FINAL DRAFT

COSTING ROADMAP

Summary Report and Findings

July 2014

CONTEXT OF OUR REPORT

This report sets out the BDO project team's findings and recommendations for the development of costing, cost information and cost collection for all NHS Funded services in England. It was prepared through a process of stakeholder engagement and analysis over the period from 3rd March 2014 to 28th July 2014.

Our work was carried out in close collaboration with Monitor's costing and pricing teams with input from NHS England (NHSE), Department of Health (DH), Health Education England (HEE), Healthcare Financial Management Association (HFMA), commissioners and independent and NHS providers.

Sources of information

The information on which our report is based was gathered from:

- NHS guidance and publications
- Research papers
- Stakeholder interviews, workshops and surveys
- Subject matter experts

Our Team

The project team included expertise in:

- Costing and cost management
- Costing systems
- NHS pricing
- Regulatory economics
- Accounting and audit

The organisations from which the project team was drawn were:

- BDO LLP and Associates
- Bellis-Jones Hill
- Oxera LLP
- Monitor
- Imperial Business School
- Harvard Business School

Project Governance

Our team reported to the Project Steering Group (PSG) at key stages. The PSG membership included senior management and clinical representation from:

- Monitor (Chair)
- NHSE
- HFMA
- HEE

DEFINITIONS, ABBREVIATIONS AND GLOSSARY OF TERMS

Abbreviation	Meaning
ABC	Activity Based Costing
AQP	Any Qualified Provider
BDO	BDO LLP
BI	Business Intelligence
CBT	Cognitive Behavioural Therapy
CCG	Clinical Commissioning Group
CCS	Clinical Costing Standards
CIP	Cost Improvement Programme
CMS	Centers for Medicare & Medicaid Services
CoSRR	Continuity of Services Risk Rating
CPG	Cost Pool Group
CQUIN	Commissioning for Quality and Innovation
CSU	Commissioning Support Unit
CSV	Comma-Separated Values
DH	Department of Health
EPR	Electronic Patient Record
ERG	Education Resource group
FCE	Finished consultant episode
FOI	Freedom of Information
FT	Foundation Trust
GL	General Ledger
HEE	Health Education England
HFMA	Healthcare Financial Management Association
HRG	Healthcare Resource Group
HSCIC	Health and Social Care Information Centre
ICD	International Statistical Classification of Diseases

Abbreviation	Meaning
JAC	JAC Medicines Management
KPI	Key Performance Indicator
MAQS	Materiality and Quality Score
NAO	National Audit Office
NCD	National Clinical Directors
NHSE	NHS England
NEYHCA	North East Yorkshire And Humber Clinical Alliance
NCO	National Casemix Office
OPCS	Office Of Population Censuses And Surveys Classification Of Interventions And Procedures
PA	Programmed activity
PACS	Picture Archiving And Communications System
PAS	Patient Administration System
PREMS	Patient Reported Experience Measures
PROMS	Patient Reported Outcome Measures
PbR	Payment By Results
PFI	Private Finance Initiative
PLICS	Patient-level Information And Costing System
PQ	Parliamentary Question
RC(s)	Reference Cost(s)
RCI	Reference Cost Index
SLR	Service Line Reporting
SoS	Secretary of State
TCS	Transforming Community Services

Abbreviation	Meaning
TDA	NHS Trust Development Authority
TDABC	Time-Driven Activity Based Costing
TSA	Trust Special Administrator
UPR	Unsustainable Provider Regime
WTE	Whole Time Equivalent

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CHAPTER 1
Executive Summary

EXECUTIVE SUMMARY

Introduction

The aims of the Costing Roadmap Project are:

- To review the current state of costing of NHS funded acute, mental health, community and ambulance services[1];
- To identify opportunities to improve the quality, consistency and availability of cost information to meet current and future needs; and
- To make recommendations as to the most effective and efficient approach in order to achieve these objectives.

A strengthened costing system will have a direct and beneficial impact on patient care through supporting better:

- Cost management and cost benchmarking to increase the productivity and efficiency with which care is delivered. This benefits patients by releasing savings for reinvestment to increase the quantity and quality of care delivered; and
- Funding of services via price development, delivery and enforcement which allocates financial resources effectively and supports and influences improvements and innovation in patient care through a stronger understanding of costs and how costs change.

The project undertook a 'needs led' approach, designed to ensure that all outcomes and recommendations would focus on meeting the needs of the healthcare sector. Therefore appropriate stakeholders from across the entire sector, including providers, commissioners and centralised healthcare organisations, were involved at all of the following five stages of the project's structure:

- Establishment of the needs of the costing system both now and in the future;
- Assessment of the current status of the costing system with respect to those needs;
- Identification of the gap between the needs and the current status;
- Developing and proposing a future costing system approach that addresses the needs and bridges the identified gap; and
- Consideration of the options for transition and selection of a preferred option.

This document is a high level description of the Costing Roadmap Project and is supported by a comprehensive evidence base.

Methodology

The project and its outputs were carried out over a period of five months from the beginning of March 2014. The methodology by which the project was carried out comprised three main components:

- **Documentary Review** - a review of existingmaterials relating to costing (both across the UK and internationally) was undertaken and used to inform both the programme of stakeholder engagement that followed, and the resulting outputs and recommendations;
- **Stakeholder Engagement** - included semi-structured interviews, workshops and the creation and dissemination of a structured survey. Stakeholders were selected from a representative cross-section of the NHS to include both producers and users of cost information. Stakeholder groups included:
    - Providers of NHS care: NHS and independent sector acute, mental health, community and ambulance services, selected to cover specific organisational characteristics that will have an impact on costing;
    - Commissioners; and
    - Centralised Healthcare organisations, including Monitor (Costing and Price Regulation functions), NHS England (NHSE), Health Education England (HEE), Healthcare Financial Management Association (HFMA), Department of Health (DoH) and the Health and Social Care Information Centre (HSCIC).
- **Analysis and Identification of the Preferred Approach** – this was carried out by the BDO LLP (BDO) project team, which included nationally and internationally renowned subject matter experts. A proposed future

[1] Primary care services are excluded but the approach has been developed to link with primary care costing at the appropriate point in time through use of methodologies, standards and frameworks which are applicable in any setting.

approach to costing was developed and refined through dialogue meetings with Monitor and other stakeholders. Finally, a range of options for the delivery of the future approach and how it can be transitioned to were identified and a preferred option for recommendation to Monitor was made.

Governance

A suitable governance structure for the project was established, including representatives from all key stakeholders. At each stage of the project, findings and recommendations were presented back to relevant stakeholders and were reviewed, challenged and approved by a structured Project Steering Group, which was chaired by Monitor. This body met at key stages of the project and included senior membership from NHSE, HEE and HFMA.

Project Background

The need for comprehensive, high quality and credible information about the costs of NHS funded services has never been greater:

- The NHS is undergoing a period of deep reform in the way it both commissions and delivers care. At the same time, it faces significant economic challenges. The achievement of long-term clinical and financial sustainability for patient services, through reconfiguration and improved efficiency, requires relevant and reliable cost management information to support decision making.
- Under the Health and Social Care Act 2012, Monitor, along with NHSE, have been given responsibility for the NHS payment system, Payment by Results (PbR). The long-term aim is to develop a payment system which supports and drives change in the delivery of high quality patient care in a sustainable manner. Within this context, it is Monitor's role to set prices, while NHSE defines the currencies. The availability of high quality cost information is essential to assess the impact of pricing strategies and deal with local modifications to PbR tariff.

Patient-level hypothesis

The hypothesis at the outset of the project was that a patient-level approach is the best method for meeting the needs of stakeholders for:

- Delivering an improved methodology for costing;
- Producing cost information both now and in the future; and
- Collecting and submitting costs as part of a national cost collection exercise.

The evidence for this hypothesis was tested thoroughly with stakeholders and through expert analysis. The conclusion is that the granular data produced under a patient-level costing approach meets all current and expected future needs and is sufficiently flexible, consistent and enduring to respond to new needs as they arise.

Uses of cost information

Cost information is used across the English NHS funded care system for many purposes. The main categories of use were identified as:

- **Cost management** – used to assist in the management of an organisation's cost base, by:
  - Providers - including Cost Improvement Plan (CIP) delivery, informing strategic decision making, business cases production and annual planning cycles, etc.;
  - Commissioners - including informing local/national price modification, QIPP initiatives and tendering of services; and
  - National bodies - including informing national investment activities, Foundation Trust (FT) authorisation and compliance regimes and identifying possible financial failure.
- **Cost benchmarking** – used to assist in the comparison of costs within and between:
  - Organisations;
  - Providers - including identifying best practice, identifying efficiency opportunities and informing strategic development / investment / divestment decisions;
  - Commissioners - including to support care pathway redesign, informing procurement decisions and assessing the impacts of modifications/variations to tariff; and
  - National bodies - including supporting the development of specialist services, to determine opportunities for economies of scale around service provision and to assess / approve merger and acquisition transactions.
- **Price regulation** – used to assist in:
  - Price development - including development of new pricing strategies, supporting the development of pricing incentives and assessing the impact over time of changes to price and currency on providers/commissioners;
  - Price delivery - determining appropriate financial values to attach to currencies for the national tariff; and

- Price enforcement - supporting and understanding local prices and local variations/modifications to national prices.

- **Sector development** – used to support health economy-wide strategies for service reconfiguration, impact assessment of greater plurality of provision through independent and third sector development and designing and implementing greater integration with social care services, etc.
- **Other parallel uses of cost information -** used to inform reimbursement of education and training and research and development expenditure, informing pricing decisions for private patient, provider-to-provider and non-NHS funded services and supporting the accountability for the cost of care to Parliament.

Current Status

The main driver of nationally consistent costing is Reference Costs (RCs) – this was a national cost collection exercise which began in 1997 to support local benchmarking and other cost management uses and which has evolved to now match the structure of current currencies for pricing. RCs are not comprehensive as they do not cover all costs of NHS funded services. As RCs are, by definition, the average cost per HRG per provider, they do not give any information on the variation of patient costs within a provider for the same HRG, or other relevant information such as the underlying diagnoses and procedure codes. Also, the level of data aggregation in RCs limits how they can be used. As a result, they generally do not form a reliable basis for cost management and cost benchmarking and are not easily understood or credible as a source of decision making for clinicians and operational managers. RCs are based on currencies for pricing and therefore as prices change the items being costed change. This results in loss of comparability of costs between years and hinders benchmarking activities.

From a pricing perspective, the lack of completeness and detail in RCs limits their value when developing innovative approaches to funding services within and across provider types. Consequently, the costing of care pathways and delivery of care in different settings is not well supported from a costing perspective, with specific sector development initiatives requiring bespoke costing approaches, often leading to different costing approaches being undertaken to meet different needs and objectives. Costing information is used for a variety of purposes in addition to pricing and cost management such as education, training, research and development. Cost information is often prepared using different methodologies and this risks double counting or omission of costs across the whole system.

Significant progress has been and continues to be made in the development of standards and guidance for costing. However, stakeholders confirmed that currently they are not yet sufficiently comprehensive or prescriptive to be of real benefit. This leads to local interpretation in the preparation of cost information, differing levels of quality and, as a result, inconsistency. Consequently comparison between providers and services is hampered and identification of best practice made more difficult. Standards and guidance are not adhered to for all costing work and in many cases ad-hoc costing approaches are used.

Needs of the costing system

The needs of the costing system have been evaluated from the perspective of: those who incur costs in the delivery of NHS funded services; the producers of cost information; and the users of cost information. Through engagement with stakeholders, key themes have emerged with regard to:

- Scope and content;
- Costing system rigour;
- Organisational investment; and
- Context and incentives.

The scope and content of costing and cost information relates to the need for richer and more comprehensive cost information which incorporates interrelated non-financial data about the characteristics of costs and how they relate to patient care. Scope and content comprises the following key needs:

The need for completeness of the financial and non-financial data collected	The need for cost information to be relevant to, and link in with, operational and clinical management	The need for timeliness of the cost information collected and when it is used (nationally and locally)	The need to make visible the effectiveness and productiveness of a trust's use of resources (productive efficiency)
The need to be able to link cost information to quality and outcome information	The need to be able to describe costs at a patient-level	The need to be able to link the cost of care across/between settings	The need for costing processes to serve, not be constrained by, payment currencies

Costing system rigour, meanwhile, relates to the need for a strong, single system of standards and guidance which supports consistent application of methodologies to

good quality input information and is subject to audit and assurance processes for continued improvement.

Costing system rigour comprises the following key needs:

The need to ensure a high level of accuracy in the source data (both financial and non-financial) used in costing	The need for clear and comprehensive costing standards and guidance	The need to increase the adherence to costing standards and collection guidance	The need for stability in the units costed, to allow meaningful year on year comparison
The need to provide a single source of cost information as a basis for all uses	The need for audit and assurance processes to be established to ensure adoption of process and accuracy of output	The need to enable the pursuit and advancement of best practice in both the costing methodology used and use of costing outputs	

Organisational investment relates to both the cultural and behavioural needs of organisations to support better costing in the future and the recognition that there is a need to identify sufficient resource to deliver appropriate systems and staff to carry out costing. Organisational investment therefore comprises the following key needs:

The need for clear board leadership and lines of responsibility	The need for clinical and operational engagement	The need to have appropriate investment in systems	The need to have appropriate investment in people and skills

Context and incentives describe factors that whilst not essential to delivery of a fit for purpose costing system, can encourage and accelerate its development. Context and incentives therefore comprises the following key needs:

The need to increase the availability of capable patient-level costing systems	The need for direction and support to be provided from the centre	The need for prescribing and mandating of the costing approach and cost collection
The need to describe a clear link between the costing system and tariff	The need for flexibility to enable a continuous improvement approach to costing processes	The need to develop an evidence base of the benefits of an improved, patient level costing system

Future Approach

Our proposed future approach to the costing system addresses the needs of the system by describing a single, activity-based, holistic approach to costing, which consists of:

- A standardised costing methodology, designed to produce more useful and meaningful localised costing information, which should be employed in the local costing systems of all organisations;
- A new approach to the annual cost collection process, based on a single national cost collection process – this collection will take a "snap shot" of the local costing system in use, rather than require separate cost collection processes to be completed for different purposes, significantly reducing the burden on providers to complete and increasing the accuracy of the costing information produced; and
- A central support structure required to both support the implementation of, and control / enforce adherence to, the new costing methodology through a number of processes, including provision of training and education, guidance on the use of cost information and implementation of audit and assurance processes. The central support structure should also take responsibility for driving continuous improvement in the costing system.

1. Standardised Costing Methodology

The proposed costing methodology is illustrated in Figure 1 below. Its prime aim is to capture cost information through reflecting the causality of costs:

- Why are costs being incurred?
- Who is incurring them?
- By doing what?
- And ultimately, for whom?

It also supports a better understanding of the extent to which resource capacity is utilised through comparison of the resources available with the resources consumed by activities.

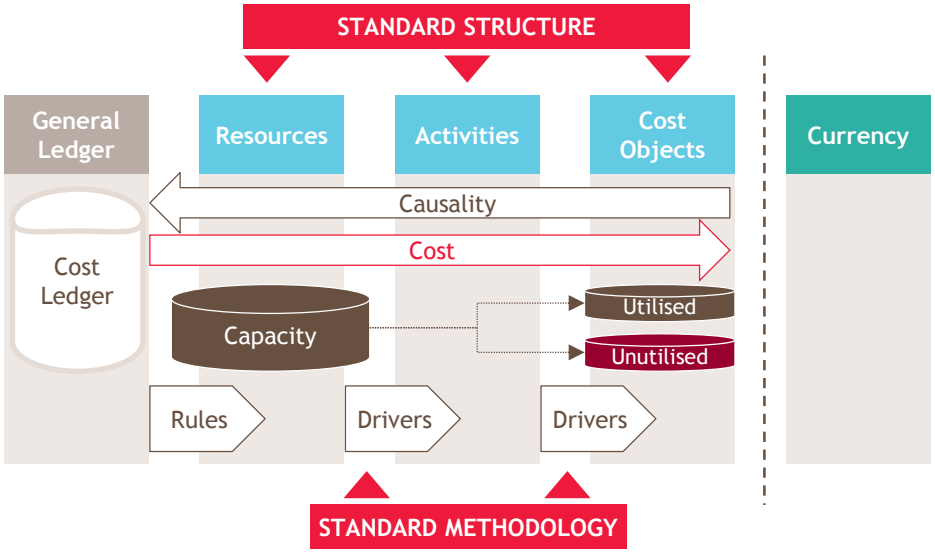


Figure 1: Application of a Standard Costing Methodology

This methodology is based on the 'Four Pillars' of costing identified above:

- General ledger – the main system for recording costs in an organisation, which inputs directly into the "Cost Ledger" (the interface between the general ledger and costing system);
- Resources – what the costs incurred "buy" (staff, drugs, consumables, etc.);
- Activities – what the resources "do"; and
- Cost Objects – a suitable aggregation of costs that represent the service delivered to users (which will be based around a measure of the patient's treatment)

The methodology will be supported by a range of processes designed to enable this approach to be implemented in a standardised way across all organisations, leading to highly comparable outputs being produced, where any variations in outputs is not resulting from different approaches to the costing process. These processes include:

- ***Publication of a set of 'definition dictionaries'***: standardised and clear descriptions of the Resources and Activities (and aggregated Resource and Activity groups) to which costs should be allocated to (see Pillars 3 and 4 in the methodology described above) will be defined and published;
- ***Publication of a costing minimum data set***: a minimum acceptable data set will be identified and prescribed, meaning all organisations will use similar measures and definitions by which to allocate and identify costs; and
- ***Publication of a clear set of standards and guidance***: which will set out the 'drivers' of each pillar – the "rules" that govern how costs should be allocated from one pillar to another in order to allocate all costs ultimately to the patient.

The application of this methodology will result in the identification of the full cost for each cost object, at the patient level, broken down into its component parts. These components will be the Activity and Resource Groups utilised in the delivery of this episode, with the costs of each being clearly identified and allowing multiple analyses across these categories to be made.

2. ***New approach to the annual cost collection process***

The proposed future cost collection 'splits' the currently used cost pool groups into two clear groups – Resource and Activity. This then makes the costing methodology used for the collection process and the format the costs are collected in mirror those of the standard costing approach described previously that should be implemented across providers local costing systems. Therefore, the annual cost collection becomes a "snap shot" of the costing system used locally, thus reducing the burden of collection AND increasing the accuracy of the outputs.

This proposed 'two dimensional approach' therefore requires the collection of highly granular information for each cost object, at the patient level, identifying the costs associated with every activity carried out by each resource. A range of non-financial information (such as patient demographic and other qualitative attributes such as Age, HRG and Procedure) should also be collected to enable a more granular analysis of the costs and their drivers to be performed.

The amount of data that will be produced is significant, therefore organisations will be expected to have in operation a technical costing system capable of costing at the resource and activity level and aggregating them into the relevant Resource and Activity groups required to deliver this level of information. However, the actual cost collection submission will be based on an "extract" of the system, rather than a manually completed workbook, meaning the burden of production of the submission on providers will be significantly reduced.

All organisations can use this methodology, without any change required to the cost collection approach for different provider types – even though there will be a number of common resources and activities across settings of care, service/provider-specific ones can be added easily and simply where appropriate and relevant.

This proposed cost collection format and structure therefore has a number of advantages, which include:

- Facilitating greater analysis and insight by giving focus on what resources are delivering what activities;
- It is simpler to produce directly from information and costing systems, as the required outputs will be available directly from the costing systems employed; and
- Outputs can be standardised across care settings, as the format of the output can take into account different care settings, by having core activities/resources that are both similar across provider types, whilst allowing specific provider activities/resources to be included where necessary.

3. A central support structure

While the proposed costing methodology aims to deliver a significantly improved costing system, the 'Enablers' referred to previously must also be in place. An example of a centralised governance structure, to provide support through both the initial implementation and the continued improvement of the costing system, is described in this document (the exact specification of such a structure will require close consultation with the relevant parties). There will be five key work streams that the established governance structure should support:

I. **Programme management** – responsibility for the overall management of the ongoing programme for the management and improvement of costing and cost collections and all specific projects that will make up the overall programme;

II. **Core Processes** – including continued development of both the supporting costing standards and guidance and the cost collection submission format (ensuring both continue to flex and adapt to the changing NHS environment in order to ensure that the needs of the healthcare sector continue to be met);

III. **National Support Framework** – including the establishment of;
   - A programme to identify and disseminate best practice, regarding the identification and use of costing information;
   - A programme for developing the capacity and capability of costing staff across the NHS; and
   - A plan for engagement and cultural change with organisations to further raise the profile of costing and how it can be used to drive benefits for patients outside of finance departments;

IV. **Systems Development** – provision of support for ongoing development of appropriate costing systems, conducting suitable engagement with suppliers to ensure the systems remain fit for purpose and capable of responding to the changing needs of providers; and

V. **Audit and Assurance Framework** - responsibility for the development and maintenance of a formal, rigorous and structured approach to ensuring standards and guidance are being adhered to and that there are processes / controls in place to maintain high quality costing, that will operate at both a local and national level.

Transition Paths

Transition to the future approach is delivered through a long-term change programme. In order to capitalise on the momentum gained through the progress already made with the development of patient-level costing, the immediate needs of the system must also be addressed. Two preferred approaches were identified and evaluated:

I. A 'Baseline', realistic transition path which keeps the processes for delivery of the long-term and short-term separate but with early adoption of benefits as they arise from the development of the future approach (see Figure 2 on page 9); and

II. A more aggressive, 'Accelerated' transition path which quickens delivery of the long-term approach with sub-options to assess the benefits of prioritisation of delivery of one provider type (acute, ambulance, mental health or community) over another.

These two transition paths will deliver the key elements that make up the future approach by undertaking a number of tasks; tasks which relate to a common element of the future approach are grouped into 'delivery vehicles' which form the main components of the transition. These delivery vehicles are combined in a programme of work, tasks allocated to organisations and the need to comply with existing timeframes for cost collection and price delivery accommodated.

Within each transition option, a number of key milestones for the implementation of the proposed costing approach are identified, which are:

- **Milestone 1**: First annual cost submission in the proposed new format (1st Patient-level Information And Costing System (PLICS) submission). This is the first year that cost collections in the proposed new format could be submitted

with the full set of guidance and standards being complete and all organisations having a suitable PLICS in place and operational.

