

# Ledger Mapping

Costing extension CP7

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# How to map your general ledger to the standardised cost ledger

## Introduction

1. This detailed guidance is supplementary to Standard CP2: Clearly identifying costs.
2. It provides further detail on the general ledger (GL) to cost ledger (CL) mapping process (level 2 mapping).
3. It should be applied to all lines of the GL.

## Overview

4. You should map the cost centre and expense codes on your GL to the standardised CL codes specified in Spreadsheet CP2.1.
5. The standardised CL maps each costing account code to either an overhead ID or a resource ID for cost allocation to take place.

## The standardised cost ledger

6. The standardised CL is a step in the categorisation of costs from your general ledger to the prescribed resources (see Spreadsheet CP3.1 for list of resources).
7. The prescribed resources are the level of granularity at which cost allocation takes place, ie cost allocation methods are prescribed for each combination of resource and activity.

**Figure 1: cost categorisation from the general ledger to resources**



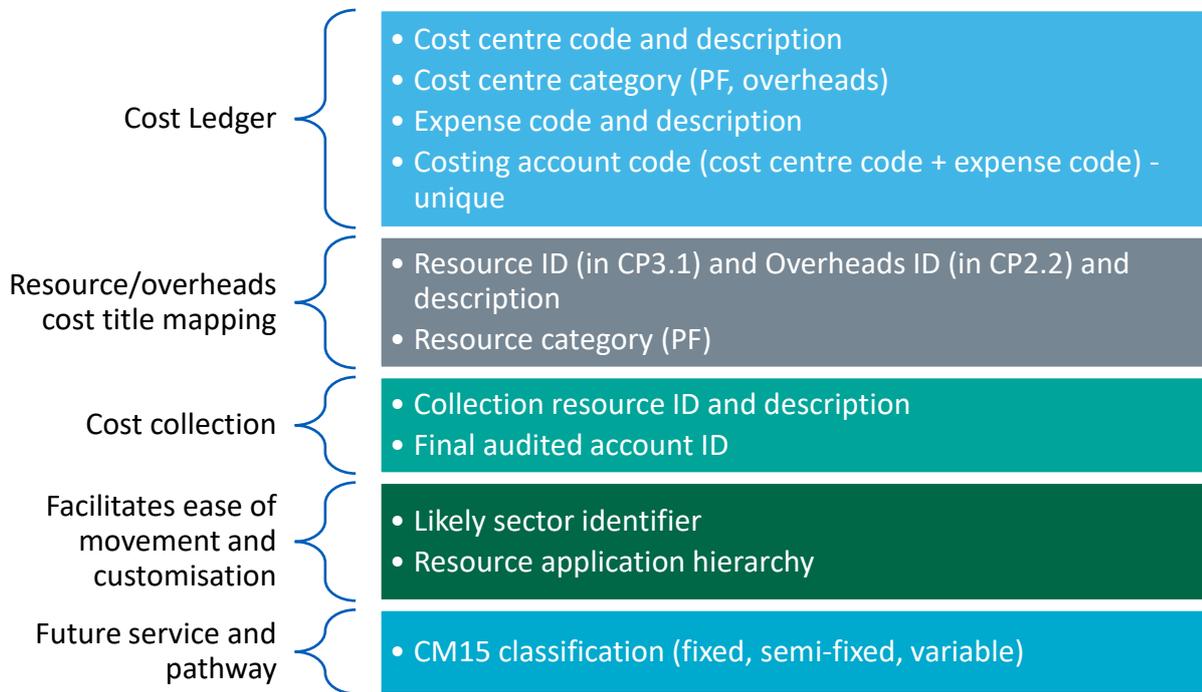
### **Structure of the standardised cost ledger**

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8. Figure 2 illustrates the structure of the standardised CL in Spreadsheet CP2.1. The columns in the CL can be grouped to the following:

