Monitor

Making the health sector
work for patients

Consultation: Minimum software requirements for the costing of NHS services in England

About Monitor

As the sector regulator for health services in England, our job is to make the health sector work better for patients. As well as making sure that independent NHS foundation trusts are well led so that they can deliver quality care on a sustainable basis, we make sure: essential services are maintained if a provider gets into serious difficulties; the NHS payment system promotes quality and efficiency; and patients do not lose out through restrictions on their rights to make choices, through poor purchasing on their behalf, or through inappropriate anti-competitive behaviour by providers or commissioners.

Contents

1. Introduction

This document sets out the draft minimum requirements for costing software in the NHS in England. We are keen to hear your views on these draft requirements, by 5pm on Friday 20 November 2015. You can share your feedback by completing our online survey using the link on the consultation web page.

1.1. Overview

On 31 March 2015 Monitor published a response to the sector feedback following the engagement on 'Improving the costing of NHS services proposals'. The proposals set out an approach to costing that we believe has the potential to deliver significant improvements in the accuracy and comparability of cost information.

The response document confirmed the strategy to achieve a step change in the quality of cost information in the NHS. Monitor subsequently set up the Costing Transformation Programme (CTP) to deliver this strategy.

The CTP comprises an improved costing method, including standard definitions and rules, to ensure the cost information produced is transparent, rigorous and consistent. By adopting this method the sector will be able to make a single, national cost collection each year, replacing the three separate cost collections (education and training, reference costs and patient level cost) as currently undertaken.

The CTP focuses on patient-level costing. This will benefit the sector by enabling:

Healthcare providers to:

- **make the best use of their resources** – supporting organisational reviews to ensure that support systems are provided as efficiently and effectively as possible

- **evaluate clinical practice** – combining patient cost, service quality and patient outcome information to allow comparisons to be made within clinical teams and across organisations

- **support better ways of working** – providing information to assess the impact of new clinical initiatives and new patient-centred models of care, crossing traditional organisational and geographical boundaries.

National bodies to:

- **support a sustainable healthcare system** – by strengthening the national toolkit for identifying best practice in the sector, and supporting their adoption

- **improve the foundations of the payment system** – providing flexible building blocks to inform payment currency development and cost-reflective prices.

To achieve this, the CTP has two core workstreams:

1. Core implementation, which establishes the systems and processes for producing cost information, including standard definitions and rules, and software requirements to process and report cost information.

2. Transformation, which supports the core implementation workstream, by assisting organisations to embed the required working practices to realise the benefits of the CTP.

The work plan for year one of the CTP covers core implementation workstreams only, the transformation workstreams are due to commence in early 2016. We will release further information on the transformation workstreams in due course.

Figure 1: Core implementation – year one work plan
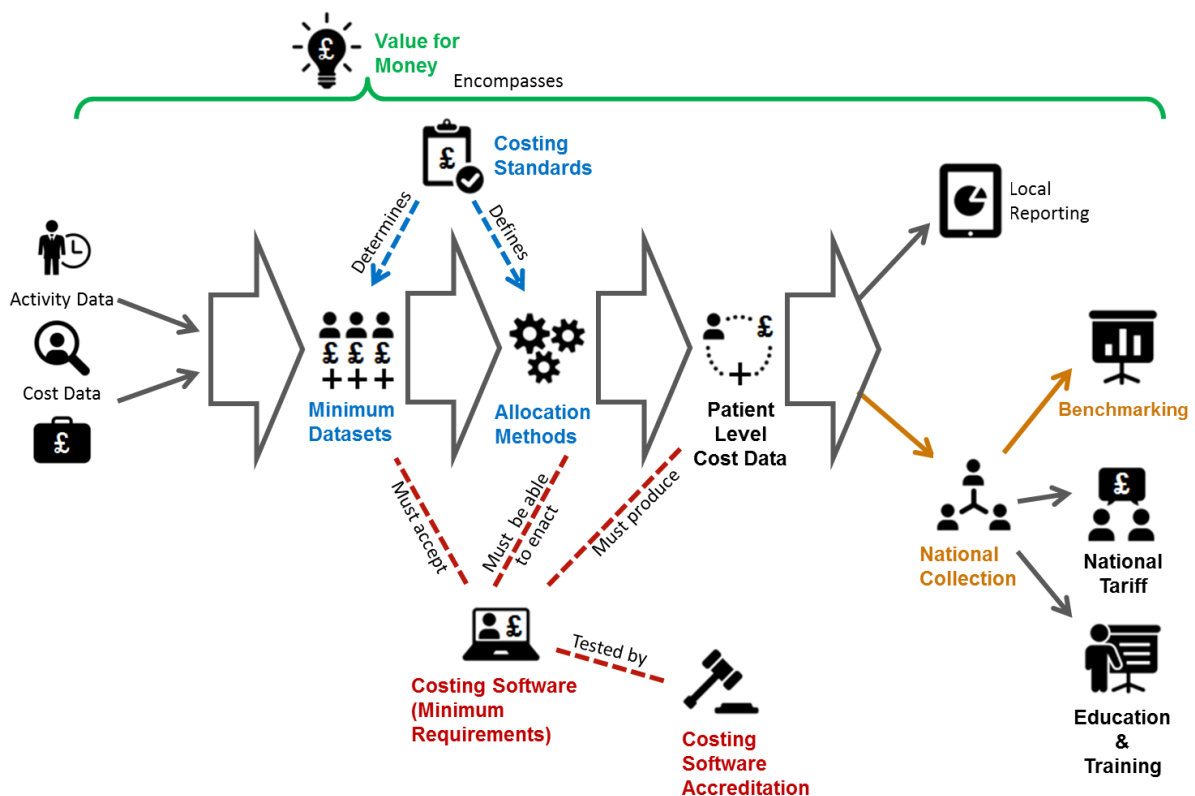
In year 1 we will develop the value for money case for patient level costing, produce the costing standards (which define the costing methodology) and the costing software minimum requirements (which support the implementation of the standards at a local level), and define the new national cost collection process and content.

