stay with patients until they are out of recovery. Work with consultant anaesthetists to understand how they deliver anaesthetic care in theatres, and then use the timestamps in column D in Spreadsheet IR1.2 to ensure that consultant anaesthetist costs are allocated using the correct durations.

24. There may be instances where two theatres share an anaesthetist at the same time. You should consider this in your allocations.

Medical and surgical consumables and equipment

25. See Standard CM21: Clinical non-pay items for information on costing consumables and equipment.

26. You need to consider the cost of capital charges, lease and repair costs for high cost equipment – eg robotics – and ensure these costs are only allocated to patients who were treated using them.

Costing emergency and out-of-hours theatre sessions

27. Emergency and out-of-hours theatre sessions include scheduled sessions for non-elective work (which may be within a ‘normal’ working day or outside it) and unplanned work to meet clinical need, such as additional sessions for capacity issues, to cover over-running operations or theatres that are taken out of use unexpectedly.

28. Both incur costs that are materially higher than in-hours work due to the enhanced salaries paid to staff working overtime or outside their normal working hours.[11]

[11] Please note, staff in theatres are often scheduled to work outside a nine-to-five working day,

29. Unplanned emergency theatre activity costs can be materially higher due to the lower use of emergency theatre sessions – for example, waiting list initiative sessions consultant anaesthetists. Work with the theatre leads to decide if a further weighting is appropriate for this work.

30. Discuss with the theatre leads whether: this is a material issue; the information is available to you; and the higher cost for emergency/out-of-hours work by additional weighting is a desirable allocation. Then discuss and agree with your costing steering group whether you should allocate the additional costs by weighting the patients who were in these theatre sessions. This is because the staff responsible for the operations often have no control over whether a theatre session is a normal one or unplanned.[12]

31. Do not assume all such costs relate to non-elective patients, as patients admitted electively may need to return to theatre out of hours. Wherever possible, use episode identifiers to allocate these additional costs.

32. Where agreed, the acceptable alternative method is for these costs to be allocated to all patients who have used the theatre during the costing period, weighted by actual theatre minutes.

33. The standards do not provide guidance on how to treat cancelled sessions or operations or 'downtime', either planned or unplanned. You should continue to use your current method for this.

Sterilisation costs

34. Sterilisation services can be within the trust or contracted in. The costs should be allocated to the department(s) that use the service.

35. You should use resource ID: SPR109 Sterile services and activity ID: SPA150 Equipment sterilisation.

36. As a superior method, you can allocate the cost to patients based on patient-level information on the sterilisation service provided.

[12] We will discuss this issue further with the Costing Expert Working Group for Theatres in 2020, to provide further guidance and/or a national prescribed approach.

Specialist procedure suites

37. If your organisation has SPS, you should use the following SPS activities:
    - MHA279 Electro-convulsive therapy
    - SLA132 Endoscopy
    - SLA134 Cardiac catheterisation laboratory
    - SLA136 Outpatient procedure
    - SLA137 Other specialist procedure suites care
    - SLA138 Renal dialysis.

38. These suites may use the same data recording and planning process as the theatres, or a completely separate one. You should identify the information and include it in the theatres feed (feed 13) to provide consistent information. We recognise that different service areas may have different information systems, so you should assess the materiality of work to bring the patient-level data into the theatres feed (feed 13) and judge the prioritisation accordingly.

Other considerations

39. Recovery costs should be allocated based on the patient's time, in hours and minutes, between entering and leaving recovery.

40. Where a provider has theatres on separate sites, collect the theatre costs by site, and apportion to the theatre minutes used, by site, for that costing period.

CM6: Critical care

Purpose: To ensure all adult, paediatric and neonatal critical care activity is costed in a consistent way.

Objective

1. To cost all critical care activity using the prescribed method.

Scope

2. This standard applies to adult, paediatric and neonatal critical care and high dependency unit (HDU) activity provided by the organisation. This includes but is not limited to:
   - intensive care units
   - specialist care units
   - HDUs
   - high dependency beds and critical care beds in designated bays on a general ward
   - critical care transport.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

3. Critical care units[13] - sometimes called intensive care units (ICUs) or intensive therapy units (ITUs) – are specialist hospital wards that provide treatment and monitoring for people who are very ill. They are staffed by specially trained healthcare professionals and contain sophisticated monitoring equipment. They are a core part of acute pathways but for costing are treated separately from the general ward stay.

4. Adult critical care patients will be recorded on the Critical Care Minimum Data Set (CCMDS); children on the paediatric dataset 'Picanet'; the neonates on the neonatal dataset 'Badgernet'. In this standard, we refer to the CCMDS for all ages for brevity.

5. Patients with a CCMDS record may be in designated critical care units and HDUs, or on other wards.[14]

6. Refer to Standard IR1: Collecting information for costing and Spreadsheet IR1.2 for the specific data items used for the critical care feed (feed 6a – neonatal, 6b – paediatric and 6c – adult critical care). Some trusts include critical care periods as a separate episode, which will be shown in the admitted patient care (APC) feed (feed 1a). Others use either the ward stay (WS) feed (feed 4) to identify critical care periods or the CCMDS dates/times to identify the critical care period as part of an episode. You should consider using these methods, to ensure costs for a critical care stay 'record' are identified in your PLICS and it has complete information.

7. You should work with your service/clinical leads to understand the costs. Costs to consider for critical care include:

    - nursing
    - medical and surgical consumables and equipment
    - medicines dispensed
    - consultants and non-consultant medical staff

[13] See https://www.nhs.uk/conditions/intensive-care/

[14] See also section on patients in non-critical care wards in this standard. Different commissioning rules may govern the treatment of critical care patients on other wards. The standards require patients recorded on the CCMDS to be included as critical care patients for costing. Please note, paediatric and neonatal critical care patients are treated on general wards far less frequently than adults.

- clinical support services (eg pathology)
- extracorporeal membrane oxygenation (ECMO) and extracorporeal life support (ECLS)
- critical care transport
- enhanced recovery teams (preoperative critical care input) and perioperative and critical care teams (PACE)
- critical care outreach teams.

8. You also need to consider the data for and cost of the following types of patients, which will not be recorded on the CCMDS (see later sections in this standard):
   - non-critical patients in a critical care bed
   - critical care staff attending major trauma patients in A&E or other areas
   - patients involved in research studies
   - patients in a temporary critical care bed in a recovery or other unit.[15]

9. Additional factors you need to consider when reviewing your costed critical care are:
   - the first day of the period in critical care may incur more costs. Best practice is to include this factor in relative weight values
   - lengthy stays in critical care may incur additional costs such as for therapies. Best practice is to obtain supporting contacts feed[16] (feed 7) to cover this factor.

10. Discuss cost and data factors with the critical care team so that you understand the issues and set costing rules accordingly. Document these rules in integrated costing assurance log (ICAL) worksheet 14: Local costing methods.

[15] These episodes would only be classed as critical care for this standard if recorded in the CCMDS data.
[16] This feed is a superior costing method.

Approach

11. Obtain the appropriate patient-level critical care feed (feeds 6a – neonatal, 6b – paediatric and 6c – adult) as prescribed in Standard IR1: Collecting information for costing and in Spreadsheet IR1.2.

12. Once the data has been gathered from the relevant dataset (CCMDS), all age groups are costed in the same way.

13. Consult your software supplier to understand which method your system uses to create the costed critical care record. This will also depend on how your organisation records critical care (see Standard IR1: Collecting information for costing, for further information on identifying critical care patients):
    - as a discrete episode with transfer of care to a consultant intensivist (anaesthetist) or
    - the patient episode continues under the surgical or medical consultant, and the WS feed (feed 4) or critical care feed (feeds 6a, 6b and 6c) will show the relevant critical care unit.

14. Use the prescribed matching rules in columns H to O in Spreadsheet CP4.1 to ensure the activity and costs on auxiliary feeds are matched to the correct critical care patient bed day. For example, pathology tests should be matched to the critical care record of that day, not to the APC episode.

15. Where a patient has a period of critical care, you should match auxiliary feeds to the critical care record, not the core episode. For example, auxiliary feeds such as pathology should be matched to the critical care record as part of the matching process.

16. The exception to this is theatres, as surgery is deemed to be part of the core episode, not the critical care episode. The only time theatres can be matched to the critical care episode is where the patient spends no time on a ward other than critical care; therefore, the critical care period is the core episode. Critical care is therefore lower in the matching rules in Spreadsheet CP4.1, and you should review any patients who match to critical care, to ensure they had no episodes out of critical care.

Integrated costing methods

17. You need to identify what critical care activity your organisation delivers and map this to the prescribed activity list in Spreadsheet CP3.2.

18. Table CM6.1 is an excerpt[17] from Spreadsheet CP3.3 showing the resource and activity links to use for critical care.

19. For each resource and activity combination, there is a two-step prescribed allocation method in Spreadsheet CP3.3.

20. As the critical care record costs on a 'by day' basis, patients not yet discharged or moved from critical care to a general ward area are always costed in conjunction with incomplete patient events (see Standard CM2: Incomplete patient events). The CCMDS data will identify when the critical care period ends for the patient.

Consultant and non-consultant medical staff

21. Critical care units are usually run by anaesthetists who have trained as 'intensivists'. Costs for these medical staff should be identified so that they can be allocated separately from the costs of those who work in theatres only.

22. Critical care medical staffing should be allocated across all patients based on critical care stay duration in hours and minutes. Where patient-level feeds are not available, medical staff job plans should be used as a secondary method. You should provide a relative weight value for critical care units higher than for HDU if the different types of bed are in the same ward area; and for the first day of care, as this usually uses a higher level of resource use. Discuss these weightings with the service and/or clinical lead.

23. As a superior method, medical staff costs can be weighted for patient acuity.[18]

24. Patients in critical care may also be visited by their named consultant from another specialty on ward rounds, eg their named cardiac consultant. These ward round visits to critical care by non-intensivist consultants (and other grade medical staff) are matched from the ward round information.

[17] Please note all excerpts in this standard are for illustrative purposes only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.
[18] This will be based on local acuity information. It is a superior method as we appreciate this information is not be available in all organisations.

Nursing

25. This standard prescribes that you allocate critical care stay nursing costs to the critical care activities based on duration in hours and minutes on the critical care feeds (feeds 6a, 6b and 6c).

26. Use the prescribed activities:

    - SLA106 Critical care journey
    - SLA107 Adult critical care – ward care
    - SLA112 Neonatal critical care – ward care
    - SLA117 Paediatric critical care – ward care.

27. As a superior method, the costs should be weighted based on nursing acuity using the 'nursing acuity care level' field in the patient-level feeds. This is because the patient-to-nurse ratio, both in terms of the number of nurses and their experience level, will be determined by how ill the patient is.[19]

28. Fields that may offer data on unit or patient acuity include:

    - nursing acuity care level (CCMDS)
    - unit function code (CCMDS)
    - acuity score (all ages – local source)
    - HRG (paediatric and neonatal).[20]

29. If acuity is included in a patient-level information source, you can use this as a best practice superior costing method. If you do not, you can still work with the critical care nursing team to understand the average patient-to-nurse ratio for patients of different acuities and set up relative weight values to allocate nursing costs. One way to do this is within a statistic allocation table as shown in Table CM6.2.

[19] This will be based on local acuity information. It is a superior method as we appreciate this information is not available in all organisations.
[20] In these datasets, the HRG is applied per day so acuity by day can be identified. The HRG cannot be used in this way for adults as it is the highest level of care in the critical care period.

Table CM6.1: Excerpt from Spreadsheet CP3.3 showing the resource and activity links for paediatric critical care stay with ECMO costs

Resource	Activity							
	Critical care journey	Paediatric critical care – ward care	Paediatric critical care – medical care	Ward round	Dispense non patient-identifiable medicines	Supporting contact	Perfusion	Haematology testing
Medical and surgical consumables	£X	£X					£X	£X
Medical and surgical equipment and maintenance	£X	£X					£X	£X
Consultant	£X		£X	£X				£X
Non-consultant medical staff	£X		£X					£X
Nurse	£X	£X						
Medicines					£X			
Pharmacy technician					£X			
Perfusionist							£X	
Critical care transport	£X							
Critical care transport network	£X							

Table CM6.2: Example of relative weight values for nursing where cost of all critical care units are contained within one cost centre

Acuity/care level (locally determined)	Nurse
HDU 1	0.5
HDU 2	0.5
ICU 1	1.0
ICU 2 (specialist unit, eg liver)	1.5
ECMO/ECLS	3.0

30. You should also consider the treatment of step-down bed moves within one critical care unit (see Table CM6.3).

Table CM6.3: Example of relative weight values for patient or bed-level acuity information within one critical care unit

Acuity/care level (locally determined)	Nurse
Patient A/Bed A	1.0
Patient B/Bed B	0.5
Patient C/Bed C	1.5

Medical and surgical consumables and equipment

31. Use the process described in Standard CM21: Clinical non-pay items to cost medical and surgical equipment.

32. As a superior costing method for non-patient level identifiable consumables, you may obtain medical and surgical consumables and equipment costs for each of the types of care as described in the 'critical care activity code' field on the critical care feeds (feeds 6a, 6b and 6c). Use these costs as a relative weight value when allocating these resources on the critical care feed.

Clinical support services

33. Costs such as pathology, therapies and diagnostic imaging will also be incurred in critical care. They are contained in the pathology feed (feed 8), supporting contacts feed[21] (feed 7) and the diagnostic imaging feed (feed 12).