- Cost ledger information
- Resource/overheads cost ID mapping
- Cost collection resources and reconciliation
- Information to facilitate ledger mapping
- Cost classification for future service and pathway development

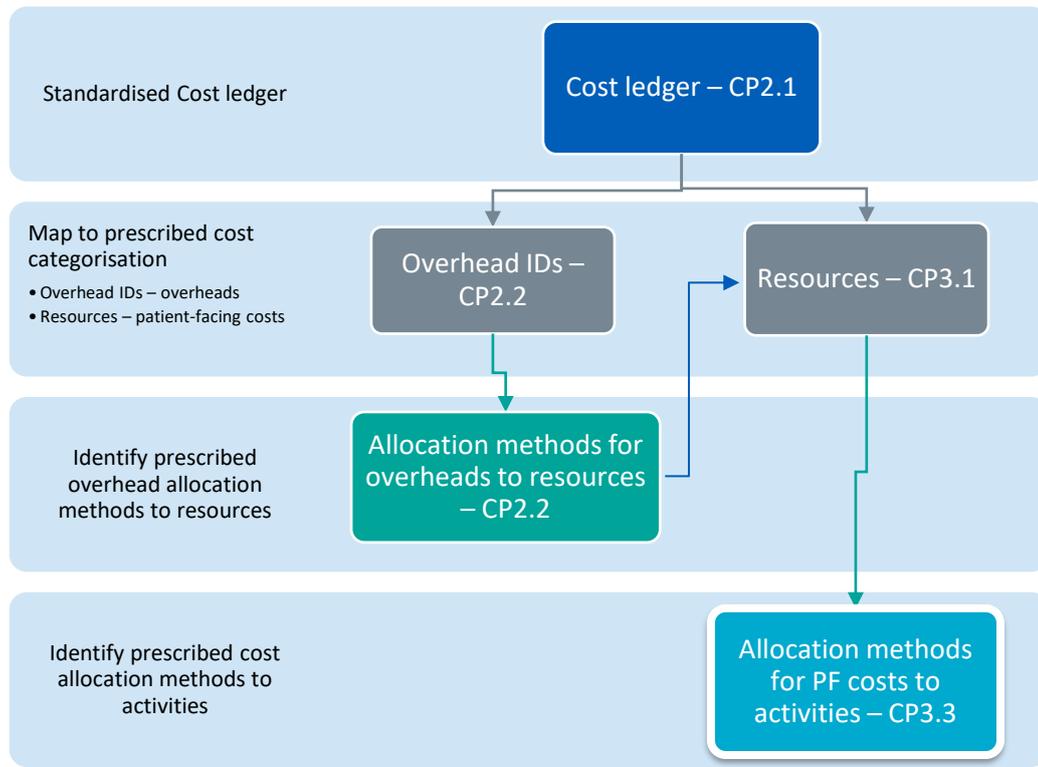
**Figure 2: Structure of the standardised cost ledger (Spreadsheet CP2.1)**



### Role of the standardised cost ledger in the costing process

- Figure 3 shows the role of the standardised CL in the costing process and how it relates to other elements of the costing process: resources, overheads, and allocation methods.