Value for money

The value for money workstream will set out a case demonstrating the cost benefit of implementing the new costing approach at a patient-level. Case studies will

demonstrate the local benefits of patient-level costing and a series of interviews will demonstrate the national benefits.

This workstream will inform the mandate decisions on the following:

- collection of patient-level cost information
- the use of the new costing standards
- a cost collection from all providers.

Costing standards

The CTP will establish one set of standards for use by community, mental health, ambulance and acute services. The costing standards will consist of:

- step by step instructions outlining the costing methodology.
- **costing guidance**; best practice examples of how to improve the quality of costing NHS services.
- **costing information requirements**; data that need to be collected for costing.
- a costing glossary; key terms and definitions.

The standards will be published for the first time in March 2016, with support from NHS providers in the shape of roadmap partners and other contributors.

Cost collection

This workstream will produce guidance, describing what information we will collect, and how we will collect it. It will also consider the infrastructure required to store and analyse the new cost information for benchmarking and informing the national tariff.

Costing software (minimum requirements)

The costing software (minimum requirements) outlines the functional requirements to support the new costing methodology. The functions include the ability to import minimum datasets, apply cost allocation methods (defined by the costing standards) and output high quality patient level cost data.

We previously referred to this work as PLICS (Patient level costing and information systems) minimum software requirements, but have changed the name to reflect that costing software processes more than just patient level data. The name change also applies to the costing software accreditation workstream (previously PLICS software accreditation).

This document sets out the minimum requirements for the costing software used by providers for the costing of NHS services. This is not a full system specification, but gives the minimum functional requirements we have identified through engagement with NHS providers and software suppliers. The requirements are intended to guide

software development and implementation of costing software products for providers of NHS services.

Costing software accreditation

Software accreditation will assess the capability of costing software products against the minimum software requirements, providing the sector with independent feedback. More information on this will follow in due course.

For more information on the CTP please see https://www.gov.uk/guidance/costing-transformation-programme.

1.2.   Context

Our view is that the proposed new costing methodology will deliver significant benefits to the sector. Done right, this will improve the quality and outcomes of NHS-funded patient care. Currently, the costing methodologies applied by NHS costing practitioners vary from trust to trust, which leads to inconsistent cost information. Variation in the costing software being used is one of the root causes of this problem.

NHS providers have identified the following main issues with some of the current costing software:

- lack of transparency: some models do not allow costing professionals to trace exact origin of patient-level costs, referred to by some as the 'black box' of costing software

- aggregation of costing information: this makes it difficult to identify exactly what resources have been allocated to patients and their amount

- rigidity and need for system updates to keep up with changes in datasets, costing standards or national cost collections.

This consultation document looks to address these issues.

We are very keen to hear your views on the minimum software requirements by completing our online response form. The engagement period will last until **20 November 2015**. Your response will inform the minimum software requirements that will be published in March 2016 for use by software suppliers, roadmap partners and early implementers as part of a development cost collection in September 2016.

We will revise and reissue the minimum software requirements annually, in the first quarter of the calendar year during the CTP development phase (see 'Improving the costing of NHS services proposals' for timelines). The revisions will reflect changes to the costing methodology, to ensure the software continues to support the costing methodology.

The first revision will be published in March 2016 together with the costing standards. This is to ensure the minimum software requirements reflect the costing methodology defined by the costing standards as well as the sector feedback from the consultation.

In-year changes to the minimum software requirements may be needed to support the implementation of the costing standards and the cost collection. Suppliers and NHS providers will be notified by email of any such changes and the reasons for them; the revised document will be uploaded to GOV.UK.