34. The cost of these activities will include the relevant resources according to the staff group, as in Spreadsheet CP3.1 and CP3.3

35. Use the prescribed matching rules in Spreadsheet CP4.1 to match them to the critical care stay, rather than the corresponding core inpatient episode.

ECMO/ECLS

36. ECMO and ECLS use an artificial lung (membrane) located outside the body (extracorporeal) to infuse blood with oxygen (oxygenation) and continuously pump this blood into and around the body.

37. ECMO is used mainly to support a failing respiratory system, whereas ECLS is used mainly to support a failing heart.

38. You will need to access local data on which patients use ECMO/ECLS in your critical care units. The CCMDS has a 'critical care activity' for ECMO, but does not distinguish ECLS separately, so local information will be required.

39. You can add this information to create the ECMO/ECLS flag in each of the critical care feeds (feeds 6a, 6b and 6c) as described in column D in Spreadsheet IR1.2 to identify when ECMO or ECLS has been delivered, and ensure those patients receive the appropriate nursing acuity costs and medical and surgical equipment and consumable costs.

40. Clinical perfusion scientists – or perfusionists – may be involved in delivering ECMO/ECLS. They are a separate type of care professional from medical staff or nurses. For best practice, you should identify them separately in your costing process to allocate to their costs to the patients they work with.

41. Some information on ECMO/ECLS equipment, consumables and staffing may come from databases separate from the main critical care record. You should

[21] This feed is a superior costing method.

identify material costs and allocate them using information from the critical care department or the relevant specialist team (eg perfusion team).

42. Nursing acuity for patients receiving ECMO or ECLS should be reported in the 'nursing acuity care level' field in column D in the critical care feeds (feeds 6a, 6b and 6c).

43. You should use resource ID: SLR087; ECMO/ECLS and the associated ECMO/ECLS activities (SLA105, SLA110 or SLA115) to identify patients who have received ECMO/ECLS during their critical care stay. These patients are likely to report higher costs against their critical care activities than critical care patients with a lower acuity.

44. Use the ECMO/ECLS flag to identify these patients for business intelligence purposes.

Critical care transport

45. You should identify the cost of critical care transport separately from critical care. This is because critical care transport patients do not always have critical care episodes in the same hospital, so it is helpful to keep the cost identifiable.

46. Not all patients conveyed using critical care transport will be taken to/from your hospital. Patients should not be matched to the master APC feed (feed 1a) but reported separately in PLICS. Costed critical care journey activities for patients conveyed to other providers should be reported under 'other activities'.

47. You should allocate the critical care transport costs across patients using the critical care transport service according to age. Work with the service manager/clinical lead to develop an appropriate relative weight value for this, according to patient acuity and/or duration of the journey made. Use resource ID: SLR088; Critical care transport (non-patient level).

48. As a superior method, if your organisation provides critical care transport, you can obtain a patient-level critical care transport feed (feed 6d) for this as prescribed in Standard IR1: Collecting information for costing and

Spreadsheet 1.2. Use resource ID: SLR086; Critical care transport (patient level).

49. Use the prescribed cost allocation rules in Spreadsheet CP3.3, using activity ID: SLA106; Critical care journey.

50. If your organisation provides critical care transport, you are likely to hold the network and central costs for running this service. Identify these costs in the cost ledger as critical care transport (you should not match the transport cost to critical care stays) and allocate them using the two-step allocation method in Spreadsheet CP3.4.

51. Critical care transport should include the cost of the vehicles. These may be owned (identifiable from the asset register) or leased. The appropriate running costs should be included in the cost of service.

Major trauma patients and other emergency department (ED) support[22]

52. Some patients in the ED may require critical care medical and nursing input. 'Major trauma patients' are identifiable as a specific category of patients recorded separately from other ED data. Major trauma consultant on-call or critical care staff may also support other patients in the ED. You should include both types of patient in your costing process for critical care staff.

53. These patients should be identified and entered onto the supporting contacts feed (feed 7), matching to the urgent care (A&E/MIU) feed (feed 2). You will need to discuss and agree with the critical care team:

- how information is collected for major trauma patients (and other ED patients) who receive input from the critical care team
- how this input is measured – that is, who in the team provides the input
- a scale to weight the input – that is, how long a member of the critical care team stays with the patient. This could be a sliding scale based on patient need.

[22] See Acute standard CM4: Emergency department attendances (including A&E, minor injury units and walk-in centres).

54. These costs need to be reported in the A&E attendance.

Critical care patients on a general ward[23]

55. Where you have critical care (ITU or HDU) beds on a general ward, you will need to ensure patients using these beds are recorded on the acute hospital critical care feeds (feeds 6a, 6b and 6c) if they are recorded in the CCMDS. This identifies them as a critical care patient.[24] You should also find them flagged in the WS feed (feed 4) using the 'critical care bed on a general ward' field in column D of Spreadsheet IR1.2.

56. The CCMDS allows these patients[25] 'to be recorded in any location where critical care is provided', but as the CCMDS is intended for commissioning, their inclusion as critical care will be locally defined.

57. You will need to work with the ward manager to identify how – or if – the nursing ratio differs for these patients. If relevant, you will need to set up relative weight values to ensure the critical care patients receive a higher proportion of the general ward's nursing than those in the other beds.

58. You should also discuss the support these patients receive from critical care staff and allocate their costs accordingly.

59. Use the prescribed activities for staff from both ward and critical care:

- SLA104 Adult critical care – medical care
- SLA107 Adult critical care – ward care
- SLA109 Neonatal critical care – medical care
- SLA112 Neonatal critical care – ward care
- SLA114 Paediatric critical care – medical care
- SLA117 Paediatric critical care – ward care
- SLA145 HDU medical care (adult)
- SLA144 HDU ward care (adult).

[23] This section may also apply to critical care beds in a recovery unit, to increase critical care capacity.
[24] Note: these are not outreach patients as they do have a CCMDS record.
[25] https://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/critical_care_minimum_data_set_fr.asp?shownav=1

Critical care outreach teams

60. Your organisation may have a specialist critical care outreach team. These teams support clinical staff in managing acutely ill patients in hospital by providing closer observation of 'at risk' patients on non-critical care wards. These patients will not be recorded on the CCMDS.[26]

61. For best practice, their activity should be recorded on the supporting contacts feed (feed 7) and matched to the episode of care, not the critical care record.

62. For care provided by nurses on critical care outreach teams use the resource ID: SLR082; Specialist nurse and activity ID: SLA099; Supporting contact. If no patient-level data is available, you should continue with your current method of allocation until a suitable dataset can be developed.

63. If the data is not available, in discussion with outreach service staff, the cost should be allocated across all patients on the wards that are typically visited by this service. Use the resource ID: SLR082; Specialist nurse and activity ID: SLA097; Ward care.

Perioperative/pre-rehabilitation and postoperative teams

64. Critical care staff in 'enhanced recovery' or 'post-acute care enablement (PACE)' teams may support patients across wards/specialties. These will:

    - pre-screen patients for treatments
    - prepare them for surgery
    - improve the effectiveness of their rehabilitation
    - facilitate effective discharge by co-ordinating care across specialties, disciplines and organisations.

65. Where these services are in place the critical care staff costs should be disaggregated between pre-habilitation/postoperative work and work on the critical care unit. Costs should be allocated to the patients who have received the different types of care.

66. As a superior method, include the relevant staff costs allocated using patient-level activity on the supporting contacts feed (feed 7), matched to specific

[26] For patients in general wards recorded on the CCMDS, see the section Critical care patients on a general ward.

patient outpatient appointments or APC episodes. Only patients who have received care from the relevant team should be allocated their costs.

Non-critical patients in a critical care bed

67. In exceptional circumstances, patients who do not require critical care may be placed in a critical care bed (**non-critical care patients**). Some critical care unit or HDU beds may be flexed to accommodate step-down patients waiting for a bed in another organisation. Their costs are not as high as those for a critical care patient.

68. If material in number or cost, the allocation of cost should be discussed and agreed with the critical care team.

69. These patients should have a note on their critical care record (CCMDS).[27] Flag these patients in the critical care feeds (feeds 6a, 6b and 6c) using the 'non-intensive care unit patient flag' field in column D in Spreadsheet IR1.2.

Patients involved in research studies

70. If you can identify the costs associated with research and development for individual patients, allocate them to those patients using activity ID: SPA155; Research and development. If not, continue with your current method and document it in ICAL worksheet 20: Research and development.

[27] We have noted that that the end date may not be consistently recorded on the local dataset to reflect this change in care level on the unit. Please note the materiality of this work.

CM7: Private patients and other non-English NHS-funded patients

Purpose: To ensure private patients and other non-English NHS-funded patients are costed in a consistent way.

Objectives

1. To ensure the activities relating to private patients,[28] overseas visitors, patients funded by the Ministry of Defence, and other patients funded from outside English NHS commissioning, are costed in line with the *Approved Costing Guidance - Standards*.

2. To ensure the associated income for these patients is correctly identified and matched to the correct episode, attendance or contact.

Scope

3. This standard applies to activities relating to all private patients, overseas visitors, patients funded by the Ministry of Defence, and other patients funded from outside English NHS commissioning. This is on the basis that all patients for whom the English NHS provides care should be costed in the same way, irrespective of the way their care is funded.

4. This standard also applies to patients funded by English NHS commissioning of an NHS provider, but managed and paid for via a third party, eg capacity purchased from a local private hospital.

[28] For our definition of private patient care, see the *Costing glossary*. https://improvement.nhs.uk/resources/approved-costing-guidance/

5. Cost and activity for patients within paragraphs 3 and 4 (referred to as CM7 patients within this standard) **should** be included in the quantum of costs as these are classified as NHS patients for tariff calculation.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

6. CM7 patients should be costed in the same way as patients funded by the English NHS, using the resources, activities and prescribed cost allocation methods in Spreadsheets CP3.1, CP3.2 and CP3.3, with the addition of any specific administration or management costs that should be attributed solely to these patients. They should also be included in the allocation of support costs.

7. CM7 patients should be costed regardless of whether they are on NHS wards or private/designated wards.[29]

8. The relevant episodes, attendances and contacts must be flagged in the costing system.

9. Costed activity for these patients should be reported as ‘own-patient care’, along with the corresponding income for local reporting and business intelligence purposes.

10. We recognise that there may be issues with recording these patients. For example:

[29] Conversely, NHS patients on private patient wards should be costed using the costs of the ward they were on.

- Private patient records may be held on a separate patient administration system (PAS). This should be brought into the PLICS where possible, to ensure consistency of costing across NHS providers.
- A patient changing from private status to NHS or vice versa during an inpatient episode may not be assigned correctly in the PAS. The informatics department should work with the relevant service to address this if it is an issue for your organisation.

Approach

11. You can identify who funds each patient episode, attendance or contact for these patients from their 'organisation identifier (code of commissioner)' and their 'administrative category code' in column D in Spreadsheet IR1.2.

12. Private patients' administration and overseas visitor managers' costs have been classified as a type 2 support cost in the standards. These costs should be allocated directly to these patients as prescribed in Spreadsheet CP3.4.

13. The patient's 'administration category code' may change during an episode. For example, the patient may opt to change from NHS to private healthcare. In this case, the start and end dates for each new administrator category code should be recorded in the APC feed (feed 1a),[30] so all activity for private patients, overseas visitors, patients funded by the Ministry of Defence, and other non NHS-funded patients can be correctly identified and costed accurately.

14. Non-admitted patients cannot change status during one contact.

15. Table CM7.1 shows the resource and activity combinations to be used for private patient administrators and overseas visitor management teams.

[30] This is to be confirmed with NHS Digital for the Mental Health Services Data Set (MHSDS).

Table CM7.1: Excerpt from Spreadsheet CP3.4 showing the resource and activity links for private patient administration and overseas visitor management team costs

Resource	Activity	
	Overseas visitor management	Private patient administration
Overseas visitor management team	£X	
Private patient administrator		£X

16. Do not include any costs in the costing process for CM7 patients where the costs incurred do not sit in the organisation's accounts. For example, where a consultant saw a patient using NHS facilities and staff but separately invoices the patient/healthcare company for their time, you should allocate the facilities and other staff cost to that patient but not the consultant time.[31]

17. Therapy, medicines, diagnostic tests, critical care costs, social care and other costs should be included in the costing process for CM7 patients unless they do not sit in the organisation's accounts.

18. If the patient receives a service that is additional to those received by an English NHS-funded patient, these costs should be identified and allocated to that specific patient – for example:

    - private room costs
    - additional catering costs
    - additional clinical or holistic treatments, tests and screening not normally available on the English NHS patient pathway
    - privately or charitably-funded specialist limbs/equipment, including those provided to veterans and children.

19. Private patient wards may include NHS beds where the provider's NHS wards are facing capacity challenges. The cost of the private patient ward should be allocated to the patients occupying the beds, irrespective of how they were funded.

[31] This example presumes the patient contact was recorded on an NHS data system.

Integrated costing methods

20. The income received for caring for private patients and other non-English, NHS-funded patients must be allocated to the correct episode, attendance or contact. This will ensure any profit is shown against the private or other non-English, NHS-funded patient, and not netted off from the English, NHS-funded patient care costs.

21. You should ensure that reports for the patients covered by this standard are available to relevant parties in your trust, in accordance with Standard IR3: Using patient-level information data as part of the decision-making toolkit and Spreadsheet IR3.1. This will allow review of cost recovery and support pricing discussions.

CM8: Clinical and commercial services supplied or received[32]

Purpose: To ensure all other activities provided to or by another organisation are costed in a consistent way.