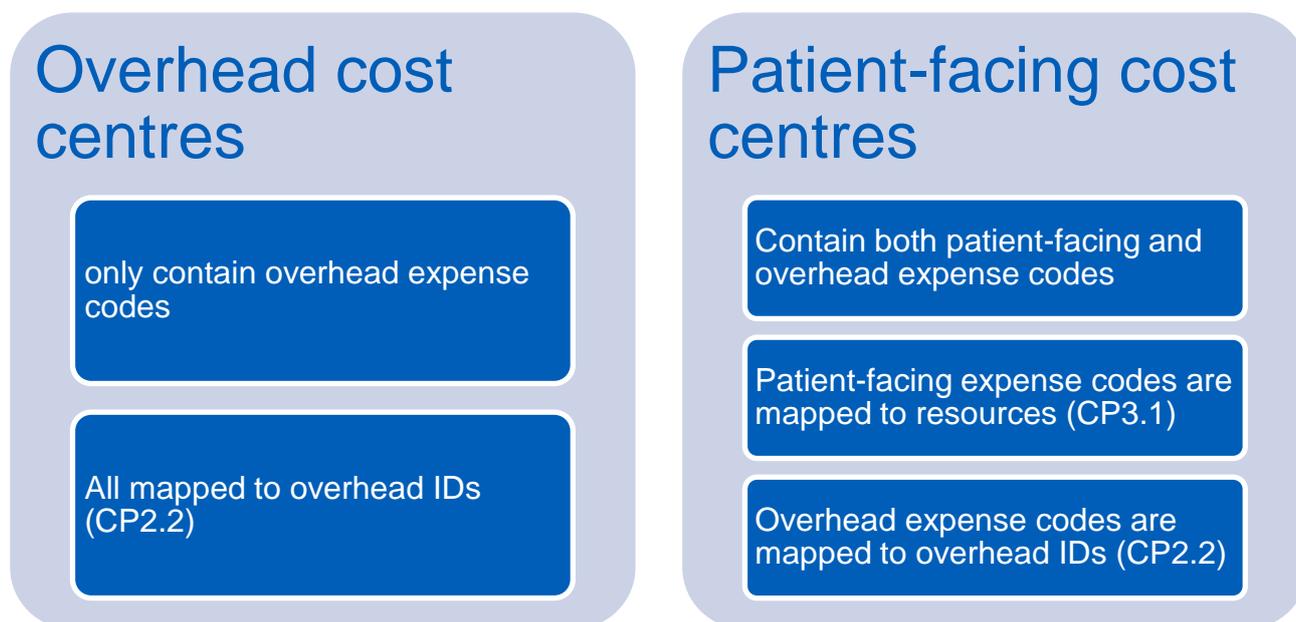
**Figure 3: Role of the standardised cost ledger**



### Cost types and the standardised cost ledger

10. Figure 4 highlights the cost types of the cost centres and expense codes in the standardised CL.
11. Understanding the cost types and their relationship with the standardised CL helps your ledger mapping.

**Figure 4 cost types in the standardised cost ledger**



12. Sometimes cost types of cost centre and expense codes on your GL do not follow the rules in the standardised CL (see Figure 4). You will need to investigate these codes and do some adjustment so that the costs can be mapped to the correct overhead ID or resource ID. See Example 1 below for more details.

### Example 1 Nurse expense code sitting in an overhead cost centre

Overhead cost centres would not always contain any patient-facing expense codes. However, sometimes a nurse will perform management or admin tasks as part of their role, such as managing staff and the nursing rota. In such cases, you may have a nurse expense code sitting in an overhead cost centre. These nurse expense codes need to be mapped to an overhead ID rather than the nurse resource.

13. Sometimes the type of the cost (i.e. whether it is patient-facing or overheads) is determined by the combination of cost centre and expense code. The same expense code can be categorised differently depending on which cost centre it sits. See Example 2 for more details.

## **Example 2 Nursery nurse expense code type determined by cost centre**

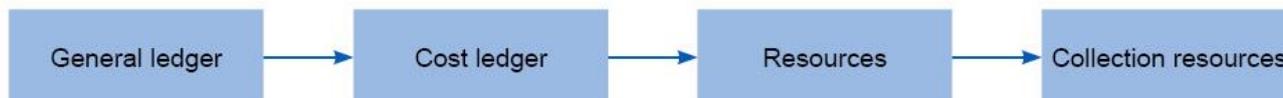
The nursery nurses expense code sitting in a staff children's nursery cost centre should be mapped to an overhead ID.

But the nursery nurses expense code sitting in a mental health or maternity ward cost centre need to be mapped to Resource ID: SLR101: Nursery nurse.