2. Scope

2.1. In scope

This document considers the software functional requirements only, which include the software features relating to loading inputs, software behaviours (result of an action) and outputs produced.

The use of the term **system** in this document does not assume a single application; the system may comprise separate components.

The minimum software requirements will also include the functionality to generate an output suitable for the national cost collection.

2.2. Out of scope

This document does not include:

- the content of the cost collection (this will form part of the cost collection workstream)

- the costing methodology, such as how to allocate resources to theatre activities. Only the functions that need to be in place to enable this process are outlined.

The non-functionality aspects of the software, such as quality or performance will be covered in the accreditation workstream and are outside of the scope of this document.

Other out-of-scope aspects are:

- the software design (the minimum software requirements will not define how the software achieves the intended result; software suppliers will determine the best approach)

- software performance, ie processing speed

- software attributes such as security and reliability

- independent verification that the costing software is compliant with the minimum software requirements (this will occur within the accreditation process)

3. Audiences

This document is directed at software suppliers that currently produce costing software, or that may be interested in supplying software to the healthcare sector.

It is also directed at costing practitioners, information managers and procurement managers in providers of NHS services (including independent providers), to support software implementations (including the procurement process) and updates, and changes to the costing methodology.

4. Functional requirements

4.1. Overview

This section sets out the functional requirements of the system, grouped according to area of functionality. These requirements aim to highlight the system functions required for the new costing method which will be defined in the new costing standards.

Within the tables of requirements below, the ID column links to a test plan that lists the tests to be carried out to confirm the costing system can achieve these requirements.

To ensure the system covers the entire costing process and incorporates end users' needs, each requirement has been given a priority ranking:

- **MUST:** indicates the definition is an absolute requirement of the specification, and suppliers must be able to demonstrate the capability

- **SHOULD** indicates there may be valid reasons in particular circumstances to ignore an item, but the implications must be understood and carefully weighed before choosing not to implement.

4.2. System set-up

This section concerns the global settings of the system, required to support the costing methodology defined by the costing standards. This is to support the setting up of multiple models that will be required in a monthly costing process.

ID	Requirement description	Priority
SYS001	The system must allow multiple cost models to be set up (with no restrictions on the number), with the ability to copy the code structures, look-up tables and physical allocation statistics of existing models to start new costing periods	MUST
SYS002	The system must allow the user to define the start and end periods for the model, where the system only includes activity and cost information that is within the parameters defined A reconciliation report must be produced stating where any activity and/or costs are outside of the parameters, indicating which rows are excluded	MUST
SYS003	The system must enable the user to lock a completed costing period, so that no amendments can be made once the period is signed off	MUST

4.3. Activity matching

The matching of activities to the correct cost object is important in generating high quality cost information. The matching process will be described by the costing standards, with matching rules defined for activity datasets.

This section outlines the activity matching functions required from the system, but with the in-built flexibility to allow users to create local rules to produce more accurate matches and apply the rules as outlined by the standards.

ID	Requirement description	Priority
MAT001	When activity data are matched outside of the system, the system must allow a matching key to be included in the activity load, and generate a report which states the number of records with and without a matching key as an absolute value and as a percentage	MUST
MAT002	The system must be able to automate the matching of activities to cost objects, eg patient, student or incident	MUST
MAT003	The system must allow the user to select any	MUST

ID	Requirement description	Priority
	combination of columns from an activity dataset to determine a match to a cost object, eg cost object identifier, consultant, specialty, location and date	
MAT004	The system must allow a matching hierarchy to be set and amended by the user for each activity, with no restrictions on the number of levels, eg set the activities to match to patients in order of point of delivery (POD), A&E, inpatients and then outpatients	MUST
MAT005	The system must allow the user to alter the matching window, ie the number of days/hours/minutes either side of the activity data	MUST
MAT006	The user must be able to change the combination of fields used for matching at each hierarchy level, eg line 1 POD, line 2 POD and consultant, and line 3 POD, consultant and location	MUST
MAT007	The system must be able to deal with unmatched activity by allowing the options: • cost and allocate separately as determined by the user • costs to be reported as a reconciliation item either under the requesting department or providing department (an example is given in Appendix 1)	MUST
MAT008	The system must be able to report the matching rule used for each individual activity record and for all activity datasets, and produce a summary report containing the rule and the number of records matched using the rule, as well as those records not matched	MUST
MAT009	The system must be able to generate a report which states the matching record percentages for each activity dataset	MUST

4.4. Data import

Data importing functions prepare the activity data for the costing process with the aim of making the loading process transparent and flexible. This also ensures costing outputs can be traced back to the source data.

These requirements outline the functions required to support the importing of the information requirements, outlined in the costing standards as well as trusts local datasets.

