

Approved Costing Guidance – Standards

Integrated Information Requirements and Costing Processes

Contents

What you need to implement these standards	3
IR1: Collecting information for costing	4
CP1: Ensuring the correct cost quantum	37
CP2: Clearly identifying costs	41
CP3: Allocating costs to activities	55
CP4: Matching costed activities to patients.....	69
CP5: Reconciliation.....	80
Appendix 1: Data sources available as part of a national collection	86
Appendix 2: GL to CL mapping method by costing process theme.	95
Appendix 3: Relative weight values specification – Pathology.....	98
Appendix 4: Relative weight values specification – Diagnostic imaging	101

What you need to implement these standards

Before you implement the *information requirements* in this document, you should read and understand:

- Costing Principle - Materiality
 - You should ensure that you bring in the feeds which cover the largest service areas first.
- Technical document:
 - Spreadsheet IR1.1: Patient-level feeds
 - Spreadsheet IR1.2: Patient-level field requirements for costing
- Appendix 1: Data sources available as part of the national collection

Before you implement the *costing processes* in this document, you should read and understand:

- Technical document:
 - Spreadsheet CP3.1: Resources for patient-facing costs
 - Spreadsheet CP3.2: Activities for patient-facing costs
 - Spreadsheet CP3.3: Methods to allocate patient-facing resources, first to activities and then to patients

IR1: Collecting information for costing

Purpose: To set out the information requirements for patient-level costing.

Objectives

1. To ensure providers collect the same information for costing, comparison with their peers and cost collection purposes.
2. To collect the correct information to inform activity for the cost quantum and prescribed allocation methods.
3. To support accurate matching of costed activities to the correct patient episode, attendance or contact.

Scope

4. This standard specifies the requirement for the patient-level¹ activity feeds as prescribed in the *Approved Costing Guidance*.
5. The patient-level activity feeds described in this standard include prescribed feeds only.
6. Further information on optional feeds and feeds for superior methods can be found in the optional and superior feeds standards learning extension document².

¹ Not all feeds are at the patient level. This is a generic description for the collection of feeds required for the costing process. The actual level of the information is specified in the detail below: for example, the pathology feed is at test level.

² <https://www.england.nhs.uk/approved-costing-guidance/>

Overview

7. This standard describes two main information sources for costing:
 - prescribed patient-level information feeds,
 - local information sources to support relative weight values.
8. Patient-level information feeds are the input data showing patient events for your costing system. They are used to provide proportional information on which patients, or types of patients have used a service and so will have cost from that service allocated to them. For example, which patients have used a ward, or received high cost medicines.
9. Some patient level feeds will include the specific cost of item or care provided for the patient, but the majority will not include cost as a data item.
10. Most of the data items required are available in a submission your organisation makes to a national dataset. You should use the national definitions of activity from these data sources. A list, including the national datasets, is given in Appendix 1.³
11. Columns D and E in Spreadsheet IR1.2 contain the activity data fields required for the costing standards, following national naming conventions for the national activity datasets.
12. The data fields required in each information feed are for costing, collection, matching or business intelligence purposes. The reason each field is included in a feed is given in columns K to N in Spreadsheet IR1.2.
13. The information feeds described in this standard provide four types of information that informs cost allocation:
 - activities that have occurred, eg the non-admitted patient care (NAPC) feed will itemise contacts with the patient
 - the cost driver to use to allocate costs, eg ward minutes
 - the information to use to weight costs, eg the medicine cost included in the medicines dispensed feed

³ This list is not exhaustive and other national datasets are available.

- information about the clinical care pathway, eg procedure codes that are used to allocate specific costs in the costing process.

14. The information feeds also contain information for collection:

- Information for linking PLICS to the national activity datasets, eg Patient PLICS Extract Matching Identifier (PLEMI) is provided for data fields that are part of the national activity dataset.
- Patient information for linking PLICS across organisations and sectors, eg NHS number.

15. A patient event is the unit of activity that is reported in PLICS. Where a patient receives some elements of care that is not the discrete patient event, but a component of the care given during that event, we match the components to the patient event. To support the matching process, three types of feed are defined:

- **master feeds:** the core patient-level event feeds that the auxiliary feeds are matched to, eg the admitted patient care (APC), non-admitted patient care (NAPC), and A&E feeds⁴
- **auxiliary feeds:** the patient-level activity feeds that contain the components of the care. These feeds are matched to the master feeds, eg the diagnostic imaging and pathology feeds
- **standalone feeds:** the patient-level activity feeds that are not matched to any patient event but are reported at service-line level in the organisation's reporting process, eg the cancer multidisciplinary team (MDT) meeting feed.

16. The master feeds form the record structure for costs to be reported in PLICS and in the National Cost Collection (NCC), eg PLICS NAPC costs is based on the NAPC feed with detailed cost information for each NAPC event.

17. A unique identifier – or combination of fields – in the master and auxiliary feeds is used to perform the matching process between auxiliary feeds and

⁴ Critical care is also a master feed, but has special properties. For some organisations it will be the main feed (where the trust does not have separate episodes for critical care), and for others it will be an auxiliary. Other auxiliary feeds such as pathology can be matched to it. This improves the quality of the costing of critical care stays. See the section on Critical Care feeds 6a, 6b and 6c below)

the patient event. For example, 'local patient identifier (extended)' is the unique patient reference in the Community Services Data Set (CSDS).

18. You should work with your informatics department to understand the different types of activity captured and reported against each data feed.
19. Where a prescribed data item is not part of national dataset or you use a local dataset, you should record the source of the data item and any local definitions for activity in ICAL worksheet 3: Local activity definitions.
20. You are not required to collect an activity feed if your organisation does not provide that activity, eg a provider with no emergency department is not required to collect the A&E attendances feed.
21. If your organisation provides mental health or community services, you need to appreciate whether the Mental Health Services Data Set (MHSDS) submission or the Community Services Data Set (CSDS) submission contains special characters, for onward linkage by NHS Digital after collection. You should ensure that the feeds into PLICS for these datasets match the submission to the national dataset.⁵
22. To build the relevant information feed, you may need to discuss the matching of some local field names with your service teams or informatics department, using the data item code shown in column G of Spreadsheet IR1.2 (where applicable to the dataset).
23. The standards prescribe the information to be collected, but not how it is collected. So, if you collect several of the specified feeds in one data source, you should continue to do so as long as the information required is captured.
24. Any costs not allocated by the patient-level feeds need local information sources to inform relative weight values to allocate them.
25. Where you use local information sources of information for costing, you should document them in your integrated costing assurance log (ICAL) worksheet 2: Additional information sources.

⁵ If the PLICS feeds do not match to the national data submission, the national cost collection submission will be compromised, as its matching to the national dataset will not be allowed.

26. If you have activity in your data feeds where the costs are reported in another provider's accounts, you need to report this activity under 'cost and activity reconciliation items' as described in Table CP5.2 in Standard CP5: Reconciliation. This is so your own patient costs are not allocated to this activity, deflating the cost of your own patients.
27. For internal reporting, this activity can be reported as part of patient pathways, even though the cost to the organisation is zero – for example, social workers paid by the local authority whose activity is part of a wider care pathway.
28. Table IR1.1 lists the patient-level activity feeds required for costing and the specific standards you may find useful to refer to.

Table IR1.1: Summary of prescribed patient-level information feeds

Feed number	Feed letter	Feed name	Feed scope	Type of feed	Accompanying costing standards
1	a	Admitted patient care (APC)	All admitted patient episodes within the costing period, including all patients discharged in the costing period and patients still in bed at midnight on the last day of the costing period (mainly from the Commissioning Data Set)	Master	CM12 CM13
1	b	Admitted patient care (APC) (mental health)	All admitted patient episodes within the costing period, including all patients discharged in the costing period and patients still in bed at midnight on the last day of the costing period	Master	CM2 CM13
2		Urgent care (A&E/MIU)	Accident and emergency attendances (A&E) – minor injury unit, walk in centres and urgent care within the costing period. These patient events are not admissions.	Master	CM2 CM4
3	a	Non-admitted patient care (NAPC) Outpatients (acute/community)	All patients who had an attendance or contact within the costing period (from the Commissioning Data Set)	Master	CM1 CM3 CM14
3	b	Non-admitted patient care (NAPC) (mental health)	All patients who had an attendance or contact within the costing period (from the Mental Health Services Data Set)	Master	CM1 CM3 CM14
3	c	Non-admitted patient care (NAPC) (community services)	All patients who had an attendance or contact within the costing period (from the Community Services Data Set)	Master	CM1 CM3 CM14

Feed number	Feed letter	Feed name	Feed scope	Type of feed	Accompanying costing standards
3	d	Non-admitted patient care (NAPC) (community midwifery)	All patients who had a contact in the community within the costing period (from the maternity information system that provides information for the Maternity Services Data Set)	Master	CM3 CM24
3	e	Non-admitted patient care (NAPC) (home births)	All patients who had a home birth within the costing period (from the maternity information system that provides information for the Maternity Services Data Set). (Note: The patient may have later been transferred to a hospital – this event should still be recorded whether the baby arrived in the home setting or not)	Master	CM3 CM24
6	a	Acute critical care – neonatal	All patients who had a critical care stay within the costing period	Master	CM6
6	b	Acute critical care – paediatric	All patients who had a critical care stay within the costing period	Master	CM6
6	c	Acute critical care – adult	All patients who had a critical care stay within the costing period	Master	CM6
8		Pathology	All types of pathology tests undertaken by the organisation within the costing period	Auxiliary	
9		Blood service products	Units of all blood and blood products used in blood transfusions within the costing period	Auxiliary	CM28
10		Medicines dispensed	Within the costing period, all medicines dispensed to a ward and non-attributable to individual patients and/or	Auxiliary	CM10

Feed number	Feed letter	Feed name	Feed scope	Type of feed	Accompanying costing standards
			medicines attributable to individual patients (likely to include controlled drugs, medicine gases and discharge items)		
12	a	Diagnostic imaging	All diagnostic imaging performed within the costing period	Auxiliary	
12	b	Maternity ultrasound and other scans (not on CRIS)	Ultrasound scans performed in the maternity service by midwives and obstetricians or sonographers, where the data is not in the main diagnostic imaging (eg CRIS, RIS, PACS) record. The ultrasound scans are recorded on the local dataset as part of the requirements for the MSDS	Auxiliary	CM24
13		Theatres/ specialist procedure suites	All procedures performed in theatres and specialist procedure suites within the costing period	Auxiliary	CM5
14		Cancer multidisciplinary team (MDT) meetings	All cancer MDT meetings held within the costing period	Standalone	CM9
15		Prostheses and high-cost devices	All prostheses or devices provided to patients within the costing period	Auxiliary	CM21
16		Improving Access to Psychological Therapies Data Set	All patients undergoing psychological therapies	Master	
17		Sexual health	Patient-level – but anonymised – feed for those accessing sexual health services, where these contacts are not recorded on the NAPC feeds	Master	CM16

Feed number	Feed letter	Feed name	Feed scope	Type of feed	Accompanying costing standards
18		Dentistry	Patient-level feed for community dentistry where this information is not contained within the NAPC feeds. Does not include dental admissions or outpatients in a hospital setting, which are part of the CDS.	Master	CM17
19	a	Wheelchair contacts	The contacts with patients for assessment, fitting, review and repair/ maintenance of wheelchairs and components	Master	CM19
19	b	Wheelchair equipment	The items issued to the patient, with the value of those items	Master	CM19
25		Unbundled Healthcare Resource Group (HRGs) – rehabilitation and specialist palliative care	All unbundled HRGs created by the grouper for sub-chapters VC and SD	Auxiliary	
26		Audiology contacts	The non-consultant led contacts with patients for assessment, fitting, review and repair/maintenance of audiology devices and other audiology services, including direct access audiology.	Master	CM22
28		Chemotherapy	Chemotherapy (Detail to be confirmed in 2021)	Auxiliary	
29		Radiotherapy	Radiotherapy (Detail to be confirmed in 2021)	Auxiliary	

Feed number	Feed letter	Feed name	Feed scope	Type of feed	Accompanying costing standards
27		Maternity	Maternity identifiers not on other datasets. This data feed enables connection of mother and baby, and the pregnancy/maternity pathway for reporting.	Standalone ⁶	CM24

⁶ This feed is different to the other standalone feeds as there is no output of cost to the data held within it. We are looking at classifying it differently in future years.

Approach

Patient-level information for the costing process

29. This section describes each information feed, explaining the:
 - accompanying costing standard(s)
 - data collection source
 - feed detail.
30. You should read the following sections describing the feeds listed in Table IR1.1 in conjunction with Spreadsheet IR1.2: Patient level field requirements for costing, and Appendix 1: Data sources available as part of the national collection
31. You should discuss with your informatics team how to draw down the relevant activity data from the national dataset, so you are able to reconcile to the patient events in your costing system. You should do this reconciliation regularly, so the year end process is less burdensome.

Feed 1a and 1b: Admitted patient care (APC)

Data source

32. This data will come from the source used at your organisation for the nationally collected and mandated APC Commissioning Data Set (CDS) or Mental Health Services Data Set (MHSDS).
33. The suffix 'a' indicates this information comes from the CDS whereas the suffix 'b' indicates it comes from the MHSDS. This notation is for clarity where trusts cover more than one sector.
34. The APC feed name is shown in column C of Spreadsheet IR1.2. The fields – or data items – are shown in column D should be contained in the APC feed.
35. Column J in Spreadsheet IR1.2 shows a MHSDS unique identifier code in feed 1b. There is no corresponding unique ID in the acute/community CDS for feed 1a, so the field names in column D should be used as the specific identifier.

36. You should take the data from the same source as the national submission of the CDS – before the national submission is sent to NHS Digital. This will allow reconciliation of your internal reporting to the dataset.

Feed detail

37. Scope: all admitted patient episodes within the costing period, including all patients discharged in the costing period and patients still in bed at midnight on the last day of the costing period. This includes regular day or night attenders.
38. Each record is:
 - an episode in feed 1a (CDS)
 - a spell in feed 1b (MHSDS).
39. Use the patient discharged flag in column D in Spreadsheet IR1.2 to identify whether a patient has been discharged. Including patients who have not been discharged as incomplete patient events (see Standard CM2: Incomplete patient events) reduces the amount of unmatched activity and ensures that discharged patients are not allocated costs that relate to patients who have yet to be discharged.
40. We recognise that some patient-level information, such as clinical coding, may not be available until after a patient is discharged. However, information regarding ward stays and named healthcare professionals will be available and can be used in the costing process.
41. Feed 1a includes one row for 'ICD10 – secondary and subsequent diagnosis codes'. You can repeat this row by adding a #2, #3, #4 etc to include as many ICD10 codes, in order, as is required locally. This will allow improved reporting of specific diseases or comorbidities within the costing system.
42. The APC feed is a master feed that auxiliary feeds such as theatres and pathology can be matched to.
43. Some patients may return home for planned or trial periods while still admitted to an inpatient bed. In acute settings this may be a 'hospital at home' arrangement for step down care, and in mental health settings this may be 'home leave' designed to ensure a bed is reserved for their care. The APC

feeds include this home leave to reflect the organisation's continuing responsibility for the patient.⁷

44. Activity for NHS funded patients, private patients, overseas visitors, non-NHS patients and patients funded by the Ministry of Defence should be included in the costing system and costed. However, it is important to understand the type of patient for some cost allocations, and for reporting. The patient's administrative category code⁸ in column D in Spreadsheet IR1.2 will supply this information.
45. The designation of the administrative category may change during an episode or spell. For example, the patient may opt to change from NHS to private healthcare. In this case, the start and end dates for each new administrative category period should be recorded in the start and end date fields respectively in column D in Spreadsheet IR1.2.
46. Where a patient with mental ill health has a care programme approach (CPA) meeting during an admission, the date of this will be included in the field 'care programme approach review date'. This will be used to identify a 'contact' with the patient; see Standard CM3: Non-admitted patient care. The cost will therefore not be part of the admission.

Feed 2: Urgent care (A&E/MIU/WIC)

Data source

47. The data will come from the source used at your organisation for the nationally collected Emergency Care Data Set (ECDS).⁹
48. The data for some walk-in centres and other unplanned care centre attendances may need to be collected locally where it is not included in the ECDS.

⁷ Ensure you review this with CM13 when working on home leave.

⁸ https://www.datadictionary.nhs.uk/data_dictionary/attributes/a/add/administrative_category_code_de.asp?shownav=1?query=%22private+patient%22&rank=37.5&shownav=1

⁹ Where the organisation collects the new Emergency Care Data Set (ECDS), this can be used as an alternative, although the costing standards have not yet brought this dataset into the technical document. You should match the ECDS fields required to those listed in Spreadsheet IR1.2.