## **Setting up the costing process in your costing system**

14. Figure 5 shows the linear mapping of cost categories from your general ledger to the collection resources.
15. There are three steps in setting up the mapping process:
  - analyse your general ledger and understand
    - how costs need to be disaggregated to ensure they are allocated properly
    - where costs need to be moved to ensure they have the right label and are in the right starting position
  - use the information from this analysis to inform the processing rules in your costing system
  - have the prepopulated CL in your costing system, so when you load your general ledger output it uses these processing rules to move costs to the right line in the CL.

**Figure 5: the costing process components**



16. The mapping of each costing account code from the CL to the resources is in columns G to J in Spreadsheet CP2.1; and the mapping from each of these resources to the collection resources<sup>1</sup> is in columns K and L in Spreadsheet CP2.1.<sup>2</sup>
17. The CL, resources, and collection resources – with their coding structure and the mapping between these elements – should be prepopulated in your costing system.
18. If you use a local resource<sup>3</sup> in your costing process, you must map your CL to your local resource, then your local resource to the prescribed resource. Figure 6 describes the mapping process with the additional component of a local resource. The mapping process will still need to be linear. You must document your mapping assumptions in integrated costing assurance log (ICAL) worksheet 15: Superior costing methods.

**Figure 6: Mapping the costing process components with the inclusion of a local resource**



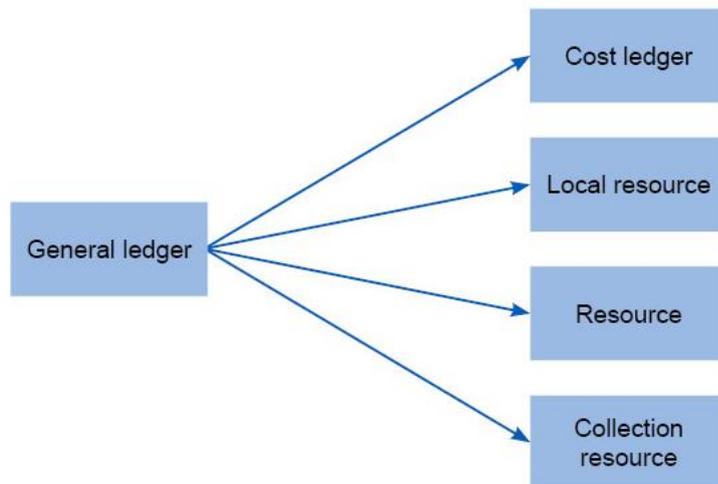
19. Do not treat these mapping exercises as separate entities as this increase the risk of inconsistency in costing output. Figure 7 is an example of how not to approach the mapping exercises.

<sup>1</sup> 'Collection resources' is the group of resources used for the national submission. These resources are not the same as the resources used in the costing process.

<sup>2</sup> We appreciate that in this version of the standards additional cost centre mappings may need to be added to Spreadsheet CP2.1. We will review and update the technical document during the implementation process where appropriate. Please send suggestions for additional cost centres to: [costing@improvement.nhs.net](mailto:costing@improvement.nhs.net)