ID	Requirement description	Priority
DAT001	The system must allow transformational procedures to be performed The minimum functions required are: • date format changes • text trimming (truncation) to a user-defined number of characters • case setting for text • concatenation of columns • pruning of spaces and non-alphanumeric characters from text • update data in columns, with users able to define the update values and select the rules • users must be able to set up their own procedures	MUST
DAT002	The system must allow data to be extracted directly into the system from any of the following sources for transformation: • SQL databases • MS Excel • CSV • MS Access databases	MUST
DAT003	The system must allow the user to load any dataset, including the general ledger, and to select the fields required for cost drivers, allocations tables and reporting	MUST
DAT004	The system must allow data to be excluded from the load based on selection criteria and to generate a report identifying the exclusions	MUST
DAT005	The system should allow datasets to be loaded as a batch or individually depending on the user's preference	SHOULD
DAT006	The system should allow automated data importation to run at scheduled times as specified by the user	SHOULD
DAT007	The system must allow datasets to be added, appended, replaced, and deleted from the system	MUST

ID	Requirement description	Priority
DAT008	The system must allow look-up tables to be stored so mappings can be linked to any import data using any column within the dataset, eg look-up test/resource codes, actual cost or prices, service line codes	MUST
DAT009	The system must be extendable to allow it to deal with the large data volumes	MUST
DAT010	The system must be able to cost incomplete cost objects in the same way as finished cost objects, and flag these as work in progress for reporting purposes	MUST
DAT011	The system must not allow any manual amendments to the activity data once these have been loaded into the system	MUST
DAT012	The system should contain a minimum length of 200 characters for text fields	SHOULD

4.5. Import data validation

Data validations capture data quality issues that have the potential to cause errors in the final outputs or processing issues within the costing model. The requirements in this section aim to detect errors when data is loaded, to capture these errors at the earliest opportunity and to feed them back to the source data providers for review.

ID	Requirement description	Priority
IMP001	The software package must allow users to set data validations on any activity loaded Validations are required for: • missing data in mandatory fields • incorrect data types in fields, ie text in a date column • negative quantities in the data See Appendix 2 for examples of other data validations	MUST

ID	Requirement description	Priority
IMP002	The system must allow users to set the importance of data validations using three levels of severity: 1. import will fail 2. system flags the error as important but the import will still load 3. reports a minor error	MUST
IMP003	The system must produce data validation reports that state where and why errors are occurring, and must be in formats that can be exported to the source departments for review	MUST
IMP004	The system must validate the activity upon data loading and after any transformation with the generation of an error log	MUST
IMP005	The system must generate a control report when activity and cost object data are imported, stating the number of records loaded, the number of records excluded and the number of records carried forward into the costing process	MUST
IMP006	The system must generate a control report which allows the user to compare the count of records for activity datasets by week/month/quarter for a financial year	MUST
IMP007	The system must flag new cost centres and account codes as part of the general ledger load	MUST

4.6.   Cost ledger

The cost ledger allows the user to move costs into the right starting position to begin the costing process. The requirements in this section aim to make the national collection of cost information consistent and to give users the flexibility to refine, develop and add to the cost information within the costing model. The requirements also described the functions required to support the cost allocation methods that will be outlined in the costing standards.

ID	Requirement description	Priority
COS001	The system must apply the costing method as defined by the costing standards (see Appendix 3) This is a three stage approach: • Stage 1 maps the cost centre and account codes in a provider's general ledger to the provider's human and physical resources • Stage 2 assigns resource costs to the activities that use those particular resources • Stage 3 assigns activities to the cost objects they relate to[1]	MUST
COS002	The system must be able to map individual account codes within cost centres to: • resources and resource groups • cost classifications as defined by the standards • a minimum of five user-defined groups	MUST
COS003	The system must have the option to use year to date (YTD) cost and activity data to produce a cumulative cost model, as well as an option to load activity and cost data monthly, allocating in-month costs over in-month activity For monthly costing, the system must be able to group models together for YTD reporting purposes	MUST
COS004	The system must be able to disaggregate account codes where there are several cost items on one line and apply different cost drivers and cost classifications	MUST
COS005	The system must allow costs to be transferred between both cost centres and account codes, with the option to use percentages or absolute values as the basis	MUST
COS006	The cost ledger must include columns for actual spend and whole-time equivalent (WTE) for each expenditure line	MUST

---

[1]

www.gov.uk/government/uploads/system/uploads/attachment_data/file/381990/Improving_the_costing_of_NHS_services_-_final.pdf

4.7. Apportionment tables and cost drivers

This section describes the requirements that are designed to ensure the costing system can apply the cost allocation methodologies defined in the costing standards, and support a consistent approach to costing across organisations.