- **Milestone 2**: Second annual cost submission in the proposed new format (2nd PLICS submission). This is the second year that cost collections in the new format could be submitted utilising the full set of guidance and standards. It is expected that improvements to both the implementation of the proposed costing methodology and the quality / accuracy of the outputs are made, meaning that the outputs of the cost collection are expected to meet minimum quality thresholds (which are yet to be established), enabling the outputs from the cost collections to be used to inform pricing on a national scale. These minimum quality thresholds have yet to be determined, but credibility of the new collection format will be established through the reconciliation of local and central calculation of RCs from submitted patient-level data. The use of the new cost collections to inform pricing will not be rigid – while waiting for all organisations to meet minimum quality standards, elements of the costing submissions could be used to inform elements of pricing at both a national and local level.
- **Milestone 3**: "Reference Costs retired" - the retirement of the RC submission in its current format can only be considered when the main outputs of the RC collection can be replicated for all organisations from the patient-level costing submissions.

The 'Baseline' transition path adopts a practical and balanced pace of change in order to meet each milestone, which is challenging without being overly aggressive - this delivers benefit in the short, medium and long-term. The 'Accelerated' alternative has been evaluated to determine the potential for and risks of accelerated or prioritised delivery (prioritised by provider type), with this approach requiring intensive input from the system in a shortened timeframe. Due to the complexity and workload associated with delivering the long-term approach over a shortened timeframe, there is little scope for short to medium-term benefit delivery with any of the 'Accelerated' options beyond those which would naturally evolve.

A comparison of the strengths and weaknesses, risks and benefits of the alternative transition paths demonstrates that while the Accelerated options have earlier delivery of key milestones and benefits, they bring significant risks, including:

- The failure of the programme due to inability to meet key deadlines;
- The potential for key elements of the future approach to be compromised due to time and workload pressure;
- The failure to deliver leads to error and the inability to support short-term development;
- The above failure leads to loss of stakeholder buy in, loss of momentum and a lack of confidence in the long-term approach.

The balance of comprehensive long-term gain and short-term benefit delivered through a challenging but achievable programme with lower risks supports the recommendation of the 'Baseline' transition path as the way forward.

Variants to the Baseline to deliver short-term benefit

Given the long-term nature of the 'Baseline' transition path, different variant transition paths were developed and evaluated to understand how benefits could therefore be delivered in the short-term. The options considered were:

1. Focus on the long-term only - this is the 'Baseline' option alone which will not accelerate short-term progress in any meaningful way, therefore not addressing the needs required in the short to medium-term);
2. Derive short to medium-term benefits from making revisions to the current PLICS voluntary collection submission, such as expanding the scope of the services covered (including outpatient and non-acute care), reconciling these submissions to the RC submissions and revising costing standards to reduce current levels of interpretation; and
3. Implement a simplified version of the future costing approach, requiring the establishment of the Resource and Activity Groups prior to the description and confirmation of the component resources and activities of the proposed costing methodology. The voluntary PLICS submission can then be reformatted to include submissions with activity and resource group components instead of the current cost pool group components. It is expected that this could be accomplished in time for the 2015/16 PLICS submission for acute organisations only to be in this interim format.

In conclusion, BDO's assessmernt concluded that Option 2 provided the best balance of a long-term comprehensive solution together with the delivery of benefit and significant additional progress in the short-term. As the Baseline transition path is implemented, eveolutionary benefits can be expected (such as clearer, more standardised definitions) and as these occur, they will feed into the ongoing short-term work described in Option 2 to ensure alignment between the short and long-term work streams.

CONCLUSIONS

The Recommended option for the Costing Roadmap

BDO recommends that Monitor adopt the proposed new approach to costing. A key element of this approach is the identification of suitable resources to invest in both systems and people both at provider organisations that will be involved in the production of these new costs and centrally, where the outputs of this new approach will be utilised. It is also recommended that the 'Baseline' transition path is the preferred route for delivery of significant and much needed improvement to the system of costing, cost information and cost collection for the NHS funded system.

BDO have reached this conclusion through careful examination of the uses of cost information and the needs for better cost information. Whilst users have identified a range of needs there is a consistent message that greater rigour in costing is required. Costing needs to be universal in its approach to meet the needs that exist now and in the future and cultural and behavioural change needs to be harnessed through central control and direction for consistent quality over the long-term.

This proposed Costing Roadmap is a long-term endeavour to fundamentally change the quality, profile and impact of costing for the benefit of patients. It will not be delivered overnight and maintaining momentum and buy-in over the whole timeline of the programme will be challenging. The recommended transition path seeks to augment current practice through delivering benefits as new data, methodologies and support frameworks come on line. This will protect the integrity of the future approach whilst making significant progress in the short-term.

Next Steps

Following a programme of further engagement with the sector, BDO recommends that Monitor establishes a detailed delivery plan with the project moving into implementation during the third quarter of 2014/15 subject to relevant approvals.

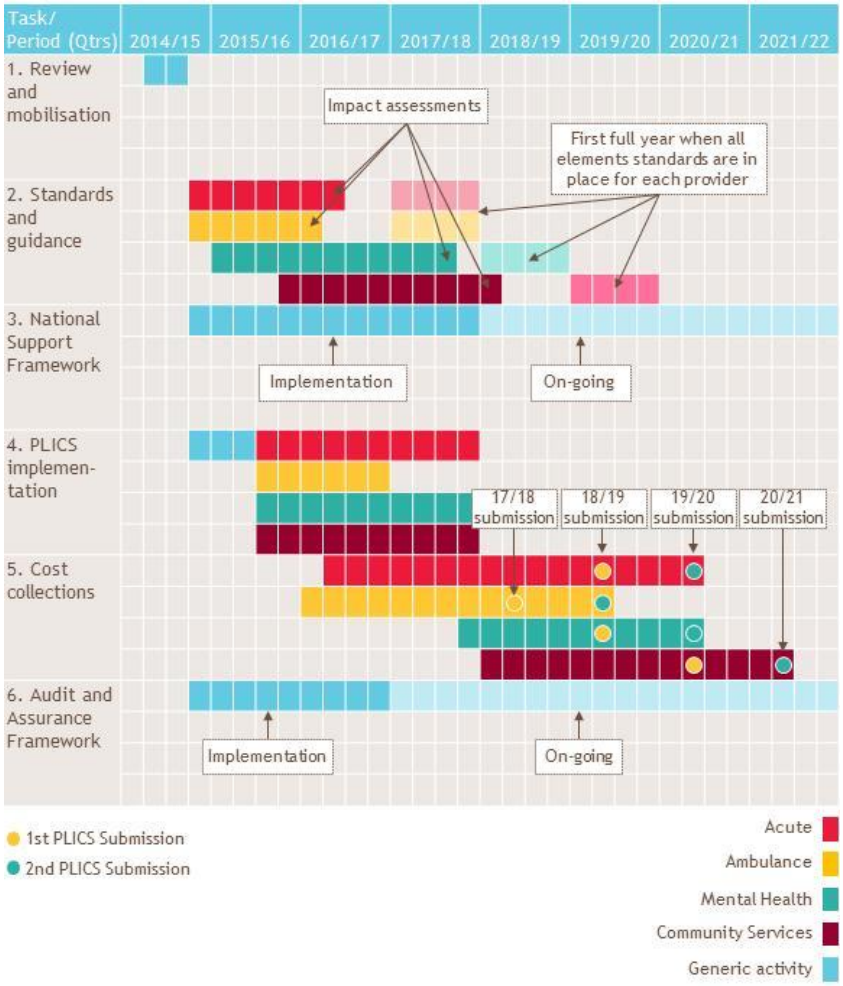


Figure 2: Recommended Baseline transition path

CHAPTER 2
Project Objectives

PROJECT OBJECTIVES

Background

This Project was commissioned by Monitor, who under the Health and Social Care Act 2012, are responsible for the NHS payment system along with NHSE. The aim of the Project is to develop a payment system which supports the delivery of high quality patient care in a sustainable manner.

The current payment system, Payment by Results (PbR), is centred on the use of average unit costs to help inform the setting of national prices. These are collected annually via a national cost collection called Reference Costs (RCs) – RCs were first collected in 1997/1998 as a means to enable the collection of financial information to support a number of uses, including enabling local benchmarking, etc. Upon the establishment of PbR, RCs evolved to become a means of providing the information on which these nationally set prices were identified.

In 2013 Monitor asked for volunteer NHS providers to provide information relating to costs and activity for admitted patient care at a patient-level, rather than at the 'average' Healthcare Resource Group (HRG) level that RCs require. This represented a significant change from the current cost identification methods used in completing RCs submissions to a more granular approach, in line with current patient-level information and costing system (PLICS) methodologies.

The disadvantages of the costing approach used by a number of trusts to inform the calculation of their RCs, include:

- It is an apportionment approach and does not support effective cost management because it is not built on cause and effect principles. This means that changes in activity will not be seen to necessarily drive changes in the corresponding resource costs;
- It lacks credibility and relevance for organisations because it is not specific patient-based. Clinicians work with individual patients who present with different conditions and needs, requiring different care. This is not reflected in a costing methodology which generates averages that cannot be further analysed and apportionments which are often not transparent; and
- Because of this, there is a lack of clinical engagement, which adds to the likelihood that poor data issues are not addressed.

The change in approach was in part due to Monitor recognising many of the weaknesses inherent in how NHS costing has been undertaken in recent years.

Monitor is now looking to define an approach to costing which: provides credible, actionable information which reflects reality for use by both Monitor and providers at strategic, management and operational levels; recognises that, in the NHS, costing is a specialist skill with a limited number of capable practitioners; meets both its and the wider NHS's current and emerging costing and cost management information needs; Is practical and one which it would be reasonable for NHS providers to be expected to follow; and is understood and supported by all interested parties.

An aim of this Project is to produce a 'Costing Roadmap', a strategic framework document which will help different stakeholders understand how the current approach to collecting and using cost information can be improved. A shift towards more accurate cost information will support more accurate and influential price-setting and will allow organisations to use cost information as an effective management tool and benchmarking enabler.

Given this ambitious objective, the Costing Roadmap tests the patient level costing hypothesis and sets out options for a transition path from RCs to patient-level costing, identifying how the optimal solution will be achieved. The transition path recognises the very different levels of costing capability and enthusiasm across the NHS and addresses this by detailing parallel programmes of costing development, cost collection and use during the transition period. This work will provide the foundation on which to deliver more efficient and effective patient care in the future.

Project Objectives

The objectives of the Costing Roadmap Project are to:

4. Examine the short-term and long-term costing data needs and gaps to support price setting, pricing development and cost management, as well as future sector development and research and development needs;
5. Develop and assess strategic options and recommendations for an achievable transition of cost collection methods, exploring alternative approaches for moving from RCs to patient-level costing; and
6. Develop an associated enabling plan for each option, supported by clear timelines and milestones

CHAPTER 3
Methodology

METHODOLOGY

Introduction

In order to meet the Project's objectives, the following evidence-based methodology was established to ensure stakeholder needs remained the focus:

- Identification of evidence gathered from desk-based research;
- Identification of evidence gathered through stakeholder engagement; and
- Development of a suitable future approach and transition paths through examination of the evidence by the experts within the project team.

Why an evidence-based methodology?

The use of an evidence-based approach achieved the following objectives:

- Stakeholder involvement in the development and agreement of findings and recommendations to ensure that the proposed future approach to costing properly reflects their needs;
- Increasing stakeholder awareness and support during the development of the Costing Roadmap, thus increasing the investment and "buy-in" of project stakeholders, supporting both acceptance of the final recommendations and accelerated and effective implementation;
- Gaining a shared understanding of the current state of costing across different sectors of the NHS, independent providers of NHS funded care and other parties who produce and use information based on NHS costs;
- Identifying and assessing the costing needs of all parties who have an interest in NHS costs, both inside and outside of the NHS;
- Developing transition paths from RCs to a patient-level costing methodology; and
- Delivering findings and recommendations for the future approach, which have been tested by stakeholder scrutiny and challenge.

This overall approach allowed:

- Project objectives to be achieved;
- Current and future costing to be described and assessed;
- Any trade-offs to be discussed; and
- The development of options for future costing practice and the transition towards those options to be informed by users and producers of cost information across the NHS.

Evidence gathered from desk-based research

One of the key sources of evidence relating to the current status of and best practice for costing in healthcare is published documents on the subject: journals, articles, guidance, etc. The Project team identified a list of documents which could provide valuable insight into the core elements of the Project, namely:

- The need for, and use of, cost information;
- How costing is carried out; and
- How cost information is collected.

A Project Reading List was created and individual documents were reviewed by Project team members. Key points were summarised systematically in a Summary Document to serve as a guide throughout the Project.

Evidence gathered from stakeholder engagement

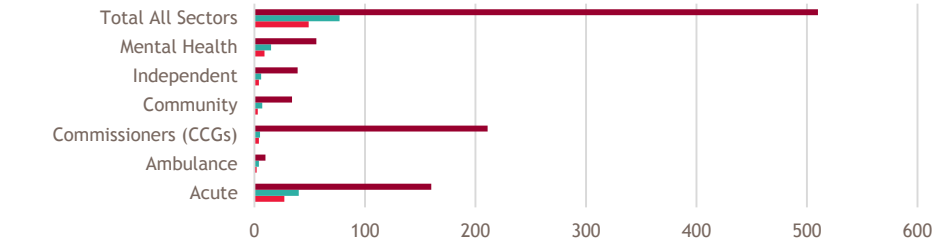
Two groups of stakeholders were engaged throughout the Project:

- Producers: organisations that "produce" costing information, primarily organisations that provide services and/or care for NHS patients (including all secondary and tertiary care provider types: acute, mental health, community, ambulance and independent sector providers who provide NHS funded services. It should be noted that as primary care services are not included within the scope of this project, primary care stakeholders were therefore not engaged[2]); and
- Users: those that "use" the cost information produced at a local, national and strategic level.

[2] Whilst the scope of this work does not specifically include primary care the approach developed will cater for links into primary care at the appropriate point in time.

Stakeholders were identified after preparing a matrix of all NHS organisations which either produce or use cost information at a local level (both providers and commissioners). After determining the different organisational characteristics (such as specialist or general services, integrated, foundation trust or non-foundation trust, rural or urban) which may have an impact on costing, cost information and cost collection, a set of stakeholders was selected from the matrix to ensure all these characteristics were included.

77 organisations were invited to participate, with 49 of those actively participating in at least one of the engagement mechanisms described below. Appendix 1 details individual stakeholders categorised as per Figure 3.



	Acute	Ambulance	Commissioners (CCGs)	Community	Independent	Mental Health	Total All Sectors
Organisations England	160	10	211	34	39	56	510
Organisations Invited	40	4	5	7	6	15	77
Organisations Participating	27	2	4	3	4	9	49

Figure 3: Stakeholder service types

Engagement took place in four phases:

1. Initial stakeholder engagement, via 1:1 telephone calls or meetings, the circulation of an online survey and a series of mini-workshops, with the findings informing the next phase. This phase was the primary evidence-gathering mechanism. All engagement was designed to gather the evidence required to support the project objectives, primarily identifying the current and future needs and the current status of costing;
2. Detailed stakeholder workshops, which were used to confirm and challenge the Phase 1 findings. The workshops also provided the opportunity to better understand any conflicting views from organisations both within and between the different sectors;
3. Stakeholder validation, whereby the proposed approach to costing was presented to key stakeholders for confirmation, challenge and ultimately validation; and
4. Ad hoc meetings with stakeholders: as the project progressed, additional 1:1 meetings were held with specific stakeholders as required (where further clarification was required).

Identification of a suitable costing approach by analysis of evidence by subject experts in the project team

The project team included individuals and organisations with significant experience of NHS and international costing, including operational knowledge and understanding of current costing methodologies and systems (BDO and Bellis-Jones Hill), strategic understanding of costing processes and their role/use at both a local, national and international level (Imperial and Harvard Business Schools) and the role and requirements of sector regulation (Oxera).

Following the stakeholder activity, the experts within the team shared and reviewed the evidence and tested this against their own experience and knowledge to challenge and shape the findings. All review and analysis carried out for this Project has been undertaken in accordance with the following structure:

- Formal notes taken: following every stakeholder engagement session, detailed notes were prepared by an attending project team member. These were circulated to any other attending project team members for confirmation and endorsement; and
- Summaries produced by several project team members: where summaries were needed (for example, from the desk-based research and the 1:1 calls and meetings), two summaries were produced by different project team members and a third overall summary was produced by a third project team member (to ensure a single balanced view was drawn from summaries prepared by those with different areas of expertise within the project team).

The internal production of all documents/deliverables was followed by a system of both internal and external review:

- All project deliverables were produced with input from many team members. Tasks and content were allocated to the project team member with the most appropriate experience. Upon completion of every draft document, an internal project team review took place, whereby all documents were circulated to all team members for comment and critique;
- Group internal review meetings were scheduled regularly. The project was structured around regular, formal full project team meetings to review draft copies of deliverables and interim documents. This ensured all content was reviewed by all team members, regardless of their area of specific experience; and
- External formal review meetings. One of the major project components was the review and analysis provided by the key stakeholders of the project. In these meetings, all interim findings and results were tabled and discussed.

CHAPTER 4
Needs of the Costing system

Introduction

The purpose of this section is to identify the need for better cost information both now and in the future.

Consideration is given to what cost information is currently used for and how effective it is in supporting those uses. Expected future uses are also considered along with the extent to which cost information could meet those future uses in its current form. Not all future uses are known and therefore the flexibility required of cost information is taken into account.

A comparison of the current and future needs with the current status of costing highlights specific areas where improvements are required, which are described below.

A clear distinction is drawn between actual improvements to cost information and what must be in place to provide the context and framework for its immediate and ongoing development. This includes elements such as guidance, support, incentives and assurance and these are described as 'Enablers'.

In summary, this section covers:

- Uses of cost information now and in the future and its current status with regard to those uses;
- Needs for improvement to cost information; and
- Enablers to support cost information improvements.

The 'Needs' and 'Enablers' form the requirements of the future costing system approach which are addressed in the next section.

Sources of cost information

Before discussing the detailed uses of cost information, it is important to consider key sources of cost information to provide insight into improvement needs as discussed later in this section.

Cost information is collected systematically through:

- RCs which provide high level aggregated and averaged information by Healthcare Resource Group (HRGs) by organisation. RCs are not readily recognisable by clinical and operational staff as they do not provide sufficient detail with regard to the resources employed or the activities carried out in the delivery of patient care. The use of RCs is most prevalent in the acute sector and covers a restricted component of the total costs of organisations. One of the primary uses of RCs is to support the development and delivery of prices. As a consequence, the nature and content of the components of RCs change regularly as the approach to pricing changes – in summary, RCs are heavily aggregated, not locally meaningful, provide no visibility on how they have been constructed and hence are not sufficient for most cost management and cost benchmarking uses; and
- Voluntary patient-level cost collections, based on the outputs of Patient-level Information and Costing systems (PLICS). Patient-level costs provide more information than RCs but are at an early stage of development, only cover a subset of acute organisations and also suffer from the potential inconsistent interpretation of guidance, methodology and standards. PLICS have been developed by suppliers from different starting points and often process costs in an unclear and inconsistent manner, meaning there is little consistency between the outputs from different systems.

In addition, local costing exercises are undertaken for a multitude of purposes. They are conducted on an ad hoc basis, using a variety of assumptions and methodologies, which relate to a specific purpose and time period. This can lead to inconsistency and lack of comparability over time and between organisations.

High quality cost information relies upon good, consistent source data from feeder systems. The general ledger is the main source of financial information and this is generally well developed, regulated and assured, through audit and strong, embedded standards and guidance. Clinical information systems provide the information which determines to a large extent how and where costs are allocated. Evidence from stakeholders and reports and analysis on the subject confirm that the quality and detail of the information available from such systems is highly variable.

Uses of cost information

Cost information is used widely across the NHS funded care system for many purposes. The main categories of 'use' have been identified as:

- Cost management;
- Cost benchmarking;
- Price regulation;
- Sector development; and
- Other parallel uses of cost information.

Within each category there are a number of key activities.

Cost management and cost benchmarking include essential activities related to planning and monitoring the cost implications of operational and service development work.

Price regulation involves price development, price delivery, price enforcement and the implications of price and cost for competition and broader regulatory matters.

Sector development includes the wide range of activities associated with local and national delivery of the reform agenda.

Cost information is also used for a wide range of other parallel purposes such as:

- Reimbursement of non-patient care costs (such as education and training and research and development costs);
- Management of private patient activity (carried out by NHS organisations);
- Management of NHS and independent sector provider to provider contracts; and
- Management of non-NHS funded care services delivered by NHS providers (including the transfer of funds from healthcare to social care which is a key issue).

Additionally, cost information is used by the DH, Monitor, NHSE, the NHS Trust Development Authority (NTDA), the HSCIC and other organisations and individuals to:

- Hold the DH and its Ministers to account for the use of NHS resources in replies to Parliamentary Questions, Freedom of Information requests and other official correspondence;
- Support implementation of the European Union cross border healthcare directive, which requires transparent and objective mechanisms for the reimbursement of patient costs between member states;
- Inform the weighted capitation formula used to allocate resources to NHS commissioners;
- Support Office for National Statistics estimates of NHS productivity for calculating Gross Domestic Product;
- Inform the design of HRGs and other payment currencies; and
- Inform other academic research.

There is a strong interrelationship between the production and uses of cost information as set out in the diagram at Figure 4.

Cost management, cost benchmarking, price regulation and parallel uses determine what cost information needs to be collected. Cost collections, which represent the aggregated data of many organisations, are used to support benchmarking, both within and between organisations, along care pathways and across settings of care.

Cost collections and, to a certain extent, cost benchmarking are used to inform price regulation activities because they support the identification of prices and the impact of price interventions on different organisations.

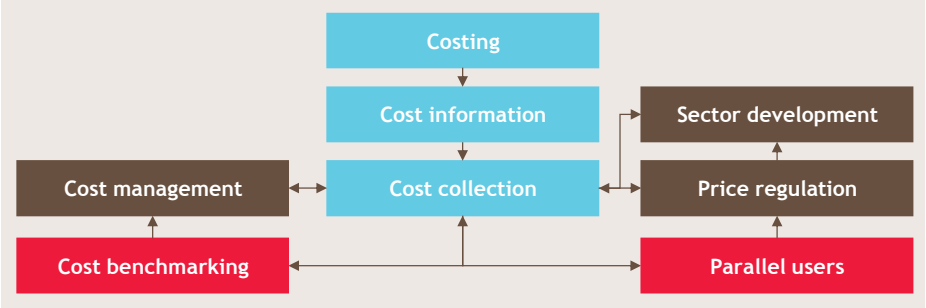


Figure 4: Relationship between production and uses of cost information

Detailed uses and current status of cost information

In the following paragraphs the current and future uses of cost information are explored in more detail and the areas for improvement of existing cost information examined. This analysis supports the identification of the 'needs' to be met by a future costing system approach set out later in this section. The main enabling factors are also identified and provide the context for the development of improved costing.