Objectives

1. To ensure activities delivered by your organisation on another organisation's behalf are costed in a consistent way, including clinical services supplied to NHS and non-NHS organisations.

2. To ensure activities delivered on your organisation's behalf by another organisation are costed in a consistent way.

Scope

3. This standard applies to all activities a provider performs that do not relate to the care of its own patients (services supplied).

4. This standard also applies to care provided to one organisation's patients by another organisation (services received).

5. The services can be clinical or non-clinical.

6. The services will include care provided by NHS organisations (sometimes termed 'provider to provider') and commercial activities that are outside standard NHS contracts (both for NHS and non-NHS organisations).

[32] This standard was formerly called 'Other services'.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

7. Patient care that is classified as 'clinical services supplied or received' needs to be flagged in the relevant information feeds using the clinical services supplied and clinical services received indicators in column D in Spreadsheet IR1.2. If the information is not available in the Mental Health Services Data Set (MHSDS), you may need to collect it locally, to ensure your organisation's own activity is identifiable.[33]

8. All activities delivered by your organisation on another organisation's behalf should be costed in the same way as your organisation's own-patient activity, but reported separately so that it and any related patient activity is not included in your organisation's own patient care costs.

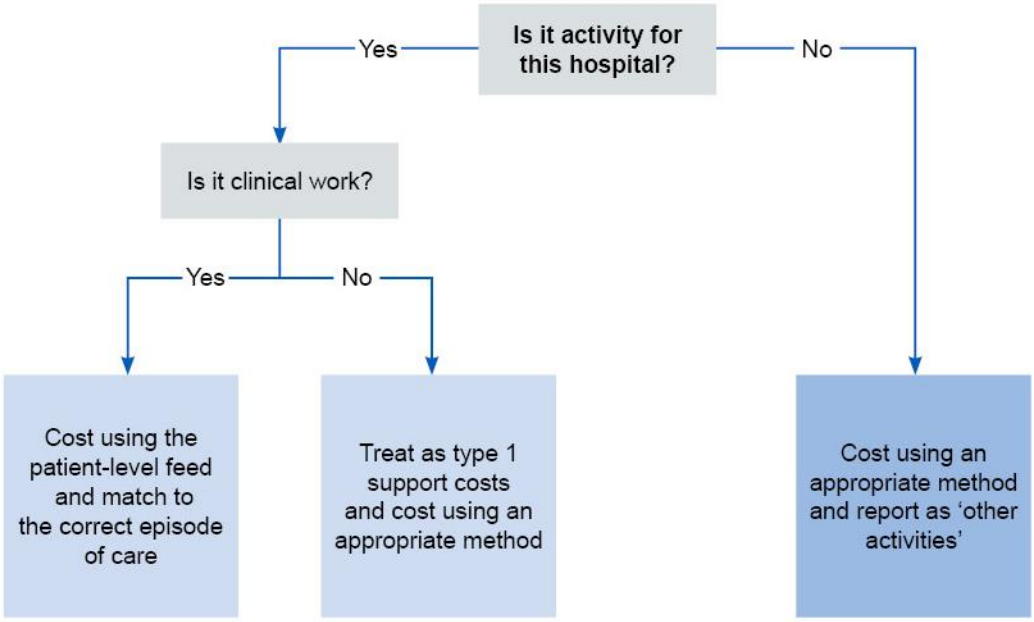
9. Work with contract managers and other finance colleagues to understand the service-level agreements for services supplied and received, as this helps you identify the nature of these activities.

10. Where activity undertaken for other organisations is in your activity feeds, you need to understand the different service users of the departments delivering this activity (see Figure CM8.1).

[33] This currently applies to acute activity only. We are looking at how other activities can be identified in the mental health and community care activity datasets.

11. The patient-level activity feeds you obtain from the relevant departments need to contain their entire activity, not just their activity for your organisation's own patients.

Figure CM8.1: Services with different service users



Approach

Services supplied

12. Where activity supplied to another organisation is within your patient administration system (PAS),[34] it needs to be flagged in the information feeds using the clinical services supplied indicator in column D in Spreadsheet IR1.2.[35]

13. All activity, including that supplied to another organisation, should be costed using the resources, activities and cost allocation methods described in Spreadsheets CP3.1 to CP3.3 and reported under the 'other activities' cost group.

14. If it is unclear whether an activity is own-patient care or activity supplied to another organisation, discuss it with the service manager to agree an

[34] We recognise that most organisations will not have this activity within their PAS.
[35] This is for the acute sector only. We are looking at how other activities can be identified in the mental health and community care activity datasets.

appropriate apportionment and document this in integrated costing assurance log (ICAL) worksheet 13: % allocation bases.

15. For non-clinical services supplied to another organisation, use the proportion of costs that should be attributed to the services it supports if the department has a system for recording this information. If it does not, develop a relative weight value with the department and financial management team to use in the costing process.

Services received

16. Services received may be:

- the whole spell, eg where provided by a private or voluntary provider or a different NHS provider
- part of the patient event, such as pathology, pharmacy or diagnostic imaging
- overheads (type 1 support services), such as payroll or shared services.

17. All services received should be flagged in the costing system using the field 'contracted-in indicator' within the feeds shown in Spreadsheet IR1.2. This field will enable the costing system to identify the correct cost for the service received at patient level.

18. The costs relating to this activity are in the form of invoices charged to the general ledger. You need to identify these costs in the PLICS and ensure they are applied to the correct patients.

19. Where the contract relates to patient-facing activity, the patient record for that provided service needs to be entered in the relevant feed and flagged in the information feeds using the clinical services received indicator in column D in Spreadsheet IR1.2,[36] and reported under the 'own patient care' cost group.

20. Where you cannot obtain a breakdown of the resources, use the resource IDs:

- CLR026 Services received pathology testing
- CLR027 Services received pharmacy services
- CLR028 Services received radiology scans

[36] We understand that some providers have difficulty receiving this information, but as it is essential for safety and communication in the complete patient record we continue to require it in PLICS.

- MDR036 Orthotics
- CLR016 Services received – clinical other.

21. The activity codes you use should relate to the care given. Use the list in Spreadsheet CP3.2. If you do not have detail of the activities, for transparency you should use:
    - SPA175 Services received – no activity detail available

22. If the activities provided on your organisation's behalf by another organisation are recharged at a fixed value per patient or per treatment, use this as a relative weight value in the costing process.

23. The fixed value will contain an element of overheads (type 1 support costs). You do not need to classify the fixed value between patient-facing and overheads (type 1 support costs) as all are patient-facing costs to your organisation.

24. Where the services received activity relates to support services, costs should be allocated in the same way as for an in-house service.

25. For example, a contract for facilities (maintenance and cleaning) with NHS Property Services would be disaggregated to show cost allocation of:
    - maintenance – use the same allocation method as T1S030 Estates, buildings and plant, facilities maintenance costs – floor area (sq m)
    - cleaning – use the same allocation method as T1S013 Cleaning and other hotel services (pay and non-pay costs) – floor area (sq m) weighted by the number of times cleaning is carried out.

26. Activities provided by your organisation on another organisation's behalf may need to receive an element of your organisation's own overheads (support type 1 costs) for administering the contract. You need to identify which overheads (support type 1 costs) to apply and in what proportion.

Commercial activities

27. Some NHS organisations have developed commercial services[37] which generate additional income to reinvest in patient care. These may be clinical

[37] www.england.nhs.uk/nhsidentity/identity-examples-categories/income-generation/

or non-clinical services, and will not be within the provider-to-provider operating partnership agreements described above. They may include but are not limited to:

- commercial research and trials
- international healthcare management and consultancy
- pathology, pharmaceutical production, toxicology
- occupational health
- retail space and site rental
- facilitating market entry for new services to the NHS.

28. Where material and possible, this activity should be costed in the same way as for other activity, so you need to identify the costs and activity relating to it.

29. All commercial activity should be flagged in the costing system by adding a commercial activity flag in your costing model where appropriate.

30. Commercial activity should be costed using the resources, activities and cost allocation methods as described in Spreadsheets CP3.1, CP3.2 and CP3.3.

31. Costed commercial activities are not matched to the provider's own activity; they are reported under the 'other activities' cost group.

32. Income for these activities should be identifiable in PLICS as relating to this service, and not netted off, in accordance with how income is treated throughout the standards. These activities should be reported internally with their associated income for business intelligence purposes.

CM10: Pharmacy, medicines and blood services

Purpose: To ensure costs of pharmacy staffing and medicines are consistently allocated to the activities they deliver.

Objectives

1. To ensure pharmacy staffing and blood services costs are allocated at patient level (for prescribed areas) or in the correct proportion to the activities they deliver.

2. To ensure medicine, blood and blood product costs are allocated to the correct patient episode, attendance or contact.

Scope

3. This standard applies to all pharmacy staffing costs and all medicine costs in the cost ledger.

4. The standard also applies to blood services and Cart-T cell therapy.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list

- Spreadsheet CP3.2: Activity list
- Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

5. Medicines and blood are a material cost second only to staffing for the NHS. For most providers, they are a significant cost. Therefore, these items should be costed appropriately, then matched to the correct patient episode, attendance or contact (prescribed areas) or allocated across patients according to allocation rules, to ensure the overall accuracy of the final patient cost.

6. The standard further classifies medicines as high cost drugs and chemotherapy drugs where appropriate, to support the costing process and cost collection. Costing treatment of controlled drugs is also described.

7. The standard further classifies blood services items as blood and blood factor products.

8. This standard also provides guidance on how to identify the activities that pharmacy and blood services staff undertake in your organisation and how to apportion their costs to those activities

9. Medicine cost should be treated separately from that of the pharmacy service, with the cost allocated using patient-level information.

10. If your pharmacy and/or blood services are provided by an external party, your access to cost and medicine issue data may be limited. As the medicines dispensed feed (feed 10) and the blood and blood services feed (feed 9) are required feeds for PLICS, work with your informatics team, chief pharmacist and/or blood services manager to access sufficient information.

Approach

Medicines

11. The range of medicines provided by organisations will vary, according to the services they provide. You should work with your pharmacy lead to develop

an understanding of how the different medicine types support care, and how the costing terms for medicines will be applied.

12. Medicines information will be provided by your organisation's own pharmacy system, an outsourced partner (where the service is not delivered in-house) or via FP10HP prescriptions on ePACT2.[38]

13. You should map medicines from your general ledger to the resources in Table CM10.1.

14. There are three different medicine types for costing purposes:

    1. 'High cost drugs' as defined by the National Tariff Payment System[39] are prescribed at patient level for costing.
    2. Those for which patient-level information is deemed locally to be a significant cost or identifiable for safety reasons (such as homecare drugs) and are therefore costed at patient level.
    3. Those for which patient-level information is not prescribed, eg ward stock.

Table CM10.1: Excerpt from Spreadsheet 3.1 showing the resources to use for medicines

Resource ID	Resource	Resource description
MDR044	Medicines	Excludes high cost drugs
MDR061	High-cost drugs	High-cost drugs[40]

15. You should allocate each of these three types to the activities. Types 1 and 2 will be allocated using the information from the medicines dispensed feed (feed 10). Type 3 will be allocated to the activity ID: MDA065; Dispense non-patient identifiable drugs.

[38] This is the system used to record the FP10s.
[39] As defined by the National Tariff high-cost drugs list: https://www.england.nhs.uk/publication/nhs-england-drugs-list/
[40] As defined by the National Tariff high-cost drugs list: https://www.england.nhs.uk/publication/nhs-england-drugs-list/

16. As a superior method, you may match medicines not prescribed at patient level to patients directly if you have the relevant information.

17. Where this information is already separate in the general ledger, you should work with your finance colleagues to ensure that the ledger balances correspond with the costing categories. This discussion will also help identify some of the medicines for which information is available at patient level.

Medicines identifiable at patient level

18. Guidance on the collection of the medicines dispensed feed (feed 10) to be used when costing medicines is provided in Standard IR1: Collecting information for costing and Spreadsheet IR1.2. The information required for this feed will be available from a locally-held database.
    - For acute organisations, a mandated monthly dataset collects data on 'high cost drugs' for NHS England's specialised commissioning of high cost drugs; this covers about 70% of the highest cost medicines.
    - For mental health organisations, some medicines will be controlled or known to be of significant cost. As these medicines are restricted for legal reasons, patient-level records will be available for them.
    - Other medicines can be deemed locally as significant to the cost of patient care and data on them will be held at patient level.

19. Many medicines may be issued directly to patients,[41] eg via an e-prescribing system or a stock control system. The pharmacy information system will have patient-level information for these medicines. Some of these will be high-cost or controlled drugs, but patient-level information on other types of medicines may also be available from this source. Examples include:
    - Acute: the 'high cost drugs' in the national tariff list and chemotherapy drugs. Pay particular attention to ensuring high cost drugs and chemotherapy drugs are identified correctly using the 'high cost drug (OPCS)' and 'chemotherapy drug flag' fields in column D in the medicines dispensed feed (feed 10).

[41] Many organisations use the term 'non-stock items'. We use the term 'patient-identifiable medicines'.

- Mental health: the antipsychotics clozapine, paliperidone, risperidone, aripiprazole and zuclopenthixol decanoate; and methadone and melatonin – all are a significant cost in an individual's care.
- Home care: there will be a patient identifiable record for medicines issued directly to patients in their own homes – for safety and commissioning purposes.

20. Use the following activity IDs for medicines:
    - MDA063 Dispensing high cost drugs
    - MDA065 Dispensing non patient-identifiable medicines (note: this is not at patient level)
    - MDA067 Dispensing chemotherapy medicine scripts
    - MDA068 Dispensing all other medicine scripts
    - SLA126 Homecare medicines.