Feed detail

49. Scope: all A&E, MIU and WIC attendances within the costing period, including all patients discharged in the costing period and patients still in the department at midnight on the last day of the costing period.
50. The A&E feed is a master feed that auxiliary feeds such as diagnostic imaging can be matched to.
51. The A&E feed requires the same terminology as the ECDS, so SNOMED-CT codes should be brought into the costing system for the EMERGENCY CARE PROCEDURE (SNOMED CT) field¹⁰.
52. The NHS Digital Casemix groupers do not yet group to the emergency care HRGs from SNOMED-CT, so you should also include the investigation and treatment fields from the previous dataset – the A&E CDS. The HRG codes should also be brought into the costing system. These can be mapped from the SNOMED-CT codes using the mapping tool supplied on the SUS webpage¹¹.
53. The A&E, MIU and WIC attendances are not admitted patient care. If a patient requires admission, they will have an episode which will show on feed 1a. If the patient is admitted to a hospital bed in the A&E unit, they may have a treatment function code of 180 – these are still admissions and are not A&E patient events. Use the patient discharged flag in column D in Spreadsheet IR1.2 to identify if a patient has been discharged from A&E (including where they are admitted to a bed in the A&E unit).

¹⁰ The ECDS is the mandated dataset to be used for emergency care, replacing the data collection that included fields for Investigation and Treatment.

¹¹ <https://digital.nhs.uk/services/secondary-uses-service-sus/secondary-uses-service-sus-what-s-new#april-2020> - ECDS SNOMED mapped code list. The process of mapping from SNOMED-CT to Investigation and Treatment codes and grouping to HRG is used for contracting purposes, so your local contracting/income team may have further information.

Feeds 3a, 3b and 3c: Non-admitted patient care (patient contacts from CDS, MHSDS and CSDS)

Data source

54. This data may come from three different datasets and should relate to how your activity data is submitted in the national data weekly/monthly submissions to NHS Digital.
- If your organisation submits clinic outpatient appointments (OPA) to the nationally collected Commissioning Data Set (CDS), these will come into the PLICS on **feed 3a**.
 - If your organisation submits mental healthcare contacts to the nationally collected MHSDS, these will come into the PLICS on **feed 3b**.
 - If your organisation submits community care contacts to the nationally collected CSDS, these will come into the PLICS on **feed 3c**.
55. You should take the data from the same source as the national submission of the CDS, MHSDS or CSDS for feeds 3a, 3b and 3c respectively – before it is sent. This will allow the best possible reconciliation to your internal and external reporting of the dataset.¹²

Feed detail

56. Scope: all outpatient or clinic attendances, care contacts or other care in a non-admitted care setting or within the community within the costing period. This includes non face to face contacts such as telephone calls.
57. This feed captures activity recorded on the patient administration system (PAS) but not reported in the other master feeds, including the following activities:
- outpatient attendances and procedures – formal booked or drop-in sessions in a clinic setting
 - community contacts, including those in the patient's own residence or mutually agreed location¹³

¹² Please see the National Cost Collection Guidance for information on how these feeds will be submitted

¹³ Except community midwifery contacts, see feed 3d.

- telemedicine consultations, including telephone calls and other telemedicine contacts such as video conference, text, email, online patient model, etc
 - ward attenders (outpatient attendances where the patient is seen in a ward environment but does not need a full admission to an inpatient unit)
 - day care (patients attending for general supportive activities throughout a day, sometimes – but not necessarily – including clinical therapy); they are not admitted, but are present for a far longer time than a standard NAPC contact
 - non-admitted patient contacts in groups for care, education, therapy etc
 - individuals who are well but having contacts with the clinical services – for example, for health promotion, preventive medicine and education
 - did not attend (DNA)¹⁴.
58. The NAPC feeds (feeds 3a, 3b and 3c) should not include the following areas, which have different field requirements, and separate feeds:
- Community midwifery contacts – feed 3d
 - Improving Access to Psychological Therapies – feed 16
 - sexual health anonymised contacts – feed 17
 - dentistry – feed 18
 - wheelchair service – feed 19
 - audiology – feed 26.
59. Work with your informatics department and other departments providing data to understand the different types of activity in these NAPC feeds and ensure costs are allocated correctly to activity, and that activity is reported correctly in your patient-level reporting process.
60. The NAPC feeds are master feeds that auxiliary feeds such as pathology can be matched to.
61. We recognise that not all NAPC activity is captured in the PAS. You need to work with your informatics department and the department responsible for the data to get the relevant activity information. You should log this local information source in the ICAL worksheet 2: Additional information sources.

¹⁴ Please note: DNAs are included on the feed for information, but are not patient events in the costing standard. See Standard CM3 for more detail.

Feed 3d: Non-admitted patient care (NAPC) (Community Midwifery) – mandation year 2022/23

Data source

62. This data will come from the source used at your organisation for the nationally collected Maternity Services Dataset (MSDS).

Feed detail

63. Scope: all community midwifery care contacts within the costing period, including antenatal and post-natal contacts.
64. This feed is separate to feeds 3a, 3b and 3c as community midwifery is not contained in the submissions to CDS, MHSDS and CSDS national datasets.

Feed 3e: Non-admitted patient care (NAPC) (Home Births) mandation year 2022/23

Data source

65. This data will come from the source used at your organisation for the nationally collected Maternity Services Dataset (MSDS).

Feed detail

66. Scope: all patients who have a home birth record within the costing period.
67. This feed is separate to feed 1a as home births are not admitted patients and are not contained in the submissions to the CDS national dataset.

Feeds 6a, 6b, 6c: Acute critical care – neonatal, paediatric and adult

Data source

68. This data should come from the source used at your organisation for the nationally collected:
 - Neonatal Critical Care Minimum Data Set (NCCMDS)
 - Paediatric Critical Care Minimum Data Set (PCCMDS)
 - Critical Care Minimum Data Set (CCMDS) (adult).

69. This data source should show the bed days of the critical care period separately. This information is required for the NCC.
70. You should discuss with your informatics department how to draw down the relevant data from the national system, to reconcile the bed days to the relevant CCMDS. You may receive this data through the informatics department or obtain access to draw down the data yourself.
71. We know that some providers open a new episode of care when a patient is transferred to a critical care unit, whereas others do not. We do not advocate one approach over the other. You should therefore understand whether your organisation holds the critical care data:
- as a discrete episode with a transfer of care to a consultant intensivist (anaesthetist), or
 - the patient episode will continue under the surgical or medical consultant and another data item (such as the type of ward) or source (such as the CCMDS for the area) will identify the critical care.
72. Your costing system will create an identifiable record for critical care, separate from the APC, showing each bed day (or part thereof) in critical care. There are various ways it can do this, including:
- using the separate episode from your APC feed (feed 1a) as the critical care record or
 - creating a separate critical care period record¹⁵ where there is no separate APC episode. This record can be created using:
 - the critical care feed (feed 6) as it will show the dates the patient had a critical care period according to CCMDS (recommended option) or
 - use the ward stay feed (feed 4) to identify the change to the relevant critical care unit. Please note this option may require additional attention where dates on the ward stay feed do not match to the critical care feed (feed 6), as this may cause problems with matching (eg to the CCMDS during the national cost collection).
73. Whichever approach your costing system uses, you need to ensure there is a critical care record to keep these costs separate from the APC data record. You

¹⁵ For reference, this was called a 'dummy record' in previous versions of this standard.

should consult your software supplier for more information on how your costing system uses your organisation's data for critical care.

Feed detail

74. Scope: all patients who had a critical care stay within the costing period, including patients still in a critical care bed at midnight on the last day of the costing period. These patient events should be recorded on the national datasets noted above¹⁶.
75. This includes but is not limited to patients¹⁷ on:
 - intensive care units
 - specialist care units
 - high dependency units
 - general wards, with a CCMDS record (see Standard CM6: Critical care, for more information).
76. Where costing processes require your APC length of stay to be adjusted to distinguish the time spent on critical care, you should use the prescribed matching rules on Spreadsheet CP4.1 to identify the appropriate dates/times and create the net length of stay on the APC feed.
77. Spreadsheet CP4.1 also includes matching rules for the ward stay feed (feed 4) if you are using that method to identify the critical care days.

Feed 8: Pathology

Data source

78. This data will be available from local systems.

Feed detail

79. Scope: all types of pathology tests undertaken by the organisation or purchased for patients within the costing period.

¹⁶ We recognise that not all critical care activity is reported to the national datasets. You should note in your ICAL worksheet 26: CM6 Critical care, where the data is not reported nationally.

¹⁷ Most critical care patients are in acute or integrated trusts, but they can be in other trust types. The defining factor for their inclusion in the feeds to PLICS is that they have a CCMDS record.

80. Direct access tests should be identifiable from the 'direct access flag' field, as shown in Column D of Spreadsheet IR1.2. See also Standard CM23: Direct access.
81. Pathology tests – especially specialist tests - are often run via operational partnership agreements for provider to provider services. See also Standard CM8: Clinical and commercial services
 - i) You should ensure you can identify tests performed for other organisations, and not include them in the matched activity to your organisation's patient events.
 - ii) Where your organisation received tests from another organisation, you should obtain the data and add it to the feed, to be matched to patient events in the same way as for your own pathology department.
82. Certain pathological tests may be purchased from highly specialist private sector organisations, for example genetic testing or products in the research and development phase. Where these are of material cost and relate to your organisations 'own patient events', you should obtain the cost of these tests and match to the patient event. See also CM21: Clinical non-pay items.

Feed 9: Blood service products

Data source

83. This data will be available from local systems.

Feed detail

84. Scope: Units of blood and blood components used in transfusion (red cells, white cells, platelets, plasma and other blood products). Also Car-T Cell therapy.

Feed 10: Medicines dispensed

Data source

85. This data will be available from local systems and supplemented by the mandated drugs patient-level monitoring (DrPLCM) specification for NHS

England's specialised commissioning on high-cost drugs.¹⁸ This covers approximately 70% of high-cost medicines nationally, which may be extended by including locally commissioned high-cost medicines

Feed detail

86. Scope: all medicines dispensed in all provider locations including wards, clinics, theatres, preoperative assessments, and medicines issued in the patient's residence. This includes both medicines attributable to individual patients (including high-cost drugs, controlled medicines, medicine gases issued in bulk and discharge items) and non-attributable to individual patients (eg ward stock) within the costing period.
87. Medicines dispensed at patient level will be matched to APC, NAPC, IAPT, critical care or A&E patient events.
88. The medicines feed will contain the cost of the medicine dispensed, to be used for a proportional allocation of cost. See Standard CM10: Pharmacy and medicines for more information.
89. FP10s are the prescriptions issued from hospitals, and these are out of scope of the medicines dispensed feed. You may include an FP10 feed at patient level as a superior method if this information is available.

Feed 12a: Diagnostic imaging and other diagnostic services

Data source

90. Feed 12a data will be available from PACS (diagnostic imaging)¹⁹ and other local systems, excluding maternity ultrasound.
91. Feed 12a should include radiology (diagnostic imaging) and other diagnostic services, including – but not exclusively - nuclear medicine; cardiac, neuro, respiratory and clinical physiology; and ophthalmic imaging.
92. As these services have service-specific data recording systems, the multiple sources should be brought into PLICS to ensure a complete patient diagnostic

¹⁸ <https://www.england.nhs.uk/nhs-standard-contract/dc-reporting/>

¹⁹ This system may also be known as RIS – Radiology information system or CRIS – Clinical radiology information system.

record is costed. You may bring the other diagnostic services into PLICS via separate feeds from feed 12, to conform with your costing software.

Feed detail

93. Scope: all diagnostic imaging scans and tests performed within the costing period. All other diagnostic tests (excluding pathological).
94. Direct access tests should be identifiable from the 'direct access flag' field as shown in Column D of Spreadsheet IR1.2.

12b Maternity ultrasound and other scans - mandation year 2022/23

Data source

95. Feed 12b will be available from the maternity system, showing the ultrasound scans undertaken in maternity patient events which are not recorded on the main diagnostic imaging system.
96. Feed 12b will largely include ultrasound scans but may also include other types of diagnostics if not recorded in another system.

Feed detail

97. Scope: all diagnostic imaging scans and tests performed within maternity services in the costing period.
98. You should ensure that scans are not duplicated in both feed 12a and 12b. The pregnancy identifier is available in feed 12b so you should ensure any scans relating to a maternity pathway are included in feed 12b, or there will be missing elements from the maternity pathway reporting.

Feed 13: Theatres and specialist procedures suites

Data source

99. This data will be available from local systems.

Feed detail

100. Scope: all procedures performed in theatres and specialist procedure suites within the costing period.
101. This feed should be at patient level, including time points so the system can calculate pre-op, anaesthesia, surgical time, recovery and other relevant time sections.
102. This feed should also include session information to enable costing of staff to particular operations.

Feed 14: Cancer multidisciplinary team (MDT) meetings

Data source

103. This data will be available from local systems.

Feed detail

104. Scope: all cancer MDT meetings held within the costing period.
105. This feed does not have to be at patient level as the costs for MDTs are reported at specialty level rather than patient level.
106. This standalone feed is **not** matched to patient episodes, attendances or contacts.

Feed 15: Prostheses and other high-cost devices

Data source

107. This data will be available from local systems.
108. High-cost devices as identified on the national tariff payment system list 13a in Annex A: the national tariff workbook²⁰ should be included in this feed. Commissioning data will be available for these items.

²⁰ <https://improvement.nhs.uk/resources/national-tariff/#h2-annexes>

109. A wider range of devices may be recorded in inventory management systems that track clinical non-pay items to the patient. Using this source of information for material non-pay items is a superior method.
110. If an inventory management system is not available, national programmes such as Scan4Safety or the National Joint Registry are useful sources of patient-level information for prostheses, devices and implants.

Feed detail

111. All prostheses, devices, implants and clinical non-pay items with a material cost provided to patients within the costing period.
112. This is an organisation-wide feed to cover clinical non-pay items with a material cost, not just those used in theatres. Key areas to review are interventional radiology, cardiac devices inserted in catheter labs, and assisted reproduction.

Feed 16: Improving Access to Psychological Therapies (IAPT)²¹

Data source

113. This data will be available from the local systems, in accordance with the submission of IAPT data.

Feed detail

114. This feed should contain the non-admitted contacts for IAPT services that are not recorded in the MHSDS dataset.
115. As the fields available in IAPT are not the same as those in the MHSDS we are treating this as a separate master feed. The costing processes should be the same as those for NAPC.

Feed 17: Sexual health

Data source

116. This data will be available from local systems.

²¹ The feed numbers are used across all sectors. For a full list, see Table IR1.1.

Feed detail

117. Scope: all sexual health contacts within the costing period that are not recorded in the standard NAPC feeds.

118. These may be pseudonymised contacts.

119. This is a standalone feed and therefore should not be matched to any other feeds.

Feed 18: Community dentistry

Data source

120. This data will be available from local systems.

Feed detail

121. Scope: There are three types of data for dental activity:

- in the main PAS as admission episodes (included in the APC feed, out of scope for this feed)
- in the main PAS as outpatient attendances (included in the NAPC feeds, out of scope for this feed)
- in a separate local system for community dentistry activity. These patient events are in scope for this feed.

122. All community dentistry contacts as defined above are in scope of this feed. This may include personal dental services.

123. The feed should show the unit of dental activity as this is a unit used for costing and local reporting purposes.

124. This feed should not contain dentistry data already recorded in PAS and sent to Hospital Episode Statistics (HES) as part of the CDS.

Feeds 19a and 19b: Wheelchair contacts and wheelchair equipment

Data source

125. This data will be available from local systems.

126. There are three types of data for wheelchair activity for this feed:

- outpatient contacts (usually recorded in the main PAS)
- wheelchair service contacts (usually recorded in the local wheelchair system)
- the value recorded against each item of equipment issued to a patient (usually recorded in the wheelchair system).

Feed 19a detail: Wheelchair contacts

127. Scope: wheelchair contacts within the costing period regardless of whether they are recorded on the main PAS or a separate clinical information system. You should ensure there is no duplication of data between NAPC feeds and the wheelchair feed.

128. The feed should show the nationally defined level of patient need as this is a unit used for local reporting purposes and national currencies. An optional field has also been included in the dataset to record a locally defined level of need if this gives greater complexity/specialisation.

129. The feed should also have a patient identifier and date so analysis and reporting can show wheelchair equipment with the patient contact(s). The cost of equipment will not be absorbed into the wheelchair contact.

Feed 19b detail: Wheelchair equipment

130. All wheelchair equipment and accessories issued to a patient (including where items are collected by a patient representative) within the costing period.

131. The feed should include the cost of the equipment.

132. The feed should also have a patient identifier and date so analysis can show the total cost for the patient, but the cost will not be absorbed into the wheelchair contact(s).

133. Equipment will not be issued at all contacts, and there will not necessarily be a contact with a wheelchair professional on the date that equipment is issued.

Feed 25: Unbundled HRGs – rehabilitation²² and specialist palliative care

Data source

134. This data will come from the source used at your organisation for the nationally collected CDS or be available from local systems
135. Where included in the CDS, procedure and diagnosis codes will generate unbundled HRGs via the NHS Digital casemix grouper. Where no national clinical coding is applied to the PAS record, local data will need to provide an HRG code to be manually applied.