Cost management uses

The following key cost management activities were highlighted in the project interviews and workshops with stakeholders and confirmed by the results of the survey:

Providers:

- Cost improvement delivery;
- Business cases for investment;
- Annual planning cycle;
- Procurement;
- Impact assessment; and
- Operational decision making.

Commissioners:

- Local prices and modifications to national tariff;
- Quality, Innovation, Productivity and Prevention (QIPP) initiatives;

- Care pathway planning; and
- Tendering of services.

There was significant debate as to whether commissioners needed to understand costs at a provider level, as their main concern is the price they pay through tariff. The conclusion reached was that a better understanding of provider costs would be of benefit for some areas of commissioner decision making.

National bodies:

- National investment activities;
- Approval of provider business cases;
- Foundation trust authorisation and compliance regime; and
- Dealing with financial failure.

Improvements to cost information for cost management

In order to improve the effectiveness of cost management activities, stakeholders identified several aspects of costing, cost information and cost collection that requires improvement:

- Most cost management activities have the patient at their heart while cost information is often not produced on this basis. Stakeholders confirmed that complete cost information captured at a patient-level would support better understanding of costs through the ability to aggregate and sub-analyse the total or component parts of patient-level costs;
- The quality, reliability and consistency of the underlying source data from clinical information systems is variable and this affects the credibility and fitness for purpose of cost information for cost management purposes;
- Strong cost information provides a transparent link to operational activities via the general ledger based on causality. Stakeholders identified the need for improvements in the causal link between the services delivered, what work is done to deliver them, what resources are employed in delivering the work and the costs of the resources set out in the general ledger;
- Consistency is important but not essential for cost management. It is perfectly reasonable for an individual costing exercise for a specific purpose to be carried out using discrete, specific data and assumptions. However, where different costing exercises require comparison either to make a choice between options or to compare planned with actual costs, consistency becomes more important. Cost information is currently produced through a mix of systematic and ad hoc processes. As a result, the ability to compare the costs generated by different exercises can be impaired. For example, business cases often include cost information developed specifically for the purpose of the particular investment while monitoring of the implementation is based on budget management which analyses costs on a different basis. This can make comparison with the original plans difficult. A common source of data based on common assumptions would support consistent analysis of the same costs under different circumstances;
- Existing cost information is often relatively simple with details of the item being costed, the cost and sometimes supplementary volume data included. Stakeholders recognised the need for the systematic production and availability of multi-dimensional cost information to support understanding of the nature, characteristics and behaviours of cost, for example: cost of utilised/unutilised capacity, variability and the ability to vary cost and the behaviour of all costs in relation to changes in volumes and complexity of patient treatment;
- In summary the key issues for improved cost management include:
  - A patient level approach, linked to operational management through the general ledger to make cost information meaningful and transparent;
  - Quality of data inputs, particularly from clinical information systems;
  - A method of costing which reflects causality supporting the patient level approach and the link to operational management and the general ledger through clear resource and activity drivers;
  - Supplementary cost information readily available to provide an understanding of ability to vary costs and the impact of complexity of work load, volume and resource utility, etc; and
  - Consistency is helpful but not critical to cost management where a single isolated exercise is being carried out but where costs need to be compared then consistency becomes important.

Cost benchmarking uses

The following key cost benchmarking activities were highlighted by the specific user type in project interviews and workshops with stakeholders and confirmed by the results of the survey:

For Providers:

- Identifying best practice;
- Carrying out peer group comparisons;
- Identifying opportunities for merger synergies;
- Establishing the value for money of service divestment and development;
- Site reconfiguration and rationalisation planning;
- Impact assessment of shift of care setting; and

- Internal performance improvement.

For Commissioners:

- Assisting and supporting care pathway design;
- Informing procurement and tendering decisions;
- Informing local price setting decisions; and
- Assessing the impacts on organisations of modifications and variations to national tariff.

For National bodies:

- Determining opportunities for economies of scale with regard to service provision;
- Understanding the cost implications of critical mass of services and sub scale operations;
- Planning specialist technology investment;
- Development of specialist services;
- Assessment and approval of transactions for merger and acquisition;
- Managing financial failure; and
- Approval of business cases.

Improvements to cost information for cost benchmarking

In order to enhance the effectiveness of cost benchmarking activities, stakeholders identified a range of characteristics of costing, cost information and cost collection that require improvement:

- Benchmarking exercises are frequently carried out by organisations using specially gathered ad hoc data, leading to a lack of consistency of approach which impacts on the consistency of the outputs.
  - In order to draw comparisons properly within and between organisations, cost benchmarking information must be prepared on an entirely consistent basis. This ensures that any differences relate to the costs of the items being compared and not the methodology by which they were derived.
  - Existing information for cost benchmarking does not consistently include information about the behaviour of cost under different circumstances e.g. variability with changes in the volume of activity.
- Cost information for benchmarking is often not sufficiently detailed to identify the specific causes of variation or isolate areas of commonality.
- Existing cost information about the nature of cost (cost of utilised and unutilised capacity, cost of capital, marginal and fixed elements and identification of abnormal costs) is not systematically available and has to be created or developed when required for specific purposes.
- Cost information collected does not include relevant information about the impact on and outcomes for patients e.g. quality and outcomes or the cost impact of volume and complexity of the work it relates to.
- There is currently no freely available and complete set of cost information from a single credible source. RCs exclude certain costs and are not comprehensive with regard to all providers.
- For cost benchmarking activities to be credible, they must be based on a common set of standards and guidance consistently applied using common assumptions. This is not the case currently. There is too much scope for local interpretation in the application of guidance and, in the worst cases, lack of adherence to the guidance that exists.

In summary improvements to cost benchmarking include:

  - More detailed information;
  - Consistently constructed;
  - Through one source;
  - Stable from year to year;
  - Identifying the nature of the costs; and
  - Linked to quality and outcomes.

Price regulation uses

The following key price regulation activities were highlighted in Project interviews and workshops with stakeholders:

- Price development;
- Price delivery; and
- Price enforcement.

Price development: the key tasks identified in this activity include:

- Development of new pricing strategies;
- Assessment of the impact of changes to price and currency;
- Assessment of the value for money of pricing decisions;
- Development of multi-part tariffs;
- Supporting development of pricing incentives;
- Supporting pricing strategies that cross providers and settings;

- Supporting the development of pricing for integrated care; and
- Assessment of the profitability of services under different price regimes.

Price delivery: the key tasks identified in this activity include:

- The delivery of a financial value to attach to the currency for the national tariff.

Price enforcement: the key tasks identified in this activity include:

- Support for local prices, local variations and local modifications to prices.

Improvements to cost information for price regulation

Price regulation requires a comprehensive and consistent view of the costs of the whole of the English NHS funded health system. Within this, there is a requirement to drill down to classes of organisation, individual providers and services within providers to support price enforcement and price development activities and impact analysis at a local level.

- When new prices are developed, it is important to test whether and how quickly they will achieve the desired outcome by means of impact assessments. Cost information does not currently provide a comprehensive system-wide view of the variability of cost and the ability to vary costs. Additionally, there is currently no consistently available data on the cost of utilised and unutilised capacity.
- Price development requires standardised cost and quality comparisons to determine efficiency potential. This allows the 'frontier of cost efficiency' to be tracked and support plans to move the system forward through continuous improvement initiatives. Currently available cost information does not include sufficient detail with regard to the characteristics and behaviours of cost to carry out this analysis easily and efficiently.
- Profitability of provider activities at a currency level informs decisions around the potential to change prices and the flexibility to move resource between service lines through price interventions. Doing this well requires cost information to provide a complete and accurate picture so that potential cross-subsidies between services can be identified and addressed.
- Pricing activities for the integration of care require an understanding of the costs of delivering the same or improved patient outcomes in different settings and in different ways. This helps determine the potential impact of shifting care, cost effectively, between providers along a care pathway and developing more effective 'whole health economy' reconfiguration solutions. Consistent cost information across different settings that identifies the same patient or cohorts of patients in different settings through linked patient data sets would support this.
- The development of multi-part tariffs may support providers in delivering more efficient and effective care by focussing the variable element of tariff on those elements that providers can control in the short-term. An ability to separate the clinical process element of costs from the costs of the facilities and other overheads which support the clinical processes is needed.
- Price delivery requires the ability to smooth the impact of price interventions over time. The speed with which the cost of the healthcare system can respond to price changes has already been mentioned and there is also a requirement to monitor how costs have changed and how they respond. To do this cost information has to be consistent between time periods. The impact of methodology change and improvements to the quality of costing over time will also have to be assessed.

Sector development uses

Sector development includes a wide range of activities aligned with the local and national delivery of the reform agenda.

Sector development activities which require cost information include:

- Health economy-wide strategies for service reconfiguration;
- Introduction of greater plurality of provision through independent and third sector development;
- Designing and implementing greater integration with social care services;
- Designing end to end care pathways;
- Delivering care in other settings and closer to home;
- Greater emphasis on health promotion and lifestyle diseases; and
- Approaches to the management of long-term conditions and at risk populations.

Improvements to cost information for sector development

The needs of cost information for sector development are broadly similar to the areas already discussed in terms of the quality, accuracy, consistency, detail and richness of related data. Patient-level information is highly important for sector development as many initiatives transcend the traditional development of the NHS and require the ability to compare and model the delivery of care in different settings.

Many sector development initiatives are delivered over longer term periods and involve infrastructure changes. The separation of process costs from the cost of capital and facilities is important, as is variability of costs, while capital costs can vary when considered over extended timelines.

Evidence from the various provider sectors regarding their cost management capabilities and the cost methodologies they use, together with an understanding of the different guidance in place for each sector, indicates a substantial degree of inconsistency of approach to costing and use of cost data. As a result, any NHS or local health economy-wide developmental activities which depend on a detailed understanding of cost are likely to be hampered, hindering fully informed decision making. A common approach to costing which treats similar types of care consistently whatever the setting would better support these activities.

Other parallel uses

There are a variety of significant additional areas where cost information is important for development and management.

These include:

- Informing reimbursement of education and training expenditure;
- Informing reimbursement of research and development expenditure;
- Informing local prices for private patient activity, provider-to-provider contracts, NHS to private sector provider contracts and non-NHS funded services;
- Others, such as informing the setting of personal budgets; and
- Accountability for the cost of care to Parliament.

Improvements to cost information for parallel uses

The needs of cost information for parallel uses include most of those already mentioned. Other needs include:

- Ability for cost information to distinguish direct NHS funded patient care costs from patient costs funded by other sources and other non-patient care costs;
- Where there is overlap between activities, for example where there is loss of productivity through patient care activities being delivered alongside training or research, this loss needs to be identified and allocated as appropriate to its source. This ensures that the true cost of both the parallel activity (e.g. education and training) and of the patient care is identified consistently between organisations;
- Certainty that total cost information for an individual provider reconciles back to the quantum of cost to ensure there is no overlap or omission. Currently the sum of cost collections does not always balance to the total costs in the annual accounts and this issue must be addressed;
- The need to link all costs to the patient in order that a single fully absorbed patient-level cost object can be calculated is important in order to understand the total cost of patient care which has an impact now and in the future (education, training, research and development);
- Education, training, research and development costs are excluded from RCs by virtue of netting off income as a proxy for costs and as such are not separately identifiable in RCs. Other, particularly commercial, activities conducted by NHS organisations fall outside of the scope of RCs; and
- Employing a consistent costing methodology for all parallel uses that mirrors other costing exercises to enable consistent cost information to be produced.

Improving cost information to better support its uses

The previous sections set out the main uses of cost information and the areas in which it should be improved. The following narrative draws together the improvements into key themes. There are two types of need; those which relate to technical areas of costing and those that relate to the environment and context within which costing is carried out and are referred to as ‘enablers’. Technical needs and enablers are firstly described at a summary level and then the elements that make them up are expanded upon.

Summary of technical needs

From examination of the way cost information is used across the NHS funded system in England, a number of needs for better cost information have emerged. These needs are identified and described below and these inform the development of the system set out in Chapter 5 Costing System Future Approach.

The needs identified have been categorised as follows:

- Scope and content; and
- Costing system rigour.

‘Scope and content’ addresses the need for richer and comprehensive cost information which provides interrelated non-financial data about the characteristics of costs and how they relate to patient care. Scope and content comprises:

- Completeness;
- Relevance;
- Timeliness;
- Productive efficiency;
- Outcomes and quality;
- Patient-level;

- Cost of care across settings; and
- Separation of costs from currencies.

'Costing system rigour' identifies the need for a strong single system of standards and guidance which supports consistent application of methodologies to good quality input information and is subject to audit and assurance processes for continued improvement. Costing system rigour comprises:

- Input accuracy;
- Clear and comprehensive costing standards and guidance;
- Adherence to costing standards and collection guidance;
- Stability;
- Single common source of cost information ("one version of the truth");
- Audit and assurance; and
- Pursuit and advancement of best practice.

Summary of enablers

In the introduction to this chapter it was recognised that there are contextual factors which support the implementation and ongoing improvement of cost information. These have been drawn together through the dialogue with stakeholders. The factors are referred to as 'Enablers' and comprise:

- Organisational investment:
  - Board Leadership and responsibility;
  - Clinical and operational engagement;
  - Appropriate investment in systems; and
  - Appropriate investment in people and skills.
- Context and incentives:
  - Patient-level costing systems;
  - Direction from the centre;
  - Prescribing and mandating;
  - Clear link between the costing system and tariff;
  - Continuous improvement; and
  - Evidence base of the benefits of an improved costing system.

Technical Needs

The following paragraphs provide a more detailed explanation of the technical needs listed under the headings of Scope and content and Costing system rigour.

Scope and content

Completeness

Cost data requirements should be clearly specified based on the information needs as listed in this chapter and data collection processes should be matched to these requirements.

Stakeholders generally consider it essential to add more richness of data to the purely financial cost element in order to aid interpretation of how and why costs behave in different circumstances and to understand value for money by comparing the use of resources with the resulting outputs.

Key areas for improving the completeness of costing information include:

- Removal of exclusions: The current exclusions inherent in the RC collection mean that cost information is incomplete (i.e. does NOT include the full costs of the organisation as reported in their financial accounts). The impact of this is to make reconciliation of the RC information to the general ledger problematic and time consuming and increase the risk of both double counting or omission of costs. Ensuring that all costs are allocated to a relevant and appropriate object (the "cost object", such as the patient, the student etc.) allows total costs to be reconciled to the ledger;
- Process costs: The need to understand the costs of the clinical process separately from the context within which that process is carried out is important. For example, with current costing practices, organisations that deliver efficient clinical processes but do so from expensive PFI buildings can look more expensive than those delivering inefficient clinical practices from older, cheaper buildings. This allows the identification of good or poor performance without it being distorted by the high or low costs of the facility;
- Variability of costs: There is a need to understand the variability of costs both within and across organisations and the ability of providers to vary costs over time. This provides more complete data for users when assessing the impact of potential decisions on cost behaviour. In considering this, it is vital to be clear that all costs can vary over a period of time. Consequently, there is a need to move beyond simple framings of fixed and variable costs to a more nuanced analysis of resource consumption as well as resource spending across different time horizons;
- Profitability: There is a need both within and across organisations to understand the profitability of the services that they deliver. This needs to be understood by

site and setting in order to make informed decisions about investment and divestment and shifts of activity; and

- Local prices: Sufficiently broad and detailed cost information is required when negotiating local prices. This information needs to be benchmarked and an understanding of the critical mass of services and comparative economies of scale would be valuable in such analysis.

Relevance

Cost data should be relevant to the purposes for which it is to be used. This requires a periodic review of requirements to reflect changing needs.

Where the RC process is the main driver for costing work, the information produced is limited in its value and relevance to stakeholders. This is because current costing practice does not provide clear links to meaningful processes and structures – the resources of the organisation, the activities that are performed, etc. This is particularly true of non-financial users for whom RCs are of little value in supporting their day-to-day work.

Timeliness

Cost data should be captured as quickly as possible after the event or activity and must be available for the intended use within a reasonable time period. Data must be available quickly and sufficiently frequently to support information needs and to influence service or management decisions.

For cost collection to inform price setting, the data must be timely but also sufficiently well understood to determine how costs behave over time. A point being considered is whether the national tariff should be set for several years. This will provide certainty to the system but for such tariffs to be realistic they need to take into account more than just the inflationary impact of time.

Local organisational management require cost information to be provided generally quarterly although in some instances it is monthly. There is a need for all organisations to deliver cost information for operational use in a reasonable time period in order for it to be credible for decision making and to engage clinicians who are focused on the 'here and now'.

Productive efficiency

Productive efficiency relates to the identification and utilisation of resource (such as staff, equipment and facilities). It recognises the need to ensure that maximum value is achieved from all resources employed. In order to do this, resources must be clearly identified, with focus applied to those that are most material and priority given to managing them through better information about their characteristics. There are three key areas which require better, more sophisticated cost management information:

- Unutilised capacity of expensive or bottleneck resources: Identifying and managing appropriately;
- Expensive resource: Identifying excess use of expensive resource, especially where inexpensive resources can be used without impacting on service quality; and
- Optimal deployment of expensive resource: e.g. whether clinicians are doing the right things.

Unutilised capacity is that element of total resource capacity which is not employed in delivering activities. For example, an operating theatre has a maximum useable capacity each year; this can be measured in minutes and adjusted to account for maintenance down time, etc. The total activities which take place in that theatre can also be measured in minutes. The total utilised capacity is the sum of the minutes of the activities which have taken place in the theatre. The difference between the minutes employed and the minutes available is the unutilised capacity.

Theatres are a highly expensive resource. There is a need to understand and quantify the cost of unutilised capacity, understand the reasons why it arises and take management action to control it.

The identification of expensive resource is important not just from a utilisation perspective but also from a productivity perspective. Taking the theatres example, a fully utilised theatre may have low productivity. In order to take effective management decisions, a clear understanding of throughput is required. So for example, two identical fully utilised theatres carrying out identical activities may deliver different volumes of activity. This highlights the need for investigation and management action.

Optimised deployment of resource relates to the analysis of expensive resource. Where such resources are employed, it is important to ensure that they are focused on those activities that create the greatest value and cannot be undertaken by less costly resources. Again, taking the theatres example, a highly expensive laminar flow theatre could be fully utilised, and highly productive but if the activities being carried out could be done elsewhere and at a lower cost, then the total resource is not being optimised.

Outcomes and quality

There is a move towards much greater emphasis on the quality and outcome of delivered patient care and away from an approach which mainly recognises the

volume of interventions as a measure of payment for services. This move needs to consider the cost of quality of both inputs and outcomes.

Clearly, there will be circumstances where cost information alone will not identify differences in quality of care (for example, where two clinicians who cost the same deliver different outcomes): a highly efficient surgeon who delivers best in class productivity (and is, therefore, more cost efficient) may not deliver patient outcomes at the right level.

CQUIN schemes put some income at risk for quality as confirmed by stakeholders. While not necessarily a short-term deliverable, due to the complexity and relative immaturity of outcome measures, it is important for a future costing approach to be able to accommodate the requirement to take account of outcomes. This could be achieved by close working with those who are developing the 'measures' of outcomes so that costs can be mapped appropriately. It is likely that the cost objects identified in the proposed costing methodology will be sufficiently granular to derive the cost of outcomes. The greater challenge will be obtaining the relevant non-financial data which supports measurement of outcomes and linking data across settings of care.

Commissioners are placing greater emphasis on outcome measures rather than input volume measures for contracting. As a result, providers need to be ready to cost their services in a way that reflects this. The development of outcome measures is at an early stage and therefore this is not an immediate need.

Patient-Level

The need to develop costing at a patient-level (the ability to identify the costs of treatment and care for individual patients) was the hypothesis set out at the beginning of the project. It was important to test this through stakeholder engagement and expert input. In principle, stakeholders support this hypothesis, as this will bring improved cost information and more efficient submission of cost collections. Further support for the move to patient-level costing is provided by stakeholders' views of the needs they have from costing generally and, in particular, to support national cost collection exercises.

Cost of care across settings

A core part of the NHS strategy is to shift care closer to home with the aim of improving quality, reducing costs and giving patients a better experience. Many patients, particularly those with long-term conditions, experience care in a variety of settings. In order to understand and support innovation in this area, work is ongoing with regard to local, person-level linked data sets. A component of this initiative is financial management, for which it is recognised that patient-level cost information is a key enabler.

The ability to identify the costs of the whole patient journey across different settings and organisations has been recognised as an important need by stakeholders both in the survey and in the interviews and workshops. There are challenges to identifying the same patient in different settings. The opportunity exists to understand the cost of care in more than one setting through integrated care providers and those trusts that acquired community services under the Transforming Community Services programme.

The first challenge is to link patient data. The differences in the quality of data in different settings can make this difficult. An additional hurdle relates to the lack of clarity and inconsistent interpretations of information governance obligations. However organisations are starting to make progress, which will drive a need for financial management and therefore cost information to keep pace.

Separation of costs from currencies

The identification of Healthcare Resource Groups (HRGs) is used to classify patient care based on expected resource use in the provision of care. HRGs are used as a basis for currency within the NHS in England and are developed and maintained by the National Casemix Office (NCO) at the HSCIC.

HRGs are groupings of patient activity derived primarily from procedure (OPCS-4) and diagnosis (ICD-10) codes within patient records. They are used, amongst other things, as a means of determining fair and equitable reimbursement for healthcare services, by providing consistent 'units of currency' to support standardised commissioning across the NHS. Whilst at a higher level of aggregation, this is also the role of clusters in mental health.

The need to separate cost information from tariff currencies is mentioned earlier but is worth reiterating here. The introduction of PbR tariffs accelerated the development of costing in the NHS as it strengthened the production of national RCs.