21. Table CM10.2 is an excerpt[42] from Spreadsheet CP3.3 showing the resource and activity links to use for medicines.

22. For each resource and activity combination, there is a two-step prescribed allocation method in Spreadsheet CP3.3.

23. The costs on the medicines dispensed feed (feed 10) are used as relative weight values to allocate the costs in the cost ledger. This is so that if the total cost to the pharmacy department is £1,000 but only £900 is in the cost ledger, a negative cost is not incurred by allocating more cost using the medicines dispensed feed (feed 10) than is on the cost ledger code.

24. For reporting purposes, ensure that your medicines dispensed feed (feed 10) includes the generic name of the medicine, not the brand name.

25. Use the prescribed matching rules in columns H to O in Spreadsheet CP4.1 to match costed medicines to the correct patient episode, attendance or contact.

[42] Please note all excerpts in this standard are for illustrative purposes only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.

Medicines not identifiable at patient level

26. Where medicines are not identifiable at patient level – for example, ward stock or 'stock' items[43] – use the non patient-identifiable field in the source data to identify their costs. Use the 'requesting location code' to allocate them to the ward, department or service. Then allocate them to all the episodes, attendances and contacts in those areas based on duration in hours and minutes, using the resource ID: MDR044: Medicines and the activity ID: MDA065; Dispense non patient-identifiable medicines.

27. Pharmacy input fluctuates as the patient moves between wards or is discharged to primary care, and not necessarily because their acuity changes. Pay particular attention to ensuring all medicines are identified for each transfer of care – such as admission, transfer between wards and discharge – and are then matched to the correct episode, attendance or contact.

Negative costs in the medicines dispensed feed

28. The medicines dispensed feed (feed 10) will likely contain negative values due to products being returned to the pharmacy department – for example, it may contain the dispensing, supply and returns for a patient's medicine.

29. These issues and returns are not always netted off within the department's pharmacy stock management system. If this is the case, you need to net off the quantities and costs to ensure only what is used is costed.

30. All negative costs need to be removed. The returns are not a reconciliation item.

Treatment of FP10 costs

FP10 prescription information is useful as part of the patient pathway as it shows how the medication regimen continues outside the clinical setting; though currently it may not be included in your main pharmacy information system.

[43] Many organisations use the term 'stock items'. We use the term 'non patient-identifiable medicines'.

Table CM10.2: Excerpt from Spreadsheet CP3.3 showing the resource and activity links for medicine costs

	Activity					
Resource	**Dispense all other medicine scripts**	**Dispense chemotherapy medicine scripts**	**Dispense non patient identifiable medicines**	**Homecare medicines**	**Research and development**	**Dispensing high cost drugs**
Medicines	£X		£X	£X		
High cost drugs		£X			£X	£X

31. Where community pharmacies or the NHS Business Services Authority – NHS Prescription Services[44] charges your provider for these medicines, you will have the costs for them in the general ledger.

32. As a superior method, you can obtain a dataset[45] to understand which patient prescription each cost relates to, so it can be matched to the relevant patient contact.

33. The information should be added to the medicines dispensed feed (feed 10) as shown in Spreadsheet IR1.2 and matched to the patient contact as described in Standard CP4: Matching costed activities to patients.

34. Use resource ID: MDR044; Medicines and activity ID: MDA068; Dispense all other medicine scripts.

35. Where patient-level information is not available but the cost of FP10s is in the general ledger, you should still gather it into the appropriate resource and then allocate it equally to all patients who received these medicines. It should be included in the unmatched reconciliation, not matched to patients, to ensure the cost is not spread over patients who did not receive these medicines.

36. Note: If your organisation is in an area where community or private pharmacies dispense medicines, they charge the clinical commissioning group (CCG) directly for this, not the mental health provider. The cost will therefore not be in your organisation's accounts and there is no requirement to gather information on it.

Other considerations

37. Where your organisation purchases its pharmacy services and/or medicines from a different NHS provider (or other external party), you will have to request sufficient information to support the PLICS. This will include:

    - patient-level information on medicine cost using the NHS number for medicines issued to prescription
    - information on non patient-identifiable medicines – these will be delivered to a trackable location from where they are issued to the required units. The

[44] Formerly the Prescription Pricing Authority.
[45] The NHS Prescription Services section of the National Health Service Business Services Authority is trialling a reporting model that will allows inclusion of patient-level information.

costs can then be allocated to the activity in the same way as an internal pharmacy service.

Pharmacy services

38. Cost of pharmacy services is separate from the cost of medicines.

39. Pharmacy staff carry out significantly more activities than simply dispensing medicines. Pharmacy pay costs may therefore be associated with a range of services which should be understood for the most effective costed patient activity.

40. Pharmacy services have a national 'infrastructure, governance and clinical model'. The infrastructure and governance elements should be costed separately from the clinical element of the service provided. The elements are:
    - patient-facing clinical services: includes prescribing, supporting patient self-care and medicine reviews
    - infrastructure: includes managing supply of medicines, outsourced pharmacy service contracts, formulary development and medicines information
    - governance: includes policies and procedures development, safe management of medicines, audit of clinical practice and recording information.

41. You will need to identify which staff grades perform which tasks.

42. Only a small percentage of a pharmacist's time is likely to be spent dispensing medicines – the rest is spent performing the infrastructure and governance elements of the service (these may include providing the legal presence to permit medicine supply to patients, provider-wide strategy, governance and education services). You will therefore need to identify the percentage of pharmacy staff's time spent in each area.

Clinical services

43. Clinical services include dispensing medicines and direct patient support in clinical units.

44. Allocate identified pharmacy staff costs for dispensing medicines using the allocation methods in columns F and G in Spreadsheet CP3.3. Use activity ID: MDA063; Dispensing high cost drugs (patient-identifiable) and activity ID: MDA065; Dispense non patient-identifiable medicines.

45. Wards may receive a ward-based pharmacy service, with input determined by specialty, clinical need and patient turnover. Use activity ID: MDA066; Pharmacy work.

46. Where pharmacy staff time is dedicated to a particular service or ward, the pharmacy staffing cost should be allocated only to those patients using this service or ward.

47. You should speak to your chief pharmacist to identify how many pharmacy staff work with dedicated services, and then set up relative weight values to ensure their costs are allocated only to patients using those services/wards.

48. As well as supporting specialty areas, pharmacy staff provide generalist input in clinical areas. You will need to identify and include them in your relative weight values.

49. Services that typically receive dedicated pharmacy services include:[46]

- critical care
- renal dialysis
- respiratory
- aseptic
- cancer/haematology
- medical admissions
- parenteral nutrition (adult and paediatric).
- high secure units
- crisis units
- forensic units
- learning disability services
- eating disorders services

[46] This is our list of likely services. Please let us know of any others that receive specialist pharmacy support.

- drug and alcohol services.

50. The same principle applies for pharmacy staff who may work over multiple areas. You will need to find out how their time is split between the areas, eg 20% in area 1, 30% in area 2 and 50% in area 3. You will need to set up relative weight values based on those percentages to ensure the costs are allocated to these areas only.

51. Further things to consider when developing relative weight values for allocating pharmacy staffing costs are:
    - Should there be a relative weight value of inpatients to outpatients/community services?
    - Do intensive care units require a higher percentage pharmacy staffing cost?

Special note: Aseptic unit (acute only)

52. An aseptic unit is a production unit for the aseptic preparation of injectables, such as chemotherapy, biological preparations/formulations and total parental nutrition (TPN).

53. The aseptic unit is staffed mainly by specially trained pharmacy technicians.

54. This is a separate pharmacy activity and as such should be costed separately. Use activity ID: MDA074; Aseptic unit work.

55. Costs in an aseptic unit include:
    - staffing (pharmacist, pharmacy technicians and assistants)
    - hire/depreciation of the unit
    - registration and inspection to ensure the unit is fit for purpose
    - quality assurance
    - consumables and cleaning of the unit.

Infrastructure and governance

56. Work on infrastructure and governance should be considered when agreeing the allocation of cost to activities. Therefore, the resources identified for pharmacy should include the time spent working on these areas. Use the activity ID: MDA066; Pharmacy work.

57. Take care not to allocate organisation-wide pharmacy costs to areas that have already received pharmacy costs through the two steps described above (unless this is appropriate).

58. Table CM10.3 is an excerpt[47] from Spreadsheet CP3.3 showing the resource and activity links to use for pharmacy services.

59. For each resource and activity combination, there is a two-step prescribed allocation method in Spreadsheet CP3.3.

Table CM10.3: Excerpt from Spreadsheet CP3.3 showing the resource and activity links for pharmacy services costs

	Activity			
Resource	**Dispensing high cost drugs (patient-identifiable)**	**Dispense non patient-identifiable medicines**	**Pharmacy work**	**Aseptic unit work**
Pharmacist	£X	£X	£X	
Pharmacy assistant	£X	£X	£X	
Pharmacy technician			£X	£X
Medicines	£X	£X		

Other considerations

60. Pharmacy teams are peripatetic in nature and not based on a single ward. One pharmacist may cover three wards a day and provide input to a different area at the weekend, eg to help provide a seven-day hospital service.

61. Remember that different clinical areas have different pharmacy care needs. The average time a pharmacist is required per bed varies. For example, the hours per bed requirement differs for the following areas:

[47] Please note all excerpts in this standard are for illustrative purposes only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.

- medical admissions requiring seven-day hospital services with multiple visits to support 24/7 admissions
- intensive therapy unit
- elective surgery
- urgent care
- maternity.

62. As part of the 'Global Standard 1' (GS1) project for the NHS, the expectation is that all NHS organisations will have the GS1 identifier (barcode) on all drugs (from February 2019) and medical devices (from May 2020). This will provide more consistent information on the type and cost of items, which may improve the ability to link key items at patient level.

Blood services

63. Blood services items will be provided to your organisation by NHS Blood and Transplant. Once within the trust, the items require appropriate storage and issue to service teams, along with other regulatory duties. The services will also manage the information about the issue, item use and expiry.

64. Guidance on the collection of the blood and blood services feed (feed 9) to be used when costing medicines is provided in Standard IR1: Collecting information for costing, and Spreadsheet IR1.2. The information required for this feed is collected in a locally-held database.

65. Blood services information will be provided by your organisation's blood services lead. All blood products are tracked to patients for safety reasons, so blood may be allocated to individual patients using this information. Many areas will track blood to the patient, but in A&E units and some other areas blood may be issued for general use – for example, 'O-negative' blood is used in emergency circumstances when the patient's blood type is not known.

66. You should map blood service items from your general ledger to the following resource IDs:

- SGR070 Blood and blood products
- SGR071 Factor products
- SGR079 High cost blood products.

67. Table CM10.4 is an excerpt[48] from Spreadsheet CP3.3 showing the resource and activity links to use for blood services.

68. For each resource and activity combination, there is a two-step prescribed allocation method in Spreadsheet CP3.3.

69. The costs on the blood and blood services feed (feed 9) are used as relative weight values to allocate the costs in the cost ledger, in the same way as for medicines (see above). Negative costs should also be treated in the same way as those for medicines.

Table CM10.4: Excerpt[49] from Spreadsheet CP3.3 showing the resource and activity links for blood services costs

	Activity	
Resource	**Blood transfusion**	**Factor replacement therapy**
Blood and blood products	£X	
High cost blood products	£X	
Factor products		£X
Medical and surgical consumables	£X	£X

70. For blood that is not tracked to a patient, the cost should be allocated across patients in that service area.

CAR-T therapy[50]

71. CAR-T – chimeric antigen receptor T-cell – therapy involves reprogramming a patient's immune system to target their cancer. It is specifically developed for

[48] Please note all excerpts in this standard are for illustrative purposes only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.
[49] Please note all excerpts in this standard are for illustrative purposes only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.
[50] We are considering how this standard treats this therapy during 2020. Please see the national collection guidance for information on how this therapy should be treated.

each patient, used only for certain cancers and is available from a limited number of NHS organisations.[51]

72. Use resource ID; SLR105: CAR-T therapy to identify the non-pay elements for this therapy separately in your costing system. Use the staff resources as per other services, showing the staff group that have worked on the therapy in the laboratory, and associated with the patient event.

73. Use activity ID; SLA131: CAR-T therapy delivery for the patient event at which the therapy is given.

[51] https://www.england.nhs.uk/cancer/cdf/car-t-therapy/

CM11: Integrated providers

Purpose: To ensure providers of integrated services cost all their services in a consistent way.

Objective

1. To ensure providers of integrated services cost in a consistent way across all services.

Scope

2. This standard applies to all services provided by NHS integrated providers.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

3. Many providers are integrated in nature. For example, your organisation may be an integrated mental health and community provider. Where your services fall within the scope of a costing method standard, that standard for patient-level costing should apply, eg Acute or Mental health standard CM1: Medical staffing.

4. Primary care services and local authority/social care services do not need to be costed at patient level, but you should ensure the costs relating to these areas are recorded against the correct service if they are in your general ledger. They should be reported under the 'other activities' cost group.

5. All providers of NHS services in England must follow the same costing process. This one process is described in the spreadsheet costing diagram.

6. This costing process is further described in Standards CP1 to CP6. Ambulance services are included in these where they are provided by an organisation that also provides services from one of the other sector(s).[52]

7. We have also developed sector-specific standards for each healthcare sector to accommodate its different information requirements and terminology as well as need for different examples.