Feed detail

136. Scope: rehabilitation and specialist palliative care²³ given in a discrete unit – that is, in a specialist unit for this type of care. The patient events created as HRGs by the grouper, should be brought into the PLICS as a feed so they can be costed as patient events separately from the admission.
137. For specialist palliative care units, the unbundled inpatient HRGs are generated on an episode basis, so the data feed (and costs) should reflect this.
138. For rehabilitation units
- the feed should contain the categorisations of rehabilitation as defined by the Specialised Services National Definition Set (SSNDS):
 - complex specialised rehabilitation services (CSRS) – level 1
 - specialist rehabilitation services – level 2
 - non-specialist rehabilitation services – level 3.
 - the inpatient HRGs are unbundled on a per day basis, so the data and process should enable costing to reflect this.

²² Please note: costing rehabilitation services is under review during 2021.

²³ The 2018/19 NHS Digital documentation for the Reference Cost Grouper (chapter VC for rehabilitation and chapter SD for specialist palliative care) can be found at: <https://digital.nhs.uk/services/national-casemix-office/downloads-groupers-and-tools/costing---hr4-2018-19-reference-costs-grouper>

139. Reporting the point of delivery for these unbundled HRGs is also a requirement; therefore, a field is included for this manual allocation based on your data:

- admitted patients with overnight stay (elective and non-elective)
- day case
- regular day/night
- outpatients/contacts (non-admitted)
- other – this category has been included to understand if there are any types of activity not included above.

Feed 26: Audiology contacts

Data source

140. This will be available from local systems.

Feed detail

141. Scope: All audiology contacts. This includes:

- direct access audiology (DAA) patients (GP direct access and ongoing audiology care): these are audiology patient events;
- and those having ongoing care following discharge from an acute pathway: these are audiology patient events;
- patient events where the responsible clinician is in another specialty – and the audiology contact supports that service area. These are components to the patient event in NAPC (and APC/A&E as appropriate).

142. Please note: audiology services provide clinical support to other specialties – especially otology ENT – within the audiology department and also in the other specialty clinic locations. These contacts should be included in this feed as they are required for allocation of cost.

Feed 27: Maternity Services identifiers - mandation year 2023/24

Data source

143. This data should come from the source used at your organisation for the nationally collected Maternity Services Data Set (MSDS)

Feed detail

144. Scope: Maternity patients recorded on the MSDS. This includes the pregnancy identifier and the maternity discharge date to identify when patient events relate to maternity services, and the discharge from delivery event date for identifying post-natal contacts.
145. This feed is used to connect mother to baby, and mother/baby to pregnancy, so the whole pathway can be reported. It can be used to link feeds 1a and 3a (which do not have a pregnancy identifier, to feeds 3d, 3e, & 12b. There is no costed output to patient events from this feed.²⁴

Feed 28: Radiotherapy²⁵

146. *Costing standard underdevelopment, expected release date late 2021.*

Data source

147. This data should come from the source used at your organisation for the nationally collected Radiotherapy Data Set (RTDS). Additional information may be required from your main PAS or other local sources.

Feed detail

148. Scope: patient events showing all radiotherapy planning HRGs and multiple treatment attendance HRGs.

Feed 29: Chemotherapy²⁶

149. *Costing standard underdevelopment, expected release date late 2021.*

²⁴ This feed and the maternity services standard continue to be developed by the Maternity CEWG.

²⁵ More information and a new standard to be published in 2021.

²⁶ More information and a new standard to be published in 2021.

Data source

150. This will be available from local systems.

Feed detail

151. Scope: Underdevelopment

Additional patient-level activity feeds and data fields

152. The patient-level activity feeds specified above do not cover all patient activities involved in providing healthcare services or overheads.

153. You need to decide whether you require additional patient-level feeds to meet specific and material costing needs. Examples of such feeds are:

- offsite educational awareness/promotion
- immunisation programmes (eg site visits to schools)
- services provided to prisons and other secure locations
- primary care services.

154. Future development areas should be prioritised according to three criteria:

- value of service
- volume of service
- priority of the service within the provider and the healthcare economy.

155. If your organisation collects additional patient-level activity feeds in costing, we encourage you to continue to do so. You should record these additional feeds in ICAL worksheet 2: Additional information sources.

156. Overheads and areas of general ledger disaggregation may need additional information entered into your costing system to create relative weight values (RWV), so that the prescribed allocation calculation can be based on sound data. You should ensure this data comes from an appropriate source, the source of the data is recorded, and it is updated regularly.

Identifying hidden activity

157. Take care to identify any 'hidden' activity in your organisation. This is activity that takes place in your organisation but is not recorded on any of your organisation's main information systems.
158. In some organisations, teams report only part of their activity on PAS. For example, a department may not record telephone activity on PAS. If this is the case, you should work with your informatics department and the department responsible for the data to obtain a feed containing 100% of the clinical activity undertaken by the department. This work is part of the NHS Long Term Plan to improve digitally enabled care, benefitting staff and patients.²⁷
159. Capturing 'hidden' activity is important to ensure that:
- any costs incurred for this hidden activity are not incorrectly allocated to recorded activity, thus inflating its reported cost
 - patient-facing and overhead costs incurred are allocated over all activity, not just activity reported on the provider's main system such as PAS
 - income received is allocated to the correct activities.

Other data considerations

160. The patient-level feeds do not contain any income information. You may decide to include this information at patient level in the feeds to enhance the value of your organisation's reporting dashboard. The standards do refer to income where this makes it easier to understand both the costs and income for a particular service for cost reconciliation, local reporting and business intelligence.
161. The feeds do not include description fields, eg there is a ward code field but not a ward code description field. You may ask for feeds to include description fields for ease of use; otherwise you will need to maintain code and description look-up tables for each feed, so you can understand the cost data supplied and facilitate appropriate outputs for reporting. There should be a process for

²⁷ <https://www.longtermplan.nhs.uk/online-version/chapter-5-digitally-enabled-care-will-go-mainstream-across-the-nhs/>

mapping and a rolling programme for revalidating the codes and descriptions with each service.

162. You may use locally generated specialty codes to report specialist activity locally. For example, epidermolysis bullosa will be reported under the dermatology treatment function code (TFC), but your provider may decide to assign it a local TFC code, so this specialist activity is clearly reported.
163. If local TFC codes are used, they should be included in the patient-level feeds and in the costing process. The costs and income attributed to these specialist and community areas need to be allocated correctly. You need to maintain a table mapping the local specialty codes to the national TFCs. This table needs to be consistent with the information submitted nationally to ensure activity can be reconciled.

Proxy records

164. Proxy patient contact/attendance records can be created to provide patient records to attach cost to where there is no other record – for example, care provided outside the organisation, or to provide anonymous costed records for services that need to cost **a** patient not **the** patient.
165. You will need a suitable source of local information to know how many records to create, and agree this within your assurance process (see Self Help: Assurance of cost data). These should conform to the same criteria as the CDS, MHSDS or CSDS datasets but should remain clearly identifiable as proxy records.
166. Proxy records should be treated with caution and noted in your ICAL worksheet 16: Proxy records. They should also appear in the activity reconciliation – as described in Standard CP5: Reconciliation – as the costed patient records will not reconcile to the in-house or national dataset activity count.
167. You should avoid generating proxy patient records within the costing system to solve data quality issues. It is better practice to work with your informatics department and service teams to create the correct data entry as is consistent with the 'right first time' principle. Creating proxy records in this way can lead to double counting of activity outputs – for example, if someone later adds a

missing record and it flows through to the costing system, both the proxy record and the correct record will receive costs for the same activity.

CP1: Ensuring the correct cost quantum

Purpose: To set out how the general ledger is used for costing, and to highlight the areas that require review to support accurate costing.

Objective

1. To ensure the correct quantum of cost is made available for costing.

Scope

2. This standard should be applied to all lines of the general ledger.

Overview

3. You need the income and expenditure for costing. We refer to this as the general ledger output. This output needs to be at cost centre and expense code²⁸ level and is a snapshot of the general ledger at a point in time.
4. You do not require balance sheet items for costing.
5. You can bring your general ledger into your costing system either by bringing in:
 - the trial balance: for audit purposes this should balance to zero, or
 - only the cost and income: this should reconcile to your statement of comprehensive income.

To reduce the burden on your costing system, we recommend the second approach.

²⁸ Expense codes may also be called 'account codes' or 'subjective codes'.

6. The general ledger is closed at the end of the period, after which it cannot be revised.²⁹ For example, if in March you discover an error in the previous January's ledger that needs to be corrected, you can only make the correction in March's ledger. Doing so will correct the year-to-date position, even though the January and March figures do not represent the true cost at those times, as one will be overstated and the other understated. Check with the finance team to ensure that only finally closed periods that contain any such changes are brought into the costing system.
7. The timing of when some costs are reported in the general ledger may pose a challenge for costing. For example, overtime pay for a particular month may be posted in the general ledger in the month it was paid, not the month the overtime was worked. This highlights a limitation in the time-reporting and expense payment system. We recognise this limitation but are not currently proposing a work-around for it.
8. Discuss the general ledger's layout and structure with the finance team so that you understand it. This will help you understand the composition of the costing output.³⁰
9. Keep a record of the input of cost into your costing system for each costing period. There may be multiple loads and we recommended that each load is noted. You should record each load in integrated costing assurance log (ICAL) worksheet 12: GL load record.

Approach

Obtaining the general ledger output

10. The finance team should tell you when the general ledger has been closed for the period and give you details of any off-ledger adjustments for the period. You need to put these adjustments into your cost ledger, especially if they are included in your organisation's report of its financial position, as you will need to reconcile to this.

²⁹ Some systems may allow you to back post payroll journals and to make other changes during the external audit process.

³⁰ Referring to the financial accounting requirements may help you understand your general ledger structure. The Department of Health and Social Care Group Accounting manual is at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/798830/dhsc-group-accounting-manual-2019-to-2020.pdf

11. Keep a record of all these adjustments in ICAL worksheet 11: Adjustments to the general ledger at each load, to reconcile back to the general ledger output. Take care to ensure that any manual adjustments are mapped to the correct line of the cost ledger.
12. Table CP1.1 below shows what the extract of the general ledger output must include.

Table CP1.1: General ledger output required fields

Field name	
1	Period (MM-YYYY)
2	Cost centre
3	Expense code
4	Monthly income or expenditure value (for use if you do in-month costing rather than year-to-date average costing)
5	Year-to-date income or expenditure value

13. You may choose either field 4 or 5 depending on the type of costing (monthly or year-to-date) your organisation undertakes.
14. Ensure the process for extracting the general ledger output is documented in ICAL worksheet 8: Extracting GL output. You should extract this only after the finance team tells you it has closed the general ledger for the period.
15. The finance team should tell you when it has set up new cost centres and expense codes in the general ledger. Cross-team approval increases the different teams' understanding of how any changes affect them.
16. **Finance teams should not rename, merge or use existing cost centres for something else** without informing you as not knowing when this has been done will cause problems for costing. Finance teams should close a cost centre and set up a new one rather than renaming it. If this is not possible, they should tell you about any changes.
17. The new general ledger cost centres and expense codes need to be mapped to the cost ledger. You then need to reflect these changes in the costing system.

18. 'Error suspense'³¹ ledger codes need to be addressed so that all costs can be assigned accurately to patients. Work with your finance colleagues to determine what these codes contain so they are mapped to the correct lines in the cost ledger.
19. You should have a rolling programme in place to regularly meet your finance colleagues to review the general ledger and its role in costing. This can identify problems and enhances their engagement with the use of the data.
20. Where income from a charitable donation appears in the general ledger it should be matched to the expenditure in the cost centre where the expenditure is recorded in, using the income code³² to identify it. This allows compliance with both costing standards (income should be identifiable) and collections (charitable income can be netted off from the cost which it funded).
21. Where charitable cost centres are in the general ledger, the expenditure and income on the cost centre should net to zero at the end of the costing period. The income not used would normally be deferred until the next period: but you should review any negative balances on the charitable fund costs centres and ensure the costing system does not offset the income against the cost of own patient care cost group. A set of charitable fund cost centres are shown in the Cost Ledger as cost centre codes starting with WWW for transparency.

³¹ Organisations may use a different name for dump ledger codes, eg error suspense codes and holding ledger codes.

³² These codes are shown in column D of Spreadsheet CP2.1 of the technical document.

CP2: Clearly identifying costs

Purpose: To ensure costs are in the correct starting position and correctly labelled for costing.

Objective

1. To ensure all costs are in the correct starting position and categorised in a consistent way for the costing process

Scope

2. This standard should be applied to all lines of the general ledger.

Overview

3. The costing processes should identify and consistently allocate costs to enable meaningful analysis both locally and nationally.
4. An organisation's general ledger (GL) is normally set up for local requirements rather than to support the standardised cost process. This means that GLs will vary in structure.
5. This standard aims to ensure a process is in place to take this into account when the costing process starts, ensuring costs are mapped to resources consistently. To achieve this, the Approved Costing Guidance uses a standardised cost ledger (CL)³³.
6. The standardised cost ledger ensures that as part of the costing process, all costs across the NHS are categorised and allocated in the same way. This process is called general ledger to cost ledger (GL to CL) mapping.

³³ The CL covers all sectors (except ambulance) to enable integrated providers to work from one document

7. This standard describes a flexible approach which enables you to decide between two methods of GL mapping. These methods are defined as:
 - **Method 1 – Essential Mapping:** This method will take your GL chart of accounts directly to the collection resources or overheads.³⁴
 - **Method 2 – Full Mapping:** This method will take your general ledger and map all the general ledger codes to NHS England and NHS Improvement’s standardised cost ledger.
8. This standard describes the process for Method 2 mapping³⁵ as this is the NHS England and NHS Improvement preferred treatment for most organisations.
9. It also details how you should allocate overheads to patient-facing resources so that they can be distributed to activities.
10. As part of your costing process, you may encounter elements of negative cost and the treatment of these are explained at the end of this standard.
11. Additionally, there will be some areas of your ledger which need specialist treatment. You should ensure you understand and implement CP5: Reconciliation, CM8: Clinical and commercial services

Approach

12. The following key principles enable you to clearly identify costs and allocate them as per the prescribed methodology:
 - Patient-facing costs relate directly to delivering patient care and are driven by patient-facing activity.
 - Patient-facing costs should be allocated using an activity-based allocation method and can be either pay or non-pay³⁶.
 - Patient-facing costs are grouped into resources for allocation and linked to activities in the costing process.

³⁴ In completing Method 1 you should ensure you do not miss costs which need remedial action to get them in the right place to start the costing process.

³⁵ You can find greater explanations with detailed examples in the ledger mapping costing extensions document <https://www.england.nhs.uk/approved-costing-guidance/>

³⁶ The allocation of resources is covered in Costing Process Standard CP3: Allocating costs to activities

- Overheads do not directly relate to delivering patient care, and many relate to running the organisation. For example, they may be a corporate service, eg finance, or may be at service method, eg ward clerk.
- Overheads such as finance and HR are allocated to all services that used them, using a prescribed allocation method. These costs should not be directly mapped to resources and activities in the costing process.
- Income can be clearly and transparently identified.

13. You should work with your financial management team to ensure costs are aligned to the correct location in the CL starting with the most material items first.

Mapping Methods

14. This standard enables two methods to implement the mapping from your GL to the CL.

15. You may choose to implement either mapping method. You may change mapping methods to meet the needs of your organisation. You may combine mapping methods if that better represents your organisation.

16. Whichever method you choose:

- you must understand the GL, especially larger items, and make sure that costs are mapped appropriately to resources
- ensure the costing system reconciles at resource method; otherwise further steps will not reconcile and may prove more complex to unravel³⁷.