The HRG currency has become the focus of costing attention but HRG RCs are limited in their effectiveness for cost management due to the aggregated nature of costs and lack of cost detail. They do not work well either for supporting cost benchmarking and decision making at a local level or at a national level for comparing organisations' cost performance and the sensitivity of costs to policy change. The reasons for this are:

- HRG RCs group procedures and diagnoses and aggregate costs in a way that inhibits meaningful dialogue with clinicians about the costs of their specific practice and patients;
- They exclude some organisational costs and therefore do not provide a complete picture of the total ancillary, supporting and parallel costs of patient care and do not reconcile back to the total quantum of cost for the organisation;
- Costing of the unbundled elements of tariff can obscure the cost of an individual patient or at least make collection of costs at a patient level more difficult as costs are scattered across different parts of cost reporting;
- They do not provide a break-down or analysis of cost or cost characteristics and therefore cannot be used to determine the underlying drivers of cost, or to help establish appropriate currencies to support best clinical practice and resource utilisation;
- Stakeholders agree that a reorientation of costing away from tariff currencies and towards a more meaningful Patient-level cost object will improve the value of cost information and cost collections. It is essential to note that patient-level cost objects must still be capable of being aggregated to support costing of the HRG currency. Cost information at a lower level supports the development of future currencies which may or may not be HRG based dependent upon setting; and
- While current payment currencies lack operational relevance, in changing payment currencies to increase operational relevance, costing stability (i.e. the ability to analyse costs consistently over a period of time) will be destroyed. The need to be able to separate costs from any form of payment currencies is therefore borne out of the needs of the system for both relevance to operational staff and the need to ensure costing stability for better cost management purposes.

Costing system rigour

Input accuracy

Cost data should be sufficiently accurate for the intended uses and should be captured only once (not repeatedly for different uses) at the point of activity.

The need for cost data to be captured once for multiple uses is endorsed by all stakeholders. It is argued that single data capture will lead to more efficient costing, reduce the costing burden, and support costing consistency between activities performed within and across organisations.

The greatest established need with regard to accuracy of cost data is the extent to which the information and analysis derived from clinical feeder systems is fit for purpose. Almost without exception, stakeholders feel that the quality of non-financial data used in the development of cost information and cost collections is one of the more significant barriers to the credibility of cost information for all uses. The inadequacies of data related to patient care are well documented in various National Audit Office (NAO) and Audit Commission reviews. As such, there is a broadly acknowledged need to improve non-financial data for costing purposes.

Clear and comprehensive costing standards and guidance

Cost data should be recorded and used in compliance with relevant requirements and standards, including the correct application of rules or definitions. This will ensure consistency between different time periods and organisations, leading to more meaningful cost information and outputs.

There is general agreement that, in order to improve the validity of NHS cost information, there needs to be greater consistency as to how cost and non-financial data are compiled and used. The HFMA standards form the bulk of the guidance in this area. Stakeholders confirm that more detailed and prescriptive rules around the production of cost information and the collection of cost data are required and would be welcomed.

Revised standards and guidance should support a 'bottom up' approach adopting managerially relevant costing system components (e.g. resource/activity costs as opposed to financial reporting related cost pools) to establish a clear audit trail from the general ledger through to the items being costed. There is a strong view from all sectors that such guidance should be mandatory.

Adherence to costing standards and collection guidance

Consistency will only be achieved if prescribed standards are meticulously adhered to. Evidence from stakeholders suggests that this is not the case currently and that guidance is not applied rigorously by all providers across all costing activities. Part of the reason for this is the current stage of development of costing across community, ambulance and mental health sectors (i.e. very little sector specific guidance and no costing standards in place) and the influence of currencies on the determination of suitable standards.

Stability

Cost data should reflect stable and consistent data collection processes across and within organisations and over time. Cost performance reported must reflect real changes rather than variations in data collection approaches or methods.

The use of RCs, which are currency driven, has led to regular changes in the definition of the items being costed as the construction and breadth of HRGs has

advanced. These changes in definition have weakened the reliability of RC information for comparison of cost performance across years.

In response to the need for better cost information many providers are implementing PLICS. Currently, the deployment of PLICS is not controlled and is therefore evolving as systems are upgraded and costing teams identify 'better' ways of approaching the allocation of costs at a patient-level to meet local and national needs. This in turn affects the ability to compare costs between periods.

There is a need for a common, enduring approach to costing which will improve the reliability and consistency of data. Standardisation at a minimum acceptable level will support this.

While complete stability over time is neither feasible nor desirable under any costing methodology, a strong stakeholder view is that patient-level costing can achieve better consistency over time. Under patient-level costing, change might arise through more refined and accurate cost measurement, and possibly service redesign. The focus on the patient (the enduring feature of healthcare) rather than the HRG, which is largely driven by the need to support effective pricing, promises that greater stability of cost information and cost collection can be achieved over time. The pace of change and the distance of travel in different NHS sectors mean that the desired level of consistency will take time. In the interim, consideration needs to be given to the minimum acceptable level of standardisation required.

The development of pricing has been a significant driver for better costing. However, there is a need for a separation between costing and pricing currencies. This has been established through 1:1 interviews and stakeholder workshops. Stakeholders have emphasised the risk that the need to produce RCs in line with currency has driven a one dimensional approach to costing. Costing has many more purposes than supporting price development and these must all be catered for.

Single common source of cost information

Costing tends to be an ad hoc process based on different needs at different times. The standards and rigour that are applied in one setting are not necessarily applied in another. There is a real need for 'One Truth'; a single source of costing information which is employed in all circumstances. Therefore there should only be one set of costs; one costing approach; and one cost collection carried out by providers. The aim is for a holistic, comprehensive system that enables consistent costing across providers, patient segments and services.

Survey responses indicated that the idea of a single source of cost information would be well received. This is backed up by workshop discussion which suggested that the use of a common cost data set for all external purposes should be mandated.

Audit and assurance of costing quality

Given the importance of cost information and cost collections, there is a need for close and regular testing of the accuracy and quality of the data produced, and the processes and the structures employed to produce such data. However, audit and assurance of costing varies across the NHS.

Survey results indicate that regular testing is not currently being undertaken. This shortcoming was also identified in the interviews and workshops. The majority opinion was that audit of the quality of costing, cost information and cost collection submissions are a key requirement.

The assessment of national collection exercises and feedback to individual organisations is seen as being important. Many trusts commented on the lack of timely feedback from the pilot PLICS submission.

Consideration needs to be given to the level of audit required. Workshop feedback suggested that if the issue of quality of cost information for local management is a high priority, then assessment of costing and cost information should be an external audit requirement.

Pursuit and advancement of best practice

Our review of the current status of costing indicates that it is important to define best practice as a means of identifying a consistent approach. The current lack of cohesion relating to costing purposes and the different operational characteristics of service sectors mean that there is no one best way, rather there are multiple approaches dependent on purpose and context. There are a number of potential developmental activities which could be undertaken to support the development of best practice:

- Publish regular, useful and relevant information to the sector, such as costing insights and case studies, technical updates and engagement articles, such as a transparent explanation of the relationship between costs and price;
- Set up a national steering group, responsible for the development of assurance practices;
- Set up a national support framework to assist in the delivery of a new methodology, develop/accredit costing training programmes for finance and non-finance staff and host appropriate forums for increasing engagement in costing – it's processes and it's outputs , as well as approaches to continuous improvement and meeting emerging future needs, such as outcomes costing; and
- Develop programmes for the growth of costing capability in the NHS, building skills in existing staff and attracting new talent to the NHS.

Enablers to support cost information improvements

Organisational Investment

Organisational investment in costing, cost information and cost collection is fundamental for effective development of costing. "Buy-in" at all levels is essential if the benefits of improved cost management are to be delivered in a sustained way across the NHS.

Board leadership and responsibility

The extent to which the Board oversees and takes responsibility for the development and use of effective costing varies across the NHS. Monitor have made it clear that high quality and effective cost management is non-negotiable and will become an enforcement, and potentially a licensing, issue where organisations are found to be deficient. Effective Board engagement with costing is expected to drive improvements and better use of patient-level cost information.

Stakeholders' views confirm that clear Board leadership with regard to cost management is essential for its development. The cost of procuring and implementing PLICS was cited as a reason for Boards not prioritising this area of development. The value for money and speed of payback of the investment in patient-level costing needs to be well established for Boards to be comfortable with committing resources in this area when faced with competing calls on limited funds.

Boards also have an important role to play in delivering greater engagement between clinical and financial staff.

Clinical and operational engagement

Stakeholders see greater clinical and operational engagement in costing, cost information and cost collection as important. This is because clinicians and operational managers are responsible for the delivery of care and only they can affect the changes and improvements suggested by analysis of cost information. Greater involvement of these staff groups in the production and use of this information will therefore build its credibility and its effectiveness.

The DH recently published a report on clinical engagement with finance (see "Effective Clinical and Financial Engagement: a best practice guide for the NHS" for detail). The 2012/13 Reference Cost survey showed how each organisation rated itself against each level of engagement, with Level 1 being Board/strategic engagement with finance only to Level 4, which was fully joined-up collaborative working between clinical and finance teams. The results of this are shown in Figure 5 below:

Engagement level	Acute	Ambulance	Community	Mental Health	All trusts
Level 1	4	2	0	1	7
Level 2	62	2	3	22	89
Level 3	62	4	7	19	92
Level 4	33	2	7	14	56
Total	161	10	17	56	244

Figure 5: National clinical engagement

Evidence from the stakeholder workshops and 1:1 meetings corroborates the view that closer clinical engagement in the production of cost information leads to better engagement, in terms of cost management activities, and leads to more successful cost improvement delivery. 30% of respondents to the survey were from clinical backgrounds, which suggest some organisations are able to engage their medical staff in costing related activities and their responses recognise the importance of costing.

A straw poll held at the Patient Cost Benchmarking conference on 30th April 2014 indicated that a majority of attendees felt that the responsibility for cost management rested with clinicians and management working together. Around 100 people were in attendance and the majority were from a finance and costing background.

Accurate cost and activity information is essential for engagement of clinicians; they are unlikely to divert their time from patient care unless they can see a positive benefit from so doing. There is a need for training for clinical and operational staff to support them in getting best use out of better cost information. This was highlighted in interviews and was well supported by the survey results.

Appropriate investment in systems

In order to support the production of more comprehensive and high quality patient level cost information, providers will need to invest in appropriate systems. The initial cost of implementing Patient Level Costing ranges from £100,000 to £300,000 for the software and implementation. There is no comprehensive data as to the internal costs of implementation although it is likely that more costing staff are needed for this intense period. Anecdotal evidence suggests that the ongoing maintenance of PLICS requires two to three dedicated staff at a cost of £100,000 to £150,000 per annum in a typical trust plus software maintenance, support and development costs of approximately £50,000 per annum. The cost of the initial

implementation varies considerably and is highly dependent on the extent to which the implementation is well planned and resourced.

It is important that appropriate investment is put into both the initial implementation and the maintenance of systems to ensure that they accurately reflect the services being delivered - experience indicates that inattention to these issues generally leads to more expensive and slower implementations, and fewer realised benefits as costing staff become more involved in the production of cost information at the expense of engagement and use of the information.

Appropriate investment in people and skills

The required investment in people covers a number of areas:

- **Retention:** Costing has been referred to as a 'Cinderella' service with senior costing staff feeling unable to influence the development and use of high quality costing information in their organisations. This has a demoralising effect and staff may move to other industries or roles where they believe they will be more highly regarded. There is a need for costing staff to feel valued, be accorded status and rewarded appropriately;
- **Recruitment:** Interviews and workshops have considered the issue of recruitment and the challenges seem to differ between rural and urban providers. The ability to find the right staff in rural areas appears to be problematic. Based on a small survey of workshop attendees, there seem to be differing views around the ability to cross-train generic finance staff in costing. Some organisations have achieved this successfully, others less so. There is a need to make costing roles more attractive to encourage high quality talent from the NHS and beyond to choose the costing discipline as a career path; and
- **Education and training:** This is an issue not just for costing staff but also for the clinical and operational staff whose engagement is vital. The future approach to costing will only be successful if the staff responsible for delivering cost and using information receive high quality and regular training and development.

There is a real need to ensure that costing staff, as well as those staff that provide direct support to the costing process, such as in IT and informatics, are in place in sufficient numbers and with the right skill set. Meeting this need drives both high standards in costing processes and the ability to disseminate the outputs. Costing staff with the appropriate seniority and training should be the primary point of engagement with non-financial staff, who in turn should be trained to understand cost information and how to use it to improve the delivery of patient care.

Context and incentives

Stakeholders have identified a range of issues which, while not directly related to improvements in costing, cost information or cost collection, support their delivery and improvement over time.

Patient-level costing systems

PLICS must respond to the current and changing needs of users in different settings. The functionality of the variety of PLICS on the market differs and there must be a core specification to ensure consistency of cost information.

Areas for improvement include: flexibility; methodology adopted; transparency; the ability to cope with large data volumes; reporting; and the necessity for users to have IT skills.

Stakeholders have recognised the need for a standard for PLICS to give confidence that whichever system they procure meets a defined capability. It has been suggested that systems should be accredited and a framework set up to ensure that only suppliers who meet the necessary requirements are procured. Any restriction of suppliers in this way should be considered with caution as it will have an impact on the market and might see fewer, larger suppliers edging out those less able to invest in development.

Direction from the centre

Currently there are a number of central organisations with responsibility for various elements of the approach to costing, cost information and cost collection. In 1:1 interviews and workshops, stakeholders raised the need for single central direction and strategy with regard to costing as an important driver for change.

Stakeholders also expressed the need for greater communication from Monitor about the importance of costing and faster feedback on the development of patient-level collections. They believe that this will support an environment where costing is more valued.

Prescribing and mandating

Many stakeholders stated that the drive for change to costing practice needs to come from the centre. This is for a number of reasons:

- The initial cost of investment to implement patient-level costing by way of a trust-wide PLICS is considered to be up to £300,000. Evidence indicates the implementation cost is largely independent of size and complexity of organisation. Some NHS costing professionals indicated that the cost of implementing patient-

level costing will not be entertained by their Board unless it is a mandatory requirement. There is an interesting debate around the expectation that cost management is a core duty of foundation trusts and the frustration expressed with regard to getting serious Board engagement with the development of costing; and

- The need for consistency across the system means that a central drive behind the move to patient-level costing is required. If organisations are allowed to evolve organically, the view is that the disparities in terms of maturity of costing and inconsistencies in terms of the quality and depth of costing data will remain, or at least take longer to eradicate.

This leads to the issue of direction and mandating. The following areas have been discussed with stakeholders and there was general agreement that mandating these areas is essential:

- Patient-level costing across all service providers where appropriate (currently there is no evidence to suggest patient-level costing would not be appropriate everywhere);
- Minimum acceptable standard cost components such as resources, activities and the specific items being costed, such as the patient episode together with the drivers and rules that link them;
- The application of minimum acceptable standard costing guidance and of clinical and non-clinical costing standards;
- A minimum acceptable specification for costing systems procurement and development;
- Circumstances where standardised patient-level costing data must be employed; and
- Internal or external audit of costing processes.

Continuous improvement

One route to the assessment and improvement of cost information quality is the MAQS. Standard Nine of the current Clinical Costing Standards sets out a methodology for organisations to measure the materiality and quality of their costing systems and processes. The view from stakeholders is that MAQS is a good start but needs to be developed. The main issues are its lack of attention to the nature of costing system components and lack of user acceptance and confidence in costing data and costing standards, principles and methodology. The development of MAQS and the audit of costing will improve the rigour of cost information for use locally and cost collections for broader application.

Clear link between the costing system and tariff

Whilst there needs to be a separation between costing at a patient-level and costing of currencies, the value of tariff as a driver for better costing must not be overlooked. Many stakeholders commented that the move away from block contracts to activity based tariff is an important driver for improved costing.

Whilst a greater focus on activity is essential, it is worth considering that, in negotiation of block contracts, more detailed and granular activity data is likely to lead to more realistic and fair remuneration levels. In one trust, a significant portion of the financial benefits derived from improved costing came in the form of higher revenue from commissioners.

Notwithstanding that good cost management should be a feature of any high performing organisation, tariff is seen as a key driver for the development of costing.

Evidence base of the benefits of an improved costing system

There is an emerging evidence base to support the cost effectiveness of high quality costing processes and structures. There is a need to build on this using case studies and sharing experience. The evidence base is important to support costing professionals and their boards when putting together business cases for the procurement of systems and implementation support, and to approve the funding of ongoing maintenance and development. Additionally, a compelling evidence base is crucial to support and justify mandating future approaches from the centre through formal impact assessment.

Boards need to consider the costs and potential benefits of costing:

- Granularity of costing better serves multiple purposes but is relatively expensive to achieve where additional recording of data is required. The degree of granularity should be proportionate and subject to both the cost of providing it and the benefits achieved. The benefits depend upon a trade-off between the degree to which standardisation for tariff setting and flexibility for local cost management are pursued;
- A second driver of the cost of costing is timeliness. The relatively higher costs of more frequent reporting need to be set against the kinds of decisions information is required to inform. On the one hand, when discussing individual patients it is helpful to have relatively recent information. However, when discussing the general profile of resource expenditure such timeliness is unnecessary;
- The real time reporting of cost found in certain non-health sectors indicates that costs of very regular reporting are in part offset by the benefits of very timely information depending upon a highly standardised product or service that is

delivered in high volume. Under such circumstances, quickly identifying departures from standards pays back. Less routine, or lower volume, activities offer less benefit; and

- Looking internationally it is not surprising that significant differences are found between the choices made in different jurisdictions regarding the granularity, primary purpose and frequency of reporting, due to the very different ways in which international healthcare systems function.

CASE STUDY: IMPLEMENTATION OF PLICS AT YORK TEACHING HOSPITAL NHS FOUNDATION TRUST

York Teaching Hospital implemented PLICS in 2009. The implementation was supported by a clear commitment to PLICS from senior management and a strong business case. Extensive research of the PLICS software market provided the foundation for the development of a demanding brief for prospective software suppliers, which was followed by a rigorous procurement process. Supported by a full time project manager and a team of two experienced costing staff, the initial PLICS model covered all areas of cost, at resource and activity level, and income in less than four months. The initial installation was followed by a period of data validation and "deep dive" analysis of performance in a number of service lines where the costing team took the PLICS results out into the trust for discussion with clinicians and managers. Opportunities to improve the quality of data and the basis of cost allocation have been progressively improved. From the start of 2010, the PLICS implementation team has kept a benefits register, which is capable of being audited and which is used to report progress to senior management. Between January 2010 and the end of April 2014 the benefits register shows that £2,406,000 of benefits have been identified. The PLICS team has estimated that the total cost of implementation and its ongoing operation, including hardware, software licences, external implementation support and the trust PLICS team, with data support from IT has been approximately £560,000 giving a payback[3] of almost 430%. This payback is, in part, due to increases in the accuracy of recording and reporting of activity detail and the Trust is strongly focussed on using its PLICS information to manage its cost base more effectively, especially now that the responsibilities of York Teaching Hospital have been extended to include Scarborough Hospital.

[3] Clearly, payback is just one form of assessment and the centre will encourage net present value and cost benefit analysis to provide more sophisticated assurance that value for money is delivered.

Conclusion

There is a clear need for improved costing, cost information and cost collection. The level of information required to manage the complexity of the NHS as it transitions to new structures and models of care is greater than ever and there is a real appetite for cost information at a patient-level. Through stakeholder input and project team analysis, it is concluded that the future approach to costing, cost information and cost collection should be based on a patient-level approach.

The key challenge and the greatest needs for improvement relate to the quality and credibility of cost information and the culture and behaviours of key influencers and boards with regard to the priority and use of good information for cost management. The diagram at Figure 6 below highlights the key components of the costing system, their state of development and the key areas for focused improvement through the future costing system approach.

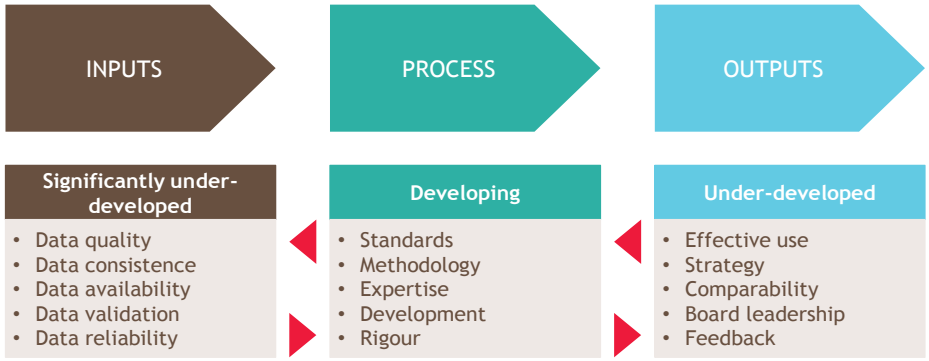


Figure 6: Costing system improvements

Identification of needs

The identification of costing needs has been developed through engaging users and discussing the purposes to which they put costing information.

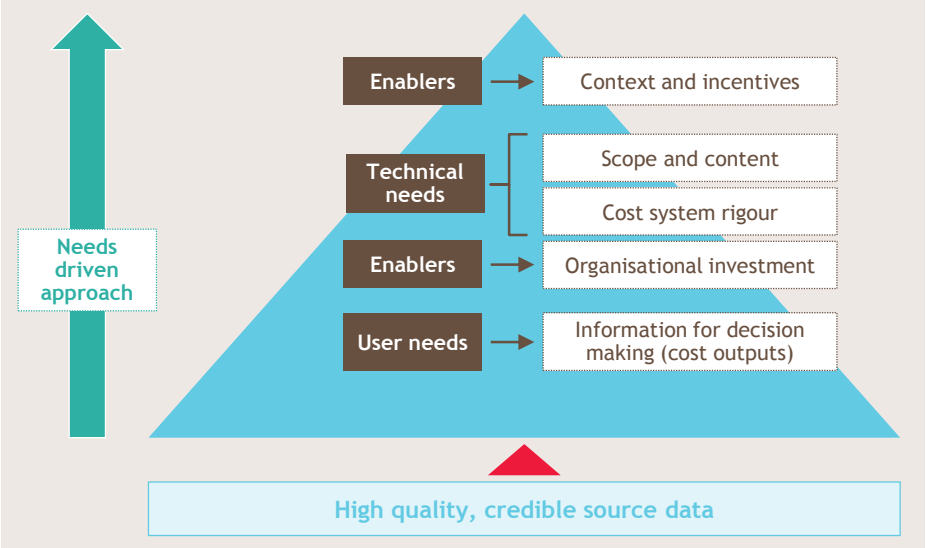


Figure 7: Hierarchy of need

The fundamental needs of the costing system are both technical and enabling in nature. Technical needs relate to the characteristics of costing, cost information and cost collections. They are driven by the core purpose of cost information, which is to support better decision making and improve the efficiency and effectiveness of patient care. Organisational investment and context and incentives enable the better production and use of high quality cost information by providing leadership and a supportive environment for the development of costing.

Future costing system approach

Chapter 5 sets out the future costing system approach. This has been designed using a patient-level methodology to meet the needs identified.