8. The information each sector requires for costing is described in Standard IR1: Collecting information for costing.[53]

9. The contents page for each sector's costing methods lists those relevant to that sector. Where your integrated provider delivers services not listed in the costing methods document for its main sector, you should refer to the other sector-wide documents as appropriate.

10. For example, if an acute provider also delivers genitourinary medicine, it should use the costing methods in this document as relevant and refer to the Community standard CM16: Sexual health.

11. The costing approaches apply to all organisations providing the specific services to which they relate – although we expect them to apply largely to the acute sector.

[52] Ambulance services currently have their own standards, and these include elements of the integrated standards.
[53] The different healthcare sectors will have different information feeds.

Approach

12. We have developed the standards to be consistent[54] across acute, mental health and community services because integrated providers mostly provide these services.[55] This supports costing of integrated services and a fully integrated cost collection. For example, Standard CP2: Clearly identifying costs and Spreadsheets CP2.1 and CP2.2 apply to all providers delivering these services, irrespective of the provider's main sector. We have also developed standards for ambulance service providers.[56]

13. The Standards CP1 to CP6 apply to all services as the core principles of the costing process are the same for all services. This enables consistent costing across services.

14. Use the appropriate standards (information requirements, costing methods and costing approaches) for each service: the acute standards to cost your acute services, the mental health standards to cost your mental health services including child and adolescent mental health services, and the community standards to cost your community services.

15. You should obtain all the information feeds needed for the sectors you require. Spreadsheets IR1.1 and IR1.2 for each healthcare sector show these feeds and the data fields in each information feed.[57]

16. We do not expect you to set up individual cost ledgers for acute, mental health and community services. You should use the standardised cost ledger in Spreadsheet CP2.1.

17. You may find spreadsheet CP2.1 easier to use if you filter it by noting the services and codes you use in column Q 'likely sector'. However, as this does not provide a one-to-one relationship between the costing account code

[54] If you find examples of inconsistency or incompleteness across the three sets of standards, please raise it with us urgently at costing@improvement.nhs.uk
[55] We looked at the 2016/17 reference costs to assess how many organisations provide integrated services.
[56] Ambulance services are only rarely supplied by acute, mental health or community providers, but should your organisation supply some, use the ambulance costing standards for that proportion of your costs.
[57] If you find identical field names across the standards that prevent you costing your sector, please raise these with us urgently at costing@improvement.nhs.uk

(CAC) and the sector, put all rows of your cost ledger into your costing software even if you have noted a row is likely to be for an alternative sector.

18. If any departments or individuals work across sectors – for example, in both mental health and community services – we expect you to set up appropriate cost allocation rules and relative weight values to ensure the correct costs are allocated in the correct proportion to the correct services. For example, we do not expect to see community-specific costs allocated to mental health activities. Document your rules and relative weights in integrated costing assurance log (ICAL) worksheet 13: % allocation bases.

19. Corporate support functions such as human resources will most likely support all services in the organisation. The relative weight values set up for them should include the relevant information for all services, so they receive their appropriate share of these support costs.

20. If you are provided with patient-level activity for different sectors in one feed, we expect that the sector the activities belong to will be identifiable to support the costing and collection process – for example, you can identify those that are acute activities.

21. If patient-level information is provided in a single auxiliary feed – eg medicines dispensed – your matching rules must ensure the medicines activities are matched to the correct episode, attendance or contact irrespective of the sector the care was given in.

Other considerations

22. If your organisation provides integrated social care services, primary care or public health services, and the cost is in your general ledger, you should apply the costing principles and:

    - ensure that the costs of these services are clearly identified, and apply the costing processes
    - map the services to the rows in the cost ledger where appropriate rows exist, adding local rows to the cost ledger where they do not
    - follow Spreadsheet CP2.1 to apply any appropriate resources and if not present, create local resources with appropriate allocation methods

- use existing activities where possible and create local activities if they are not present
- ensure these services share the support costs, so their cost quantum is not understated.

23. If your organisation has the costs but not the activity for a service, or vice versa, these should be costed using Standards CP1 to CP6 and reported as ‘other activities’. Please also see Standard CM8: Clinical and commercial services supplied or received.

CM14: Group sessions

Purpose: To ensure group activities are costed consistently.

Objective

1. To ensure costs are correctly allocated to patient episodes/contacts where there are multiple patients with one or more professionals.

Scope

2. This standard covers all groups with two or more patients attending.

3. Group contacts can take place during a non-admitted patient care (NAPC) contact or during an admitted patient care episode.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

4. Group care is often delivered in a group setting, eg physiotherapy in a gymnasium.

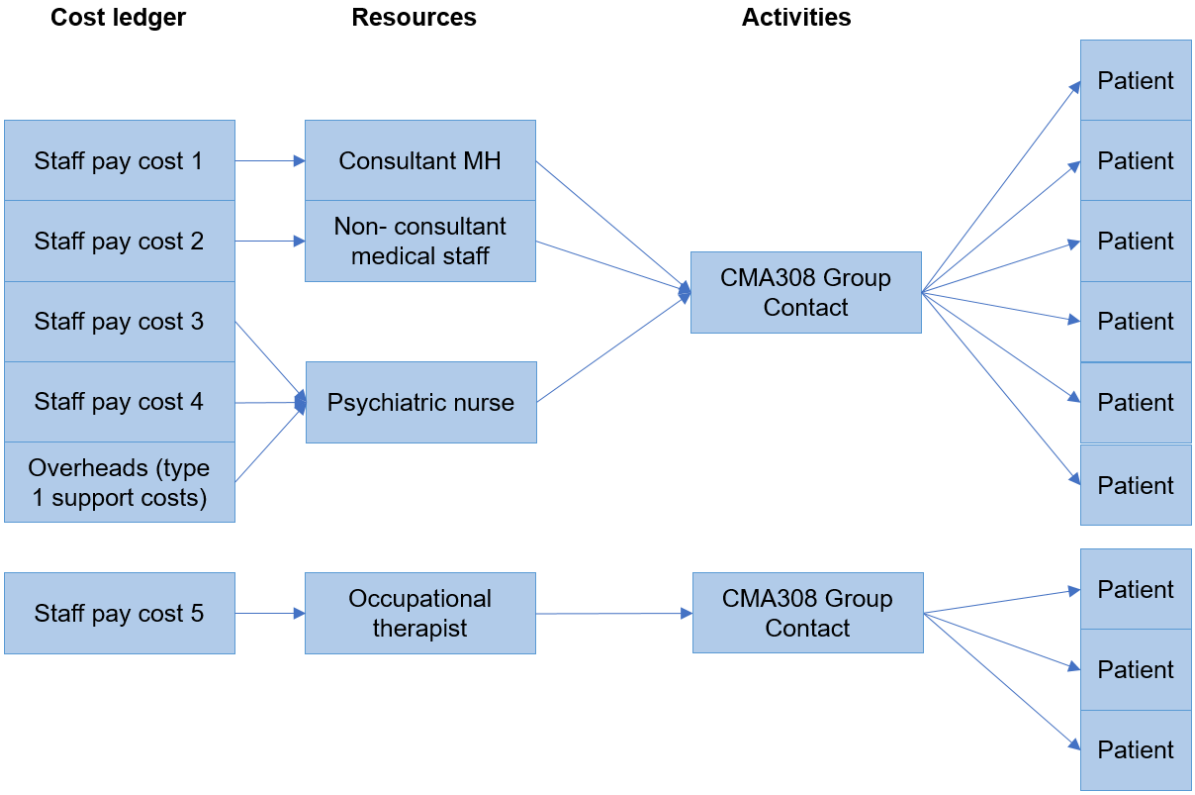
5. A group session involves multiple patients and one or more staff members. A group contact is the activity unit recorded for a single patient within a group session that also contained other patients.

Approach

6. Group contacts should include the cost of the resources to provide the group, spread across the number of patients in the group as shown in Figure CM14.1.

7. For each resource and group activity combination, there is a two-step prescribed allocation method in Spreadsheet CP3.3.

Figure CM14.1: How multiple or single staff members are attributed to resources, activities and patients



8. This method relies on several assumptions:

- each staff member spends the same amount of time with each patient
- patients do not leave the session early
- staff members do not leave the session early.

9. We acknowledge that these assumptions do not always hold true, and the method will therefore not provide a completely accurate representation of how care is delivered. As the ability to collect information improves, future versions of the standards will specify more accurate methods based on, for example, patient acuity or measuring actual time spent with specific patients.

10. If you already apply additional relative weight values to specific patients or adjust for staff presence in the relative weight values, continue to do so as this provides better information for costing.

Information for costing groups run in a non-admitted setting

11. Standard IR1: Collecting information for costing and Spreadsheet IR1.2 specify the minimum information required to cost group contacts (that is, a patient activity unit within a group session) in a NAPC setting.

12. Each patient contact in the NAPC – mental health feed (feed 3b) and NAPC – community feed (feed 3c) relating to a group session should have a unique identifier in the field ‘group session identifier’ as this information comes from the Mental Health Services Data Set (MHSDS) and Community Services Data Set (CSDS) respectively. Where this field is not null, it is a group session. The ‘number of group session participants’ is available as a field to enable cost to be divided between them.

13. The acute patient Commissioning Data Set (CDS) does not have a field identifying a group contact, so the ‘group session identifier’ field and the ‘number of group session participants’ field in the PLICS NAPC feed (feed 3a) will need to be populated from local information.

14. The NAPC – mental health feed (feed 3b) and NAPC – community feed (feed 3c) should include a record of the duration of the group session against each participant, in the field ‘clinical contact duration of group session’. For acute groups, you should use the NAPC feed (feed 3a) field ‘appointment duration’. Assume all patients spend the same amount of time in the group session (although this can vary). The recorded duration will be for the whole contact, so it should be used to allocate the cost of providing the session against all the participants.

15. To identify the service/team providing the group, you will need local information:
    - for some services this may be a clinic code
    - another indicator may be specialty or treatment function code
    - for community services, the service/team providing the group may be identified from the field 'service or team type referred to (community care)'.[58]

16. If the group session fields are not routinely completed, work with your informatics department to ensure these are recorded. Without this information, the contact will be costed as though it were a single professional appointment (receiving a higher weighting of resource than was actually used by the patient).

17. The costing process can then link the staff cost to the resource for that staff group, and onwards to the activity for the types of group sessions.

18. There is only one prescribed activity to use for group sessions where the patients are known and have a patient administration system (PAS) record for the group – Activity ID: CMA308; Group contact recorded at patient level.

Day care

19. Day care is where a group of non-admitted patients benefit from care services in a group setting – usually over a few hours. A range of care professionals may provide care over the period of attendance. The activity may be recorded as NAPC or it may be on a standalone local system.

20. The staff involved are most likely to be nurses/therapists but in some areas there could be medical input. The model of care may be termed 'social' or 'medical' depending on its clinical content. You should include all relevant staff costs for the session.

[58] See the Community Services Data Set (CSDS) specification for the list of codes (https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/community-services-data-set/community-services-data-set-technical-output-specification), under 'technical output specification'. Further information on the CSDS can be found at: https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/community-services-data-set

21. Day care should be costed as for other group sessions, using the duration of the session divided by the number of patients present.

Groups run during admitted patient care

22. Many patients receive group therapy during admissions, eg physiotherapists running a group on a ward to maintain patient mobility.

23. Where the cost of running the group is within a service area's budget (eg the cost of the physiotherapist is on the ward budget) and all patients on that ward have the opportunity to participate in the group, there is no requirement to separately cost a group contact. The cost will be included in the activity ID: SLA097; Ward care.

24. Where the cost is not in the service area, you should include it in the costing of the area that runs the group, using the activity ID: CMA308; Support or other group contact. This will be shown as a component of the admission cost.

25. Where **no** patients on the ward receive the group service, you should apply the cost to the patients who do attend the group. You should consider the materiality of this cost differential and prioritise it accordingly.

26. There is no national dataset to record groups run for admitted patients, so you will need a local data source. This should be entered onto the supporting contacts feed[59] (feed 7), in accordance with Standard IR1: Collecting information for costing and Spreadsheet IR1.2, to ensure a record of the cost of the group contact is included as part of the episode cost for patients benefitting from the service – see Standard CP2: Clearly identifying costs.

Costing groups with no patient record of the contact

27. For some groups there will be no separately recorded patient contact, eg diabetes education sessions to an audience of individuals at risk of developing that condition. These patients' attendance may be recorded at the session – for example, on a register – but not as a separate PAS contact record.

[59] This feed is a superior costing method.

28. These group sessions should be treated as an overhead (type 1 support cost) to the service running the session, using support cost code ID: T1S130; Group session (where no patient contact is made in PAS).

Staff numbers running group sessions

29. The sources of the NAPC data feeds (CSDS, MHSDS and CDS) record only one care professional for the group, using the fields ‘care professional local identifier’ (CSDS and MHSDS) and ‘healthcare professional code’ (CDS). These fields can provide a contact for the group session and you can discuss the costing process with them and consider whether additional information is required about the service team make-up. You should ensure the cost of the identified care professional is included in the group cost.

30. If no further information is available or the cost of additional staff is not material, for costing purposes you can assume the group is staffed by this one care professional only.

31. Group sessions with multiple care professionals will have a different cost per patient from group sessions with a single care professional. Depending on the number and type of staff involved, the cost could be higher or lower. You need to identify the appropriate resources for each patient contact, to ensure costs are not attributed to the wrong patient activity (or spread across other activities).

32. Where the cost of additional staff within the group is material, the activity feed can include additional staff from a local source. The field to use is ‘second care professional local identifier’. This information will then inform relative weight values to identify the resources involved.