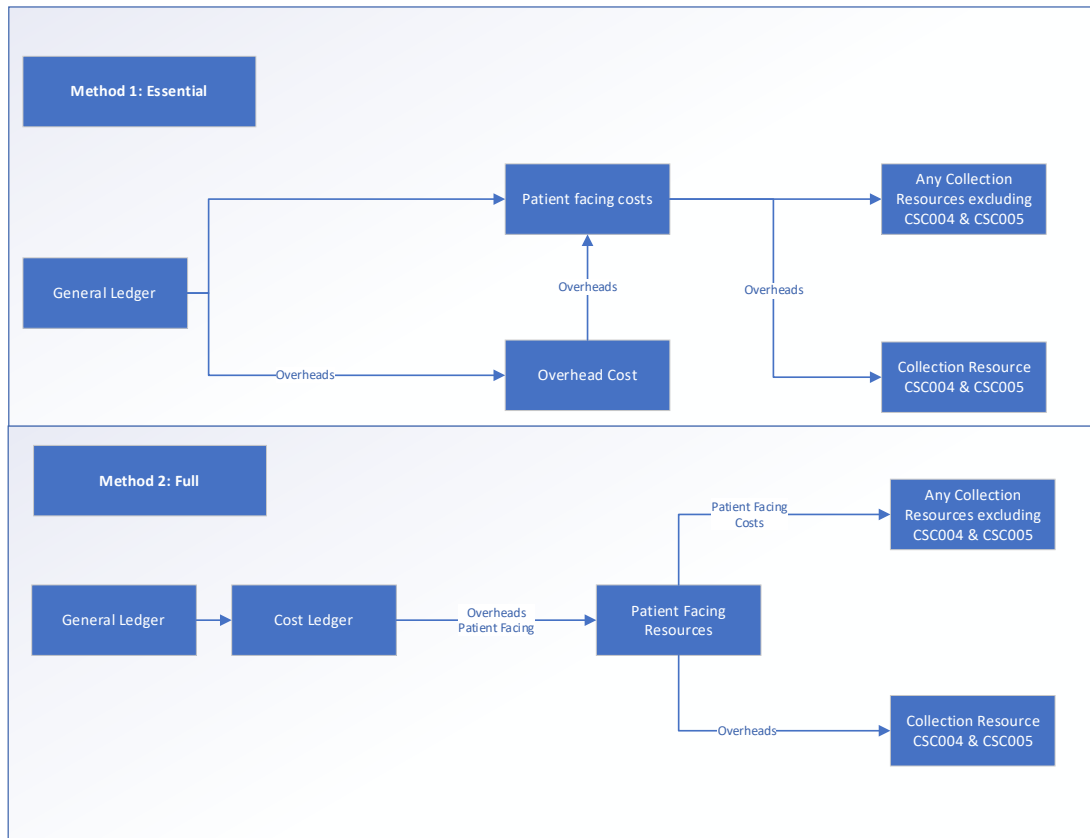
17. Over time, all trusts should aim to use method 2 mapping where method 1 does not ensure consistency for national level analysis.

18. Even on full implementation, trusts may wish to retain some elements of method 1 mapping if that is more suitable for the environment you are working in.

³⁷ Refer to Standard CP5: Reconciliation and Costing Extension: Assurance of Cost data.

19. Figure CP2.1 shows the application of the CL to the organisation's GL in the two mapping methods.

Figure 2.1: Basic diagram showing mapping methods



20. Complying with method 2 advocates an in-depth investigation of the GL to understand the costs it contains but you shouldn't get overly focused on any immaterial details.
21. In completing method 2 you should ensure that you don't allow it to become too much of a time-consuming exercise by focusing on materiality and utilising the automapper³⁸.
22. Method 2 provides a way to get the costs into the right starting position with the appropriate label – that is, from your GL to the CL costing account codes and then to the correct 'resource' codes.

³⁸ The automapper can be found on the Open Learning Platform <https://www.openlearning.com/nhs/courses/costing-improvement/homepage/>

23. Method 1, however, is a more straightforward approach, and aggregates costs to 'collection resources'. There are benefits to implementing method 1 including the ability to establish a holistic view of your general ledger costs.
24. If you utilise method 1, you should retain evidence of your mapping exercise if this can't be completed in your costing software. It should evidence that all material costs have been considered.
25. Regardless of the mapping method implemented within your organisation, you should still comply with the prescribed resource and overhead allocation methods in Spreadsheets CP2.2 (for overheads), CP3.3 (for patient-facing resources)³⁹. You should not use locally defined allocation methods to allocate costs unless prescribed⁴⁰.
26. In addition, in some circumstances you may wish to implement superior methods or permission substitutions.
27. Trusts that choose to adopt method 1 **may**:
 - increase risk of the inaccuracy than those that do as there is potential for costs to not flow through the costing process correctly.
 - be more likely to have costing assurance visits to ensure their costs are in the correct starting position, correctly labelled and classified consistently if inaccuracies are identified during the mandated collection.
28. The paragraph above outlines the risks which may present by adopting method 1. Trusts should be aware of these risks and ensure appropriate mitigations are planned to ensure these do not present.
29. If as an organisation, you choose not to complete the full GL to CL exercise, it is important to understand Method 2. Appendix 1 outlines the main premises of the two mapping methods.

³⁹ See Standard CP3: Allocating costs to activities for more detail.

⁴⁰ Where this is not possible you should note it in your ICAL and ensure your provider executive team are aware of this.

Implementing Method 2

30. The CL outlines the chart of accounts suitable for most costs in most provider organisations, but it is not intended to be exhaustive. Where the CL does not have a combination (of cost centre and expense code) that is required for your organisation, you should refer to the resource application hierarchy (RAH) tool⁴¹ and customise your cost ledger.
31. It is important to remember that the initial GL to CL mapping is a one-off exercise when setting up your PLICS; but you should review your GL to CL mapping exercise once a year, in line with any refresh of the integrated technical document, to ensure it remains representative of how the costs in each part of your GL are used for costing.
32. The process of GL to CL mapping may run incrementally or simultaneously. For ease of understanding, we describe the process in linear steps.
33. The transformation of the GL into the CL should occur within your costing system to ensure that mappings can be traced and reconciled to your GL.
34. If in your costing system, the costing process takes place at a more granular level than the prescribed costing resources, you may continue using this method. The use of local resources or cost items will require the implementation of an additional mapping process⁴². You should log the method you use in ICAL worksheet 15: Superior costing methods.
35. Your actions should include:
 - **Disaggregation** – Some costs may be reported in the general ledger at a level that is not detailed enough for patient-level costing: multiple costs are combined in a singular GL code. These costs need to be disaggregated when creating the cost ledger, using an appropriate method
 - **Aggregation** – Some costs may be reported separately in the general ledger, but for patient-level costing these costs can be aggregated when creating the cost ledger to simplify areas with the same treatment.

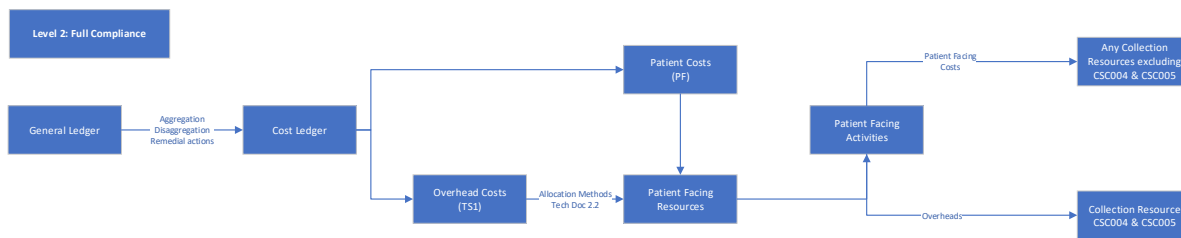
⁴¹ The RAH can be found in the prescribed tools section at: <https://www.england.nhs.uk/approved-costing-guidance/>

⁴² You must document your mapping assumptions in ICAL worksheet 15: Superior Costing Methods

- **Remedial actions** – If a cost has been incorrectly recorded in the general ledger, it should be corrected at this point.

36. At the same time or following the system process to put the costs into the right starting place following the GL to CL mapping, it will undertake a process called reciprocal costing⁴³.

Figure CP2.3 Simplified Costing Process Diagram



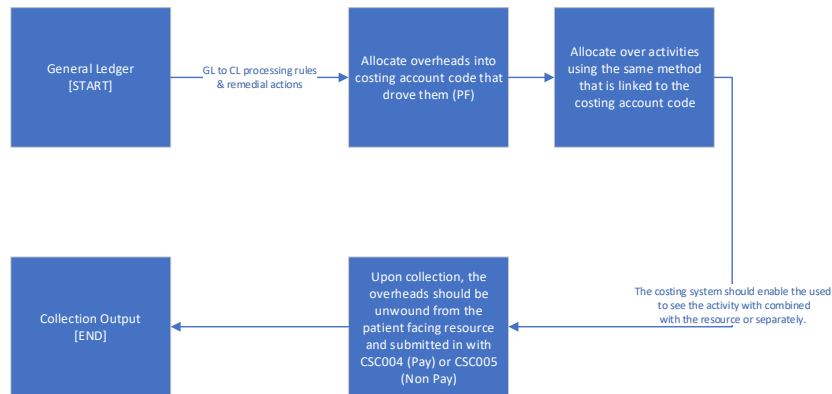
Treatment of Overheads (including reciprocal costing)

37. Certain costs in your GL are not patient-facing but provide the support services for clinical and non-clinical areas. These are called overheads.
38. Overhead costs refer to those expenses associated with running an organisation that can't be directly linked to the treatment of a patient. Overheads are incurred regardless of activity level.
39. Overheads should be allocated to the cost centre(s) which use the service using prescribed allocation methods. Once the overhead has been allocated to the cost centre(s), it should be apportioned to the expense codes within the cost centre(s)
40. Overheads are grouped into overhead titles and assigned a T1S code in Spreadsheet CP2.2. Each T1S code, and their allocation method, are shown in Spreadsheet CP2.2.
41. You may use an appropriate two-step allocation method which incorporates an activity-based method. This type of treatment would be classified as a superior method.
42. Figure CP2.4 describes the treatment of overheads from the GL to CL to collection. Overheads that have been absorbed to patient-facing resources

⁴³ Reciprocal costing is discussed further in paragraphs below.

need to be separated for the cost collection and grouped into the two support collection resources; CSC004 (Pay) and CSC005 (Non Pay).

Figure CP2.4 Simplified GL to Collection Output Diagram



43. Using an expenditure-based allocation method, some areas of the ledger may get a larger proportion of the allocated overheads because of specific high-cost items.
44. Costs which may affect the allocation calculation include CNST, high-cost medicines, interventional radiology/nuclear medicine consumables or prostheses. If so, investigate and correct the overheads allocation⁴⁴ and adjust the allocation to allow for this. Any amendment to overheads should be recorded in your ICAL worksheet 13: Percentage split of allocation bases

Devolved and Centrally held costs

45. During your review of the GL, it is important to identify whether a cost is centrally held or has already been devolved⁴⁵ to the relevant cost centres in the CL – for example, as part of service line reporting.
46. Table CP2.1 shows the treatment of devolved and centrally held.

⁴⁴ For example, you may need to reduce the amount of overhead being allocated to a particular service.

⁴⁵ You may find it useful to discuss centrally held or devolved costs in your GL with your financial management department.

Table CP2.1: Devolved and Centrally held costs

Cost location in GL	Standard requires:
Held centrally	Use the prescribed allocation method
Already been devolved to the cost centre that used it, using the prescribed method or a superior method	No action – costs are already in the correct place. You do not need to aggregate the costs
Already been devolved to the cost centre that used it, but not using the prescribed method or a superior method.	Aggregate to a central code, so the process will use the prescribed allocation method

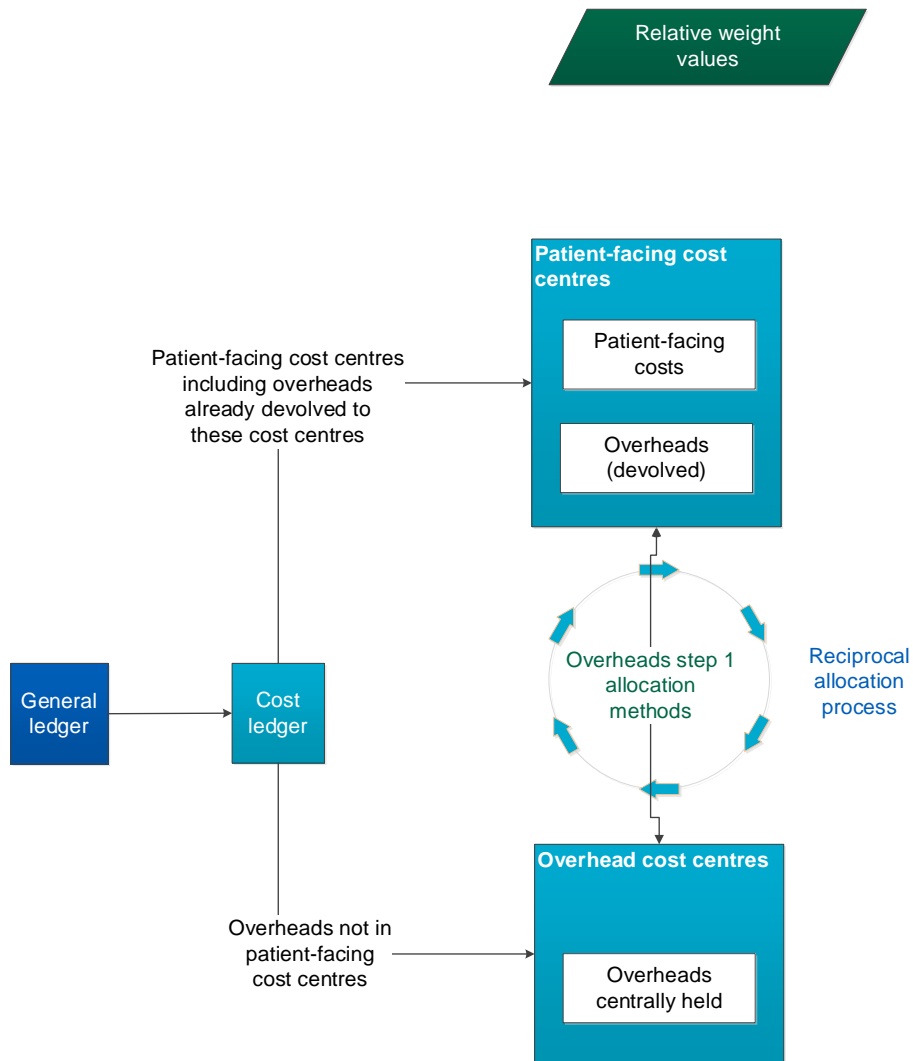
Reciprocal costing

47. This standard prescribes reciprocal costing. This enables allocation of overheads across patient facing and other overhead cost centres, as all those services have ‘used’ the cost of the overhead.
48. You should do this using a reciprocal allocation method, which allows all corporate support service costs to be allocated to, and received from, other corporate support services. For example, HR costs should be allocated across all cost centres that have staff, as all staff benefit from HR services.
49. Reciprocal costing must take place within the costing system.
50. Overheads should not be allocated using a hierarchical method as this will only allow cost to be allocated in one direction between corporate support services.⁴⁶

⁴⁶ Providers using a hierarchical method of allocation should adopt a reciprocal method as soon as possible. This can be done in conjunction with purchase of costing software or review of current costing software.

51. A reciprocal allocation method reflects the interactions between supporting departments, and therefore provides more accurate results than a hierarchical approach.

Figure CP2.5 Extract from Costing Diagram – Reciprocal Costing



52. Following this process, patient facing costs with their allocated portion of overheads are then mapped to resources.

GL negative costs

53. With the wider finance team, you must consider any material negative costs. If the negative value is sufficiently material, you may want to treat it as a reconciling item, depending on the materiality and timing of the negative costs.
54. The main questions to ask before deciding are:

- What negative costs are there?
- Are they distorting the real costs of providing a service?
- Are they material?
- Do they relate to commercial activities?

55. It would be best practice to investigate with the wider finance team why negative cost balances have arisen. Several issues can cause negative values in the GL, which will be carried into the CL. We describe some of these below, with suggested solutions:

- **Miscoding:** Actual expenditure and accrual costs not matched to the correct cost centre and expense code combination.
- **Journals:** Where the value of a journal exceeds the total value in the cost centre for a specific period, a negative cost will be created.
- **Timing of accrual release:** A prior period accrual release can result in a material negative cost value. You must consider whether the timing creates an issue. You may need to report some negative costs caused by timing issues as a reconciliation item. For example, where the accrual is posted in the previous period and released in the next period, this can result in an overstatement in the previous period and understatement in the current period. To resolve this, you may need to report the net over-accrual as a reconciliation item to avoid understating the current-period costs. The same is true with an equivalent misstatement for income.

56. The costing process itself may create negative costs. This will include:

- **GL to CL mapping movements:** when more cost is moved than is in the expense code. To avoid this, you should use relative weight values or percentages to move costs rather than actual values. For example, 50% of the pay costs rather than a fixed amount.

57. Negative costs can be an issue because of traceable costs. If a particular cost per patient or unit is known and allocated to an activity rather than used as a relative weight value, and the total of the actual cost multiplied by the number of activities is greater than the cost sitting in the costing accounting code, it will create a negative cost.

58. Traceable costs should be used as a relative weight value. The only exception is where the traceable cost is of a material value and using the actual cost as a relative weight value will distort the final patient unit cost. If you do use the actual cost, you must ensure that this does not create a negative value in the CL.
59. Clinical support functions. GLs are usually set up to show clinical support departments such as pathology, diagnostic imaging, and therapies in an identifiable manner. However, the costs may be recharged to other clinical services, leaving little costs or negative costs in the originating cost centres. You should ensure the recharges are not creating negative costs, while still allowing the clinical support function to see all costs incurred in delivering their service linked to the patient-level activity.

Cost Classification

60. 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.
61. This classification is important for an organisation's internal financial management as well as for discussions about service change and developing local payment mechanisms.
62. When activity levels change, costs do not all change in the same way. Variable costs will usually change in relation to the activity change, but fixed costs will remain the same over the given period.
63. You should classify each line in your cost ledger⁴⁷ as fixed, semi-fixed or variable, based on a timeframe of 12 months.