ID	Requirement description	Priority
ALL001	The system must allow income or costs to be allocated using activity that has a start and finish time date format of 'dd/mm/yyyy hh:mm:ss'	MUST
ALL002	The system must allow the user to create automated cost drivers from activity datasets, using any fields in the dataset and user-defined data filters, which link the activity to individual cost objects	MUST
ALL003	For apportionment of overhead costs, the system must create automated financial apportionment tables based on general ledger values and allow the user to select the records to be used, eg create apportionment tables such as WTE or actual costs by specific cost centres and periods	MUST
ALL004	The system must allow overhead costs to be allocated at the cost ledger stage, once all costs have been disaggregated: • to any cost centre whether or not classified as overhead, as determined by apportionment tables • direct to cost objects using cost drivers	MUST
ALL005	The system must allow overhead costs to be allocated at the resource stage: • to any resource whether or not classified as overhead, as determined by apportionment tables • direct to cost objects using cost drivers	MUST
ALL006	The system must allow activity trim points to be used to determine the activity days that are outliers The system must then automatically link the relevant resources and resource amounts to an excess bed day activity in line with the cost collection guidance	MUST
ALL007	Income and costs must be allocated within the	MUST

ID	Requirement description	Priority
	system using at least four decimal places	
ALL008	Where cost drivers contain actual cost or income, the user must be able to generate a reconciliation between the cost driver value and that of the combined associated general ledger lines , with any variances identified and flagged as reconciling amounts	MUST
ALL009	Where reconciling amounts are created as a result of requirement ALL008, the user must be able to disaggregate the variance and apply user-defined cost drivers and income or cost classifications	MUST

4.8. Costing validation

This section includes requirements that aim to ensure the information in the costing system is fully reconcilable with the financial performance of the organisation as reported in the general ledger and financial statements. The validations in this section are also essential if costing practitioners are to see where and why the costing model does not reconcile, or where costs are absorbed incorrectly.

ID	Requirement description	Priority
VAL001	The system must produce a reconciliation between the general ledger and the fully absorbed cost objects The reconciliation must show clearly which general ledger lines have been absorbed by the cost objects	MUST
VAL002	The system must produce a report identifying cost ledger lines that have no basis for allocation and are a reconciling item	MUST
VAL003	The system must generate a validation report showing cost drivers that contain no activity records	MUST
VAL004	The system must contain a report identifying the record count and the volume amounts for each cost driver	MUST

4.9.   System reports and transparency

Transparency applies to all aspects of the costing system, from imported activity data to the traceability of cost allocations and cost adjustments. It is an important aspect of the system as it provides the user with the assurance that the intended result of an action has occurred. This section covers the requirements that aid transparency of the costing process.

ID	Requirement description	Priority
REP001	The system must allow the user to trace the cost methodology from both the general ledger and the cost object	MUST
REP002	The user must be able to select any fields from the cost object dataset to create reports which present the costs and activities in a number of different ways, eg costs by clinic, date, site, clinician and directorate	MUST
REP003	The system should allow the fully absorbed cost objects to be compared to previous year's currency averages for sense checking and outlier identification	SHOULD
REP004	The system must show how each cost centre and account code combination is allocated in the model	MUST
REP005	The system must show how costs have transferred from the general ledger to the cost ledger	MUST
REP006	The system must enable users to view all fields from an activity dataset and define records to be viewed based on user selections	MUST
REP007	The system must allow overhead costs to be traced from the originating cost centre to the cost object and from the cost object to the originating cost centre The system must be able to show all the cost centres the overhead costs have been allocated to, giving the amount and the cost drivers used to allocate the costs to the cost objects	MUST
REP008	The system must include a reconciliation report showing costs by directorates in the cost ledger (patient care, research, education and training,	MUST

ID	Requirement description	Priority
	commercial activities and reconciliation items), as well as by services defined by the user for cost objects	
REP009	The system must allow the user to view the costs and descriptions of each individual resource and activities assigned to a cost object	MUST
REP010	The system must allow the user to isolate a cost at any stage within the system and identify where it has come from or been allocated to	MUST
REP011	The system must allow matched source activity to be reported	MUST
REP012	The system should produce reports stating the average unit costs for each combination of resource and activity, as well as the averages at a resource group level and an activity group level	SHOULD
REP013	The system should allow the cost ledgers and income ledgers in two cost models to be compared, to identify the percentage change in costs and income by cost centre and account code	SHOULD

4.10. Income ledger

The income ledger allows the user to move income into the right starting position to begin the income allocation process. The requirements in this section aim to give consistency to the treatment of income information and users the flexibility to refine, develop and add to the income information included and reported on in the costing model. The costing standards will provide guidance on the treatment of income and these requirements support the implementation of the income standard.

ID	Requirement description	Priority
INC001	The system must allow resource cost values, once attributed to cost objects, to be used to create user-defined cost drivers and to allocate income to the appropriate cost objects	MUST
INC002	The system must allow the user to assign income-related general ledger lines to cost drivers to allocate income	MUST

INC003	The system must be able to disaggregate account codes from the general ledger where there are several income types on one line, and apply different user-defined cost drivers and income classifications	MUST
INC004	The system must be able to disaggregate records in the income dataset where there are several income types on one line, and apply different user-defined cost drivers and income classifications	MUST

5. Future developments

This section gives a brief insight into future developments. It is for information only as the work is either still in development or does not form part of the 2016 costing standards work plan.