33. You may add further fields for subsequent care professionals if needed, in conjunction with your costing software provider.

34. Work with the relevant team/service/department and your informatics department to find a suitable method of recording each staff member’s involvement in the group activities.

Allocating non-pay costs to group sessions

35. Many group sessions will not involve equipment, medicines or patient consumables, or their item use will be negligible. However, for some activities such as specialist sporting sessions (including trips out), identifying the costs in a more detailed manner may be beneficial.

36. The materiality principle should be used when developing detailed models for attributing this cost. Use the methods prescribed for consumable items in Standard CM21: Clinical non-pay items.

37. Travel and other non-pay costs should be allocated to those patients who benefited from the group.

CM15: Cost classification

Purpose: To correctly classify costs on each ledger as fixed, semi-fixed or variable.

Objectives

1. To ensure costs are classified as fixed, semi-fixed or variable in a consistent way across all providers.

2. To enable providers to analyse costs based on which elements are fixed, semi-fixed or variable.

Scope

3. All costs in the cost ledger will be eligible for classification, including research and development (R&D) and education and training (E&T). Income and balance sheet items are not costs and therefore do not currently have this classification.

4. This standard **will not** provide guidance on bottom-up costing exercises for contract negotiation. It is expected that the outputs from the costing process can be used to inform those costing exercises.

5. This standard **will not** identify the fixed portion of cost and the portion that is variable in the semi-fixed quantum of cost.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list

- Spreadsheet CP3.2: Activity list
- Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

6. Classifying costs as fixed, semi-fixed or variable is not part of the costing calculations but rather a classification showing how costs behave based on the level of activity.

7. This classification is important for an organisation's internal financial management as well as tariff purposes. Contracts are calculated to fund the fixed costs to maintain the infrastructure and a variable cost element based on the activity. For example, a specialist paediatric hospital that is the national centre for bowel transplants needs to constantly maintain the infrastructure for the activity needed, even though on average it only undertakes three bowel transplants a year.

Approach

8. You should classify each line in your cost ledge as fixed, semi-fixed or variable, based on a timeframe of 12 months.

9. The definitions adopted for fixed, semi-fixed and variable costs in the *Approved costing guidance (standards)* are given below.

10. The classification of costs for each ledger line can be found in column R in Spreadsheet CP2.1.

Fixed costs

11. Fixed costs remain the same regardless of the level of activity.

12. Typical examples of fixed costs include rates, standing charges, financial charges and board of directors' costs.

13. Agenda for Change (AfC) staff at Band 8a and above are also classed as fixed, as the AfC guidelines state that these grades do not qualify for overtime. Staff at Band 8a or above employed during the year will be classified according to this rule, irrespective of the role or duties they were employed for.

Semi-fixed costs

14. Semi-fixed costs remain the same until a certain level of activity is reached; the costs then increase in proportion to the level of activity.

15. Costs are defined as semi-fixed when the level of cost needed to maintain the infrastructure to deliver the contracted activity level is fixed. The costs incurred to deliver additional activity above that level are thus variable.

16. An example of semi-fixed costs is contracted staff who can work and be paid for overtime. A consultant's basic pay must be paid regardless of their activity, so this is fixed; however, for example, the costs of additional sessions that reduce waiting lists will be variable.

17. AfC staff up to and including Band 7 also fall into this category, based on current AfC guidelines.

Variable costs

18. Variable costs increase in proportion to the level of activity.

19. Variable costs are only incurred to deliver activity – for example, those for medicines, patient consumables and hire of equipment – and they will vary depending on the level of activity.

20. Agency and bank staff will also fall into this category. We understand that sometimes agency and bank staff are contracted to cover longer term absences (eg for leave and staff sickness). However, for this version of the standards, we maintain these absences would usually be covered by the service establishment,[60] so the choice to use agency and bank staff represents increased volume.

Classification of resources

21. As each cost ledger line is mapped to a classification, resources will inevitably end up containing costs of all three cost classifications, based on how overheads (type 1 support costs) are allocated in the costing process. For this version of the standards, the classification of fixed/semi-fixed/variable costs

[60] This will be discussed further with technical focus groups during 2020.

will be applied at cost ledger level. Therefore, resources will not map to a single classification.

Other considerations

22. Activities are not classified as fixed, semi-fixed or variable.

23. The classification of costs into fixed, semi-fixed or variable depends on the period being assessed. In the long term, all costs are variable, so you should base this classification on a 12-month period.

CM20: Costing GP services in secondary care settings

Purpose: To allocate GP costs within NHS trusts to the activities they deliver.

Objectives

1. To ensure all GP costs are allocated in the correct proportion to the activities they deliver, using an appropriate cost allocation method.

Scope

2. This standard applies to all GP costs in the cost ledger.

3. This standard applies to NHS providers.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

4. GPs provide care in:
   - primary care settings – such as GP surgeries and health centres
   - secondary/tertiary care as a special interest

- core cover for agreed services such as community hospitals and GP out-of-hours services.

5. Most of their services are in primary care settings. However, the other areas of patient care they provide, and their training activities, need to be understood to ensure the costs within NHS providers are accurate.

6. Some of their work supports the increasing demand for NHS services or is for personal development, although the service may facilitate both aims. For example, the agreed operational model may be for a GP to provide medical cover for wards in an intermediate care, but they will also gain career development from this.

7. GPs may have undergone specialist training for the clinical area they are working in or be developing skills in that area.

8. There will be two types of GP work in a non-primary care provider:
   - **patient-facing activities** – where the GP sees the patient in place of another member of the provider's medical staff; for example, a GP with a special interest in the stroke service may work in the acute stroke or stroke rehabilitation unit for up to two sessions per week as part of their contract
   - **other activities** – including where the GP is attending academic training sessions or is shadowing other care professionals; for example, a GP may be developing a special interest but is shadowing the clinical team and is not yet contributing to the medical service.

9. The costing team should understand the nature of the GP's contribution to care so their cost can be allocated appropriately.

Approach

10. You will need to identify the medical staff costs in the general ledger, using the expense codes for GPs. The cost of the GP will usually be in the provider's ledger:
    - through a recharge on a session basis
    - as a payroll entry in the same way as for other medical staff.

11. You should therefore check whether and where the cost is in the ledger. When it is in your provider's ledger map, cost it to the expense code 5363: General practitioners.

12. Map your medical staffing costs to the cost ledger according to the service in which the GPs work (this may be at specialty level or a local team category).

13. Allocate all GP costs using the resource ID: SGR077; General practitioner.

14. Review the prescribed list of activities in Spreadsheet CP3.2 and identify those that are delivered by GPs where their costs are in the cost ledger.

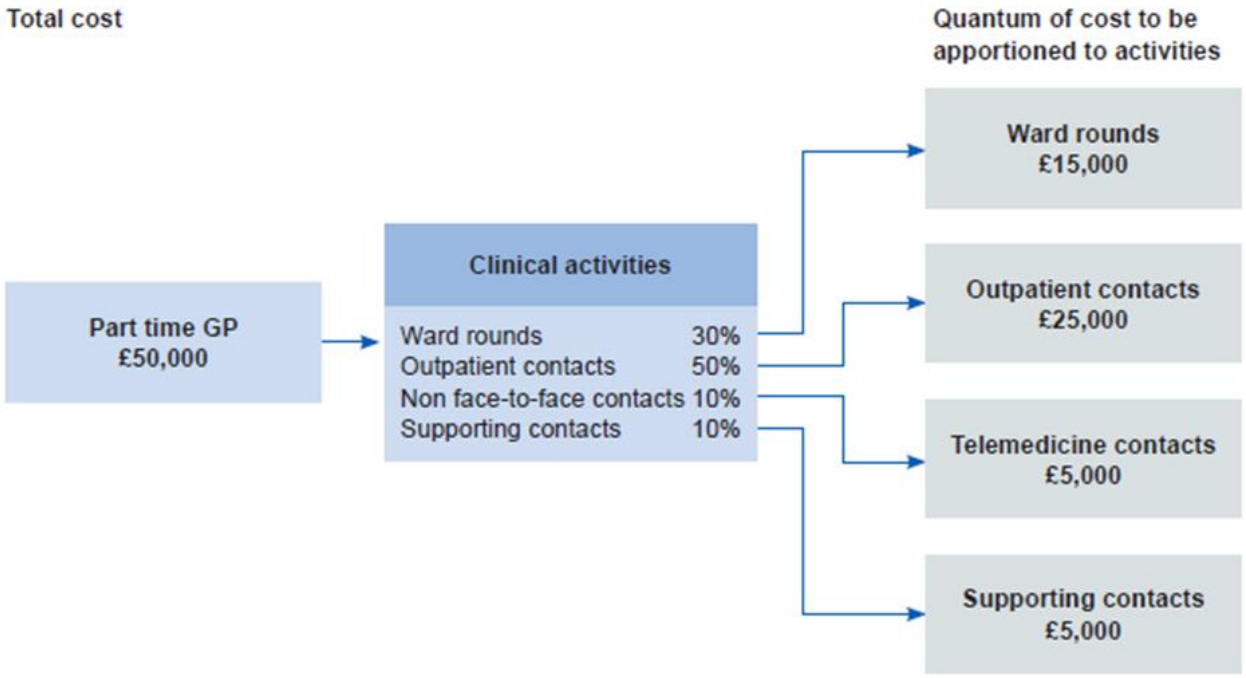
15. The cost of GP sessions should be appropriately allocated between the patient-facing activity and other activities, using information from the service manager or clinical lead in the service area, in the same manner that other medical staff time is allocated.

16. For each resource and activity combination, identify the correct quantum of cost to be allocated to the patient-facing activities using a percentage split of the GP costs by activity type. You can find out what this is by talking to the GP or medical staff co-ordinator, using job plans or other sensible means, such as clinic set-ups, live job diary recordings or electronic clinical notes (see Figure CM20.1).

17. The activity (that is, special interest or medical cover for contacts, appointments, support of inpatients, etc) will usually be shown in the provider's patient administration system (PAS). Therefore, the cost of the GP session should be allocated to the appropriate patient care, in the same way as other medical staff (see Standard CP3: Allocating costs to activities and acute Standard CM1: Medical staffing).

18. In the PAS, the 'care professional local identifier' field should include where a GP has been responsible for the contact or admission according to local policy. Where this is the case, the GP is responsible for the patient for the period they are on the dataset (episode or contact). Each patient admission may have multiple episodes of care, with responsibility changing from one to the next. See also Standard CM1: Medical staffing.

Figure CM20.1: Identifying the correct quantum of cost to be apportioned to activities



19. In accordance with Standard CM1: Medical staffing, this standard requires the cost of a GP performing a consultant role to be allocated at patient level. So, in Figure CM20.1, the resource shown as 'Part time GP' would be one individual.

Patient-facing activity

20. Use the prescribed activities listed in Spreadsheet CP3.2 for GP and primary care services.

21. Examples of cost centres for GP work in secondary and tertiary settings are:

- XXX064 Ward A – acute, elderly and general
- XXX066 Ward C – maternity
- XXX604 Ward – community
- XXX504 Mental health inpatient low-secure unit – non-forensic
- XXX510 Day care facilities
- XXX638 Intermediate care ward
- XXX579 Mental health medical staffing – by specialty
- XXX049 Medical staffing – by specialty

- XXX050 Medical staffing – anaesthetics.

11. Where the costs are within the medical staffing cost centres, you will need to work with the service to understand where the GP is working, in the same way as for consultants.

Training activities

12. The GP should have no named patient responsibility while undergoing purely training activities.

13. This portion of their cost should be allocated to the cost centre XXX273: Education and training, to ensure the cost of patient care is not inflated.

GP out-of-hours services run by provider organisations

14. Where these services are provided within a secondary care organisation by GPs or other staff (such as nurse practitioners, paramedics, etc), the cost may be recharged to the GP practice(s) that require cover. It may be a separate income stream, or it may be part of the contract with clinical commissioning groups (CCGs).

15. You should use the resource for the staff group providing the service (eg resource ID: 5363: General practitioners, as above or other staff as applicable.) The cost centre in the cost ledger should be XXX640: GP out-of-hours services.

16. You should use the activity ID: AMA191; GP out-of-hours service (OOH).

17. Services that are part of the contract with the CCG should be shown in the cost group ‘own-patient care’.

18. For out-of-hours services recharged to primary care practices, the general ledger codes should be identified and shown as cost group ‘other activities’ in the reconciliation.

Primary care services run by secondary care providers

19. Some providers manage GP surgeries and services. These are largely recorded in a separate PAS and reported separately to the secondary care activity. However, the cost of providing these services is as important as that for other areas, and you need to ensure the quantum of costs for the secondary care provision is accurate.

20. Primary care services run by secondary care providers should be costed in the same way as other services provided – for example, costing contacts by appropriate resource and activities. The activities will be separate from the secondary care activities, so the service can be identified clearly.

21. Use the resources in Spreadsheet CP3.1 for the staff group providing the service (eg GP, nurse, phlebotomist, etc or other staff as applicable).

22. The cost centre in the cost ledger should be XXX057: GP and primary care services. Use the activity ID: SGA091; GP and primary care service.

23. The activity data should be identifiable in the source dataset, the costing system and output reports.

Other considerations

24. Primary care services and GP out-of-hours services are currently out of scope of the PLICS collection. There is therefore no current requirement to cost these services at patient level for national purposes. These sections are presented here for information only and to ensure the cost quantum for provider services is accurate. It will be up to the provider to decide whether patient-level detail is useful for local purposes.