Fixed costs

64. Fixed costs remain the same regardless of the level of activity.
65. Typical examples of fixed costs include corporate costs such as rates, depreciation, CNST, financial charges and board of directors' costs.

⁴⁷ Where trusts are applying level 1 mapping and do not use the cost ledger they should still ensure they have an appreciation of which costs are fixed, semi-fixed and variable.

66. 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. Trust scale senior managers are also classified as fixed costs. This classification should be applied regardless of the role or duties for which they were employed.

Semi-fixed costs

67. 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.
68. 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.
69. 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.
70. AfC staff up to and including Band 7 also fall into this category, based on current AfC guidelines.

Variable costs

71. Variable costs increase in proportion to the level of activity.
72. 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.
73. 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) but as a general principle they should be classified as variable.

Other considerations

74. As each cost ledger line is mapped to a classification, resources may end up containing costs of all three cost classifications, based on how overheads are allocated in the costing process. The classification of fixed/semi-

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

75. Activity codes are not classified as fixed, semi-fixed or variable. Some expense codes within an activity will vary in classification according to the behaviour of the cost when the number of patient events changes.
76. The classification should be applied regardless of the role for which an individual was employed. For example: a nurse manager may have a portion of their role in a clinical setting and the remainder in a management capacity. Their whole role will be considered as one classification.

CP3: Allocating costs to activities

Purpose: To ensure that the correct quantum of costs is allocated to the correct activity using the appropriate costing allocation method.

Objectives

1. To ensure resources are allocated to activities using a single appropriate method, ensuring consistency and comparability in collecting and reporting cost information, and minimising subjectivity.
2. To ensure costs are allocated to activities using information from an appropriate source.
3. To ensure resources are allocated to activities in a way that reflects how care is delivered to the patient.
4. To ensure relative weight values (RWVs) reflect how costs are incurred.

Scope

5. This standard should be applied to all costs reported in the cost ledger and all activities undertaken by the organisation.
6. This standard covers RWVs and how to identify and use traceable costs in the organisation.

Overview

7. The standardised costing process using resources and activities aims to capture cost information by reflecting how those costs are incurred.

8. After mapping from the general ledger to the cost ledger and resources, the costing process allocates resources to patients in two steps:
 - Step 1: allocate resources to activities (as explained in this standard)
 - Step 2: match costed activities to the correct patient event (as explained in Standard CP4: Matching costed activities to patients).
9. The allocation methods prescribed in the standards in most cases do not include an RWV for acuity or intensity. If you are using an RWV for acuity or intensity on top of the prescribed allocation method, continue to do this and record it in integrated costing assurance log (ICAL) worksheet 15: Superior costing methods.

Approach

Resources

10. Resources are the components used to deliver activities, such as staff, equipment, or consumable items. The costs of providing these resources are recorded in your general ledger, and the resource code prescribed by the standards groups these costs in themes.
11. In the standardised cost ledger (see Spreadsheet CP2.1) all patient-facing lines are mapped to resources. Once you have mapped your general ledger to the standardised cost ledger, you will get a subset of resources that your organisation uses from the list shown in Spreadsheet CP3.1.
12. The costs within a resource may contain overhead costs, as overheads are allocated to patient-facing resources to be allocated to activities (see Standard CP2 for more details). For example, the patient-facing nurse resource could include the costs of overheads, such as protective clothing, stationery and computer hardware purchase, HR, and finance costs.
13. The transparency of these costs – what they are and where they come from in the general ledger – should be maintained throughout the costing process⁴⁸.
14. Once these separated costs have been calculated, they can be aggregated to whatever level the resources have been set at, and you can be confident the

⁴⁸ In the national cost collection, the overheads are identifiable as separate pay support cost and non-pay support cost collection resources.

costs in each resource is accurate because it is underpinned by this costing process.

15. Spreadsheet CP3.1 lists the prescribed patient-facing resources to be used for the costing process. You are expected to use the most appropriate resource and not a generic resource to aggregate costs. For example, you are expected to use the physiotherapist and speech and language therapist resources, and not report all therapists' costs against the general therapist resource. The general resources are to be used only if there is no specific resource for that cost.
16. Columns I and J in Spreadsheet CP2.1 contain the mapping from each line in the cost ledger to the patient-facing resources. Use this information to identify the two-step prescribed allocation methods in Spreadsheet CP3.3.

Activities

17. Activities are the work undertaken by all resources to deliver the services patients require to achieve the desired outcomes, eg a procedure in theatre, pathology tests or a therapy session carried out in clinic.
18. Together, resources and activities form a two-dimensional view of the costs incurred to deliver activities. This can be displayed in a matrix shown in Table CP3.1.

Table CP3.1: Example of costs incurred to deliver a resource–activity combination in matrix form

Resource	Activity
	Day care
Speech and language therapists	£X
Community nurse	£X
Occupational therapist	£X
Physiotherapist	£X

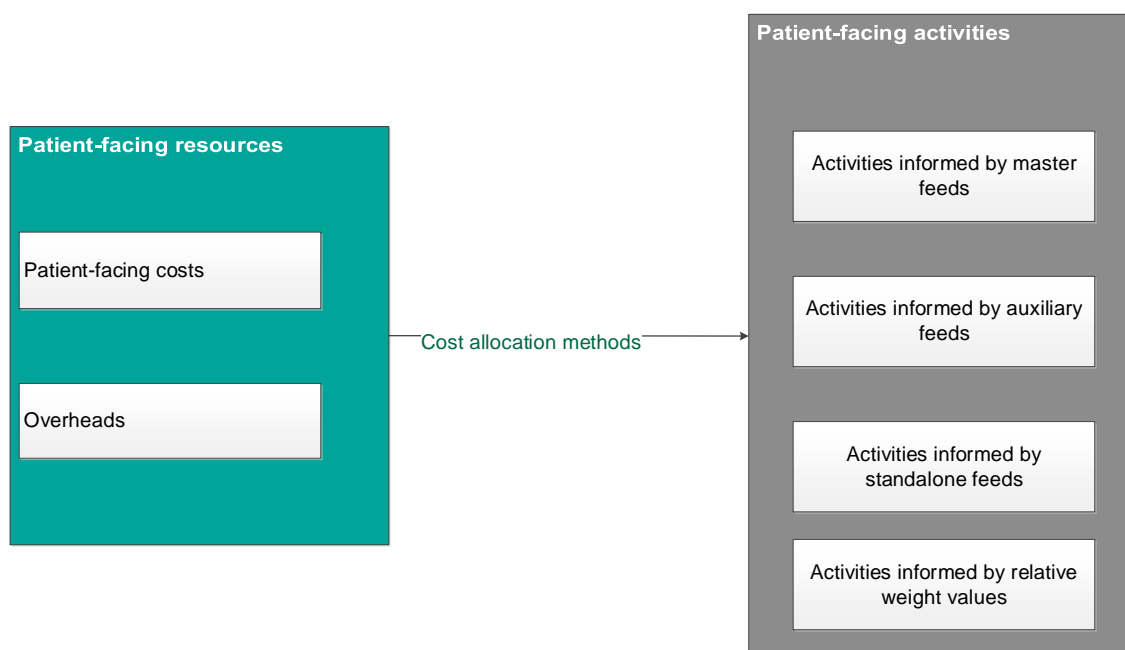
19. You need to identify all the activities your organisation performs from the prescribed list of patient-facing activities in column B in Spreadsheet CP3.2. You are expected to use the most appropriate activity. For example, audiology assessments should be reported using the 'audiology assessment' activity

rather than the 'outpatient care' activity, and for endoscopy use the 'endoscopy' activity rather than 'outpatient procedure' or 'theatre care'.

20. For non-admitted care, the activities prescribed for the community care sector is more specific than other sectors due to the lack of specificity in community care activity data. For example, for outpatient clinic activities for diabetes in an acute hospital, 'outpatient care' should be used as the activity; for diabetic care in a community setting, 'diabetic care' should be used. These more specific activities (by specialty) are for community care only. See Standard CM3 for more detail.
21. Some activities are informed by patient-level feeds; for example, the activity 'ward care' uses information from the ward stay feed (feed 4) for costing,⁴⁹ and the 'dispense all other medicine scripts' activity uses information from the medicines dispensed feed (feed 10) for costing.
22. Column F in Spreadsheet CP3.2 indicates which prescribed patient-level feed informs the activity, or if another information source is required where a patient-level feed is not prescribed.

Allocate resources to activities

Figure CP3.1: Extract from the costing diagram showing allocation of resources to activities



⁴⁹ Acute and community providers only. Mental health trusts may have the same data within their admitted patient care (APC) feed (feed 1b).

23. You need to use these prescribed resource and activity combinations in your costing system.
24. The resource and activity combinations used in the costing process for your organisation are identified by:
 - obtaining the list of resources for your organisation from mapping your general ledger to the cost ledger or mapping directly to resources (see Standard CP2: Clearly identifiable costs) and
 - identifying the list of activities performed by your organisation from the prescribed list (see Spreadsheet CP3.2).
25. You should ignore the resource and activity combinations in Spreadsheet CP3.3 for activities your organisation does not perform.
26. Resources need to be allocated to activities in the correct proportion before being allocated to each unit of activity. There are three ways to do this:
 - based on actual time or costs⁵⁰ from the relevant information feed prescribed
 - using RWVs created in partnership with the relevant departments
 - using a local information source, such as 'traceable costs'.
27. Where one resource needs to be apportioned to several activities, eg consultants delivering both inpatient and outpatient care, you need to determine what percentage of the cost to apportion, after discussions with clinicians and managers and supported by documented evidence where available (eg medical job plans). These splits and their basis should be recorded in ICAL worksheet 13: % allocation bases. Please note that this is a different process from disaggregating costs in your general ledger for mapping to the cost ledger.
28. As an example, the division for medical staffing costs shown in Figure CP3.2 disaggregates the cost ledger further to resource/activity level. The figure shows how this could look in the resource–activity matrix.

⁵⁰ The actual costs should be used as an RWV rather than a fixed cost.

Figure CP3.2: Example of how the cost in a resource (consultant) is apportioned to activities using relative weight values

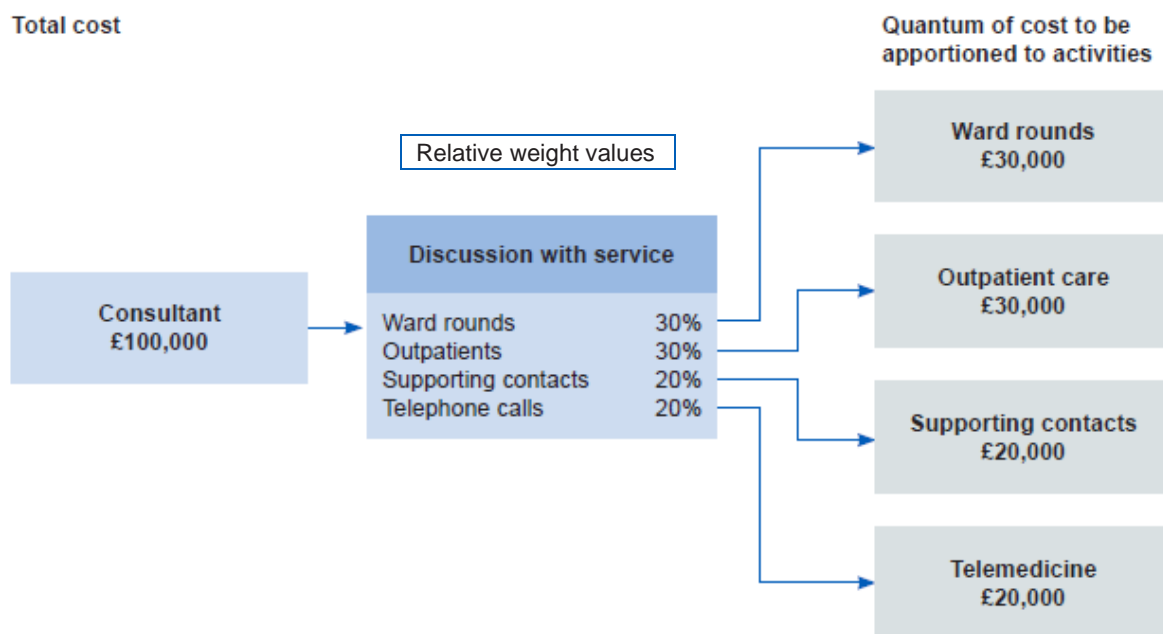


Table CP3.2: Example of a resource and activity matrix for a consultant, using the information in Figure CP3.2 for costing

Activity	Resource
	Consultant
SLA098: Ward rounds	£30,000
SLA135: Outpatient care	£30,000
SLA099: Supporting contacts	£20,000
SLA149: Telemedicine	£20,000
Total	£100,000

29. Use a RWV unless there is a local reason for applying a fixed cost.⁵¹

⁵¹ You should document this reason in the integrated costing assurance log (ICAL) worksheet 14: Local costing methods

30. Do not apportion costs equally to all activities without clear evidence that they are used in this way, and do not apportion costs indiscriminately to activities. You must allocate your patient-facing resources to the patient-facing activities using the methods in column F in Spreadsheet CP3.3.
31. Where the same cost driver is used for several calculations in the costing system, and providing the costs can be disaggregated after calculation, you can aggregate the calculations in your costing system to reduce calculation time. For example, if numerous costs on a ward use the driver length of stay, you can add them together for the cost calculation.
32. If you have a more sophisticated cost allocation method for allocating resources to their activities:
 - keep using it
 - document it in ICAL worksheet 15: Superior costing methods
33. Inform the NHSEI costing team. See Spreadsheet CP3.5 for the methods we have accepted as superior methods.⁵²
34. Some superior methods require a subset of resources.⁵³ For example, Acute standard CM1: Medical staff superior method SCM33 allocates actual payroll detail for medical staff. To do this, a resource below the standard level of resources is needed for each staff member. There is no requirement currently to adopt this method, but if you are already performing such detailed work, continue to do so and log it in ICAL worksheet 15: Superior costing methods.
35. We do not accept some cost allocation methods as superior to the prescribed methods. These include using income or national averages to weight costs.
36. The key cost drivers, such as length of stay, that inform the cost allocation methods can be obtained from the information feeds.
37. Investigate any costs not driven to an activity or any activities undertaken by your organisation that have not received a cost and correct these.

⁵² The list of superior methods has been developed from experiences of implementation across sectors. We would like to hear about any superior methods you are using.

⁵³ See Standard CP2: Clearly identifying costs – including Figure CP2.3: How *not* to map to the costing process elements.

Relative weight values

38. You should allocate all material costs based on actual usage or consumption using the prescribed allocation method and an information feed. However, where there is no information feed, or the costs are immaterial, you should use an RWV to allocate costs.
39. RWVs are a method of using appropriate source information as a proportional (%) weighting to distribute or 'drive' the allocation of cost. An example of an RWV is shown in Figure CP3.2. RWVs may be used to:
 - disaggregate costing account codes so the cost can flow to different resources in conjunction with the mapping to the cost ledger (see Standard CP2: Clearly identifying costs)
 - apportion overheads to resources (see Standard CP2: Clearly identifying costs)
 - apportion resources where resources deliver more than one activity (see Figure CP3.2 as an example)
 - allocate costs from resources to activities
 - attribute costed activities to patient events.
40. RWVs may contain information from various sources such as staff job plans, HR/electronic staff record data, interviews, floorplan measurements, catalogues of laboratory supplies and consumable costs. Income values and national cost averages should not be used as RWVs.
41. The information feeds will also provide the information needed to use RWVs in the costing process, such as actual medicine costs in the medicines dispensed feed.
42. You must develop and agree RWVs with the relevant service managers and healthcare professionals to ascertain all aspects of the costs involved and ensure these are as accurate as possible. You can also use traceable costs as RWVs.
43. Different costs will require different approaches to derive appropriate RWVs to support their allocation to patients. For example, a scan requires RWVs for:
 - review time per scan
 - contrast required per scan.

44. The approach should not be high level; for example, the measure should not be the average time to carry out a test or investigation and instead should be tailored to the particular activity. To do this you need to break down the activity into its component costs and measure the drivers of these individual costs.⁵⁴
45. One way to store the RWVs for use in your costing system is to use statistic allocation tables.
46. RWVs should be reviewed on a rolling programme or when a significant change occurs in the relevant department.

Traceable costs

47. Where the actual costs⁵⁵ of items are known, use them in the costing process as an RWV⁵⁶ to allocate costs to the activities (see Table CP3.3).
48. Items for which a traceable cost may be available include:
 - medicines, including high cost drugs
 - security – patient-specific cost of escorting using an external provider
 - patient appliances
 - pacemakers and other cardiac devices
 - hearing aids – bone-anchored, digital
 - theatre consumables.