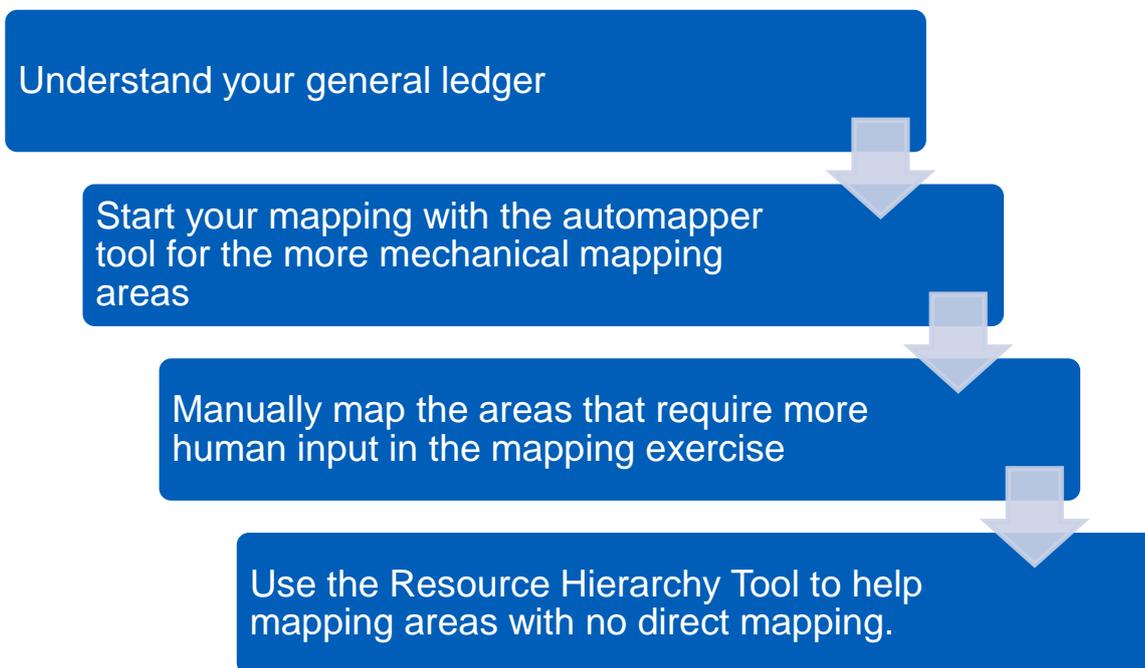
<sup>3</sup> Groups of cost set up locally that is usually more granular than the level of prescribed resources, eg, a local resource can be each individual consultant.

**Figure 7: How not to map to the costing process elements**



## Ledger mapping – basic processes

20. The following steps are recommended as the basic processes for ledger mapping with tools provided by NHS England and NHS Improvement:



## Understand your general ledger

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21. Analyse your general ledger to understand how costs are recorded in it and what steps you need to take to get the costs mapped to the correct lines in the standardised CL.

## Use the automapper for the more mechanical mapping areas

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22. You can use the auto mapper tool to help map the expense code description on your GL to that on the CL after you have reviewed your GL to get the 'easy to map' part of the CL mapped. <sup>4</sup>
23. It is important to review the mapping results from the automapper as some of them may not be accurate.
24. You should record the output for the auto-mapper application in ICAL worksheet 10: GL to CL auto-mapper output.

## Manual mapping for the parts that need human input

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25. Where the CL auto-mapper application cannot identify an appropriate line in the CL, you will need to analyse the GL line, identify what cost sits there and map it to the appropriate line in the CL manually.
26. The manual mapping includes the following processes

Direct mapping

Aggregation

Disaggregation

Remedial  
actions

<sup>4</sup> See <https://www.openlearning.com/nhs/courses/costing-improvement/homepage/> for details of the automapper.

27. **Direct mapping** is the process of matching an account code in your GL to the CL, e.g. matching expense code 'Band 5' in cost centre 'Therapies' to CL account code 'occupational therapy – occupational therapist band 5'.
28. Sometimes direct mapping is not straightforwardly one line on your ledger to a line on the CL. You need to do some adjustment to your ledger, such as replicating lines, so that it can be mapped correctly. See Example 3 for more details.

### Example 3 Ledger mapping: replicate for direct mapping

Where a cost centre is designed to be replicated (eg XXX 049 Medical staffing) by specialty, you should replicate all the rows (or all the relevant rows) from this cost centre for each specialty – General surgery, Urology, ENT, etc as:

- XXA049 General surgery
- XXB049 Urology
- XXC049 ENT.