25. Services provided by secondary care teams in GP surgeries or other primary care settings, where the cost is within the provider, should be costed according to the relevant sector costing standards.

26. In some cases, the cost may be provided directly by the commissioner to the GP concerned – particularly if they work across several providers. The patient activity will be present, but without the cost of the GP. The costing process should identify these areas and recognise that while this may attribute the

appropriate cost to their organisation, it will not show the true cost of care for the wider health economy. This activity should be reported in the reconciliation statement and a note made in ICAL worksheet 22: Other notes, for reference, so discussions on cost can be appropriately informed.

CM21: Clinical non-pay items

Purpose: To ensure clinical non-pay items are costed consistently.

Objectives

1. To allocate patient-specific clinical non-pay items to the patients who use them.

2. To cost non-patient identifiable clinical non-pay items in a consistent manner.

Scope

3. This standard applies to:

   - all clinical non-pay items used in all patient care settings, including but not limited to wards, outpatient locations, community contacts, theatres and special procedure suites[61]
   - those items identified as high cost devices in the national tariff list
   - clinical equipment that is not a capital purchase, including leased items[62] and payments for loan equipment.

4. This standard does not apply to non-clinical use items, such as linen, uniforms, administrative items and basic food.[63] It also does not cover medicines or blood and blood products, which are included in Standard CM10: Pharmacy, medicines and blood services; or wheelchairs and accessories, which are included in Community standard CM19: Wheelchair services.

[61] This standard should be used in conjunction with the standard for the relevant area, eg Standard CM3: Non-admitted patient care and Standard CM5: Theatres and special procedure suites.
[62] Please note: new FRS 16 requirements relating to leases are anticipated. These may require this standard to be update. Please consult your finance lead for this area for more information.
[63] Specialist dietetic items for patient use may be included as clinical non-pay items.

5. The term clinical non-pay items for this standard includes prostheses, implants, devices, appliances, specialist dietetic foods, equipment and other clinical items.[64]

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

6. Clinical non-pay items are an essential part of patient care and should be matched to the patient where material. The cost per item varies immensely, and therefore you should balance the materiality of the items against the amount of work required in identifying them to the patient.

7. Where they are not material to the cost of care, the items should be allocated across the patients in the service area that used them.

8. Clinical non-pay items are identifiable as expense codes in your general ledger to comply with the financial accounting requirements[65]: and should be mapped clearly from the appropriate expense codes (see also Standard CP2: Clearly identifying costs) to resources, showing whether they are patient identifiable or non-patient identifiable.

9. For costing purposes, the following explanations help to understand the different terminology, and different types of items to expect in your organisation (see also the *Costing glossary*). Please note, the definitions may

[64] Other terminology may include 'medical and surgical' consumables and equipment, but clinical non-pay items also include items used for mental health support, education and health promotion.

[65] *DHSC Group Accounting Manual 2019-20*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/798830/dhsc-group-accounting-manual-2019-to-2020.pdf

overlap depending on circumstance, and may differ from those used in your general ledger.

- An ‘implant’ (noun) is something intentionally left in the patient after surgery. Implant is also a verb to describe the insertion of an item. Some implants will later be removed and some will be permanent.
- A ‘device’ is an item ‘intended for a medical purpose, as assigned by the manufacturer’ (NHS National Innovation Centre 2019).[66] They are usually a mechanical or electrical invention or contrivance, and can be implanted in the body or used outside the body. For example, a pacemaker is implanted into the body; a circular external fixator frame is applied externally but goes into the body; and CPAP machines are applied externally.
- A ‘consumable’ is an item used once for a patient. These may also be called disposable (single use) items.
- ‘Prosthetic and orthotic limbs/appliances’ are a personal item ‘worn’ by the patient to replace – or to support – a function of their body, eg hearing aids. Appliance can also refer to an item of equipment used by a single patient, eg a walking frame.
- The term ‘prosthetic’ can also refer to an artificial body part implanted into the patient – such as a breast prosthesis.
- ‘Medical and surgical equipment’ includes non-capitalised items to be used by more than one patient in a clinical setting.

10. Implants and devices to include at patient level: All implants and devices in the national tariff high-cost devices list and listed procedures tab in Annex A: National Tariff Workbook for 2017/18 and 2018/19[67] should be included in the patient-level prostheses and other high-cost items feed (feed 15), to be costed at patient level.

11. Your organisation will have cost, activity and patient information available, as this is used for payment flows to commissioners.

[66] Definition from the NHS National Innovation Centre: http://knowledge.nic.nhs.uk/documentDetails.aspx?docId=15
[67] https://improvement.nhs.uk/resources/national-tariff-1719/

12. Other non-pay items: as a superior method, you may add other high cost devices and items to the patient-level feed. We do not specify what constitutes 'high cost' for items not in the national tariff list. That is left for local policy.

13. Data sources for this information will vary by trust. For example:

    - implants within the Scan 4 Safety[68] theatres protocol or other local tracking system. Your organisation should have activity and patient information available, as this is used for patient safety
    - electronic inventory management systems (IMS) that record the clinical non-pay items used at patient level, with the cost.

Approach

14. Separate the clinical non-pay items into the two sections – those for which you will apply a patient-level feed to match the cost directly to the patient, and those for which you will allocate the cost over all patients in that service area.

15. You should identify the patient-level items first, and the remainder will fall into the second group.

Patient-level clinical non-pay items – prostheses and other high cost items feed (feed 15)

16. As described in Standard IR1: Collecting information for costing, the prosthesis and other high cost items (feed 15) contains items of clinical non-pay that will be costed at patient level. See also Spreadsheet IR1.2.

17. Use the prescribed matching rules in columns H to O in Spreadsheet CP4.1 to ensure the costed prosthesis, implant or device is matched to the correct patient episode, as in Standard CP4: Matching costed activities to patients.

18. Feed 15 allocates the cost for the item to the patient, irrespective of the location or setting of the issue. For example, a heart valve may be implanted in theatre and a prosthetic limb may be issued to the patient in an outpatient attendance.

19. The cost identified by the patient-level feed will either determine the actual cost shown in the costed patient record or will be used as a proportional

[68] https://www.scan4safety.nhs.uk/

weighting in the allocation patient identifiable items in the costing account code.[69] This allows for discounts and residual balances of cost on general ledger codes.

20. Some patients will receive custom-made prosthetic limbs and appliances purchased from a laboratory or other manufacturer contracted to supply the service. You should obtain this information from the appropriate source and add it to the prostheses and other high-cost items feed (feed 15).

21. Note: Items identified on a 'sale or return' or 'consignment stock' basis will only be in the general ledger at the point they are purchased, so no adjustment to the costing system is necessary.

22. The linking of costs in your general ledger to the expense codes shown in Table CM21.1 should be identifiable. These are the expense codes that we recommend you consider as part of your materiality/priority planning exercise. They should have patient-level information available for safety and clinical tracking reasons.[70]

Table CM21.1: List of expense codes where use of a patient-level feed is advisable

Expense code	Expense code name
7032	Pacemakers
7035	Maxillofacial implants
7036	Hearing, tinnitus and balance aid accessories (including batteries)
7037	Hearing and balance aid repairs – repairs
7038	Digital hearing aids – purchase
7039	Non-digital hearing aids and assistive listening devices – purchase
7040	Cochlear implant, auditory brainstem and middle ear implants + processor – purchase*

[69] Where only part of a general ledger code relates to patient-identifiable items, this cost should be separated so the PLICS can apply it to the patients that used them.
[70] Please note, wheelchairs and wheelchair equipment are covered in Community standard CM19: Wheelchair services.

Expense code	Expense code name
7041	Ophthalmic Implants
7042	Vascular implants
7043	Orthopaedic implants – hips
7044	Orthopaedic implants – knees
7045	Orthopaedic implants – other
7046	Other prosthesis
7047	Breast care prosthesis
7048	Voice prosthesis
7049	Upper limbs
7050	Disabled living aids – including balance and other audiology aids
7076	Heart valves
7077	Spinal cord stimulators
7078	Stents
7084	Bone conduction implant and processor system (including BAHA/sound and bone bridge) – purchase*
7085	Spinal implants
7086	Endoscopy high cost items
7087	High-cost consumables for specialist equipment
7088	Lower limbs
7102	Umbilical cords
7103	Bone marrow
7104	Stem cells

23. The expense codes have been set up so you can identify clearly the high cost devices and consumables separately from those that are of significant cost but are not in the national tariff high-cost devices list. The information will then

flow through your PLICS and be identifiable in output reports. All items that are considered of significant cost should be costed at patient level, including where the high cost item is a consumable item associated with specialist equipment such as perfusion or robotics.

24. In Spreadsheet CP2.1, these expense codes will map to the resources shown in Table CM21.2 by using the relevant costing account codes leading to these resources.

Table CM21.2: Excerpt from Spreadsheet CP3.1: Resources – showing resources using a patient-level feed

Resource ID	Patient-facing and type 2 support resource
MDR041	Hearing and other audiology devices
MDR050	Cardiac devices
MDR051	Other prostheses, implants and devices
SGR072	Heart valves
SGR074	Bone marrow, stem cells and umbilical cords

25. The items in this list are for items usually issued in theatres or special procedure suites. The resource ID: MDR052; Patient-specific consumables will include theatres and other service areas, eg wards and outpatient clinics.

Table CM21.3: Excerpt from Spreadsheet CP3.3 showing resource and activity links for the items on the prostheses and other high-cost items feed (feed 15)

Resource ID–activity ID	Resource	Activity
MDR052–SLA107	Patient-specific consumables	Adult critical care – ward care
MDR052–SLA136	Patient-specific consumables	Outpatient procedure
MDR045–MDA077	Patient appliances	Specialised dental care
SGR074–SGA089	Bone marrow	Insertion of a prosthesis, implant or device

Resource ID–activity ID	Resource	Activity
MDR050– SGA089	Cardiac devices	Insertion of a prosthesis, implant or device
MDR041–SGA089	Hearing devices	Insertion of a prosthesis, implant or device
SGR072–SGA089	Heart valves	Insertion of a prosthesis, implant or device
MDR051–SGA089	Other prostheses, implants and devices	Insertion of a prosthesis, implant or device

26. Table CM21.3 shows some of the combinations of resources and activities for the prostheses and other high-cost items feed (feed 15).

27. If your organisation is not currently collecting any or all the information required by the prostheses and other high-cost items feed (feed 15), you should raise this with the costing steering group[71] as part of the assurance process. Until an appropriate data source is obtained, you should develop relative weight values by procedure code or similar information for use in costing, through discussion with the relevant clinical or operational team.

Data quality review

28. For many procedures – particularly those done in theatres and special procedure suites – the expected costs will include prostheses, devices and implants. Use the reference document to cross-check your output data to see if your costing outputs may be missing costs. Use the procedure (OPCS) field in the theatres feed (feed 13) or the final clinically coded record in the APC feed (feed 1a) in column D in Spreadsheet IR1.2.

29. Then, where the missing costs are material and the implants/devices are part of the prescribed national list, review this with clinicians and service managers to ensure you understand the availability of the data. You may need to manually gather and apply some information to ensure the highest cost items are shown against the correct patients.

[71] See Standard CP6: Assurance of cost data.

30. As a superior method, you can add other known costs at patient level manually for areas identified as missing their implant/device cost.

31. The list in the reference document makes no clinical statement about whether these items should have been used in a procedure. Its purpose is solely to help identify missing costs in the costing outputs.

Non-patient level clinical non-pay items

32. For clinical non-pay items that cannot be attributed directly to the patient, you should use the following categories of items and cost accordingly:
    - consumables used in specific theatres, wards or service areas
    - consumables used in all theatres, wards or service areas.

33. Most organisations will have clinical non-pay items in the budget of the service that uses it. These are consumables used in specific theatres, wards or service areas. You should work with the service and finance colleagues to allocate the cost over the patients that used the service.

34. Allocate consumables and equipment on hand in specific theatres to the patients in those theatres based on duration of the operation in minutes.

35. Allocate consumables and equipment where the cost is held centrally, but the items are issued to all theatres or all clinical areas, to all patients.

36. Use the resources shown in Table CM21.4.

Table CM21.4: Excerpt from Spreadsheet CP3.1: Resources – showing the resources not using a patient-level feed

Resource ID	Resource	Resource description
MDR046	Medical and surgical consumables	Including medical gases and dressings
MDR047	Medical and surgical equipment and maintenance	Including hire

37. Table CM21.5 shows an excerpt from the resource and activity combinations for clinical consumables and equipment not identifiable at patient level. You should use the allocation method in Spreadsheet CP3.3.

Table CM21.5: Excerpt from Spreadsheet CP3.3: Resources and activity combinations for some clinical non-pay items not at patient level

Resource	A&E – department care	Adult critical care – ward care	Drug and alcohol inpatient unit – ward care	Clinical decisions unit (CDU) – ward care	Magnetic resonance imaging (MRI)
Medical and surgical consumables	£X	£X	£X		
Medical and surgical equipment and maintenance	£X			£X	£X

Other considerations

38. As part of the 'Global Standard 1' (GS1) project for the NHS, the expectation is that all NHS organisations will have the GS1 identifier (barcode) on all drugs (from February 2019) and medical devices (from May 2020). This will provide more consistent information on the type and cost of items, which may improve the ability to link key items to patient level.

CM22: Audiology services

Purpose: To ensure costs for audiology services are allocated consistently.

Objective

1. To ensure costs for providing audiology services are allocated consistently, including purchase of equipment and patient contacts for assessment, fitting, review, maintenance and repair.