Table CP3.3: Using traceable costs as a relative weight value

	Number of prostheses	Expected cost	Expected spend	Actual spend	Weighted spend ([expected spend/total expected spend] × actual spend)
Prosthesis A	5	1,000	5,000	Not known	4,091
Prosthesis B	12	500	6,000	Not known	4,909
Total			11,000	9,000	9,000

⁵⁴ We appreciate that some areas may not have defined and collected their activity types in this way. Work with the information you have and recommend development of improved activity recording over time, as this type of data can benefit understanding of patient care as well as the costing process.

⁵⁵ These actual unit costs are known as traceable costs.

⁵⁶ If an actual cost is applied, it is likely that costs will be over or under-recovered in the costing system, so actual traceable costs should be used as a relative weight value to allocate the costs.

49. If the value of the item is material to the cost of the patient and you want to use the actual cost, you must ensure it matches the value in the ledger. If there is under or over-recovery, you must use the cost as an RWV, as outlined above.
50. Some organisations may have local departmental databases or an inventory management system that record material cost components against individual patients which can be used in a supplementary feed. These traceable costs can be used in the costing process as a weighting to allocate the costs on a costing account code. See Standard CM21: Clinical non-pay items for more information.

Overheads

51. To allocate overheads in the correct proportion, you may need to identify RWVs by obtaining the relevant information from the departments, eg RWVs for actual whole time equivalent (WTE). Please see Learning Extension: Overhead Allocation for more details.

Complex relative weight values

52. Some cost areas will require RWVs that have more than one facet in the calculation of the proportional split for the cost allocation. This method combines cost drivers to make a multiple-layer statistical allocation table.
53. Supporting information for using information feeds in conjunction with RWVs for pathology and diagnostic imaging are included in Appendices 1 and 2 of the integrated costing process standards documents.⁵⁷ The process described in the pathology example below can be adapted for diagnostic imaging.

Other considerations

54. If you have already undertaken a sampling exercise in which you have calculated the RWVs to be used in the costing process, you can use this information. You should repeat this exercise at reasonable intervals to include technological, contractual, and cost changes.

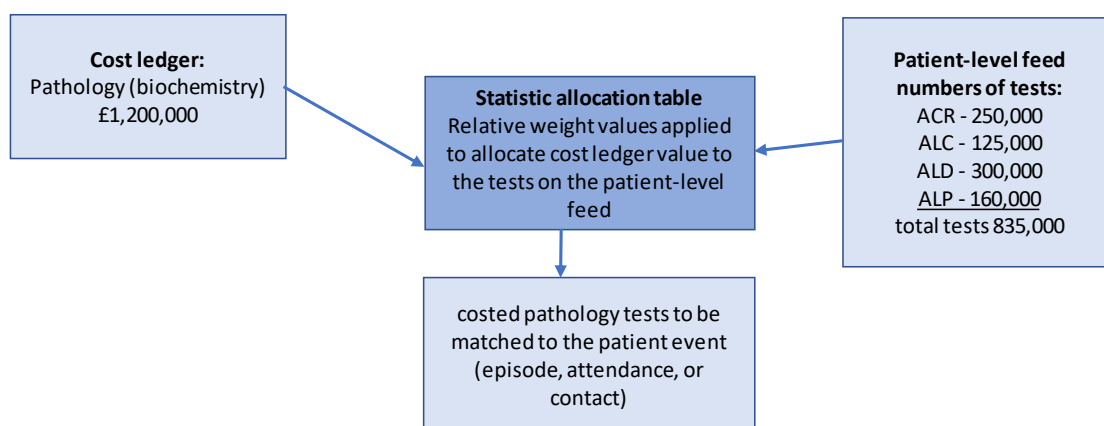
⁵⁷ Further information for pathology and diagnostic imaging is planned for 2021.

55. If your organisation contracts an external organisation to provide a clinical or non-clinical service, you may not have a patient-level feed or detailed information on the components of the service. See Standard CM8: Clinical and commercial services for information on how to treat the cost.

Example: Using a pathology relative weight value

56. The pathology feed (feed 8) includes the count of the number of tests undertaken, but for costing purposes, because more than one factor drives the cost, an RWV table needs to be developed to understand the resources used by each type of test.
57. Figure CP3.3 is an overview of the step-by-step process described below.

Figure CP3.3: Allocating the costs in the cost ledger for pathology using relative weight values



58. If this example were used as a simple RWV, the calculation would presume all the tests used resources at the same rate.

$$£1,200,000/835,000 = £1.44 \text{ per test.}$$

59. But the pathology manager identifies that two main factors drive the different resource use for these tests: time to do the test and number of staff required. The manager supplies the minutes per test and the number of staff required – as shown in Table CP3.5.

Table CP3.5: Information on resources required for selected tests

	Albumin: creatinine ratio	Alcohol (ethanol)	Aldosteron e	Alkaline phosphat e
Time (min) (x)	6	15	18	6.5
No of staff required (y)	2	1	1	2
Weighted time (x*y)	12	15	18	13
Relative weight value	1.2	1.5	1.8	1.3

60. Using this information, the costing system can calculate a more accurate cost per test to apply to activities.

Step 1: Derive the weighted activity for each test

61. Using the created RWVs, the number of tests can be weighted.

Table CP3.6: Weighted activity calculation

Code	Description	Relative weight value	Number of tests	Weighted activity
ACR	Albumin-to- creatinine ratio	1.2	250,000	300,000
ALC	Alcohol (ethanol)	1.5	125,000	187,500
ALD	Aldosterone	1.8	300,000	540,000
ALP	Alkaline phosphate	1.3	160,000	208,000
Total			835,000	1,235,500

Step 2: Calculate the weighted resource unit cost (WRUC)

62. The total resource value of £1,200,000 is allocated to the tests in proportion to their individual RWV as follows:

WRUC = total resource value / total weighted activity

£1,200,000/1,235,500 = £0.97

Step 3: Calculate the unit cost of each type of test

63. Multiplying the WRUC by each RWV gives the estimated unit cost for each test.

Table CP3.7: Unit cost calculation

Code	Description	Relative weight value	WRUC	Unit cost
ACR	Albumin: creatinine ratio	1.2	0.97	1.17
ALC	Alcohol (ethanol)	1.5	0.97	1.46
ALD	Aldosterone	1.8	0.97	1.75
ALP	Alkaline phosphate	1.3	0.97	1.26

64. The total resource value of £1,200,000 is allocated to the tests in proportion to their individual RWV as follows:

Step 4: Checking the result

65. The result can be checked by multiplying the number of tests by the unit costs. The total should equal the total resource value.

Table CP3.8: Checking the result

Code	Description	Unit cost	Activity	Total cost
ACR	Albumin-to-creatinine ratio	1.17	250,000	£291,380
ALC	Alcohol (ethanol)	1.46	125,000	£182,113
ALD	Aldosterone	1.75	300,000	£524,484
ALP	Alkaline phosphate	1.26	160,000	£202,023
Total			835,000	£1,200,000

Other information that may be factored into the relative weight values for pathology

66. Service areas may identify other factors that could be considered. For pathology they may include:
- Staff group/banding for different tests. The staff band should be identifiable in the costing system. Ensure the correct band is allocated to the activities.
 - Costs of associated consumable items such as reagents, and equipment (if material).
 - Equipment. High volume, automated machinery will have different cost drivers from smaller more traditional equipment:
 - maintenance per test is calculated as the total equipment maintenance cost for each machine divided by the number of tests it performs
 - depreciation per test is calculated in the same way as equipment maintenance, with the costs taken from the fixed asset register
 - costs for a 'sent away' pathology test – or parts of a test – are ascertained from invoices on the general ledger, with additional carriage costs (eg for dry ice) also taken into account; management accounts and the supplies department need to use identifiable ledger codes for these tests.

CP4: Matching costed activities to patients

Purpose: To achieve consistency in assigning costed activities to the correct patient event.

Objectives

1. To ensure consistent use of the prescribed matching rules.
2. To assign costed activities to the correct patient event – including episode, attendance, or contact.
3. To highlight and report source data quality issues that hinder accurate matching.

Scope

4. All costed activities should adhere to this standard.⁵⁸

Overview

5. Matching is integral to accurate patient-level costing. For an accurate final patient unit cost, the costed activities need to be matched to the patient episode, attendance, or contact in which they occurred, to show the different components of cost within a patient event.
6. The costing process allocates resources to patients in two steps:
 - Step 1: allocate resources to activities (explained in Standard CP3: Allocating costs to activities)

⁵⁸ Standard CP3: Allocating costs to activities identifies which patient-level activities are part of the matching process.

- Step 2: match costed activities to the correct patient episode, attendance or contact (explained in this standard).
7. Matching is not needed for activities where the allocation methods involves data from each patient event in the master feed, ie matching and cost allocation in the same process. In particular, matching is not needed for:
 - costed activities informed by the master feeds⁵⁹, eg costed ward care activities using the length of stay in the APC feed
 - costed activities informed by auxiliary feeds pre-matched with a master feed before the costing process starts, eg APC feed contains ward feed information.
 8. The costing process uses two approaches to match costed activities to patients, depending on the type of activity:
 - use the prescribed matching rules (specified in Spreadsheet CP4.1) for activities informed by an auxiliary patient-level feed, e.g. costed supporting contacts using the duration of attendance in the Supporting Contact feed
 - use the prescribed cost allocation methods (specified in CP3.3) for:
 - costed activities informed by the Standalone feeds, e.g. costed clinical MDT meetings using the duration of the meeting in the Clinical MDT feed
 - costed activities informed by relative weight values, i.e. where the activity feed is not available
 9. The prescribed matching rules ensure the relevant auxiliary information feeds can be attached to the correct patient episode, attendance or contact in the master feeds.
 10. Matching rules should be hierarchical⁶⁰ and strict enough to maximise matching accuracy, but not so rigid that any matching is impossible. Matching rules that are too lax risk false-positive matches occurring – that is, activity is matched to the wrong patient episode, attendance or contact.

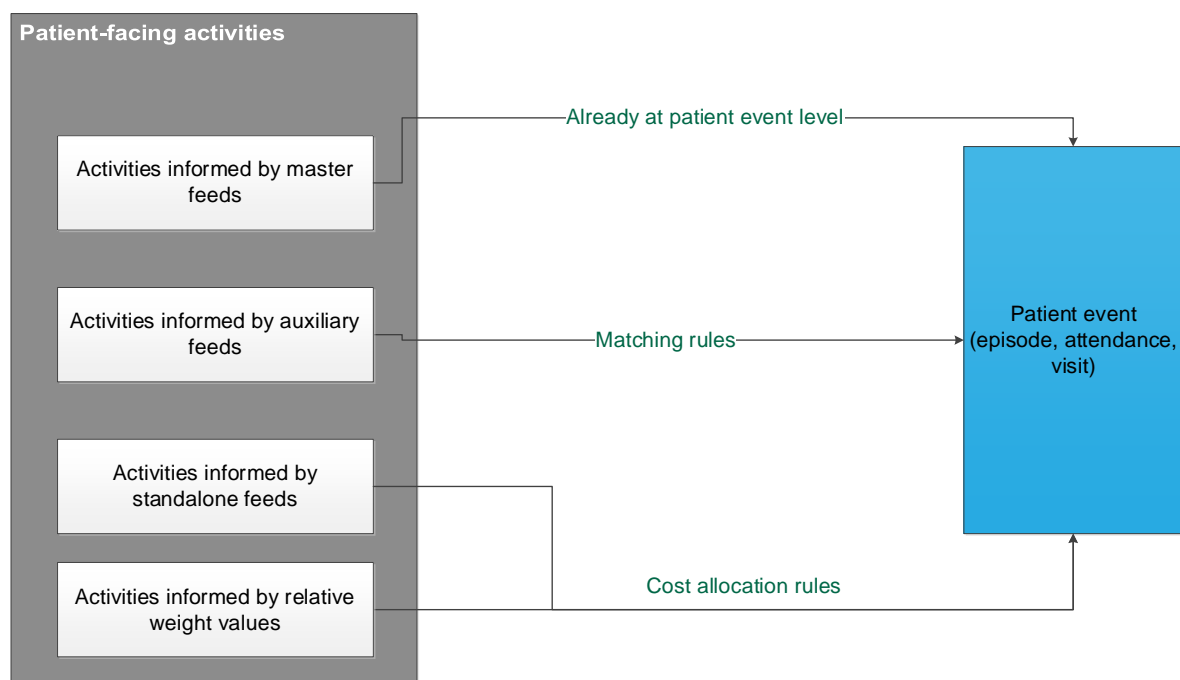
⁵⁹ See standard IR1: Information required for costing for details of master, auxiliary and standalone information feeds

⁶⁰ Match iteratively.

11. The matching hierarchy in the prescribed matching rules in Spreadsheet CP4.1 determines which master feed the auxiliary feed is matched to, and the order in which to identify the correct master feed.
12. Where there is a local unique identifier for patient and patient event across all types of service, this is matched first.
13. If a data feed contains the patient's point of delivery (PoD) or location, and this data field is considered robust, use this field to determine which core PAS dataset to match to. For example, if a patient is recorded as a non-admitted patient care (NAPC) feed (feed 3a), this patient's activity is first matched against the master outpatient (NAPC) dataset. If the PoD data field is considered robust, records should be matched to the NAPC dataset only, to avoid the risk of false-positive matches.
14. As the matching patterns for data feeds differ depending on the activities they contain, each has a distinct set of matching rules. Matching rules may vary in their hierarchies, date parameters or additional data fields used in the matching criteria.
15. Unmatched records should be reviewed.
16. The accuracy of which costed activities are matched using the prescribed matching rules depends on the quality of both the master feeds and the auxiliary feeds. Follow the guidance in costing extension: Managing information for costing, to support your organisation in improving data quality.

Approach

Figure CP4.1: Excerpt from the costing diagram showing matching costed activities to patient events



Using the prescribed matching rules

17. The unique identifier of patient and patient event (episode/spell/attendance/contact⁶¹) always generates the best match as this is unique to the patient and the relevant date range.⁶²
18. If your auxiliary data feeds are obtained from the PAS⁶³, and you can include the unique identifier of patient and patient event in the feeds, you should use this field to match to the master feeds.

⁶¹ In the Mental Health Services Data Set (MHSDS) for the APC feed (feed 1b) this is: 'local patient identifier (extended)', 'start date (care professional admitted care episode)' and 'end date (care professional admitted care episode)'; and for the NAPC feed (feed 3b): 'care contact identifier' and 'care contact date'. In some organisations, the care contact identifier will include the care contact date. If this is the case in your organisation, you do not need to add the care contact date again.

⁶² If there is more than one contact on one day, the ID should include this, whereas a simple aggregation of patient identifier and date will only reflect one contact on one day.

⁶³ We understand that some mental health organisations use 'ward stay' data as a separate auxiliary feed. It can be used if it provides more information than the MHSDS APC feed (feed 1b).

19. If your auxiliary feeds do not include the unique identifier of patient and patient event, you should use the prescribed matching rules in Spreadsheet CP4.1.
20. If your matching rules are more sophisticated than the prescribed matching rules and improve the accuracy of your matching, continue to use them, and record them in the integrated costing assurance log (ICAL) worksheet 29: Superior matching rules.
21. If an element of a prescribed matching rule would produce a false-positive match for a particular feed, adjust the rule to ensure a more accurate match and document this in ICAL worksheet 29: Superior matching rules.
22. Activities from non-integrated systems need to be matched to these groups of patients:
 - patients discharged during the costing period (APC feed)
 - patients not discharged and still in a bed at midnight on the last day of the costing period (APC feed)
 - non-admitted patient care (NAPC feed)
 - minor injury unit (MIU) or A&E attendances (urgent care (A&E/MIU) feed 2)
 - critical care stays (adult (feed 6c), paediatric (feed 6b) and neonatal (feed 6a) critical care feeds).
23. Some activities from non-integrated systems should not be matched:
 - those for patients not in the provider's care, including direct access and services received activity⁶⁴; however, there may be instances where such activities should be matched, eg diagnostic imaging for direct access physiotherapy
 - items such as replacement orthotics, homecare medicines or blood factor products for which there may be no corresponding patient event (although the organisation provides these, they can be sent directly to the patient's home) can have a proxy record created to match to (superior method) or these items should be recorded as 'reconciliation items'.
 - medicines dispensed from the pharmacy for a patient whose episode is already closed

⁶⁴ See standard CM8: Clinical and commercial services.