CHAPTER 5
Costing System Future Approach

COSTING SYSTEM FUTURE APPROACH

Introduction

The proposed future costing system approach delivers significant benefit and therefore directly impacts on the quality and outcomes of NHS funded patient care. It does this by ensuring that there is a strong understanding of how and where resources are used, how this can be improved through greater productivity and efficiency and how funding through better pricing can direct resources to where they are needed most and to influence further innovation, improvement and adoption of best practice.

This chapter describes the technical approach, highlighting where the specific needs identified in the previous section are met. It goes on to describe enabling work streams which will be required to achieve the high value and sustained impact of the proposed costing system future approach. Finally, it summarises the benefits delivered through the proposed future approach in relation to price regulation, cost management, cost benchmarking, sector development and other parallel uses.

As the previous chapter has outlined, there are significant gaps between the needs of costing information and the outputs of the costing systems and processes currently in use. Specific needs which are not being met are manifesting themselves as key weaknesses in the current costing approach, driven by the annual cost collection process. These were identified by stakeholders as being:

1. The guidance produced to aid costing and cost collection is ambiguous and allows for a high degree of latitude in its interpretation and application, making meaningful comparison difficult;
2. Costs are currently collected based on an average full cost of an HRG – the "average" does not allow the identification of the level of cost variation that can occur in the delivery of healthcare;
3. There is no detail below the "full cost" that is collected – the use of this data for benchmarking is severely hindered due to the inability to identify at which point in a patient's treatment cost variations are occurring; and
4. A significant amount of cost is excluded from the full cost being used – this means that the "full cost" identified is incomplete and could consequently invalidate the use of this data in other areas, such as service developments.

The cost data currently collected therefore is limited in its ability to meet the needs of both providers and users.

This chapter presents the proposed future approach to the costing system, which will address these gaps and weaknesses by describing a single, activity-based, holistic approach to costing, which consists of:

- A standardised costing methodology, designed to produce more useful and meaningful localised costing information, which should be employed in the local costing systems of all organisations;
- A new approach to the annual cost collection process, based on a single national cost collection process – this collection will take a "snap shot" of the local costing system in use, rather than require separate cost collection processes to be completed for different purposes, significantly reducing the burden on providers to complete and increasing the accuracy of the costing information produced; and
- The central support structure required to facilitate, control and enforce adherence to the new methodology through training and education, guidance on the use of cost information and audit and assurance processes.

The next section defines the components of the proposed approach and explains how the recommended approach would be implemented, while demonstrating how it meets the various needs identified.

Application of a Standardised Costing Methodology

The proposed costing methodology is illustrated in Figure 8 below. Its prime aim is to capture cost information through reflecting the causality of costs – why are costs being incurred? Who is incurring them? By doing what? And ultimately, for whom?

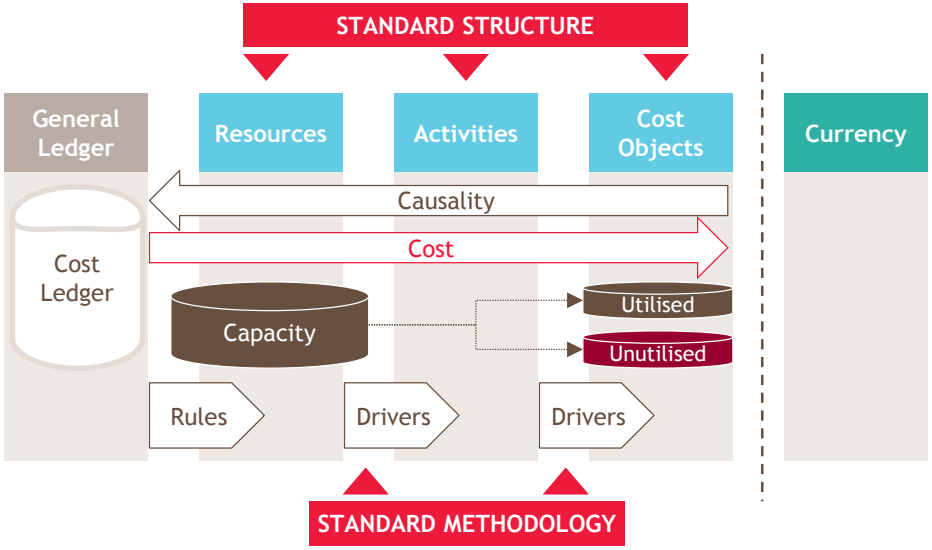


Figure 8: Application of a Standard Costing Methodology

This methodology is based on the 'Four Pillars' of costing identified above:

- General ledger;
- Resources;
- Activities; and
- Cost objects.

These terms are used throughout this section and are defined here to support understanding of the future approach as it is developed in the following sections. The following sections will briefly describe each element of this methodology and why it is important to meeting the technical needs of costing information as described in Chapter 4, with further technical detail supplied in Appendix 2.

One technical need not picked up in the description of the structure of the proposed costing method is 'timeliness'. This need, identified by operational and clinical users of cost information, relates to the availability of cost information more frequently than the annual cycle currently determined by RC collections. Currently, many organisations with PLICS in place produce cost information on a quarterly or monthly basis. Provided all feeder systems are managed to produce accurate inputs during a year, the proposed approach can systematically produce cost information for any period required.

General Ledger

The general ledger is the core source of financial information for costing. The total expenditure used for costing is known as the quantum of cost and is a key reconciling figure to ensure that, throughout the costing process, there are no omissions or duplications of cost – in contrast to current cost collections, no costs should be excluded from local costing systems. General ledger data is captured in the costing system in a 'cost ledger' which manages this interface between the two. The cost ledger resides within an organisation's costing system and operates by taking a full download from the general ledger and either aggregating or separating specific costs from the general ledger to prepare them for the costing process. For example, where the general ledger includes superfluous details such as the separate identification of pay, pension, NI and overtime, these would be combined into a single staff cost. It will also support the annual introduction of new codes and guide their consistent treatment.

TECHNICAL NEEDS MET:

- **Completeness** – no costs are excluded;
- **Single common source of cost information** – as no cost exclusions are involved, this single source for the costing process means it can be used for all costing requirements;
- **Audit and Assurance** – the clear link back to audited accounts and general ledger means the audit of costs and costing should be made simpler; and
- **Relevance** – the general ledger links day-to-day operational and budget management activities to costing and through the causal link to patients. This transparent link supported by reconciliation to the total quantum of cost at each stage ensures that cost information is congruent and therefore relevant to users.

Resources

From the cost ledger, costs are allocated to resources. These represent the people, systems and facilities that are employed in cost centres/management structures to deliver services such as patient care, education and training or research and development. Resource groups are aggregations of these resources for reporting purposes, and are made up of discrete components such as nurses, psychiatrists,

physicians, drugs or supplies. The total costs generated by the employment of resources will equal the quantum of cost from the general ledger. Each resource group comprises a range of individual resources which are separately identified, for example specific consultants or nurses by banding, so that specific costing methodologies can be applied to each of them as relevant. The costs from the cost ledger are mapped to the resources via a set of consistent and clearly prescribed rules which will be included in the standards and guidance published to support the application of this costing methodology. These resources will be at a sufficiently granular level to support localised costing needs

Activities

Activities describe the work undertaken by the resources detailed above - such as delivery of hospital nursing, delivery of community nursing, medical care, surgery or therapies. Activity groups are aggregates of detailed activities for reporting purposes which meet the needs of users who do not require the greater level of detail. Detailed activities provide the level of granularity of costing information required by users to deliver better cost management and local pricing. The costs of resources are allocated to activities at a detailed level based on which resources carry out which activities. For example, ward nursing staff resources would be mapped to patient observation, patient feeding and washing activities. The drivers that support the allocations will be designed and developed in detail and described within the standards and guidance produced – the guidance will include minimum data sets for each activity. This will be a prescriptive description of what data needs to be recorded, in what format and when, where and how it should be submitted to the local costing team.

TECHNICAL NEEDS MET:

- **Input Accuracy** – minimum data sets will be introduced that define dictionaries of resources and activities and also define the data fields from the operational feeder systems which describe the treatments, drugs, clinical attendance details, home visit information, etc. These will help standardise cost drivers and ensure that sufficient high quality source information is made available to increase the accuracy of the cost outputs;
- **Adherence to Costing Standards** – a consistent costing methodology is required for consistent costing outputs. Clear and comprehensive costing standards and guidance must therefore be in place for all organisations types – acute, ambulance, community services and mental health. The use of common components such as activities, supports the development and consistent adherence to these standards across organisations;
- **Productive Efficiency** – by separating resources and activities and through tracing costs, volumes, capacity and utilisation, the future approach is designed to provide insight into the productivity and efficiency of resources - how this can be achieved will be described later in this section; and
- **Relevance** – by identifying the costs of specific activities and describing these in a way that is relevant to those carrying out those activities, the understanding of costs and why they are incurred is improved.

Cost Objects

Cost objects are the final destination for the costs which originate in the general ledger. They are unique and comprehensive, receiving allocations of all costs incurred by an organisation and therefore in total will equal the quantum of cost. Cost objects are defined by the nature of the demand for services by the ultimate user of the service. For patient care, the cost object receives (or consumes) components of care demanded by patients while for education and training it is the components of education demanded by a student. Each component will be discrete and its identification supported by a clear definition and comprehensive minimum data set. 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. For mental health and community care, where conditions can be chronic or permanent with varying levels of acuity, the boundary between one cost object and another will require careful definition and supporting clinical data to ensure consistency.

The primary purpose of the cost object is to act as the point of collection for costs associated with an individual patient (or student in the case of education and training costs). Additionally, for some cost objects it may not be practical, possible or necessary to allocate costs to an individual user – for example in patient care, the costs associated with individual outpatient appointments may not be worth recording at a patient level and would be grouped while the anonymity associated with genito-urinary medicine will prevent meaningful patient level recording.

Some costs will not be attributable to an individual user and will be allocated based on estimated consumption by each cost object where they are indirect costs. Overhead costs which are not attributable to any user will be allocated to their own cost objects and then subsequently allocated to user cost objects to derive fully absorbed costs at a patient level.

Again, clear definitions of the cost objects will be included in the costing guidance and standards and will be carefully considered, together with the materiality and usefulness of data to be collected. Each cost object will be supported with a comprehensive data set that provides demographic information, resource

consumption and, in the future, data regarding pathways, linked patient identifiers, outcomes and quality of care delivered. This data can be analysed to produce the cost information identified by users in Chapter 4. This will also allow a cost object to be "sliced and diced" by any of its components – e.g. resources AND/OR activities - to identify the components of care and the comparative costs of different resources and activities, supporting better benchmarking.

Costs and other data are related to cost objects through activities and their drivers. The cost objects represent the demand for services and the activities deliver these services. The allocation of costs from activities to cost objects will be managed through detailed drivers, which again will be designed and developed together with the minimum datasets required to inform them. However, it is important to note that some costs can be traced directly to the cost object from resources. For example, where high cost drugs are administered on a named patient basis, they can be directly allocated to that patient.

It is important to be clear that cost objects are not just patient care related. There will also be cost objects for non-patient services (such as education and training, research and development, etc.) and commercial and exceptional items (which are excluded for pricing of clinical services, such as the costs of car parking or the visitors cafeteria which have separate sources of funding). Where there is a need for a fully absorbed patient-level cost which represents the full quantum of cost of an organisation, this can be achieved through the allocation of the costs of non-patient care activities to patient care cost objects. Again, both approaches will be prescribed and documented to ensure a consistent methodology is applied across all organisations.

Figure 9 right shows how cost objects may be defined by what they relate to.

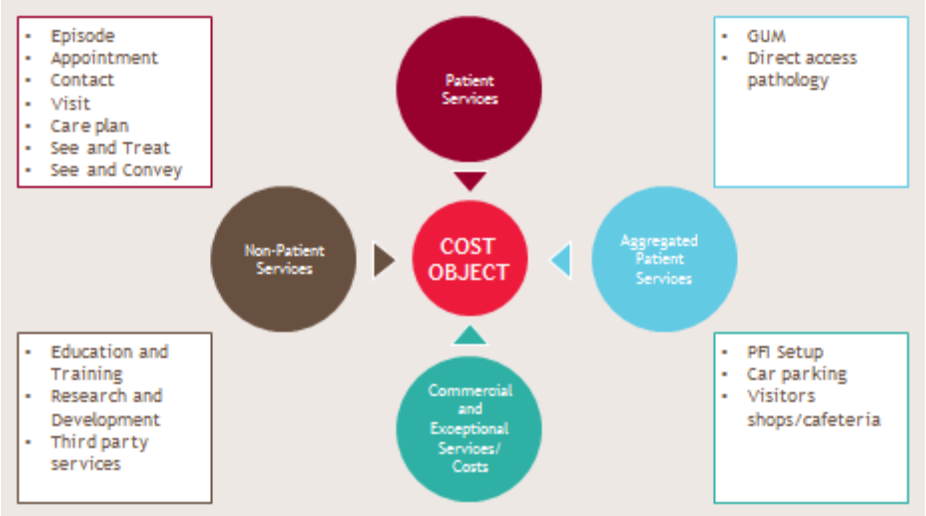


Figure 9: Cost object descriptions and mapping

TECHNICAL NEEDS MET:

- **Patient-level** – for patient services, the cost object will be based on the patient, i.e. patient event, patient period, etc.;
- **Outcomes and Quality** – a number of standard quality and outcome measures are based on specific patients with specific conditions and comorbidities. Costs identified at a specific patient event level can be directly matched to the quality and outcomes measured, allowing an understanding of "value" to be gained – "value" being a measure of what outcome was achieved per £ spent. It should also be noted that specific quality indicators also apply to activities (test turnaround time for pathology activities, etc) and resources (staff sickness rates, etc) – the allocation of costs to both of these are also enabled by this approach, meaning the costs of achieving both specific patient outcomes and service quality levels can be identified;
- **Cost of Care across settings** – by making the cost objects for patient care patient-centred, the costs of care across multiple organisations and/or care settings for an individual patient or groups of patients can be identified. This will allow a far greater understanding of the "true" costs of treating a patient across a full patient pathway (the development of this benefit will be subject to resolution of potential information governance challenges where there is risk of individual patients being identified);

- **Stability** – making the cost object patient-centred rather than currency based removes the risk that changes in definitions of the currencies used (such as the introduction of new HRGs or the remapping of OPCS, ICD10 codes to different HRGs) requires changes to the calculation of cost from one period to another; and
- **Separation of Cost from Currencies** – this is achieved by making the patient the cost object rather than, as presently, the HRG reimbursement currency. This will allow greater flexibility for those setting both local and national prices as they will be able to obtain cost information in a format that will allow both the assessment of different HRG designs and a non-HRG reimbursement currency to be identified and understood.

Productive Efficiency

Productive efficiency is an economic term which covers the effective utilisation of resource and considers how productively, efficiently and effectively resources are being employed in delivering activities. Through the proposed separate identification of resources and activities and by capturing total resource capacity and the resource capacity consumed in delivering activities, productive efficiency measures can be determined and compared for improvement through benchmarking.

For example, the knife to skin component of a theatre resource may be 3,000 hours per year. If the actual knife to skin operating time identified through measurement of the activities undertaken in that theatre is 2,000 hours then the theatre is 2/3rds utilised. Based on this information decisions can be made with regard to actions to improve utilisation.

Utilisation alone does not support consideration of the productivity of resource. Taking the theatre example above further, analysis of the number of activities (in this case operations), undertaken in the 2,000 utilised hours and comparing this to plans and benchmarks allows assessment of the relative productivity of the theatre resource. Incorporating costs into this calculation supports the identification of efficiency and consideration of outcomes and quality measures supports assessment of effectiveness.

Clearly, the detailed and accurate identification of productive efficiency requires a move away from estimation and allocation of resources and activities to their measurement. For example, from estimating utilisation (using job plans or sample time card exercises) to measurement and recording of ACTUAL capacity of resource and capacity consumption of activities. Such an approach is in line with emerging international best practice methodologies (such as Time Driven Activity Based Costing[4] – TDABC).

Methodology, standards and guidance

In describing the 'Four Pillars' and the links between them, reference is made to the need for prescriptive and detailed standards and guidance to support a consistent methodology across all providers of NHS funded services. This will be supported by the development of three key resources:

- **A set of 'Definition Dictionaries':** for each of the Pillars within the costing system (including the general ledger which is already well defined but which requires guidance on the granularity of expenditure information it holds for costing) and the identification of standardised rules and drivers for the causal links between the general ledger, resources, activities and cost objects;
- **A Costing Minimum Data Set:** for each of the Pillars of the methodology, a minimum acceptable data set will be identified and prescribed, meaning that all organisations use similar measures and definitions by which to allocate and identify costs; and
- **Clear Standards and Guidance:** this will set out the 'drivers' of each pillar - how costs should be allocated from one pillar to another in order to allocate all costs ultimately to the cost object.

Application of the Methodology

Through application of the definition dictionaries, standards and guidance the minimum data sets for resources and activities are populated with data from the general ledger and clinical information systems. This is achieved using rules and drivers to map all revenue costs from the ledger to resources and all utilised and unutilised costs separately to activities based on the new methodology. The total costs along with relevant non-financial information are transferred to the relevant cost objects based on the activities undertaken to deliver each item of patient level care (or other cost such as student level education). At each stage the total costs for resources, activities and cost objects will equal the total quantum of cost in the ledger and therefore reconcile to the audited position for the relevant period.

The outcome of this exercise is a final data set at cost object level which includes all costs together with relevant non-financial information which can be reported on and

[4] http://hbr.org/2011/09/how-to-solve-the-cost-crisis-in-health-care/ar/1

used for day to day operational cost management and internal and external benchmarking. Importantly it is in a standard format which can be automatically converted into the required format for cost collections.

The diagram at Figure 10 shows an example of the outputs of the application of this methodology – in this example, the cost object used is for an acute inpatient surgical episode.

EXAMPLE COST OBJECT: Inpatient episode – Surgical		RESOURCE GROUP							
		PAY					NON-PAY		
		Consultant	Junior Medical Staff	Nursing	Scientific, Therapeutic	Support staff	Premises and plant	Consumables	Drugs
ACTIVITY GROUP	Ward care (pre- and post-op	25	25	125		10	65	5	10
	Pathology	5			5		1	5	
	Imaging	10			15		30	3	
	Theatre care	450	450	250		25	500	100	
	Pharmacy				5		10		100
		TOTAL COST = £2,254							

Figure 10: Illustration of an example output

The full cost for the entire episode will be produced, with this being broken down into its component parts. These components are the activity and resource groups utilised in the delivery of this episode, with the costs of each being clearly identified and allowing multiple analyses across these categories to be made.

The next section describes the proposed cost collections based on a patient level methodology.

A Universal Cost Collection

The following paragraphs set out how the proposed methodology supports a more comprehensive and efficient cost collection approach.

Currently, the main driver of the NHS Costing System is the annual submission of the costs of patient care via the RC collection. This costing exercise uses HRGs and other patient treatment events (such as attendances, contacts, etc.) as its cost object and requires an 'average' full cost to be submitted. The weaknesses inherent in such a system were described in the introduction to this chapter.

In developing the universal cost collection the potential to employ alternative approaches was considered - in particular, the use of sampling. Sampling was considered as it is used in other international cost systems to support pricing.

Whilst it is reasonable to use a sampling approach for pricing, it does not support the other cost information needs and becomes redundant where a universal approach is in place. This approach was therefore dismissed as an enduring solution but is considered as a potential interim method for delivering pricing during the transition to the future approach.

The proposed universal cost collection builds on the 2012/13 PLICS submission for acute admitted care. This addressed many of the acknowledged weaknesses of the RC process (no costs were excluded, there was a reduced burden of collection as it was based on the same format as many local costing systems [i.e. individual patient-level], it added granularity of cost components) and was received favourably by stakeholders as a 'step in the right direction'. However, comments from stakeholders identified two ways in which it could be improved: the level of detail; and the structure of the cost components.

The cost components in the current PLICS submission are based on the 22 cost pool groups described in the HFMA's Clinical Costing Standards. The cost pool groups are a mixture of resources (drugs, medical staff, etc.) and activities (wards, theatres, outpatients, etc.). They do not separately identify all resources and activity types (no nursing cost pool group, for example). Therefore the mapping of costs into these groups introduces a level of interpretation that causes providers difficulty and increases the level of unwanted variation in the end result.

Part of the proposed future cost collection 'splits' the cost pool groups as currently defined into two clear groups:

1. **Resource Groups:** all resources will be aggregated into recognisable groups – medical staff, nursing, drugs, fixed premises and estate; and

2. **Activity Groups:** all resources will then have their costs mapped to an Activity within an Activity Group, based on the work each resource delivers.

By making the cost objects for this annual cost collection mirror those of the standard costing methodology described earlier in this chapter, the annual cost collection will become a "snap shot" of an organisation's local costing system – thus reducing the burden of collection AND increasing the accuracy of the outputs (local costing systems will be scrutinised more rigorously throughout the year, and outputs will be produced on a consistent basis from one organisation to another, allowing more meaningful comparisons to be made).

This proposed 'two dimensional approach' (i.e. using resources and activities) to the breakdown of the full cost will be collected for each individual cost object used by an organisation.

The Cost Collection Submission

The submission would comprise two linked tables (submitted as CSV files). The first table would contain:

- A single, unique row for each cost object (i.e. patient episode, patient contact, period of care, etc.);
- Non-financial information, demographics and other qualitative attributes of each cost object (such as Age, Sex, HRG, Procedure, Diagnosis, Specialty, outcome achieved, etc.); and

Cost object level statistics showing relevant cost drivers (such as length of stay, theatre minutes, etc.) are required for analysis and context. The first table would be linked to the second table, which would contain data on specific cost elements relating to each cost object, with one row for each combination of:

- Time period;
- Cost object;
- Resources: defined types of resources used to deliver the activity to the cost object (such as nursing resource or drugs);
- Activities: a defined set of activities performed by the resources (such as activities carried out on a ward, theatre, clinic or patients home); and
- Resource/activity specific data such as capacity utilised and the variability of resource costs.

Figure 11 below illustrates what this submission would look like by way of an example.