29. **Aggregation** is the process of combining more than one accounting code on your ledger which are at a more granular level than the CL. For example, nurses grouped to different sub teams on your ledger can be aggregated and mapped to one nurse accounting code on the CL.
30. **Disaggregation**, on the other hand, is the process of splitting an account code on your general ledger where it is not granular enough. In this way, the newly disaggregated codes can be mapped to accounting codes in the CL that flow to different resources. You can also disaggregate costs if later in the process, the costs need to flow to different activities.
31. Aggregation and disaggregation can also happen at cost centre level. For example, if you have two HR cost centres on your ledger, you can choose to

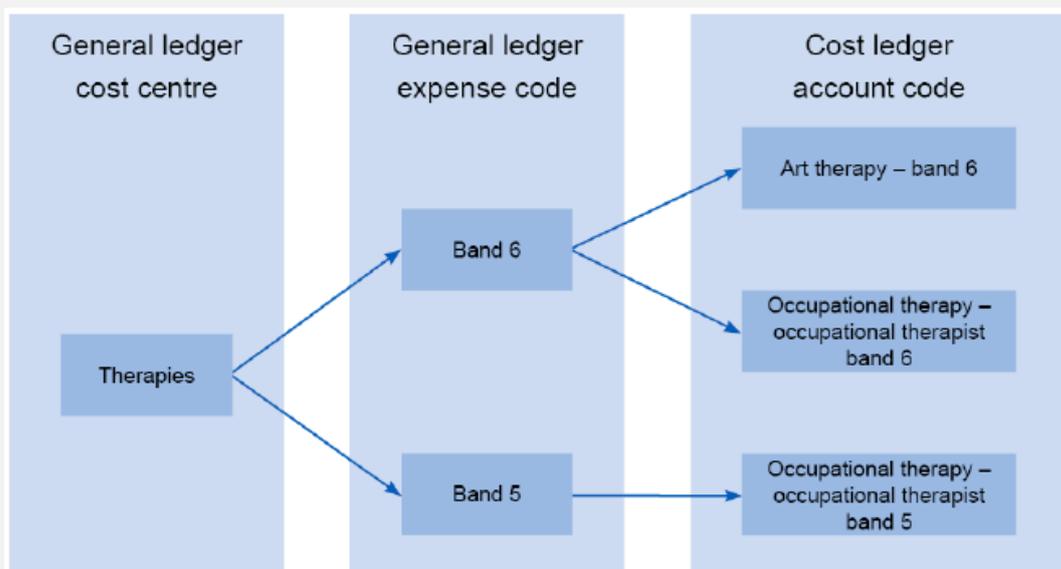
aggregate the two cost centres together and map to the HR cost centre on the CL.

32. Example 4 below illustrates the process of direct mapping and disaggregation

## Example 4 Ledger mapping: direct mapping and disaggregation

You may have a therapies cost centre in your general ledger:

- The expense line 'Band 5' only contains band 5 occupational therapist. Therefore the line can be directly mapped to cost ledger account code 'occupational therapy- occupational therapist band 5.'
- The expense line 'Band 6' contains both art therapist and occupational therapist. As the costs for the occupational therapists need to go to different resources from art therapists, the line must be disaggregated. You can use relative weight values or other information sources to determine the apportionment of costs between the two lines (Art therapy – band 6, Occupational therapy – occupational therapist band 6) in the standardised CL.



in manual ledger mapping.

33. **Remedial actions** is the process of moving expense codes on your GL from one cost centre to another cost centre so that they can be mapped to the correct resources. Depending on how your GL is structured there will be some cases where same expense codes sit in different cost centres on your GL and the standardised CL.
34. Example 5 below illustrates the process of replicating expense codes from different cost centres so that costs to flow to the correct resource.

## Example 5 Ledger mapping: remedial actions

Where the costs in a cost centre need to flow to different resources, you should replicate rows from another cost centre where the cost flows to the correct resource and create a new local cost centre to show that cost flow.

For example, you may have different types of nursing in the cost centre XXX607 District nursing: some community nursing and some specialist nursing. You need to separate these so they can flow to different resources, or later in the process, to different activities. To do this, you could replicate rows from cost centre XXX077 Specialist nursing for the community diabetes nurse, so their cost is disaggregated from that for the same band of general district nursing.