5.1. March 2016

We are developing the requirements for the September 2016 development cost collection for roadmap partners. These developments will include the cost collection design and extraction process, overhead allocation requirements, cost collection validations and additional system reporting requirements to support transparency and system audit.

5.2. 2017 and beyond

Long-term developments to the SRS include requirements for education and training in cost collection, commercial and research activities.

Other areas we will look to develop in the future include the ability to build scenario plans and model the likely impact on resources and activities within the costing system, and reporting resource and activity consumption by day to help support clinical engagement and development of the costing standards.

6. Test plan

The test plan describes the testing approach that will drive self-assessment against the minimum software requirements. The objective is to verify the functionality of the software in accordance with the requirements outlined in this document.

The test plan provides software suppliers and providers of NHS services with a means to assess the system's capability of supporting the new costing methodology. The test plan can be accessed using the link below.

Minimum software requirements - Test Plan

Accreditation is planned to commence in the summer of 2016. It will verify the system's compliance with the minimum requirements as well as assessing non-functional aspects of the system to provide a complete assessment of the system.

7. Next steps

We will consider all responses to the consultation and assess whether the minimum software requirements support the costing methodology defined by the costing standards, before publishing revised minimum software requirements in March 2016.

Between April and June 2016, Monitor will work with roadmap partners, software suppliers and early implementers to implement the costing standards and minimum software requirements locally. A development cost collection will take place in September 2016 for roadmap partners and early implementers to test the standards and minimum software requirements.

Appendix 1: Unmatched activity: example of how these will be treated

There will inevitably be activities that do not match to cost objects because of, for example, timing differences or data quality issues. If, for example, a pathology test in an acute service does not match to a patient episode, the system needs to treat the data as follows:

- if the specialty that ordered the test is known but it cannot be matched to the patient, the system must allow the cost to be reported under the requesting specialty and labelled as a reconciliation item
- if the specialty that ordered the test cannot be identified, then the system must allow the cost to be reported under the pathology department and labelled as a reconciliation item
- if additional information is available to the costing practitioner that can be used to allocate the cost to specific groups of patients, eg all patients with the same location or consultant, then the system must enable this.

Appendix 2: Examples of data validations

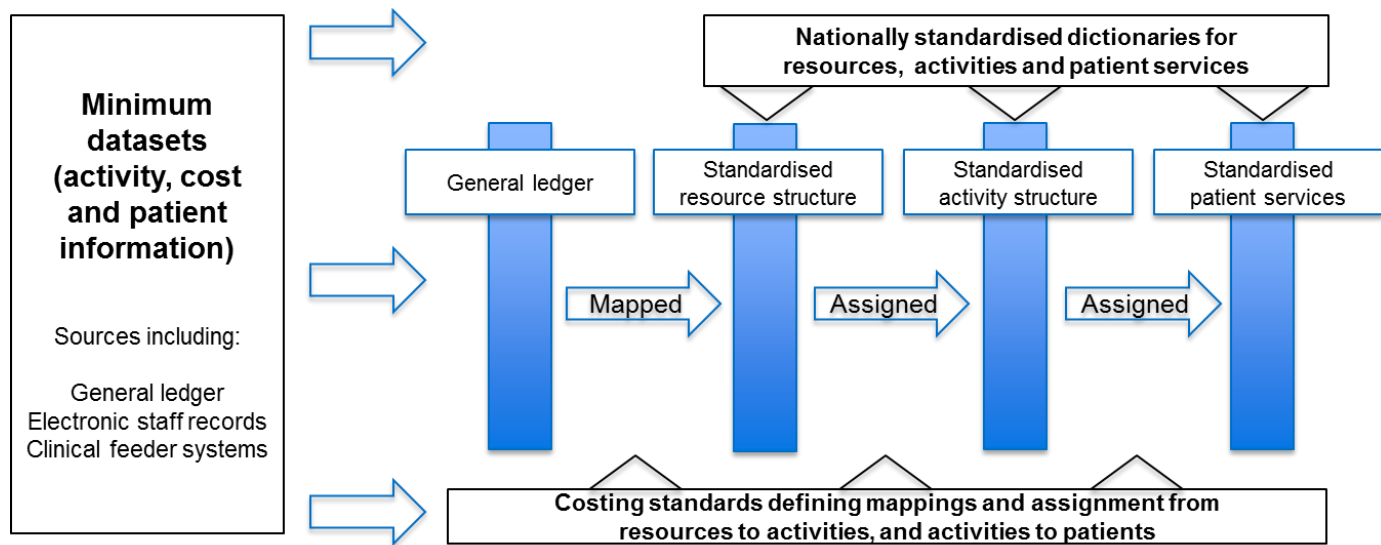As identified above, data validations should be classified according to the following levels of severity:

1. import will fail
2. system flags the error as important but the import will still load
3. reports a minor error

Severity	Field Name	Rule Name
1	Anonymised Local Patient ID	Patient ID column value is blank
1	Anonymised Local Patient ID	Patient ID column value exceeds the threshold for the number of permitted special characters (eg ! £ & *), which is three
1	Spell ID	Spell ID column value is blank
1	Spell ID	Spell ID column value exceeds the threshold for the number of permitted special characters (eg ! £ & *), which is three
1	Spell ID	Unique Spell ID has been recorded for each episode Please ensure that spells are reported correctly
1	Episode ID	Episode ID column value is blank
1	Episode ID	Episode ID column value exceeds the threshold for the number of permitted special characters (eg ! £ & *), which is three
1	Episode ID	Episode ID column contains duplicate values
2	Episode Start Date & Time	Episode Start Date & Time column value is blank
2	Episode Start Date & Time	Episode Start Date & Time column value is not reported in correct format, within range Please follow 'DD/MM/YYYY hh:mm' format Enter a date/time between 01/01/2012 00:00 and 31/12/2016 23:59
2	Episode End Date & Time	Episode End Date & Time column value is blank
2	Episode End Date & Time	Episode End Date & Time column value is not reported in correct format, within range Please follow 'DD/MM/YYYY hh:mm' format Enter a date/time between 01/01/2012 00:00 and 31/12/2016 23:59
2	Episode Start Date & Time, Episode End Date	Episode End Date is prior to Episode Start Date

Severity	Field Name	Rule Name
	& Time	
2	Admission Date & Time	Admission Date & Time column value is blank
2	Admission Date & Time	Admission Date & Time column value is not reported in correct format, within range Please follow 'DD/MM/YYYY hh:mm' format Enter a date/time between 01/01/2012 00:00 and 31/12/2016 23:59
2	Admission Date & Time, Episode Start Date & Time	Admission Date & Time column is on or after 01/04/2014 and does not match the first episode's start date within the spell
2	Discharge Date & Time	Discharge Date & Time column value is blank
2	Discharge Date & Time	Discharge Date & Time column value is not reported in correct format, within range Please follow 'DD/MM/YYYY hh:mm' format Enter a date/time between 01/01/2012 00:00 and 31/12/2016 23:59
2	Admission Date & Time, Discharge Date & Time	Discharge Date & Time is prior to Admission Date & Time column
2	Discharge Date & Time, Episode End Date & Time	Discharge Date & Time does not match the last episode's end date within the spell
2	Admission Method Code	Admission Method Code column value is blank
2	Admission Method Code	Invalid value(s) entered in Admission Method Code column
2	Discharge Method Code	Discharge Method Code column value is blank
2	Discharge Method Code	Invalid value(s) entered in Discharge Method Code column
3	Discharge Destination Code	Discharge Destination Code column value is blank
3	Discharge Destination Code	Invalid value(s) entered in Discharge Destination Code column
3	Patient Gender	Patient Gender column value is blank
3	Patient Gender	Invalid value(s) entered in Patient Gender column
2	Treatment Function Code	Treatment Function Code column value is blank
2	Treatment Function Code	Invalid value(s) entered in Treatment Function Code column
2	Point of Delivery (POD)	POD column value is blank
2	Point of Delivery (POD)	Invalid value(s) entered in POD column
2	FCE HRG (RC)	FCE HRG (RC) column value is blank