Table 1: NON-FINANCIAL DATA (one row per Cost Object)

Hospital ID	Period ID	Episode/ Service ID	Spell ID	Patient ID	Pathway ID	Patient/Non-Patient ID	RC HRG	PBR HRG	PRIVATE	OSEAS	OPCS	ICD10	Admission date	Discharge date
RCB55	1314	1	1	1	1	P	AA06Z	AA06Z	N	N	Y75.1	A17.1	01/01/2014	03/01/2014
RCB55	1314	2	1	1	1	P	AA12Z	AA06Z	N	N	Y72.4	A15.2	03/01/2014	05/01/2014
RCB55	1314	3	1	1	1	P	AA18Z	AA06Z	N	Y	Z14.2	B12.3	05/01/2014	10/01/2014
RCB55	1314	4	2	1	1	P	AA12Z	AA06Z	Y	N	Y72.4	A15.2	02/02/2014	03/02/2014
RCB55	1314	5	2	1	1	P	AA06Z	AA06Z	N	N	Y75.1	A17.1	03/02/2014	05/02/2014

One line per combination of Hospital ID, Period ID and Episode/Service ID
Each column (those above are for illustrative purposes ONLY) would be defined, with content and rules specified in the costing guidance and supported by the Data Dictionaries.

Table 2: FINANCIAL DATA (one row for the cost of each combination of Resource and Activity group)

Hospital ID	Period ID	Episode/ Service ID	Resource Group	Activity Group	Cost
RCB55	1314	4	Consultant	Ward	50
RCB55	1314	4	Consultant	Theatre	100
RCB55	1314	4	Consultant	Outpatients	200
RCB55	1314	4	Nursing	Ward	100
RCB55	1314	4	Nursing	Theatre	200
RCB55	1314	4	Nursing	Outpatients	300
RCB55	1314	4	Drugs	Ward	400
RCB55	1314	4	Drugs	Outpatients	200
RCB55	1314	4	Consumables	Theatre	12

One line per combination of Hospital ID, Period ID , Episode/Service ID, Resource Group and Activity Group

Sum of Cost should equal the audited costs of the Trust
Sum of WTE should equal the total WTE employed in the period

Figure 11: Example Annual Cost Collection Template (Extract)

The link between these two tables is one to many:

- If an organisation has 1 million cost objects in a year, Table 1 will have 1 million rows;
- If each cost object has 12 combinations of activities and resources, then Table 2 will have 12 million rows of data; and
- Every row in Table 2 will have the relevant identifier back to a specific row in Table 1, i.e. there will be "logical linking".

The amount of data that will be produced is significant. Organisations will be expected to have in operation a technical costing system capable of costing at the resource and activity level and aggregating them into the relevant resource and activity groups required to delivering this level of information. However, the actual cost collection submission will be based on an "extract" or "output" of the system, rather than a manual workbook, meaning the burden of production of the submission on providers will be significantly reduced.

All organisations can use this methodology, without any change required for different providers. There will be a number of common resources and activities across settings of care, while service-specific ones will be added where appropriate and relevant.

Advantages of the proposed future costing approach

Appendix 2 details how this approach meets every need identified in Chapter 4. In addition, this proposed structure has a number of advantages:

- **It facilitates greater analysis and insight** - by submitting costs in this normalised, relational structure, the costs can be analysed in a flexible way – allows focus on what resources are delivering what activities, which currently is not possible;
- **It is easier to extend where necessary** - if additional information is required from one year to the next, the resources and activities can be altered but the structure of the submission remains the same, allowing for improvements to be easily introduced;
- **It is simpler to produce directly from information and costing systems** - the submission is simpler for providers to produce as the required outputs should be available directly from the information systems employed, rather than requiring manual reconciliations and data entry, thus reducing the burden of collection significantly and the likelihood of misunderstanding and resulting errors and inconsistency;
- **The outputs are robust** – these new cost submissions are easier to reconcile to audited trust accounts as ALL costs are included. In addition, the data in each submission will be system generated rather than being manually input into a submission workbook, ensuring that input errors are greatly reduced, helping to ensure the results can be more easily traced, validated and ultimately audited;
- **It allows for robust validation and internal analysis** – analyses and validations should be available within each trust from the outputs created, which allows trusts to carry out more detailed validation prior to submission; and
- **Outputs can be standardised across care settings** – the output can take into account different care settings. Some fields for submission may not be applicable to each care setting, but the submission guidance can make this clear.

How the data will be collected and used

All provider cost information collected will be submitted centrally in a standard format and collected in a centralised national database.

The submission will be supported by a robust feedback loop, which will be vital for continuous improvement of the quality and consistency of data. The nature of the feedback loop is part of the enablers and will be explained later. This database will be available to all users, who will be able to access relevant data in an appropriate format (based on appropriate levels of detail and aggregation) – see Figure 12.

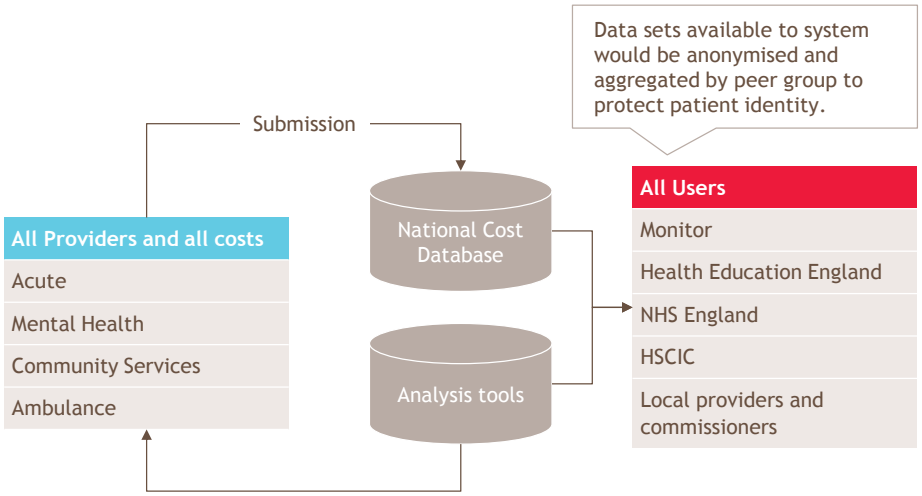


Figure 12: Collection/Feedback/Use loop

Support for an enduring future costing system approach

The methodology set out above will deliver a significantly improved costing system. However it is recognised by stakeholders that the methodology on its own is not sufficient to galvanise the whole costing system and the 'Enablers' referred to in the introduction to this chapter and described in detail in the previous chapter must also be in place. The following paragraphs describe a recommended structure that could be set up to do this and Chapter 6 Costing System Transition Paths will explain how it can be implemented. It is also explained here how the structure delivers the 'enablers'.

Costing system governance structure

Both the initial implementation and the continued improvement of the costing system will require strong governance for success. The exact specification of such a structure will require close consultation with the relevant parties. A number of options have been set out here as a start point for discussion and this section should be considered as a vehicle for debate rather than a prescriptive plan.

The overall responsibility for the costing system will rest with the Joint Pricing Executive (JPE) which is already in place. The members of this group are Monitor and NHSE who between them have the powers to implement change. The JPE is a decision making body and its decision making is informed through the detailed work

of the existing Joint Pricing Group (JPG). The specific responsibility for the implementation and ongoing development of the costing system will lie with a new body: the Cost System Board (CSB). The powers of the CSB will be delegated to it by the JPE and it will report to the JPG. Where decisions are required which are outside the delegated powers of the CSB they will be referred to the JPE via the JPG. The CSB will be chaired by the Monitor Head of Costing and will include membership from interested parties which will include as a minimum: NHSE, DH, HSCIC, HFMA and HEE. The CSB will be supported by a Cost System Steering Group (CSSG) which will take responsibility for the coordination and monitoring of the work streams responsible for delivering the new cost system and ensuring its continued development and improvement. There will be five work streams:

- Programme management;
- Core Processes;
- National Support Framework;
- Systems Development; and
- Audit and Assurance Framework.

Each work stream will have a lead and the leads will sit on the CSSG providing feedback on progress and identifying issues for debate and possible escalation.

This proposed governance structure is illustrated in Figure 13 right:

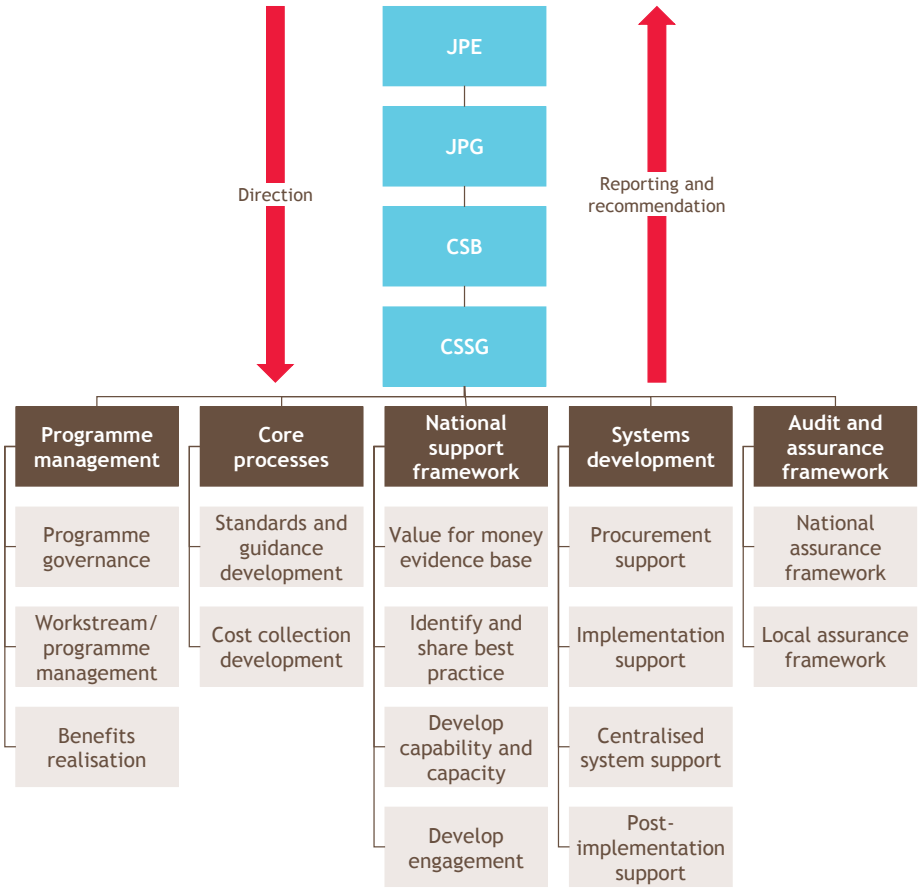


Figure 13: Cost system governance structure

The governance structure will take responsibility for leadership and development of costing and make decisions based on impact assessment for issuing direction and mandating or prescribing practice development.

This proposed governance structure represents best practice but its actual composition will be discussed with key stakeholders and finalised during project mobilisation.

ENABLER NEEDS MET:

Direction from the centre - Stakeholders asked for greater clarity from central bodies for the development, implementation and delivery of costing practice. Through the work of the National Support Framework within the governance framework the engagement of central bodies will be managed and communication to the system coordinated as one voice via Monitor.

Prescribing and mandating - Stakeholders stated that an assertive approach to adoption of the key elements of the future approach is required in order for consistency to be achieved across the system. The key areas which require mandating are:

- The use of the new standards and guidance; and
- The implementation of PLICS.

In both cases Monitor will use its powers under the 2012 NHS Act to regulate prices to enforce the adoption subject to impact assessment and consultation. The approval of decisions to take assertive action will be delivered through the governance structure.

The following paragraphs describe the roles of the four key work streams and how they will deliver the enablers on an enduring basis.

Programme management

Programme management will have both a role in implementation of the new cost system and an ongoing role to coordinate activities for its development and continuous improvement. The role and size of the programme management function will flex as the development of the cost system moves from implementation to business as usual and improvement. It will be led by a suitably qualified and experience programme director who will be supported by a team of project managers and other suitably qualified professionals as required to support finance, human resource and other requirements yet to be determined.

The role of programme management is described generically and these activities will apply to both the implementation phase which is envisaged will be more intense and the support for ongoing activities past implementation:

- **Programme governance:** the programme management function will be responsible for coordinating the set up and implementation of the new elements of the governance structure. It will develop clear terms of reference for each element of the structure and the work streams. It will support the identification and engagement of the membership of each group and set out meeting timetables and standard agendas with timing and frequency of meetings based on the requirements of each element of the programme. It will be responsible for supporting the production of papers for each meeting and ensuring that minutes are taken, actions identified and delivered and that appropriate issues are escalated.
- **Project and Programme management:** the management of the individual projects that will make up the overall programme will adopt the principles of PRINCE2 [5] and MSP [6] and consider the use of the OGC gateway [7] approach to management and assurance of key deadlines. The purpose of adopting these standard approaches is to ensure demonstrable rigour and to maintain momentum. It will develop the detailed project plans with the other work streams. This will include determining the tasks to be undertaken, when they take place, how long they take and who will do them. It will also include ensuring that dependencies within and across work streams are managed effectively and it will maintain an overall project Gantt chart to monitor critical path items.
  - Programme management will also take responsibility for identifying and seeking approval for the budget for the delivery of the implementation stage and then on an ad hoc basis for ongoing development and continuous improvement. It will be responsible for monitoring performance against budget and reporting to the CSSG.
  - It will take responsibility for identifying and maintaining the resource requirements for the different work streams and where this requires procurement of resource it will deliver the preparatory work and support the evaluation of tenders for the procuring body.
  - The programme management work stream will manage the overall risk register for the project and coordinate risk management activities in each of the work streams. It will set up a risk register that will identify risk, risk

[5] PRINCE2 (an acronym for PRojects IN Controlled Environments) is a de facto process-based method for effective project management. Used extensively by the UK Government, PRINCE2 is also widely recognised and used in the private sector, both in the UK and internationally. The PRINCE2 method is in the public domain, and offers non-proprietorial best practice guidance on project management.

[6] Managing Successful Programmes (MSP®) is a methodology that comprises a set of principles and processes for use when managing a programme.

[7] The OGC Gateway Process examines programmes and projects at key decision points in their lifecycle. It looks ahead to provide assurance that they can progress successfully to the next stage; the Process is best practice in central civil government, the health sector, local government and Defence.

mitigation activities and residual risk together with both financial and non-financial impact. It will report risk to the CSSG.

- Benefits Realisation: programme management will be responsible for identifying expected benefits and monitoring benefits realisation working together with the other work streams. It will report deviations from plan and proposed remedial actions to the CSSG.

ENABLER NEEDS MET:

Stability - The delivery of the initial change programme and the ongoing improvements to the costing system must be achieved without adversely impacting the ability to deliver the year on year requirements to support cost management, cost benchmarking, price regulation, sector development and parallel uses of cost information. The risk based approach described above will place high emphasis on continually monitoring the potential and actual impact of the programme and take remedial action or seek direction through the governance structure in relation to recommendations to manage any material risk to stability.

Centralised "Core" processes

As part of the ongoing development of this methodology, there are two core processes which the centre will deliver on an ongoing basis. These are developments of standards and guidance and cost collections:

- **Standards and guidance** - to provide specific support and guidance to enable the delivery and improvement of the new standards and guidance. This is particularly with regard to the initial design of local data collections to populate the minimum data sets for the new methodology. This activity will require the centre to employ costing capacity and capability to guide development, act as a reference point to support decisions regarding what actions to take where data is not available or where there is ambiguity locally as to the appropriate course of action. This will support consistency across the system, build local knowledge and foster peer to peer relationships to share emerging best practice and solutions to problems as they arise through the governance structure. Minimum standards for costing would be established along with mechanisms for identifying whether these have been achieved or exceeded. These measures, based on the development of MAQS, would support the propagation of best practice. Through the governance structure, best practice and centrally identified opportunities for the improvement of the costing standards and guidance would be fed back, considered and adopted through regular updates and where appropriate subjected to impact assessment prior to mandating; and
- **Cost collections** - to provide specific support to and development of the annual cost collection process. This is to ensure that the format and structure of the cost information provided and collected continues to meet the evolving needs of all relevant organisations across the healthcare sector and will involve the centre providing suitable resource to:
  - Ensure the format and structure of the costs being collected accurately reflect the needs of the sector;
  - Produce revised collection documentation and guidance for all participating organisations;
  - Produce suitable collection, validation and analysis tools for the data to be submitted, validated and assessed for quality and fed back to the sector; and
  - Offer suitable support throughout the collection process for all participating organisations.

National Support Framework (ongoing)

An ongoing National Support Framework will be set up to provide an ongoing role to ensure continued improvement in the costing system. To be clear, whilst the National Support Framework will support and guide development, it is Monitor and NHSE who have the powers required to deliver change through the governance structure. Therefore, the ongoing National Support Framework will operate in an advisory capacity and as a point of coordination and engagement but it will be Monitor that will largely take responsibility, along with other statutory bodies, for issuing direction and taking remedial action where necessary. The ongoing National Support Framework will have a steering group with an active senior membership drawn from central national bodies with representation from providers, commissioners, PLICS suppliers and potentially academia which will report into the CSSG.

The main roles of the ongoing National Support Framework are:

- To establish the evidence base and value for money for patient-level costing: this will be a key enabler to gain ownership, engagement and buy-in for the programme. This will require a rigorous approach to determining the full costs of implementation and a methodology for assessing the wide range of benefits (both financial and non-financial) that could be delivered, to help organisations to 'sell' the benefits of PLICS internally through a package of support including published evidence, case studies, conferences, workshops, seminars, webinars and on-site presence. It should be noted that this role will ONLY be fulfilled during the implementation of the proposed costing methodology – this role will NOT be required once the costing methodology is fully implemented;
- To develop a programme for the identification and sharing of best practice: In this context, Best practice can be defined in three areas:

- The measurement of required metrics (cost objects, activities, etc);
- The allocation of costs within the proposed costing methodology; and
- The use of the costing outputs/data.

These will be identified through self-assessment, MAQS, audit and processes for encouraging providers to talk about local innovations. Forums will be set up to facilitate this with a combination of face to face and internet interactions between providers, suppliers and the centre. The centre will act as a focus for the collection of best practice which it will then disseminate. Best practice will be developed at the centre by "Costing Champions" who will visit organisations to discuss opportunities for innovation and improvement and identify local barriers and enablers. The dissemination of best practice will be coordinated under the guidance of the National Support Framework through regular briefings and updates, including case studies, benefits realisation studies and innovations and barriers overcome;

- The future approach to costing, when fully implemented and operational, will create a national database of benchmarking information which will be a powerful resource for the NHS. Harnessing the opportunity that this presents is of great importance and the National Support Framework will take responsibility for developing benchmarking across the NHS such that it is effective for cost management (particularly cost improvement programmes), service development and service rationalisation and reconfiguration plans. Its approach to doing this will be to create standard benchmarking methodologies which take advantage of the new, comprehensive and standardised costing information available. In its role, the National Support Framework will build on the existing work being carried out by a variety of advisory groups including the Quality and Costing Benchmarking Group (QCBG);
- "Productive Efficiency" was identified earlier in the document as a need of the costing system. The future approach provides the information and structures which allow greater exploration of the opportunities and benefits from productive efficiency. The National Support Framework will support the local implementation of methodologies which support greater measurement of the components of cost information, reducing the reliance on an allocative method where there is an opportunity to derive benefit;
- To develop a national plan with regard to assisting organisations develop their costing capability and capacity from a people perspective: the activities carried out under the guidance of the National Support Framework would include: development of a skills matrix to determine what skills costing professionals should possess, understand where they are now and set a direction of travel for development; this would be supported by nationally coordinated training programmes to train and educate costing staff in the new standards and guidance and relevant ancillary skills to help them deliver their work effectively and efficiently. Training and development would extend to other staff groups who use the outputs of cost information. There will be particular emphasis on the development and consistent application of methods for cost benchmarking so that the full value of new data is exploited. The National Support Framework will take responsibility for attracting new talent into the pool of NHS costing staff. This will require assessment of the volume of costing staff likely to be needed and determination of the processes for attracting new people. This could potentially include graduate training programmes working with universities and marketing career opportunities to other sectors to encourage people to transfer into the NHS. The National Support Framework would take responsibility for continual assessment of the capability and capacity of costing professionals in the system and new initiatives to retain and recruit staff as part of a national talent management programme; and
- To develop a national plan for engagement and cultural and behavioural change: The purpose of this activity is to raise the profile of costing within and across organisations. This will meet the needs for improved board leadership and responsibility and better clinical and operational engagement. This will be in part through the evidence base developed but also through training and education to explain the importance of costing. The approach will seek to incentivise and prioritise the accuracy and quality of cost information through describing the benefits for decision making at an operational and strategic level. This work stream will also consider the requirement for standardised cost information to be used for all purposes so that boards and other approving bodies can draw confidence that the data they are presented with is robust and comparable. Clinical and operational staff will be engaged through developing the credibility of high quality cost information through its use and success in supporting decisions which result in better services for patients.

ENABLER NEEDS MET:

Advancement of best practice – for each of the three areas of best practice earlier identified, advancement in each will be delivered through the range of activities carried out under the National Support Framework. Key tools for improvement include the supporting activities described:

- Sharing best practice;
- Training and education;
- Benefits realisation;
- Identification and fostering of innovative or emerging practice;
- 'Hand holding' activities for implementation and development through 'Costing Champions'; and
- The development and use of MAQS to guide, monitor and incentivise progress.

Board leadership and responsibility - through the National Support Framework, boards will become more engaged in costing and appreciate their role in its development and use and its value in delivering better patient care. As a result of the guidance and training received, they will be better placed to take steps to encourage and nurture the development of costing in their organisations. They will be advised of the priority that Monitor give to high quality costing as a prerequisite for good management practice and the risk of regulatory challenge if the appropriate actions are not taken. They will be supported in their decision making processes for investment in patient level costing through the publication of the evidence base and through the results of impact assessments which support the mandatory adoption of the new standards and guidance and the implementation of PLICS.

Clinical and operational engagement - the identification of patient events as cost objects, which in turn are supported by more granular details of the care provided, allows those providing the care to more readily relate to the costs of the care provided. The National Support Framework will enable greater engagement of clinicians and operational management through making the case for the shift to patient level costing through the evidence base and impact assessments and will back this up with training and education, sharing and deployment of best practice and making clear the value of linking cost with outcomes and quality to drive better investment in patient care through more informed decision making.

Appropriate investment in people - the National Support Framework will deliver the appropriate investment in people through actively identifying the volume of staff required across the NHS and the skills and experience they require as a precursor to establishing an attractive career path for costing professionals. Based on this information it will tailor training and education for existing and future staff for use by providers.

The expected increase in the use of cost information and the associated realisation of benefits will help to increase the investment in costing across organisations, ensuring that costing teams remain suitably resourced and skilled not only to produce, review and improve the quality of the costing outputs, but also to help the organisation to use the information to derive even more benefits. The National Support Framework will seek to stimulate this virtuous circle of investment in capacity and capability through communicating the evidence base for the new approach and sharing best practice and case studies to demonstrate the value and encourage recruitment and career development locally.