Scope

2. All activities provided by audiology services, across all sectors.

3. All patient hearing and balance aids, accessories and equipment provided by the audiology service, and the maintenance/repair of items for patients accessing the audiology service.

4. Newborn hearing screening services.

What you need to implement this standard

- Standard IR1: Collecting information for costing
- Standard CP3: Allocating costs to activities
- Technical document:
  - Spreadsheet IR1.2: Field requirements for the activity feeds
  - Spreadsheet CP3.1: Resource list
  - Spreadsheet CP3.2: Activity list
  - Spreadsheet CP3.3: Methods to allocate resources to activities

Overview

5. Audiology services assess the hearing, tinnitus and balance function of referred patients, and support the associated disorders/diagnoses, with various methods of rehabilitation.

6. *Commissioning services for people with hearing loss: A framework for clinical commissioning groups*[72] defines the demographics, requirements and audiological pathways available to primary care; and how to support the commissioning of audiological services supporting acute pathways, including ear nose and throat (ENT) and complex hearing aid referrals.

7. "Hearing is central to our health and well-being. Approximately one in six people experience hearing loss, which is a major cause of poor development of language and communication skills and also impacts on employment, mental health, independence and quality of life. It is responsible for an enormous personal, social and economic impact throughout life." [73] Hearing loss affects people who are born deaf and people who experience it later in life.

8. The services may be direct access from GPs, ongoing and long-term support or part of a broader pathway. Understanding which part of the service the cost relates to is critical to the accurate allocation of patient-level costs. The 'Direct Access Audiology' (DAA) service "covers all patients referred to a direct access audiology service – that is a service not led by a medical or surgical consultant – regardless of where that service is provided".[74]'

9. For costing purposes the audiology services are broken down into the following areas:

   - **Direct access audiology:** Services for people with hearing loss who are referred directly from primary care and included within the data that feeds the DAA dataset. They may be identified by the non consultant-led treatment function code (TFC) 840 Audiology. The service may include

[72] https://www.england.nhs.uk/publication/commissioning-hearing-loss-framework/
[73] https://www.england.nhs.uk/wp-content/uploads/2016/07/HLCF.pdf
[74] https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-collections/adwt-direct-access-audiology

complex referrals such as patients with multi-complex needs, eg learning disabilities and dementia.

- **ENT and other specialty support:** Staff working in the audiology service provide clinical support to other specialties, including – but not exclusively – Otology ENT services, which diagnose and treat diseases and disorders of the ear. Such audiology support may take place in outpatient clinics or in theatres during surgical implant procedure; or the patient may attend the audiology department for specialist hearing/balance tests, but these activities are still part of the consultant-led service.
- **Audiological medicine:** The audiology service will support this consultant-led specialty for balance and associated medical conditions. The TFC for this service is 310 Audiological medicine. The consultant-led appointments will be included in the main patient administration system (PAS) and commissioning dataset. This service is only provided in a small number of trusts.

10. In the first two areas listed above, audiology acts as a clinical support function for data recording and for costing purposes – no separate audiology appointments should be reported for commissioning, and the specialty or TFC will reflect the consultant-led service. The location of the audiology contact with the patient does not define how it should be recorded in the activity data.

11. Appointments for clinical support within ENT, audiological medicine (and other specialties where relevant) may be identified by clinic codes within the PAS or via the audiology system;[75] which may also hold other useful information about the contact.

12. Newborn hearing screening may be part of the audiology service or separate. You should identify how your trust structures newborn screening and ensure costs are categorised to the correct service.

13. Costing practitioner feedback indicates data recording of the types described above varies by trust, and that the costing standards need to clarify the treatment of different service types for accuracy and comparative cost data.

[75] An example system of standalone data is ‘Auditbase’.

Approach

14. Audiology services are largely commissioned by activity, so the data can be brought into PLICS via the non-admitted patient care (NAPC) feed (feed 3a).
    - Support of ENT and other specialties within their clinics will be available as part of the electronic patient record – there may be no separate contact from the consultant-led consultation. The cost of the audiology service will be a part of the consultant-led appointment.
    - The DAA contacts will be available either in the main PAS or in a standalone system. The audiology cost will be the main cost of this activity.
    - Where the patient attends the audiology department as a separate contact to the (ENT) specialty clinic, this will be an appointment under the specialty, but the cost of the audiology will be the main cost.

15. The contacts can therefore be brought into the NAPC feed (feed 3a), under the relevant specialty, as defined in the NHS Data Dictionary (see Table CM22.1).

16. Where TFC 840 is not used in your local organisation data, it should be added to the load for the PLICS activity NAPC feed (feed 3a).

Table CM22.1: Excerpt from NHS Data Dictionary list of treatment function codes, showing principle areas for audiology services[76]

840	Audiology	Physiological measurement diagnosis of hearing disorders and the rehabilitation of patient with hearing loss
310	Audiological medicine	The medical specialty concerned with the investigation, diagnosis and management of patients with disorders of balance, hearing, tinnitus and auditory communication. Excludes audiology and hearing tests (listed under medical specialties)
120	ENT	Ear, nose and throat (listed under surgical specialties)

[76] NHS Data Dictionary https://www.datadictionary.nhs.uk/web_site_content/supporting_information/main_specialty_and_treatment_function_codes_table.asp?shownav=1?query=%22treatment+function%22&rank=100&shownav=1

254	Paediatric audiological medicine	The medical specialty concerned with the investigation, diagnosis and management of patients with disorders of balance, hearing, tinnitus and auditory communication. Excludes audiology and hearing tests (listed under children's specialist services)

17. You may need to set up a local TFC for newborn screening, to identify it separately from the other parts of audiology.

18. Which appointments/contacts are in which TFC depends on the care professional who has clinical responsibility for the patient in that appointment.

    - Where an audiologist provides a DAA appointment (or ongoing audiology service where a patient has been discharged from a primary care pathway but continues with the hearing loss/balance support element of their care), the audiologist has clinical responsibility – this is a 'non consultant-led' activity: use TFC 840.[77]
    - Where an audiologist works directly in an ENT clinic that provides consultant-led activity for TFC 120 ENT, the activity will remain as TFC 120, to show the responsibility for the patient in that appointment lies with the consultant. This appointment will usually be part of a wider ENT pathway, not for hearing loss alone.
    - Where an audiologist works in an audiological medicine clinic that provides consultant-led activity for TFC 310 Audiological medicine, the activity will remain as 310, to show the responsibility for the patient in that appointment lies with the consultant (see below for detail on the costing process in this area). The same principle applies for TFC 254 Paediatric audiological medicine. This work will usually be part of a wider pathway, not for hearing loss alone.
    - Where an audiologist or other specially trained staff member performs newborn hearing assessments, the clinical responsibility will be agreed locally.

19. If your organisation records outpatient procedure codes (using OPCS coding), you can identify hearing assessment with the code U243: Hearing

[77] This TFC will enable you to identify the DAA within the NAPC feed (feed 3a), and allocate the content to the correct costing activities.

assessment. This may be included in the record for ENT outpatients or other treatment functions, and indicates audiology input.

20. Costs of the audiology equipment provided will be recorded in the local system or spreadsheet and should give the cost of the items issued per patient.

21. Where material,[78] this information should flow to the prostheses and other high-cost items feed (feed 15), to be matched to the patient appointment in accordance with Standard CP4: Matching costed activities to patients.

22. Most audiology services are provided during NAPC clinics in a hospital or health centre, but if an audiologist or other staff member attends an admitted patient, it should be recorded on the supporting contacts feed[79] (feed 7).

23. The audiology services data should be built into the NAPC feed (feed 3a) as shown in Standard IR1: Collecting information for costing and Spreadsheet IR1.2. The appropriate TFC will identify which type of activity the contact is, eg the DAA will be specialty 840.

24. The contacts can then be costed using the 'clinical contact duration of care contact' field, in accordance with Standard CP2: Clearly identifying costs and Standard CP3: Allocating costs to activities. This will allow each type of contact to be costed according to the resource used and activity provided.

25. In the standardised cost ledger, you should use the following cost centres as appropriate:

- XXX037 Audiology
- XXX040 Newborn hearing screening diagnostics.

26. In the costing standards, newborn hearing screening diagnostics has been kept separate, although in your general ledger the services may be separate, combined within one cost centre or even be provided by a different organisation.

[78] We are not specifying what is material, but allowing trusts to agree locally whether this is a priority area.
[79] This feed is a superior costing method.

Service-specific pay

27. Professional audiologists and associated staff are specifically trained to provide the hearing, tinnitus and balance assessments, fitting and review of aids, rehabilitation with/without hearing aid provision, and all ongoing long-term care.

28. Allocate all audiologists and assistant technical officers pay costs using the resource IDs: MDR039; Audiologist and MDR040; Assistant technical officer (audiology)

29. Medical staff are not connected to the audiology cost centres, but if relevant, the cost ledger should have a separate cost centre to show doctors specifically in audiological medicine, eg cost centre code XXX049 Medical staffing – by specialty can be customised using the same rows and renamed **X21**049 Medical staffing – audiology.

Allocating staff time to direct access audiology, audiological medicine, ENT and other specialties

30. Where staff on the audiology (or newborn hearing screening diagnostics) cost centre provide services for both DAA and other specialties, their costs should be disaggregated before the general ledger to cost ledger mapping exercise. This process is the same as for staff in other areas, and also where staff provide a commercial service or services for another trust.

31. You should add a separate cost centre (with a customised local code) for the staff (and any non-pay items), ensuring the appropriate resource is used. This ensures the cost of the activity shown as DAA (audiology contacts) is not overstated and that for the other services is not understated.

32. Where the staff providing supporting services to other specialties do not record the patient contact as audiology activity, and it is not recorded as a contact under the other specialty, these contacts should be included on the supporting contacts feed (feed 7), so they can be allocated to the patient contact (admitted or non-admitted).

Service-specific non-pay items

33. Allocate all audiology clinical non-pay costs such as hearing aids and implants using the resource ID: MDR041; Hearing and other audiology devices.

34. The external part of the hearing aid may be applied in audiology; however, part of the cochlear implant or bone anchored hearing aid may be implanted in a theatre or a special procedure suite. You should identify where the cost sits and ensure it flows to the patient.

35. The costs should be matched to the patient for the episode or attendance where it was implanted/issued.

36. The allocation method for the devices is actual cost – based on information supplied to the costing system from the prostheses and other high-cost items feed (feed 15).

37. You need to identify which activities your audiologists and support staff deliver and map these to the prescribed activity list in Spreadsheet CP3.2.

38. With your service team, agree how the patient activities are identified from the data in the NAPC feed (feed 3a) and the non-pay prostheses and other high-cost items feed (feed 15).

39. To ensure your local reporting shows the impact of audiology on the cost, use the activity ID: MDA062; Audiology assessment for all contacts where no equipment will be issued.

40. Table CM22.2 is an excerpt[80] from Spreadsheet CP3.3 showing the resource and activity links to use for audiology.

41. For each resource and activity combination, there is a two-step prescribed allocation method in Spreadsheet CP3.3.

[80] Please note all excerpts in this standard are for illustrative purposes only. Use Spreadsheet CP3.3 to ensure you are using all the correct resource and activity links.

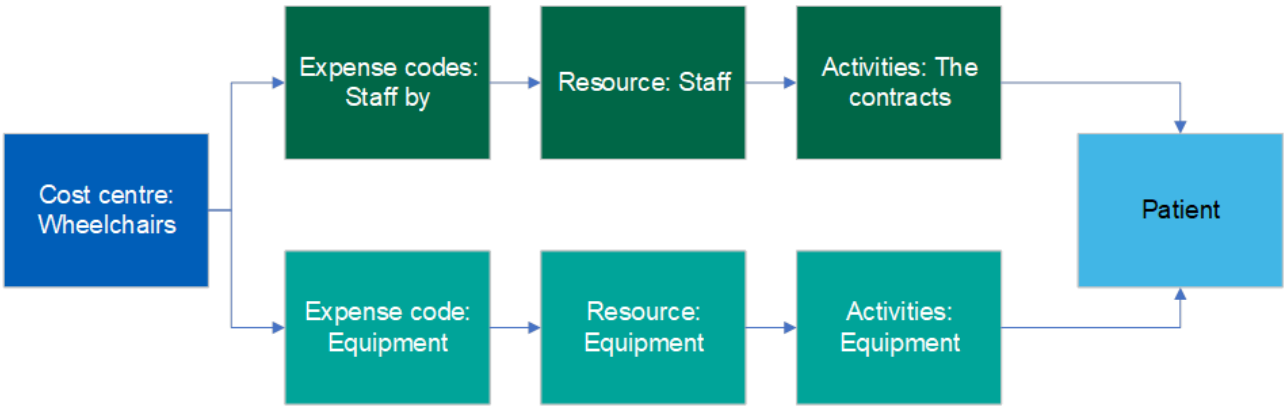
Table CM22.2: Excerpt from Spreadsheet CP3.3 showing the resource and activity links for audiology service costs

Resource	Audiology assessments	Newborn hearing diagnostics	Supporting contact	Theatre care – general	Insertion or fitting of a prosthesis, implant or device
Audiologist	£X	£X	£X		
Assistant technical officer (audiology)	£X	£X	£X	£X	
Hearing and other audiology devices					£X

Other considerations

42. The materiality of the cost of devices should be considered locally. If a patient-level feed is not considered necessary, the cost of the devices should be allocated to the patients who received them.

Figure CM19.1: Costing process for audiology services



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