- medicines issued by the pharmacy but sent to another organisation without a patient contact,⁶⁵ even if the patient is under a care plan with your organisation
 - medicines dispensed from pharmacy to patients who did not attend (DNA) or who were not brought (WNB) to clinic
24. Medicines supplied to patients at home under a homecare arrangement should be matched to a proxy patient event, using the date the medicines were dispensed. These medicines are administered at patient level, so can be included in the medicines dispensed feed (feed 10). See Standard IR1 for details.
25. There are no prescribed matching rules for the following master feeds:
- Feed 6d: Critical Care transport
 - Feed 16: Improving access to psychological therapies data set
 - Feed 19b: Wheelchair equipment.
26. There are no matching rules for these feeds as these services are not anticipated to have a need for auxiliary feed matches. However, if you have information that requires matching one of these feeds, you can add them to the matching rules hierarchy. Please contact us so we can work with you to develop the matching rules.
27. Not all organisations have or need separate feeds for some activity. For example, for mental health organisations, the MHSDS APC feed contains ward information, and the Community Services Data Set (CSDS) care contacts feed contains DNA information, so no matching is needed.
28. Direct access activity must be correctly identified using the direct access flag in column D in Spreadsheet IR1.2 to avoid it being incorrectly matched to other episodes or attendances for that patient. For example, giving all direct access patients a hospital patient identifier risks the incorrect matching of activity other than own-patient care to an episode, attendance or contact with the same patient identifier. An incorrect match could be made if a patient has previously been a patient at the organisation and their hospital patient identifier is applied to the direct access activity.

⁶⁵ For more guidance on how to cost patient-specific medicines, see Standard CM10: Pharmacy and medicines.

29. Clinical services supplied activity contracted to another organisation must be correctly identified using the 'contracted out flag' indicator in column D in Spreadsheet IR1.2 to avoid being incorrectly matched to episodes or attendances.
30. The rules to identify and correctly treat direct access and services purchased from another organisation activities are included in the prescribed matching rules.⁶⁶

Matching hierarchy used in the prescribed matching rules

31. You only need to follow those steps relevant to your organisation. For example, if your organisation does not provide A&E services, start at the next relevant service and so on through the steps in order.
32. All the feeds with prescribed matching rules in Spreadsheet CP4.1 follow the hierarchy described below. The hierarchy is adjusted slightly for each feed to reflect how the service is provided, but the principle is that for all sectors the matching feed is matched first to A&E attendances (including MIU, feed 2) and then to:
 - A&E activity on an observation ward (APC feed 1a)
 - MIU activity on an observation ward (APC feed 1a)
 - critical care – adult (adult critical care feed 6c)
 - critical care – paediatrics (paediatric critical care feed 6b)
 - critical care – neonatal (neonatal critical care feed 6a)
 - APC (APC feed 1a, feed 1b)
 - NAPC (NAPC feed 3a, feed 3b, feed 3c, feed 3d, feed 3e)
 - unmatched to the treatment function code (TFC)
 - if the TFC is missing, to the providing department.
33. In addition to this hierarchy, you should search first 24 hours before and after the exact date, and then expand the search timeframe by 24-hour increments up to 720 hours either side of the delivery dates increase the chance of a match.

⁶⁶ For more guidance on how to treat direct access and clinical/commercial activities, see Standard CM8: Clinical and commercial services.

34. The prescribed matching rules contain conditional criteria, which should be followed in the order shown on spreadsheet CP4.1 - Matching ID column.
35. The matching process should then search again without the conditional criteria, incorporating the final prescribed matching elements.
36. If you have (or develop) other auxiliary feeds, these should be matched after the mandated feeds, to ensure the prescribed matching to the master feeds is completed first.

Using the prescribed cost allocation methods in matching

37. For patient-facing activities not informed by a patient-level feed, eg where relative weight values are used in cost allocation, use the prescribed cost allocation methods in column F in Spreadsheet CP3.3 to match (or allocate) the costs to the relevant patient events.
38. For costed activities informed by the standalone activity feeds, no matching rules are prescribed, and the prescribed allocation methods in Spreadsheet CP3.3 should also be followed:
 - Feed 5: NAPC – did not attend (DNA) feed – including was not brought
 - Feed 14: Cancer multidisciplinary team (MDT) meetings feed.

Other considerations

39. Some costed activities will not match because either the activity took place too long before the episode, attendance or contact, eg a diagnostic imaging scan that was done more than 720 hours (30 days) before the connected NAPC contact, or the quality of the information in the activity feed is so low that an appropriate match cannot be found. As stated above, unmatched activity should be reviewed.
40. Develop a list of 'unlikely matches' to be included in the matching rules for your organisation, to ensure that costs for certain activities are correctly assigned to episodes. For example, medicines that are never used by certain specialties should never be assigned to episodes within those specialties,

even if other matching criteria are fulfilled. Engagement with clinicians, the pharmacy team and other staff will help you identify these 'unlikely matches'.⁶⁷

41. Your costing system should produce a report of the matching criteria used in the system, as described in Standard CP5: Reconciliation, report CP5.1.8 in Table CP5.1.
42. Review is necessary because if costed activities are matched on the least stringent criteria, work is needed to improve data quality so that activity can be matched more accurately. You should have a rolling programme to review this.

Reporting unmatched activity for local business intelligence

43. Unmatched activity should be reported to the PLICS steering group. The report should identify items that are expected unmatched activity (including direct access and homecare without proxy records) and the unexpected unmatched activity.
44. Organisations have traditionally treated the cost of unexpected unmatched activity in different ways. Most commonly, it was absorbed by matched activity, which could have a material impact on the cost of matched activity, particularly when reviewing the cost at an individual patient level for comparison with peers and tariff calculation.
45. For local reporting purposes, we recommend you do not assign unmatched activity to other patient events.
46. To achieve consistent and comparable costing outputs, unexpected unmatched activity should be treated consistently across organisations. We suggest applying the following rules for any unmatched activity:
47. If the specialty that ordered the item can be identified, but the item cannot be matched to a patient event, the cost sits in the specialty under unmatched items. It should not be matched to the other patients within that specialty.
48. If the specialty that ordered the item cannot be identified, the cost sits in the providing department under unmatched items. Likewise, the cost should not be matched to the patients within the most likely specialty. For example, if a pathology test cannot be matched to a patient event and the requesting

⁶⁷ You will need to work with your costing software supplier to ensure regular reporting of these items is possible and have a process in place to audit/amend any erroneous matches.

specialty (eg cardiology) cannot be identified, the unmatched activity is reported under the pathology service line, as this is the department that provided the service. This data should be discussed with the department to improve the understanding of data quality in the feed.

49. If reported unmatched activity forms a material part of an organisation's expenditure, this is likely to be due to inadequate source data. As this issue will deflate the patient unit cost, it needs to be identified and steps taken to improve the quality of the source data, rather than artificially inflating the patient unit cost by allocating unmatched activity.⁶⁸ Please follow the guidance in costing extension: Managing information for costing to support your organisation in improving its data quality.
50. Tables CP4.1 and CP4.2 show how unmatched activity could be reported to assist business intelligence.

Table CP4.1: Example of unmatched activity costs (in blue text) within a specialty

Specialty: Medical oncology	
Total activity	Total resource cost
Inpatient care – core episodes	£X
Critical care for oncology patients	£X
Outpatient care	£X
Cancer MDTs	£X
Unmatched activity identified as oncology but unable to match to individual patients	£X
Total	£X

⁶⁸ See Standard CM2: Incomplete patient events, for guidance on matching auxiliary feeds to incomplete patient events and how to treat diagnostics that were performed in a different costing year.

Table CP4.2: Example of unmatched activity costs (in blue text) within a providing department

Department: Pathology	
Total activity	Total resource cost
Cardiac service	£X
Medical oncology service	£X
Dermatology service	£X
Critical care service	£X
Unmatched activity unable to be allocated to a specialty or patient	£X
Total	£X

CP5: Reconciliation

Purpose: To set out process for reconciling costs and income to the organisation's accounts, and to reconcile the activity counts reported by the organisation.

Objectives

1. To ensure the cost and income outputs from the costing system reconcile to the organisation's accounts.
2. To ensure the activity outputs from the costing system reconcile to what the organisation is reporting.

Scope

3. This standard covers all costs, income and activity included in the costing process.

Overview

4. All the costing process outputs must reconcile to the information reported to the board, and in the final audited accounts. This ensures a clear link between these outputs and the costs and activity information captured in the source data.

Approach

Reconciliation of cost, income and activity

5. The costs, income and activity outputs must reconcile to the main sources of this information, the general ledger output and the organisation's reported financial position.⁶⁹ For example, if your organisation reports XX non-admitted

⁶⁹ See Standard CP2: Clearly identifying costs for guidance on where adjustments may be made between the general ledger output and the cost ledger, to be included in your reconciliation.

patient care (NAPC) contacts in any costing period, your activity costing outputs should reconcile to this. To avoid any reconciliation differences due to timing, the patient-level feeds used in the costing process and those reported by the organisation should be created at the same time.

6. To demonstrate that the costing system's outputs reconcile to the main sources of cost, income and activity information, use the reports detailed in Table CP5.1. The reports must be available from the costing system.

Table CP5.1: Cost, income and activity reconciliation reports

Report number	Report name	Report purpose
CP5.1.1	Input accounting reconciliation	Enables the totals for the cost ledger and income ledger to be reconciled to the monthly statement of comprehensive income (SOCl) reported by the provider board for the period reported on, as well as to the final audited accounts at the year end.
CP5.1.2	Internal reporting reconciliation	Shows the costs from the monthly, quarterly or annual report reconciled to the costs reported in the costing system. Clear records must be kept of any adjustments leading to differences between them, both for internal purposes and to provide a clear audit trail.
CP5.1.4	Output accounting reconciliation	To check that the final costing outputs reconcile to those in the provider board reports and the audited annual accounts, with the option in the costing system to amend values for any post-closure adjustments, thereby ensuring that the final costing outputs can be reconciled to these earlier reports.
CP5.1.5	Adjustments and exclusions report	To document all the adjustments and exclusions to the total quantum. This must also be reconcilable annually to the final audited accounts to provide assurance when submitting data for mandatory cost collections.
CP5.1.7	Cost centre and classification reports	To provide assurance to users of cost information that all appropriate costs are accounted for as part of the costing process. These reports must be available at the levels of the cost centre, expense code and pay/non-pay/income.
CP5.1.8	Matching criteria	To show the matching criteria being used in the system to identify how many records are using which level hierarchy in the prescribed matching rules in Spreadsheet CP4.1.
CP5.1.9	Unmatched activity	Costed activities that could be matched to a specialty but not to a patient within that specialty and costed activities that could not be matched to a specialty or a patient.

Report number	Report name	Report purpose
CP5.1.10	Cost group reconciliation	When the costing process is complete, to enable the costs within the five cost groups referenced in Standard CP5: Reconciliation, to be reconciled to the cost ledger, with the total cost within these cost groups being equal to the total cost ledger.
CP5.2.1	Core activity reconciliation	To show the core episode and attendance activity used in the costing model reconciled to the original source data, as well as to an external source such as HES or SUS data, with all exclusions and amendments clearly recorded and explained.
CP5.2.2	Patient event activity reconciliation	To show patient event activity used in the costing model – eg pathology tests, bed days, theatre minutes or radiology scans – reconciled to the initial data feeds, with all exclusions and amendments clearly recorded and explained.
CP5.2.3	Board report reconciliation	To enable reconciliation of episode and attendance activity used in the costing model to the board report based on the PoD: eg day cases, elective inpatients, outpatient first attendances. This activity must also be reconciled to the outputs of the costing system to ensure that all activity has been processed.
CP5.2.4	Full cost reconciliation	A reconciliation report showing all the activities that have been loaded into the costing system fully costed as part of the outputs of the costing model.
CP5.2.5	Timing differences reconciliation	If differences in the timing arise between capturing the activity in the costing system and the activity reported by the provider, a clear record must be kept so these differences can be explained. To avoid these timing differences, it is good practice to use a dataset for provider reporting produced on the same day as that to be used in the costing system. For example, both should use either the Day 5 or Day 20 datasets referenced in Table IR2.1 in costing extension: Managing information for costing.
CP5.2.6	Output activity reconciliation	Reconciliation should be performed by the costing team to demonstrate that the activity from the source datasets matches the outputs of the costing system, with the exception of any legitimate – and documented – adjustments or exclusions. This reconciliation report should encompass activity feeds received from the informatics team, data warehouse or equivalent, as well as any activity data captured and reported manually.
CP5.2.7	Non-NHS patient report	All activity that does not relate to NHS patients should be clearly identifiable and reportable to enable the use of the costing system to complete a reference costs return.

7. To support reconciliation and reporting, once the costing model is fully processed the costs associated with patients and other cost groups should be categorised into the cost groups listed in Table CP5.2.

Table CP5.2: Cost groups

Cost group	Examples
Own-patient care	<p><i>National Cost Collection included services</i></p> <ul style="list-style-type: none"> • incomplete patient events • all cancer MDT meetings where your organisation’s patients are discussed • other MDT meetings <p><i>Services performed by another NHS Provider</i></p> <ul style="list-style-type: none"> • clinical services received (such as capacity purchased from private inpatient organisations) <p><i>Patient care outside the NHS</i></p> <ul style="list-style-type: none"> • private patients, overseas visitors, non-NHS funded patients and patients funded by the Ministry of Defence
Activities other than patient care	<ul style="list-style-type: none"> • Costs relating to Research & Development in the organisation • Costs relating to Education & Training in the organisation
Other activities	<p><i>National Cost Collection included services</i></p> <ul style="list-style-type: none"> • direct access services where the patient is referred from primary or community care for assessment only, but the care remains with the GP/community organisation • screening programmes • critical care transport where patient not brought to your organisation • external cancer multi-disciplinary teams where your organisation’s patients are not discussed <p><i>Services performed by another NHS Provider</i></p> <ul style="list-style-type: none"> • clinical services supplied, such as pharmacy services supplied to another provider • commercial activities <p><i>Services excluded from the National Cost Collection</i></p> <ul style="list-style-type: none"> • local authority care • primary care services • national programmes such as Scan4Safety

Cost group	Examples
Cost and activity reconciliation items ⁷⁰	<p data-bbox="528 271 1123 302"><i>Services performed by another NHS Provider</i></p> <ul data-bbox="469 315 1353 560" style="list-style-type: none"> <li data-bbox="469 315 1353 448">• cost to provide agreed resources to an external body with no responsibility for delivering a service to a commissioner, eg a provider-to-provider service-level agreement, including national programmes <li data-bbox="469 456 1353 560">• cost to employ a staff member, such as a youth worker, for activity undertaken by the local council and the provider is unable to include it in the costing system <p data-bbox="528 598 842 629"><i>Accounting adjustments</i></p> <ul data-bbox="469 636 900 667" style="list-style-type: none"> <li data-bbox="469 636 900 667">• grants or donations received <p data-bbox="528 705 1209 736"><i>Services excluded from the National Cost Collection</i></p> <ul data-bbox="469 743 1126 817" style="list-style-type: none"> <li data-bbox="469 743 1126 775">• homecare medicines including factor products <li data-bbox="469 784 807 817">• homecare appliances

8. Where your organisation is commissioned to provide an activity, but this activity occurs outside your organisation and is recorded by an external body, you should obtain this information and include it in your organisation's costing data. If you cannot obtain the activity data, report the cost in reconciliation items.
9. Reconciling cost and activity have the following benefits:
 - patient unit costs reflect the true cost of treatment, undistorted by provider-incurred costs that are unrelated to the organisation's own-patient activity
 - the true cost is more appropriate for comparison between peers, as these costs can significantly affect cost reporting by different providers.

Proxy records

10. Proxy records may be generated for services that do not keep a record of patient contacts for information governance purposes; see costing extension: Managing information for costing⁷¹.
11. You should ensure that proxy records are included in the activity reconciliation.

⁷⁰ Includes activity for which there is no corresponding cost and costs for which there is no corresponding activity.

⁷¹ Costing extension documents can be found at <https://www.england.nhs.uk/approved-costing-guidance/>

Services with sensitive/legally restricted data requirements

12. You will need to consider pseudonymising data for services with sensitive/legally restricted data. Some services have extra levels of required information governance because the legal data holding regulations and patient consent differ for them.
13. **'A'** patient rather than **'the'** patient will need to be costed. The reconciliation of both cost and activity with other trust records will need to take this into account.