The quantity and quality of costing staff across NHS providers and at the centre will be the subject of focus and attention through the National Support Framework. Identifying and attracting new people into the NHS will form part of a talent management programme.

The development of the skills base will be undertaken on a continuing basis with assessment of the needs of costing staff and provision of training and education opportunities.

Feedback will be sought and considered on the costing workload and its benefit to the system as a whole to ensure that costing remains lean and productive and is not overburdened and ineffective. At a national level the National Support Framework will coordinate marketing of the opportunities associated with a career in costing and raise the profile of costing as a discipline. It will actively work to attract new talent into the NHS through exploring the potential for graduate training or transfer from other sectors.

Evidence base of the benefits of an improved costing system - the ongoing programme of activities to continue to grow the evidence base and value for money argument for patient-level costing will be achieved through sustained engagement with the wider NHS, clinicians and operational staff through using case studies and best practice examples undertaken by the National Support Framework.

Systems Development

Stakeholders confirmed that the proposed cost collection will require a costing system of some kind in order to produce the required outputs for submission. It is not believed that a locally developed spreadsheet or database solution is tenable. Therefore, it will be necessary to ensure that all organisations who provide patient care on behalf of the NHS have a suitable patient-level costing system that is capable of producing these required outputs.

The approach to the development of costing systems was considered carefully and a number of options assessed. The preferred option is to maintain a competitive market for PLICS systems with all providers accessing the market in a controlled way through a central procurement and implementing their preferred PLICS locally. It is believed that this will ensure quality through minimum standards set out in the procurement specification, maintain competition, stimulate innovation and drive costs down.

In arriving at the preferred approach the following alternatives were evaluated:

1. Hub and spoke: this looked at the potential for a single central PLICS with providers submitting raw costing data for processing by the centre. This has the benefit of consistency but creates a huge risk in terms of a single point of failure and local disenfranchisement from the costing process;
2. Single PLICS supplier for all providers: this considered procurement of a single PLICS system by all providers. There are some advantages in terms of consistency

and there is certainly the opportunity to drive the total cost of procurement down. However, this creates unacceptable levels of risk through a single point of failure, the ability of any one supplier to meet this level of demand, the impact on providers who have already invested in PLICS and the stifling of innovation and potential escalation of future costs through lack of competition.

The PLICS system development work stream will take responsibility for supporting the national implementation of PLICS based on local procurements from a preselected framework. It will take responsibility for the ongoing development and improvement of PLICS based on a national perspective. It is anticipated that the lead for this work stream will have detailed experience of the procurement, implementation and use of PLICS and be well versed in the new costing standards and guidance. An appropriate team will be recruited to support the lead and the skill set and make up of this team is likely to include more junior costing staff. The team will require access to procurement professionals which will be sourced through the Programme Management work stream. The resource required will change between the intensive implementation phase and the subsequent and ongoing development of PLICS.

During the implementation phase it will undertake the following activities:

- Procurement Support:
  - Identify and publish a minimum service specification for PLICS systems – this will ensure the standardisation of costing approaches and methodologies used by these solutions. This specification will include how the system should operate (bottom-up allocation of costs via resources and activities to patients) as well as the supporting infrastructure required (data extraction requirements, "matching" of source data to cost object via appropriate patient identifiers, etc.) and the demonstrable capability of the system to process the data volumes involved;
  - Establishment of an assisted procurement framework; to reduce the burden of procurement on both provider organisations and PLICS suppliers, a framework of preferred suppliers will be identified, made up of suppliers whose systems transparently meet the minimum service specification described above. This will include a rigorous assessment of the methodology used by each PLICS under review to ensure that data processed under any system produces consistent results. To this end, template data sets will be provided and outputs tested against a pre-agreed checklist. Additionally, there will be an assessment of the ability of selected PLICS suppliers to deliver at scale and provide comprehensive support to each of their clients. The number of suppliers allowed onto the framework will consider the need for competion in the future to drive competitive prices and stimulate innovation; and
  - Development of a methodology for a realistic cost/benefit analysis on which to base software selection - the work detailed in the National Support Framework on collecting evidence of the value for money of patient level costing will provide a means for providers to ensure the system they procure provides value for money. Providers may have significant local requirements and priorities in addition to those in the minimum service specification. They need a means of valuing the potential benefits to set off against expected costs to ensure best value over the lifetime of the system.
- Implementation Support:
  - Support for local implementation of PLICS systems at organisations who currently do NOT own such a system. This would include sharing of best practice business cases and review of draft business cases to provide input into key areas of risk, value for money and benefits realisation; and
  - Support for revision or upgrade of currently installed PLICS systems at providers – it is anticipated that all PLICS systems currently in use will require an element of upgrade to support the proposed cost collection processes. Providers will be expected to evaluate the ability of their current system suppliers to meet the new requirements and undertake the required procurement processes to secure these upgrades. Certain current systems may not be able to support the required upgrade. Where this is the case, provider organisations will be expected to undertake the procurement of a new system via the processes described above. Based on a national perspective, the PLICS development team will provide support and guidance with regard to the issues and challenges associated with the procurement and migration of exisiting systems to meet the new requirements.
  - During implementation of the new systems, the PLICS Systems Development team will work closely with the National Support Framework in assisting with the set-up of the new costing standards and guidance to resolve any generic, systems issues which arise. It will also engage in the potential challenges with regard to securing the required outputs from clinical information systems; and
  - The PLICS Systems Development work stream will act as the main liaison point between the PLICS suppliers at a national level. Regular meetings will be held to address challenges with regard to the implementation programme for PLICS.
- Centralised Systems Support:
  - Taking responsibility for the design, development and procurement of the central database and analysis tools for the receipt, analysis and reporting of cost information. In doing this it will consider the following:

- The first stage of the development of the central database is to decide who owns/manages it - this could be HSCIC or Monitor. A decision will be taken during the project mobilisation phase based on an agreed set of criteria;
- Based on the collections designed through the methodology for the future approach, the database must meet the needs understood now and be flexible in line with local costing systems so it can evolve with PLICS. Following the development of a specification, the database and analytical tools will be procured and the system implemented; and
- Ownership of the database requires further consideration. The information contained therein is immensely useful and has extensive possible uses. The aggregate costs across the NHS of providing the data and making it visible will have been considerable. There will be requests from many parties for access, within and without the NHS. Consideration should therefore be given to ensuring the value derived from any uses of such data devolves to the NHS rather than to commercial bodies and that data governance processes are appropriate to its content, use and value.

- Post implementation Support:
  - The PLICS Systems Development team will be responsible for:
    - Maintaining an ongoing forum for PLICS suppliers and a representative group of provider clients to meet and discuss existing challenges and future developments; and
    - The PLICS Development team will work closely with the National Support Framework and support the systems development component of best practice adoption.

ENABLER NEEDS MET:

Appropriate investment in systems - the PLICS Development work stream will enable the delivery of a robust PLICS solution to all providers across the NHS and will support its development. It is wholly expected that the more standardised approach to costing and the cost collection methodology described above will lead to a reduced cost for providers in implementing and using PLICS. Likewise the proposed new cost collection format, being a system output, rather than a manual input as per the current RC submission, should help reduce the cost of system support.

Patient-level information and costing systems development - the continued development of patient-level costing systems will be supported by a dialogue between Monitor and other interested parties including the supplier market through the PLICS Development team. This will be predominantly concerned with ensuring that the systems base for the delivery of high quality cost information is robust. There is currently a concern that not all systems are capable of certain minimum requirements and this will be addressed through the specification for procurement of systems to meet the needs of the future costing approach. Additionally, it will look to identify opportunities for innovation for greater automation of the process, improved reporting and analysis and improved user expertise.

Systems development activities will extend to and consider the opportunities for improvement of clinical and non-clinical feeder systems to the costing process.

Audit and Assurance Framework

The Audit and Assurance Framework takes responsibility for the development and maintenance of a formal, rigorous and structured approach to ensuring that the new costing system is in place in all providers, that standards and guidance are being adhered to, that the leadership and management context is appropriate, that an appropriate IT systems environment exists and that there are proper processes and controls in place for maintenance of high quality costing. It will operate at both a local and national level.

The Audit and Assurance Framework will be led by a senior auditor with appropriate experience and skills and it is likely that this will be on a part time basis once the structures and processes for audit and assurance are in place. The support for the lead will consist of senior internal and external auditors who will act in an advisory capacity on a part time basis. The team will include membership from Monitor and NHSE.

The key roles of the Audit and Assurance Framework are:

- Agreement of a suitable national level assurance programme – to include cost collection audits to identify any anomalies in the data collected (similar to the 2012/13 RCs audit programme) and cost system audits to ensure that the central database and its analysis and reporting tools are operating effectively;
- Agreement of a suitable local (provider) level assurance programme to include detailed description of the role of: the board; the audit and finance committee; internal audit; and external audit. It is expected that this would include the requirement to assure that the appropriate processes, controls and structures are in place for data capture from source systems, population of PLICS, adherence to costing standards and guidance, testing of costing outputs, dissemination and use of costing information, testing and submission of cost collections, engagement with clinical and operational staff, training and education, recruitment and retention of costing staff and active identification, adoption and sharing of best practices.

Consideration will be given as to whether the quality of cost management in a provider could give rise to a qualified external audit opinion;

- The role of Monitor and NHSE with regard to: development of measures of quality and assessment of performance against quality standards; assessment of the criteria for regulatory action for non-compliance with mandatory requirements; and review and reaction to national but summarised audit findings; and
- The audit and assurance of costing will be reviewed regularly with central guidance and publications issued to identify key areas for attention. Review of audits and the lessons to be learned will be undertaken by the centre and disseminated to providers to maintain the focus and rigour applied to costing and to ensure robust information for decision making.

ENABLER NEEDS MET:

Audit and assurance - the need for audit and assurance will be met through the implementation and development of the Audit and Assurance Framework.

Stability - the presence of a robust audit and assurance framework will ensure stability across the costing system through policing poor practice.

Adherence to standards and guidance - will be achieved through robust local audit with recommendations made through committees to boards, clear local governance requirements with regard to the structures and processes required for high quality costing; and the potential for regulatory action in response to non-compliance with mandated requirements.

Advancement of best practice - through the Audit and Assurance Framework assertive approaches will be employed to drive improvement such as:

- Audit reports, recommendations and remedial actions;
- Local assessment of costing progress through site visits;
- Assessment of local generation and adoption of best practice;
- Testing of Board Assurance processes of costing; and
- Actions based on outcomes of national audit of cost information submitted.

Delivery of benefits to patients

Price regulation

As discussed earlier, price regulation comprises three elements: price development; price delivery; and price enforcement. Through better cost information, each of these areas provides benefits to patients through effective and targeted use of funding to deliver more care per pound invested and to drive continuous improvement in productivity, efficiency, quality and outcomes.

Cost information which is more accurate, granular, consistent across providers, links patients between settings, includes demographic and resource information and information about the quality and outcomes of care delivered to patients provides a powerful tool for improving patient care. The following benefits can be derived:

- Better cost information for pricing will ensure that prices properly reflect the cost of delivery of care. Within providers this will reduce the level of cross subsidy between specialties and ensure that funding is in the right place. It will do this through the ability to identify where profits and losses are currently being made and support decision making to shift funding between service types leading to greater stability in the system for sustainable delivery of patient care;
- A better, more detailed understanding of costs in relation to volumes of activity will allow analysis of the spectrum of efficiency and productivity across the system. The context and critical mass of services required to deliver at the frontier of efficiency and productivity will allow the centre to set prices which support moves towards best practice. Improvements in efficiency will release funding to support growth in volumes and the cost of service transition for delivery of high quality care;
- Subject to information governance rules, the ability to link patients across settings and to understand the costs of delivering care to different cohorts of patients will allow the development of effective prices in support of initiatives to move care to the most appropriate place. In many instances this will result in care being delivered closer to home, further benefitting patients;
- The ability to identify costs and performance across settings enhances the opportunity to improve integrated care and plan delivery of end-to-end care pathways. Such information will facilitate decisions with regard to the linkages between care provided in different settings and by different providers, supporting more seamless delivery of care for patients. While this project currently excludes primary care and social care, over time these areas could be included, adding further value;
- The introduction of quality and outcome measures associated with costing will support measures to incentivise a consistent and coherent move towards best practice. It will also support innovation as providers will be recognised for the value of investment in upstream activities which deliver better outcomes at a higher initial cost but with a saving to the system as a whole through prevention of re-admission and longer periods of care which is better for patients;
- The development of new pricing systems or changes to existing prices requires impact assessment. Better cost information about all providers allows the centre

to analyse on a provider-by-provider basis how changes in prices will affect overall funding and therefore financial stability over the short to medium and long-term;

- Where prices are set to incentivise best practice and innovation, a strong understanding of the ability to vary costs over time is important. Cost information provided by the proposed approach includes data on both the variability of costs and the ability to vary costs over time. This supports assessment of the pace of change and the speed with which patient benefit is achieved; and
- Price development also relates to activities which deliver better care in the long-term. For example education and training and research and development. Through stronger understanding of the detailed costs and benefits of these activities, better investment decisions can be made, leading to improved clinical practice and faster adoption of the results of research and development.

Cost management and cost benchmarking.

Better cost information allows for improvements in cost benchmarking and cost management which, in turn, lead to more efficient and effective services and the ability to provide more and better care for patients – examples of this are given below.

- Better cost information will support cost benchmarking both within and between providers, leading to improved decision making and better care. Within organisations, operational, clinical and financial staff will be able to work together with data which is clear and understandable and relates directly and transparently to their operational activities. They will be able to compare and contrast performance; comparing the costs incurred with the outcomes delivered in support of effective challenge to current practice and positive decision making for improvement. This will improve patient care through supporting best practice in terms of both increasing the volume of appropriate care and the quality of care. At an organisational level, effective comparison of cost and quality and the identification of best practice will support dialogue at all levels for system-wide improvement of patient care.
- Improved cost information will allow identification of resource use and unutilised capacity. This information is vital for day-to-day operational planning, medium-term service reconfiguration and longer term integration and collaborative activities such as merger and clinical network development. It also provides insight into the critical mass of capacity required to deliver clinically and financially sustainable services.
- The detailed cost information proposed under the future approach will support analysis and subsequent decision making with regard to the use of resources. The structure and content of the cost information within the proposed system allows a close understanding of which resources are carrying out which activities. This will facilitate assessment as to whether resources are being used to their optimum and whether they are doing the right things.
- Better, more consistent cost information for planning and delivery of service change will allow an effective assessment of benefits realisation. For example, business cases for investment are often developed based on one set of cost information and their delivery monitored against a different set. When cost information is harmonised, more valid comparison between what is planned and what is actually delivered is possible. Better and more focused benefits realisation activities will ensure delivery of envisaged enhancements.

Sector development

Sector development includes a host of activities associated with delivering the reform agenda; shifting care from acute to community settings and assessing the best location for delivery of care. It includes integration of care and focus on cohorts of patients with particular needs and co-morbidities and assessment of investments in technology and therapies such as high cost drugs. High quality, consistent cost information allows effective assessment of the impact of proposed changes and investments to ensure that the benefits and costs are balanced and result in better outcomes for patients. Such cost information is crucial for ongoing analysis of the benefits delivered to support intervention and remedial action.

Risks of the Proposed Future Costing Approach

As with any sector-wide change, there are a number of inherent risks. The key risks are:

1. The rejection of the future costing approach by providers due to the investment requirement at a time when there is significant budget pressure – this will be mitigated through the production of the evidence base for patient level costing;
2. The inability of systems suppliers to meet the requirements of the future costing approach – suppliers are confident that the needs can be met and this risk will be mitigated by close communication and appropriate assessments at procurement;
3. The increased requirement for high quality costing professionals cannot be satisfied – this risk will be addressed through the National Support Framework via cross training existing staff and attracting new staff from other sectors, in addition some suppliers provide turnkey solutions to manage the whole process. This is not optimal but could act as a stop gap;

4. Clinical information feeder systems cannot capture or deliver the required inputs to the costing system – this risk will be monitored and it may be that in the short-term estimation or sampling techniques will be required but ultimately investments will be necessary; and

5. The volumes of data produced will require a significant investment from Monitor in order to process into meaningful information for analysis – the volumes of data have been assessed and the challenges will be around analysis rather than data warehousing – this risk will be addressed through the procurement exercise.

Conclusion

The future costing system approach is designed to meet the current and future needs of users for high quality cost information. The approach proposed does this comprehensively and, through positive action, will continue to improve and add value to patient care.

Having established the needs of the system and proposed a future approach which addresses those needs flexibly for the future, Chapter 6 describes the options for transition from the current status.

CHAPTER 6
Costing System Transition Paths

TRANSITION TO THE NEW COSTING SYSTEM

Introduction

Earlier chapters identified the needs of the costing system and laid out a flexible future approach to costing, cost information and cost collection which meets those needs.

This chapter focuses on the development and evaluation of options for transition to the future approach, which is delivered through a long-term change programme. As a number of immediate needs must also be addressed, the best alternative will also capitalise on momentum in the short-term. The most appropriate transition plan is not only one that delivers the future approach, but also in the short-term builds on the considerable progress already made.

This chapter details thinking with regard to the delivery of the future approach through the evaluation of two main options. A third, 'do nothing' option was considered for good practice but this is not a tenable approach as it fails to address the needs identified and over time they would become overwhelming. The absence of a comprehensive solution would be a severe inhibitor with regard to price regulation, cost management, cost benchmarking, sector development and other parallel uses.

Following examination of the two main options, the preferred option is selected and then variants to this which deliver benefit in the short-term are considered. The main options for the future approach are:

1. A 'baseline', realistic transition path which keeps the processes for delivery of the long-term and short-term separate but with early adoption of benefits as they arise from the development of the future approach; and
2. A more aggressive, 'accelerated' transition path which quickens delivery of the long-term approach with sub-options to assess the benefits of prioritisation of delivery of one provider type over another.

These two transition paths will deliver the key elements that make up the future approach by undertaking a number of tasks; tasks which relate to a common element of the future approach are grouped into 'delivery vehicles' which form the main components of the transition.

These delivery vehicles are combined in a programme of work, tasks are allocated to organisations and the need to comply with existing timeframes for cost collection and price delivery is accommodated.

The 'baseline' adopts a practical and balanced pace of change which is challenging without being overly aggressive. The 'accelerated' alternative is developed from the 'baseline' and evaluated to determine the potential for and risks of accelerated or prioritised delivery.

The strengths and weaknesses, risks and benefits of the two alternative transition paths are compared and a recommendation made for the way forward. The potential variants to the recommended way forward to deliver benefit in the short-term are considered, the best selected and an overall preferred option set out.

Finally, next steps are set out for broader engagement, refinement and agreement of the future approach and the mobilisation of the preferred transition path.

Approach to developing the transition path options

The future approach is designed to meet the needs of the stakeholders and therefore the transition paths have been developed to deliver this future approach. The process for developing the transition paths includes 16 steps. These are set out at a high level in Figure 14 overleaf and explained in more detail in the following sections.

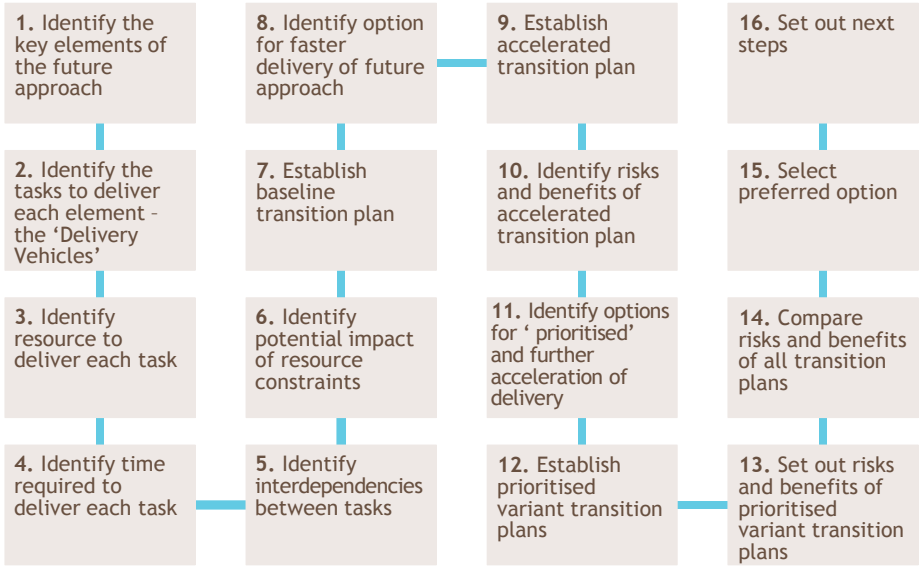


Figure 14: Steps for the development of the preferred transition path

Step 1: Identify the key elements of the future approach

The future approach is made up of four key elements each of which needs to be delivered:

- Revised costing standards, guidance, definitions and minimum datasets;
- Implementation of PLICS locally and the establishment of the national database and analytical tools;
- Implementation of the new approach to cost collections; and
- Establishment of the Assurance Framework.

Step 2: Identify the tasks to deliver each element and establish the delivery vehicles

The detailed tasks and sub-tasks required to deliver each element of the future approach were developed through workshops. In addition to the programme of work, two parallel work streams are required to facilitate and support the transitions:

- Programme management and central delivery tasks: this is a central function, led by Monitor, which takes overall responsibility for delivery of the transition path including: mobilisation, planning, monitoring and progress reporting for the programme, seeking the approvals required at various stages, management of the key task dependencies, achievement of key milestones and deadlines, day to day management of delivery through liaison with provider organisations, PLICS suppliers and others and governance for the programme.
- National Support Framework (implementation): this will be put in place to support the initial implementation of the future approach. During this period, its role will be to communicate, engage and signpost the programme to stakeholders, provide central support for key elements of the project, establish programmes for training and development of costing staff and support activities associated with building costing capacity in the system. Once implementation has been completed, the ongoing National Support Framework will be established to provide ongoing support and guidance to the continued development of costing in the NHS (see page 44 for details).

The tasks for each of these work streams were also established.