- XX**P**607 District nursing – general
- XX**Q**607 Community diabetes nursing.

35. It is important to note that the purpose of ledger mapping is for costs to be mapped to the correct resources. Therefore, what action to take in your ledger mapping should be dependent on whether that leads to the correct resource mapping. For example, sometimes you may have an expense code on your ledger that is less granular than the CL accounting code, eg nurses on your

ledger are not by pay band. In these cases, you do not necessarily have to disaggregate all these codes as long as they map to the same nurse resource.

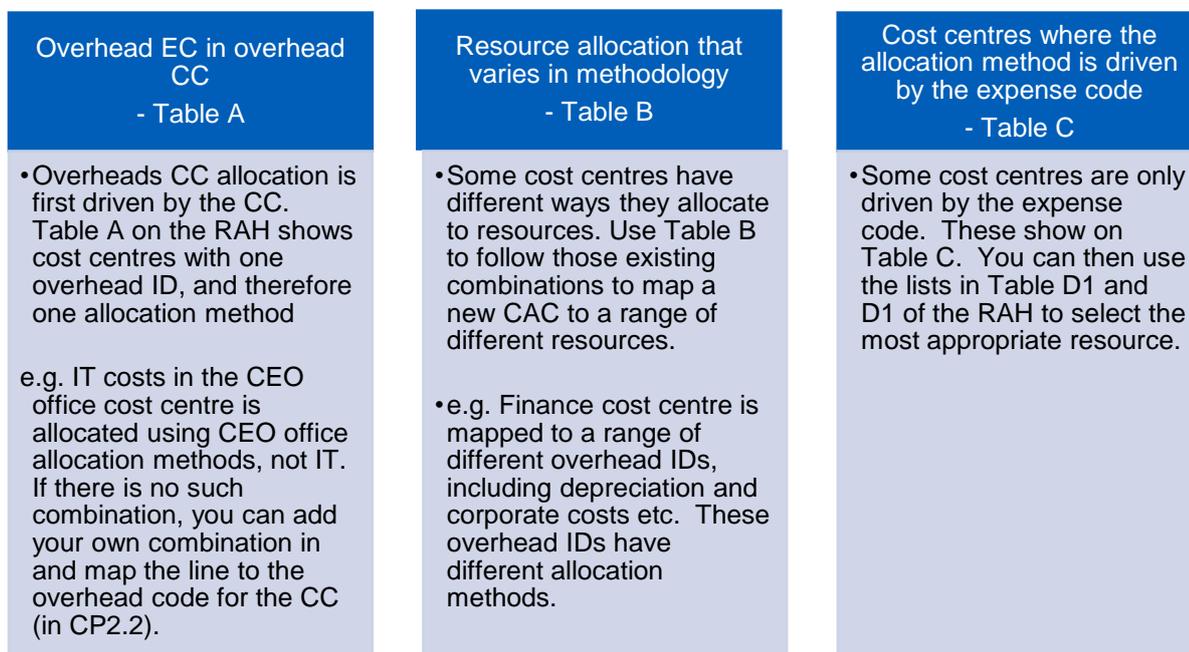
## Where codes cannot be mapped

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36. Where costing account codes (combinations of cost centre and expense codes) cannot be mapped manually, use the Resource Application Hierarchy (RAH) to help your mapping<sup>5</sup>.
37. The costing account code is used as part of the resource application hierarchy tool.
38. Figure 8 shows some simple rules to follow to map cost lines to resources. It is important to identify the type of cost centre and expense code in order to do the mapping.
39. If you cannot determine the type of a cost centre, contact the NHS England and NHS Improvement costing team for advice.

<sup>5</sup> The RAH is available on our website <https://www.england.nhs.uk/approved-costing-guidance/>

**Figure 8 Resource Application Hierarchy rules to map cost lines to resources**



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

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