Appendix 1: Data sources available as part of a national collection

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
1	a	Admitted patient care (APC)	Admitted Patient Care Commissioning Data Set (CDS)	<p>This dataset details data for finished and unfinished consultant, midwife and nursing episodes.</p> <p>The list of the fields included in the CDS dataset can be found in the Data Dictionary (see supporting information link)</p>	www.datadictionary.nhs.uk/web_site_content/cds_supporting_information/commissioning_data_set_version_6-2_type_list.asp?shownav=1
1	b	Admitted patient care (APC) (mental health)	Mental Health Services Data Set (MHSDS)	<p>The MHSDS is a patient-level, output-based, secondary uses dataset that delivers robust, comprehensive, nationally consistent and comparable person-based information for children, young people and adults who are in contact with mental health services. As a secondary uses dataset it intends to reuse clinical and operational data for purposes other than direct patient care.</p>	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/mental-health-services-data-set
2		Urgent care (A&E/MIU)	A&E Commissioning Data Set (CDS)	<p>The dataset details data for A&E attendances for acute providers.</p>	http://www.datadictionary.nhs.uk/data_dictionary/messages/cds_v6-2/data_sets/cds_v6-2

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
				<p>The list of the fields included in the dataset can be found in the Data Dictionary (see supporting information link).</p> <p>The applicable CDS type is: 010 – Accident and emergency CDS.</p>	2_type_010 - accident and emergency cds fr.asp?shownav=1
3	a	Non-admitted patient care (NAPC)	Outpatient Commissioning Data Set (CDS)	<p>This dataset details data for outpatient attendances/appointments for acute providers. The data includes activity for consultant, nurse and midwife attendances/appointments. Ward attendances for nursing care are also included in this extract.</p>	http://www.datadictionary.nhs.uk/data_dictionary/messages/cds_v6-2/data_sets/cds_v6-2_type_020 - outpatient cds fr.asp?shownav=1
3	b	Non-admitted patient care (NAPC) (mental health)	Mental Health Services Data Set (MHSDS)	<p>The MHSDS is a patient-level, output-based, secondary uses dataset that delivers robust, comprehensive, nationally consistent and comparable person-based information for children, young people and adults who are in contact with mental health services. As a secondary uses dataset it intends to reuse clinical and operational data for purposes other than direct patient care.</p>	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/mental-health-services-data-set
3	c	Non-admitted patient care (NAPC)	Community Services Data Set (CSDS)	<p>The CSDS is a patient-level, output-based, secondary uses dataset that will deliver robust, comprehensive, nationally consistent and comparable person-centred information for people who are in contact with publicly-funded community services. As a secondary</p>	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/community-services-data-set

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
				<p>uses dataset it intends to reuse clinical and operational data for purposes other than direct patient care. It defines the data items, definitions and associated value sets to be extracted or derived from local systems.</p> <p>The CSDS is an update to the Children and Young People's Health Services (CYPHS) dataset standard (ref: SCCI1069) so the scope includes data for people of all ages in receipt of publicly-funded community services.</p>	
3	d	Community Midwifery	Maternity Services Data Set (MSDS)	<p>As a secondary uses data set MSDS re-uses clinical and operational data for purposes other than direct patient care. It defines the data items, definitions and associated value sets extracted or derived from local information systems and sent to NHS Digital for analysis purposes.</p> <p>The MSDS defines the care for pregnancy, delivery and post natal care.</p>	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/maternity-services-data-set
3	e	Home births	Maternity Services Data Set (MSDS)	<p>As a secondary uses data set MSDS re-uses clinical and operational data for purposes other than direct patient care. It defines the data items, definitions and associated value sets extracted or derived from local information systems and sent to NHS Digital for analysis purposes.</p>	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/maternity-services-data-set

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
				The MSDS defines the care for pregnancy, delivery and post natal care.	
6	A	Critical care – neonatal	Neonatal Critical Care Minimum Data Set (NCCMDS)	<p>NCCMDS (also called ‘Badgernet’) details the data required to enable the assignment of healthcare resource groups (HRGs) to neonatal episodes of care.</p> <p>The list of the fields included in the dataset can be found in the Data Dictionary (see supporting information link).</p> <p>The applicable CDS types are:</p> <ul style="list-style-type: none"> 130 – Finished general 190 – Unfinished general 	http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/neonatal_critical_care_minimum_data_set_fr.asp?shownav=1
6	B	Critical care – paediatric	Paediatric Critical Care Minimum Data Set (PCCMDS)	<p>PCCMDS (also called ‘PICANet’) is the minimum dataset that is required to allow the assignment of paediatric critical care HRGs.</p> <p>The list of the fields included in the dataset can be found in the Data Dictionary (see supporting information link).</p> <p>The applicable CDS types are:</p> <ul style="list-style-type: none"> 130 – Finished general 190 – Unfinished general 	http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/paediatric_critical_care_minimum_data_set_fr.asp?shownav=1

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
6	C	Critical care – adult	Critical Care Minimum Data Set (CCMDS)	<p>This dataset is required to support the assignment of critical care HRGs, excluding neonates and paediatrics.</p> <p>The list of the fields included in the dataset can be found from the Data Dictionary (see supporting information link).</p> <p>The applicable CDS types are:</p> <ul style="list-style-type: none"> 120 – Finished birth 130 – Finished general 140 – Finished delivery 180 – Unfinished birth 190 – Unfinished general 200 – Unfinished delivery 	http://www.datadictionary.nhs.uk/data_dictionary/messages/supporting_data_sets/data_sets/critical_care_minimum_data_set_fr.asp?s_hownav=1
10		Medicines dispensed	Pharmacy e-prescribing systems and High-cost drug information collected by NHS England Specialist Services	Data collection sheets to enable the consistent exchange of patient-level information between provider and commissioner in support of the commissioning of devices and drugs excluded from the national tariff.	https://www.england.nhs.uk/publication/devices-and-drugs-taxonomy-and-monthly-dataset-specifications/

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
12		Diagnostic imaging	Diagnostic imaging dataset	This dataset contains information from the radiology system, such as the type of test, the source of referral and patient details. Further information about the dataset can be found on our website (see supporting information link)	www.england.nhs.uk/statistics/statistical-work-areas/diagnostic-imaging-dataset
14		Clinical multidisciplinary team (MDT) meetings	National Cancer Waiting Times Monitoring Data Set	This is a patient-level clinical and administrative dataset used for various access targets.	http://www.datadictionary.nhs.uk/data_dictionary/messages/clinical_data_sets/data_sets/national_cancer_waiting_times_monitoring_data_set_fr.asp?shownav=1
14		Clinical multidisciplinary team (MDT) meetings	Cancer Outcomes and Services Data Set (COSD)	You can register to obtain details of your COSD submission for cancer MDTs.	https://nww.cancerstats.nhs.uk
14		Clinical multidisciplinary team (MDT) meetings	Somerset Cancer Registry (SCR)	SCR is a software application designed to collect relevant data throughout the patient's cancer journey.	http://www.somersetscr.nhs.uk/
15		Prostheses and other high-cost devices	National Joint Registry	Orthopaedic prostheses used in elective patients.	http://www.njrcentre.org.uk/njrcentre/default.aspx
16		Improving Access to Psychological Therapies (IAPT)	Improving Access to Psychological	The IAPT dataset was developed to collect national data on IAPT services, to support service delivery, inform clinical decision-	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/improving-

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
			Therapies Data Set	making and encourage improved access to talking therapies for people with common mental health problems such as depression and anxiety disorders. Started in April 2012, this dataset is submitted by providers of NHS-funded IAPT care via the NHS Digital Bureau Service Portal.	access-to-psychological-therapies-data-set
18		Dentistry	Dentistry dataset	<p>NHS community dentistry is commissioned by CCGs from community NHS and private dental practices and NHS community provider organisations. The community dental activity is recorded and sent to NHS Digital for inclusion in the NHS Dental Statistics.</p> <p>Dental hospitals and outpatients as part of an acute provider are recorded using the Commissioning Data Set (CDS) and are not included in this feed or the NHS Dental Statistics.</p>	https://digital.nhs.uk/data-and-information/publications/statistical/nhs-dental-statistics
19	a	Wheelchair contacts	National Wheelchair Data Collection	This dataset is collected quarterly at aggregate level. There should be an underlying local dataset to fulfil this return.	https://www.england.nhs.uk/publication/wheelchair-services-national-wheelchair-data-collection-guidance/
19	b	Wheelchair equipment	National Wheelchair Data Collection	This dataset is collected quarterly at aggregate level. There should be an underlying local dataset to support this return	https://www.england.nhs.uk/publication/wheelchair-services-national-wheelchair-data-collection-guidance/

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
19	a and b	Wheelchair currencies	National Wheelchair Data Collection	The data items required to create the currency information will be available in the underlying local dataset	https://www.england.nhs.uk/publication/wheelchair-services-national-wheelchair-data-collection-guidance/
Other			Chlamydia Testing Activity Dataset (CTAD)	CTAD is used to provide detailed reports at a national and local level on screening coverage, the proportion of chlamydia tests that are positive and the chlamydia detection rate in England.	https://www.gov.uk/guidance/chlamydia-testing-activity-dataset-ctad
Other			Sexual and Reproductive Health Activity Data Set (SRHAD)	SRHAD came into effect on 1 April 2010. It consists of anonymised patient-level data submitted on an annual basis. SRHAD replaces the annual, aggregate KT31 return and provides a much richer source of contraceptive and sexual health data for a range of uses from commissioning to national reporting.	http://content.digital.nhs.uk/datacollections/srhad
Other			Genitourinary Medicine Clinic Activity Data Set (GUMCADv2)	GUMCADv2 is a mandatory reporting system providing data on sexual health services and STI diagnoses from all commissioned Level 3 and Level 2 sexual health services in England. It is an electronic, pseudo-anonymised, patient-level dataset reported by over 600 services.	https://www.gov.uk/guidance/genitourinary-medicine-clinic-activity-dataset-gumcadv2
Other			HIV and AIDS Reporting System (HARS)	HARS is the dataset underpinning national HIV surveillance. It is used to: inform the	http://content.digital.nhs.uk/media/22774/1570202015guidance/pdf/1570202015guidance.pdf

Feed number	Feed letter	Feed name	Data source	Description	Supporting information link
				public health response and policy formulation for HIV in England.	
27			Maternity Services Data Set (MSDS)	MSDS Information Standards Notice (ISN) that mandates the national collection of the MSDS is available via the former ISB web pages. A corrigendum that makes some minor corrections to the original ISN is also available on the Standardisation Committee for Care Information (SCCI) web pages. The ISN required that maternity information systems must be fully conformant with the standard by 1 November 2014. Maternity service providers must collect data locally from 1 November 2014, and central submissions started from 1 June 2015 (for April 2015 data).	https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/maternity-services-data-set#how-do-i-submit-the-data

Appendix 2: GL to CL mapping method by costing process theme.

Table CP2.4 Mapping Method by Theme.

	Method Two – Full	Method One - Essential
Mapping to overheads resources	Each unique combination of cost centre and expense code forms a 'costing account code'. This enables simple identification of the correct overheads or costing resource and associated allocation method.	There is no requirement to apply the costing account code to the GL and therefore identification of the appropriate apportionment method will require working backwards from the collection resource for those not derived from activity.
Disaggregating cost lines	Where the cost on a GL cost centre and expense code combination relates to more than one resource, you will need to disaggregate that combination, so the cost can be allocated to the correct costing resource in the prescribed manner.	Where the cost of GL costs relates to more than one collection resource, you will still need to disaggregate the costs, so they can be allocated to the correct collection resource in the prescribed manner.

<p>Availability of more granular cost categorisation</p>	<p>The method 2 process allows more detailed cost allocation methods to be prescribed in Spreadsheets CP2.2, CP3.3 and CP3.4 to suit the nature of the different costs. The CL enables the process to be followed in a streamlined manner, to allocate overheads, and patient-facing costs respectively.</p>	<p>The list of overhead codes in CP2.2. provides enough granularity to apply the prescribed allocation methods for overheads.</p> <p>The list of collection resources provides enough granularity for the prescribed allocation methods in CP3.3 and CP3.4 to be implemented. That is, between each collection resource and collection activity only one allocation method is prescribed but it will require a mapping table between resources and collection resources. The cost allocation methods prescribed in Spreadsheets CP2.2, CP3.3 and CP3.4 need to be followed to allocate overheads and patient-facing costs respectively.</p>
<p>Transparency of the costing process</p>	<p>The CL shows the categorisation type (patient facing and overhead) of each cost centre code⁷² to aid understanding. This shows the types have different allocation methods.⁷³</p>	<p>Nuances of mapping to the collection resources to the category of cost centres (PF, overhead) to show they types have different allocation methods may be lost. You should ensure you have a local method to understand this.</p>

⁷² In determining the cost categorisation, both the nature of the cost and the allocation method have been considered.

⁷³ Other categories identify balance sheet codes, income, research & development, and education & training.

Cost classification	Each costing account code has a classification (fixed, semi-fixed and variable) to enable understanding of the nature of cost behaviour over time, and so aid decision-making.	There is no national mapping of the GL or collection resources to the classification of costs (eg fixed, semi-fixed and variable) used in method 1 but it is important to ensure this is done locally.
----------------------------	--	--

Appendix 3: Relative weight values specification – Pathology

Pathology process	Field name	Full field name
Data requirements	Investigation code	Data requirements – investigation code
	Investigation name	Data requirements – investigation name
	Lab department	Data requirements – lab department
	Sent away or in-house	Data requirements – sent away or in-house
Preparation	Band	Preparation – band
	Time (min)	Preparation – time (min)
	Cost ledger code	Preparation – cost ledger code
	Resource	Preparation – resource
Running of the test	Band	Running of the test – band
	Time (min)	Running of the test – time (min)
	Cost ledger code	Running of the test – cost ledger code
	Resource	Running of the test – resource

Reviewing the test	Band	Reviewing the test – band
	Time (min)	Reviewing the test – time (min)
	Cost ledger code	Reviewing the test – cost ledger code
	Resource	Reviewing the test – resource
Consultant review	Time (min)	Consultant review – time (min)
	Cost ledger code	Consultant review – cost ledger code
	Resource	Consultant review – resource
Reagents	Cost (£)	Reagents – cost (£)
	Cost ledger code	Reagents – cost ledger code
	Resource	Reagents – resource
Specialist equipment	Cost (£)	Specialist equipment – cost (£)
	Cost ledger code	Specialist equipment – cost ledger code
	Resource	Specialist equipment – resource
Other significant consumables	Cost (£)	Other significant consumables – cost (£)
	Cost ledger code	Other significant consumables – cost ledger code
	Resource	Other significant consumables – resource
Equipment maintenance	Cost (£)	Equipment maintenance – cost (£)

		To calculate costs at test level, divide total maintenance cost for a specific machine by the number of tests conducted using that machine
	Cost ledger code	Equipment maintenance – cost ledger code
	Resource	Equipment maintenance – resource
Equipment depreciation	Cost (£)	Equipment depreciation – cost (£) *To calculate costs at test level, collect depreciation cost for a specific machine from the fixed asset register and divide by the number of tests conducted using that machine
	Cost ledger code	Equipment depreciation – cost ledger code
	Resource	Equipment depreciation – resource
Sent away costs	Cost (£)	Sent away costs – cost (£) The cost of each test sent away can be ascertained from the general ledger. Carriage costs such as dry ice must also be considered
	Cost ledger code	Sent away costs – cost ledger code
	Resource	Sent away costs – resource

Appendix 4: Relative weight values specification – Diagnostic imaging

Diagnostic imaging process	Field name	Full field name
Data requirements	Examination code	Data requirements – examination code
	Examination name	Data requirements – examination name
	Modality	Data requirements – modality
	Scanner used	Data requirements – scanner used
	Location	Data requirements – location
Preparation	Band	Preparation – band
	Time (min)	Preparation – time (min)
	Cost ledger code	Preparation – cost ledger code
	Resource	Preparation – resource
Radiographer	Band	Radiographer – band
	Time (min)	Radiographer – time (min)
	Cost ledger code	Radiographer – cost ledger code

Diagnostic imaging process	Field name	Full field name
	Resource	Radiographer – resource
Consultant (test)	Time (min)	Consultant (test) – time (min)
	Cost ledger code	Consultant (test) – cost ledger code
	Resource	Consultant (test) – resource
Consultant (review)	Time (min)	Consultant (review) – time (min)
	Cost ledger code	Consultant (review) – cost ledger code
	Resource	Consultant (review) – resource
Contrast/tracer agents	Description	Contrast/tracer agents – description
	Cost (£)	Contrast/tracer agents – cost (£)
	Cost ledger code	Contrast/tracer agents – cost ledger code
	Resource	Contrast/tracer agents – resource
Specialist equipment	Cost (£)	Specialist equipment – cost (£)
	Cost ledger code	Specialist equipment – cost ledger code
	Resource	Specialist equipment – resource
Other significant consumables	Cost (£)	Other significant consumables – cost (£)

Diagnostic imaging process	Field name	Full field name
	Cost ledger code	Other significant consumables – cost ledger code
	Resource	Other significant consumables – resource
Equipment maintenance	Cost (£) (annual maintenance cost/annual number of tests)	Equipment maintenance – cost (£) To calculate costs at test level, divide total maintenance cost for a specific machine by the number of tests conducted using that machine
	Cost ledger code	Equipment maintenance – cost ledger code
	Resource	Equipment maintenance – resource
Equipment depreciation	Cost (£) (annual depreciation cost/annual number of tests)	Equipment depreciation – cost (£) To calculate costs at test level, collect depreciation cost for a specific machine from the fixed asset register and divide by the number of tests conducted using that machine
	Cost ledger code	Equipment depreciation – cost ledger code
	Resource	Equipment depreciation – resource
Equipment energy consumption	Time (min)	Equipment energy consumption – time (min)
	Cost (£)	Equipment energy consumption – cost (£)
	Cost ledger code	Equipment energy consumption – cost ledger code
	Resource	Equipment energy consumption – resource

Contact us:

costing@improvement.nhs.uk

NHS England and NHS Improvement
Skipton House
80 London Road
London
SE1 6LH

This publication can be made available in a number of other formats on request.

© NHS England and NHS Improvement March 2021
Publication approval reference: PAR344