Severity	Field Name	Rule Name
2	FCE HRG (RC)	Invalid value(s) entered in FCE HRG (RC) column
2	Spell HRG (RC)	Spell HRG (RC) column value is blank
2	Spell HRG (RC)	Invalid value(s) entered in Spell HRG (RC) column
3	Patient Age	Patient Age column value is blank
3	Patient Age	Invalid value(s) entered in Patient Age column
2	OPCS 1	Invalid value(s) entered in OPCS 1 column
2	OPCS 1	Invalid value(s) entered in OPCS 1 column
2	OPCS 2	Invalid value(s) entered in OPCS 2 column.
2	OPCS 3	Invalid value(s) entered in OPCS 3 column.
2	OPCS 4	Invalid value(s) entered in OPCS 4 column.
2	OPCS 5	Invalid value(s) entered in OPCS 5 column
2	OPCS 6	Invalid value(s) entered in OPCS 6 column
2	OPCS 7	Invalid value(s) entered in OPCS 7 column
2	OPCS 8	Invalid value(s) entered in OPCS 8 column
2	OPCS 9	Invalid value(s) entered in OPCS 9 column
2	OPCS 10	Invalid value(s) entered in OPCS 10 column
2	OPCS 11	Invalid value(s) entered in OPCS 11 column
2	OPCS 12	Invalid value(s) entered in OPCS 12 column
2	ICD10 1	ICD10 1 column value is blank
2	ICD10 1	Invalid value(s) entered in ICD10 1 column
2	ICD10 2	Invalid value(s) entered in ICD10 2 column
2	ICD10 3	Invalid value(s) entered in ICD10 3 column
2	ICD10 4	Invalid value(s) entered in ICD10 4 column
2	ICD10 5	Invalid value(s) entered in ICD10 5 column.
2	ICD10 6	Invalid value(s) entered in ICD10 6 column.
2	ICD10 7	Invalid value(s) entered in ICD10 7 column.
2	ICD10 8	Invalid value(s) entered in ICD10 8 column.
2	ICD10 9	Invalid value(s) entered in ICD10 9 column
2	ICD10 10	Invalid value(s) entered in ICD10 10 column
2	ICD10 11	Invalid value(s) entered in ICD10 11 column
2	ICD10 12	Invalid value(s) entered in ICD10 12 column
2	ICD10 13	Invalid value(s) entered in ICD10 13 column
2	Anonymised Consultant/Care Provider Code	Consultant/Care Provider Code is blank

Appendix 3: Proposed costing method[2]

A diagram showing: "Minimum datasets (activity, cost and patient information) Sources including: General ledger, Electronic staff records, Clinical feeder systems" flowing via arrows into a process. Top box: "Nationally standardised dictionaries for resources, activities and patient services". Columns: General ledger → (Mapped) → Standardised resource structure → (Assigned) → Standardised activity structure → (Assigned) → Standardised patient services. Bottom box: "Costing standards defining mappings and assignment from resources to activities, and activities to patients".

2

www.gov.uk/government/uploads/system/uploads/attachment_data/file/381990/Improving_the_costing_of_NHS_services_-_final.pdf

Appendix 4: Glossary

Activity	A measurable amount of work performed by resources, such as delivery of ward nursing, delivery of community nursing, a pathology test, surgery or therapies
Activity group	Aggregates of detailed activities for reporting purposes
Allocations	Process of spreading costs from a high level pool of costs to an activity or cost object, based on a predetermined methodology
Apportionment tables	Process of distributing costs proportionally
Cost driver	A factor that causes costs to vary, such as length of stay or theatre minutes; this contains the activity data to allow costs to be allocated to cost objects
Cost ledger	Cost information to be used within the costing system typically created by either aggregating or separating specific costs from the general ledger to prepare them for the costing process. For example, where the general ledger includes unnecessary details such as the separate identification of pay, pension, NI and overtime, these would be combined into a single staff cost
Cost object	Final destination for the costs which originate in the general ledger and are defined by the nature of the demand for services by the ultimate user of the service. For example, a patient cost object in acute care may be an episode of care, which has a clear start and end date and well understood interventions taking place in between. There will also be cost objects for non-patient services (such as education and training, research and development, etc) and commercial items such as car parking costs
Datasets	Activity data that feed into the costing system
General ledger	Source of cost and income information in the system, which is the trial balance of the organisation as reported in financial statements
Healthcare resource group (HRG)	A grouping of clinically similar procedures and diagnoses which use a common level of resources
Income dataset	Data used for income billing purposes

Income ledger	Income information to be used within the costing system typically created by either aggregating or separating specific income items from the general ledger to prepare them for the income process. For example, where the general ledger includes non-patient care income within a cost centre, this will be disaggregated and included within the income ledger
Matching	Matching of an activity to a related cost object
Minimum datasets	Minimum information required in each dataset as defined by the costing standards, meaning that all organisations use similar measures and definitions to allocate and identify costs
Physical allocation statistic	Statistics used in apportionments that are not derived from activity datasets, and are likely to be updated annually rather than for each costing period, eg floor area
Point of delivery (POD)	Nature and location of the care provided to patients or service users
Provider	Organisation that uses costing software
Resources	Components used to deliver the activities, such as staffing, supplies, systems and facilities
Resource group	Resources aggregated into groups for reporting purposes but made up of discrete components
Roadmap partner	NHS providers who contribute to the development and testing of the costing standards.
Supplier	Supplier of costing software
Work in progress (WIP)	Cost objects that are incomplete at the end of the period but have consumed resources
Whole-time equivalent (WTE)	Measurement of the staffing resource involved in providing a service, taking account of full- and part-time working

Monitor

Making the health sector
work for patients

Contact us

Monitor, Wellington House,
133-155 Waterloo Road,
London, SE1 8UG

Telephone: 020 3747 0000
Email: enquiries@monitor.gov.uk
Website: www.gov.uk/monitor

This publication can be made available in a number of other formats on request.
Application for reproduction of any material in this publication should be made in
writing to enquiries@monitor.gov.uk or to the address above.