Together with the delivery of the four key elements of the future approach, these two parallel activities make up the six delivery vehicles for implementation of the transition paths. The development of the delivery vehicles is summarised in Figure 15 overleaf which also shows the relationship between the current and future needs, the proposed approach and the delivery vehicles:

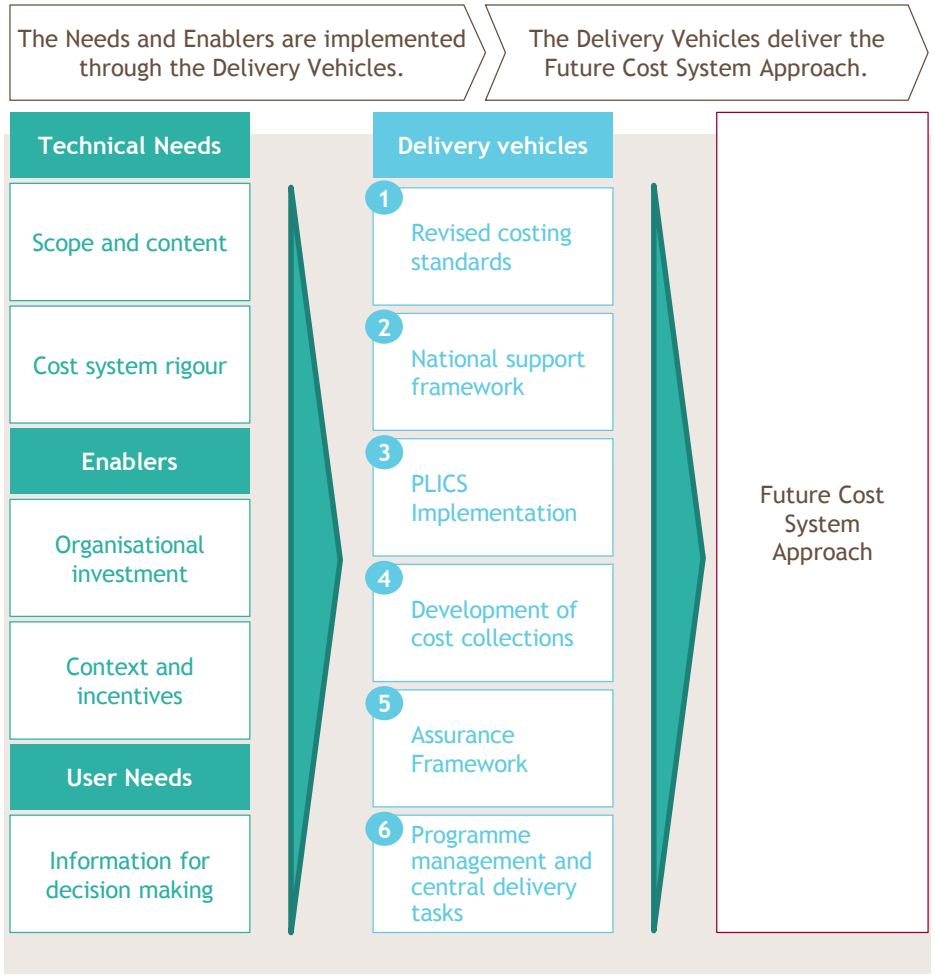


Figure 15: Development of the delivery vehicles

Step 3: Identify resource to deliver each task

Following the generation of the tasks for each delivery vehicle, the organisational resources required to deliver each task were identified. These include central functions such as Monitor, NHSE, HEE, HSCIC and HFMA and resources for local implementation, including provider organisations and costing system suppliers.

Step 4: Identify time required to deliver each tasks

Each task was reviewed in detail and its duration estimated in months. At this stage the minimum reasonable time for delivery was evaluated without consideration of the impact on resource constraints or overall project timelines and deadlines. The time line for each task includes a contingency for delays relevant to the complexity of the task. These estimates were developed initially through project team workshops followed by refinement through wider discussions with key stakeholders.

Step 5: Identify interdependencies between tasks

The relationship between tasks was considered to identify:

- Tasks that can run in parallel;
- Tasks that must run in series (i.e. where a task cannot start until a previous one is completed); and
- Tasks that could be staggered (i.e. where a second task could conceivably commence part way through the completion of the first task).

Interdependencies were recognised both within and across delivery vehicles. The results of this analysis, together with durations and resources were captured in a detailed Gantt chart (see Appendix 3).

Step 6: Identify potential impact of resource constraints

At Step 5 the Gantt chart sets out all the tasks, linked in logical order but with no account taken of the number of tasks any one resource would be required to undertake at any one time. A review of resource workload was carried out and an assessment made as to whether this was reasonable or not. Bottlenecks were identified and consideration given to whether these could be handled through re-allocation of tasks between resources, provision of additional resource or re-scheduling of tasks. This analysis was relatively subjective and high level. Detailed resource planning will be an important component of the mobilisation stage and will be better informed once key individuals are recruited and tasks allocated.

With regard to the resourcing of each task, consideration has been given to:

- Number of concurrent tasks handled by central bodies – Monitor, HFMA, NHSE and others. Where the demands set by the nature of the tasks, combined with the number of parallel tasks was unreasonable, tasks were staggered. This reduced the overlap between Delivery Vehicles and therefore the workload.
- A PLICS supplier capacity check has been carried out to determine capacity to meet the implementation/revision demand.

Step 7: Establish the Baseline Transition Path

The Baseline transition plan was constructed through mapping the Gantt chart developed at Step 6 to existing timelines and processes. The purpose of this exercise was to test the extent to which the emerging plans for transition dovetailed with established annual programmes. Through this, the earliest points at which the future approach would be in place and able to inform cost collections and price delivery were determined.

Where marginal differences existed in any one year between the timings of the Gantt chart and the established programmes, refinements were made to the Gantt chart. Where these differences were not marginal, the Gantt chart was extended to meet the next annual cycle. Timeframes associated with existing programmes were assumed to be immoveable.

Consideration was given to the need for the future approach to be embedded and its outputs assessed to ensure they meet required quality standards, particularly for pricing and benchmarking, before being deployed. It was assumed that this would be the case by the second full year post implementation. The Baseline transition path was developed with the aim of delivering all the benefits at a minimum acceptable level of risk and forms the basis for assessing variant options. The management of risk took account of the factors set out in the table at Figure 16:

Needs led	• The basic need of the costing system to deliver cost collections must be met in each year of transition • The burden on resources to deliver must be managed.
Evidence based	• The basis for the nature, duration, dependency and priority of tasks must be based on evidence.
Stability	• The impact of changes to cost management and price regulation must be managed to ensure stability.
Speed	• The pace of change must be achievable such that quality is maintained • Needs should be met at the earliest reasonable date.
Priority	• Where tasks are staggered this should be based on their relative priority.
Readiness	• The pace of change must consider the readiness of different providers • The continued buy-in of providers must be maintained throughout.

Figure 16: Transition Path Management

Steps 8 to 13: Development of options

These steps evaluated the potential variants to the Baseline transition path. The benefits and risks associated with the variant options were compared to the Baseline transition path.

Steps 14 & 15: Recommendation of the preferred option

The risks and benefits of each variant were assessed and a preferred option selected as 'recommended'.

Step 16: Set out the next steps

This step considers the process to reach agreement on the preferred option through engagement and subsequent refinement and to gain the approvals required to move into project mobilisation.

Delivery Vehicles

This section provides a detailed description of each delivery vehicle. It sets out the headline tasks, duration and resources for each. The detailed interdependencies between tasks and delivery vehicles are commented on at a high level here and set out in detail in the Gantt chart of the Baseline transition path in Appendix 3.

In each of the following sections, the timescales for the tasks in each of the delivery vehicles are provided in a table. These are the Baseline transition path timescales.

Revised costing standards and guidance

The tasks set out in Figure were identified as the key steps to delivering the standards and guidance for the future approach. They represent a step-by-step approach to defining cost objects, activities, resources (and their respective groups) and include the development of the definitions dictionaries, drivers, rules and minimum data sets (MDS). Cost objects are the most detailed area and so are completed first to ensure that activities and resources are defined which cover all cost objects.

It is assumed that the documentation of the standards and guidance will take place in parallel and will be refined with stakeholders prior to formal consultation, impact assessment and direction for their mandatory use. The impact assessment is necessary because of the statutory requirement to consult where there are material mandatory changes proposed to the requirements placed on providers. The timescales differ by provider type based on our assessment of the state of readiness of each and the complexity of the delivery of the task.

Task	Acute duration	MH duration	CS duration	Ambulance duration	Resource
Define cost objects and cost object MDS	6 months	9 months	9 months	6 months	Central
Define activity groups, activities, activity MDS and drivers to cost objects	6 months	12 months	9 months	6 months	Central
Define resource groups, resources, resource MDS and drivers to activities	6 months	4 months	4 months	2 months	Central
Define G/L cost system requirements and resource maps	1 month	1 month	1 month	1 month	Central
Write guidance, standards, MAQs and dictionary chapter	19 months	26 months	23 months	15 months	Central
Engagement with providers and refinement of documentation	3 months	3 months	3 months	3 months	Central, Providers
Impact assessment – consultation, pre and post-consultation, mandate guidance upon conclusion	4 months	4 months	4 months	4 months	Central
Compile standards and guidance	3 months				Central

Figure 17: Delivery of Standards and Guidance

The diagram at Figure 18 illustrates the relationship between tasks for the delivery of standards and guidance using the proposed acute sector timelines to illustrate the general dependencies.

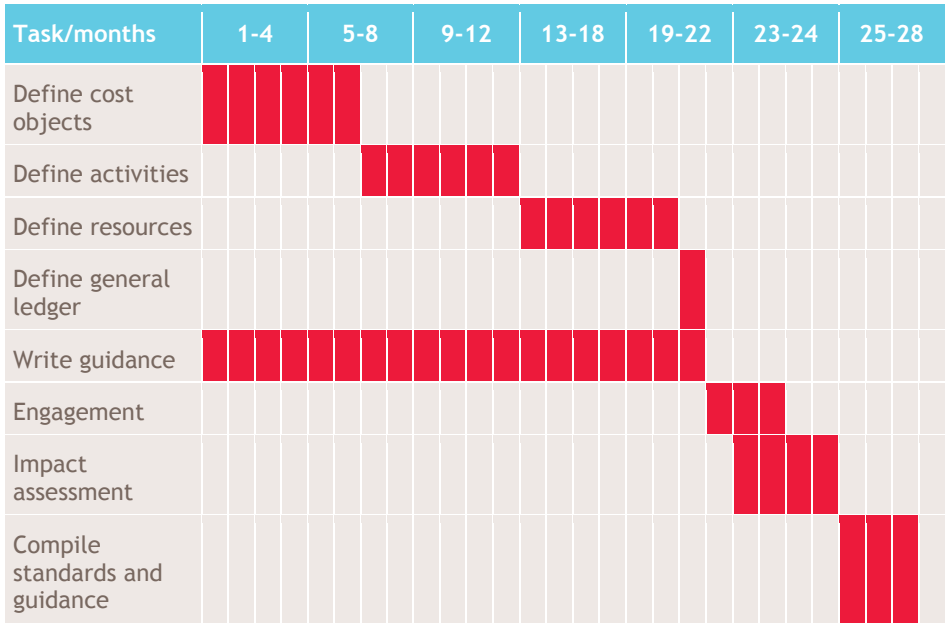


Figure 18: Task interdependency for development of Standards and Guidance for the acute sector

As the guidance and standards are developed across provider types, there will be cross checking to ensure that resources, activities and cost objects are consistent where appropriate to aid the understanding of costs of the same activities delivered in different settings. These tasks commence after project mobilisation.

National Support Framework

The diagram at Figure 19 below describes the key tasks to be delivered during implementation under the National Support Framework which was described in Chapter 5 Costing System Future Approach.

Task	Acute duration	MH duration	CS duration	Ambulance duration	Resource
Identify evidence for PLICS value for money	3 months				Central
Publish PLICS VFM evidence	3 months				Central
Engagement – use evidence to identify benefits of PLICS to all provider organisations	3 months				Central
Required approvals gained (Issue prospective date for mandating PLICS)	1 month				Central
Establish programme to identify and share best practice (once established, the programme will be ongoing	8 months				Central
Development of costing capability and capacity (once established, this development will be ongoing)	83 months (from start of vehicle)				Central
Develop national plan for engagement: to include organisational cultural and behavioural change	3 months				Central
Standards and guidance training	12 months	12 months	12 months	12 months	Central
Central support for data collection design	18 months	5 months	11 months	10 months	Central

Figure 19: National Support Framework

The diagram at Figure 20 shows the interdependencies between tasks. This excludes the Standards and Guidance training and Central Support for Data Collection Design which both take place after the completion of the Standards and Guidance development for each of the provider types.

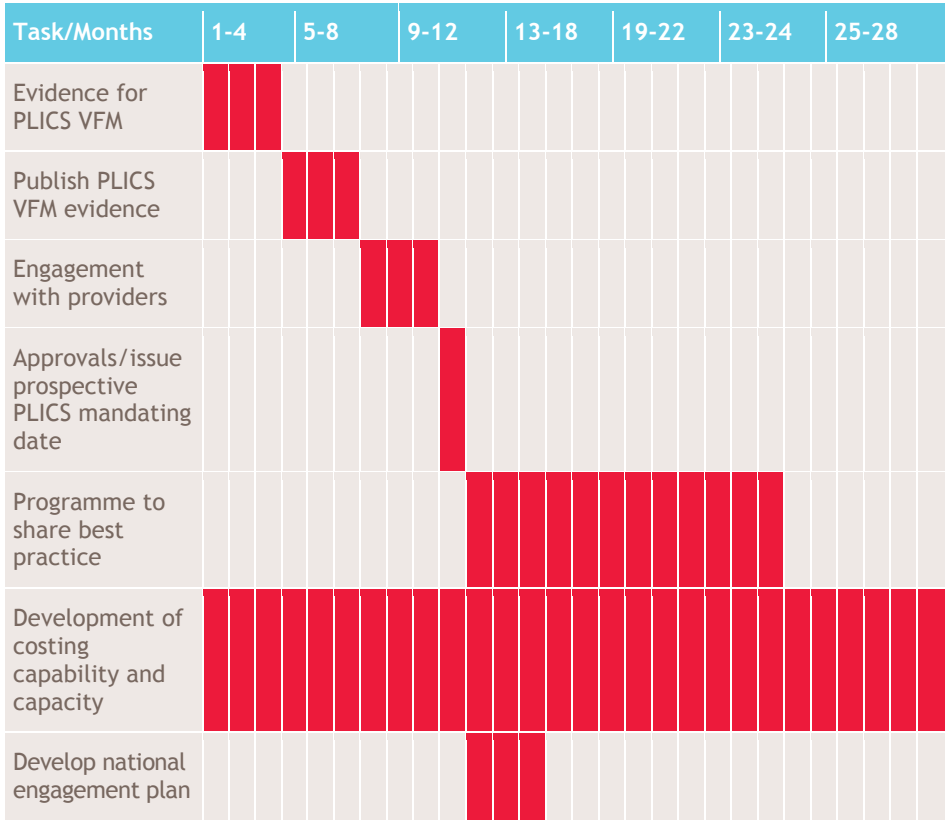


Figure 20: National Support Framework

PLICS Implementation

The implementation of PLICS is delivered by the PLICS Development work stream described in Chapter 5 Costing System Future Approach. The estimated timeframes are set out in Figure 21 below based on the current number of new and upgrade activities required.

Task	Acute duration	MH duration	CS duration	Ambulance duration	Resource
Prepare minimum system specification for PLICS solutions	6 months				Central
Establishment of PLICS solution procurement framework	6 months				Central, Suppliers
Providers to prepare business case for PLICS solution and gain authorisation to procure	3 months	3 months	3 months	3 months	Providers
Providers to recruit suitable qualified/experienced staff to support PLICS solutions	6 months	6 months	6 months	6 months	Providers
Implementation of PLICS solutions at providers who currently do NOT have PLICS	23 months	23 months	23 months	11 months	Suppliers, providers
Revision of existing PLICS solutions to meet minimum system specs for providers who currently DO have PLICS	26 months	26 months	26 months	14 months	Suppliers, Providers

Figure 21: PLICS Implementation

These tasks are highly interdependent with those in other delivery vehicles and too detailed to represent diagrammatically here. The reader should refer to the detailed Gantt chart in Appendix 3.

Development of cost collections

The vehicle for the development of cost collections includes two elements:

- The development of the central database and analysis tools for the receipt, analysis and reporting of cost information; and
- The process at local providers for the design, preparation and submission of cost information to the centre.

These tasks are carried out by the Systems Development work stream and the diagram at Figure 22 sets out the key time periods.

Task	Acute duration	MH duration	CS duration	Ambulance duration	Resource
Agree responsibility for data management	3 months				Central
Design specification for database and reporting tools	6 months				Central
Procure system	6 months				Central
Implement system	6 months				Central
Collect and interpret 17/18 PLICS submission	6 months				Central, Providers
Design of data collection - providers to identify how new costing data (resources, activities, etc) will be collected	18 months	5 months	11 months	10 months	Providers, Suppliers
Collection of first full year of complete required costing data	12 months	12 months	12 months	12 months	Providers
First year cost collection submission in proposed format	5 months	5 months	5 months	5 months	Providers
Second year cost collection submission in proposed format	5 months	5 months	5 months	5 months	Providers

Figure 22: Cost collections

These tasks are highly interdependent with those in other delivery vehicles and too detailed to represent diagrammatically here. The reader should refer to the detailed Gantt chart in Appendix 3.

Assurance framework

The timescales associated with the development of the Assurance Framework are shown in Figure 23 overleaf.

Task	Acute duration	MH duration	CS duration	Ambulance duration	Resource
Agree and implement a national assurance framework	12 months				Central
Agree and implement local assurance frameworks at all relevant organisations	12 months	12 months	12 months	12 months	Providers

Figure 23: Assurance Framework

These tasks run in series with the development of the local assurance framework following the development of the national assurance framework.

Programme management and central delivery tasks

A programme management structure will be set up by Monitor to oversee the delivery of the programme. The specific roles of this work stream are described in Chapter 5 Costing System Future Approach. This will commence with engagement and approvals to start the project, following which the programme will be mobilised, recruitment of the resource needed at the centre to support implementation will take place and detailed planning will be undertaken. The programme will require project governance and a reporting structure to monitor progress, agree change management recommendations and take remedial action where necessary. This will be set up during this phase of work. Consideration needs to be given as to whether the programme is free standing or reports through the governance framework set up under the National Support Framework.

Development of the Transition Paths

The following sections describe the construction of the transition paths for the two preferred options. Both are based on the delivery vehicles described above and a set of common assumptions, detailed below.

Assumptions

Common assumptions apply to both transition paths. They determine the way in which the delivery vehicles are combined and the relationships between tasks.

In order to mandate the use of PLICS, the following process will be followed:

- PREPARATION AND PLANNING
  - Value for money evidence will be gathered and published, along with anticipated benefits and highlighted risks;
  - A "decision in principle" will be reached regarding the mandation of PLICS across all healthcare organisations. This will include an anticipated date upon which mandation will be made;
  - The required detailed costing standards will be identified and compiled, with provision for thorough engagement with relevant individuals/organisations across the sector;
  - Once the standards have been compiled and it is clear what is expected of the sector, an impact assessment will be completed to determine the anticipated impacts on all organisations of the expected changes;
  - There will be a process of formal consultation with the sector; and
  - The mandatory use of PLICS will be formally agreed and implemented by the previously identified date.
- IMPLEMENTATION OF NEW COSTING SYSTEM
  - The implementation of a new costing system across **all** providers could result in significant movements in the costs of current HRGs in a very short period of time. It **is** assumed that the primary focus of the implementation will be to allow providers to access better information for cost management, therefore any significant impacts that will result from the implementation of the new costing approach on the key uses of the information (tariff setting, etc) will be managed accordingly; **and**
  - Organisations currently planning on implementing PLICS will continue with their plans. PLICS implementation will therefore continue to be encouraged (via relevant channels and publications from HFMA, Monitor, etc.) centrally up to the point of mandation, at which point it will become compulsory.
- COST COLLECTIONS
  - Cost collections continue to be carried out between April and September for the previous financial year;
  - A full collection year is required in order to collect costs;
  - In advance of the collection year/by provider type:
    - Communication, engagement and signposting through the National Support Framework is delivered;
    - All costing standards and guidance, recruitment and training is dealt with prior to commencement of collection of the newly established minimum data sets;

    - PLICS systems/solutions are fully implemented across each service type;
    - The national collection database is implemented, tested and fully functional; and
    - Full assurance processes are in place at both local and national levels.
  - RCs in their current format will continue in parallel alongside new cost collections to ensure annual data for price setting continues to be produced;
  - A minimum of two full cost collections using the proposed format is required so that the quality of the submitted data can be tested to ensure it meets minimum quality standards;
  - These minimum quality standards are yet to be established, however the credibility of the new collection format will be established through the reconciliation of local and central calculation of RCs from submitted patient-level data; and
  - RC collections are 'retired' after the second cost collection in the proposed format for each service type, with the outputs of RCs then being calculated on a patient level basis using patient level cost collections thereafter.

Baseline Transition Path – TIMELINE

In addition to the assumptions set out above, the Baseline transition path 'staggers' the development of the standards and guidance by provider type. The acute and ambulance service start first and in parallel, followed by mental health and then community. The following paragraphs describe the development of the Baseline transition path.

Tasks to be performed immediately after project mobilisation

- The project mobilisation period completes in 6 months and includes gaining all approvals and completion of impact assessment;
- Standards and guidance are completed in order of their 'natural progression':
  - Cost objects first (acute and ambulance providers are prioritised – due to these being already more developed and/or relatively easier to define – and start together, with mental health provider cost object development starting on completion of the cost objects for acute and ambulance followed by community providers which start on completion of the cost objects for mental health);
  - Activity dictionaries and Activity Groups are developed together with drivers to cost objects following the completion of cost objects for each provider; for example, as soon as the cost objects are completed for acute providers the development of their Activities commences;
  - Resource dictionaries and Resource Groups are developed together with drivers to Activities for each provider type on completion of their Activities;
  - General ledger mapping rules are developed to populate Resource Groups once the Resource Groups are complete for each provider.
  - Revised MAQS are developed alongside these activities, reflecting both the introduction of the minimum data sets for costing and the revisions of current cost objects and cost pool groups to activity/resource groups
  - Guidance is written up in parallel (to ensure a consistent and unambiguous application of standards and terminology across common activities/resources), along with the compilation of provider types and non-clinical guidance (including that for costing Education and Training, etc.)
  - A final impact assessment will be conducted prior to the issue of the guidance for each provider type.
- A number of delivery vehicles and sub-tasks are conducted concurrently, namely:
  - The development of the National Support Framework;
  - The development of both national and local assurance frameworks; and
  - The commencement of the PLICS procurement framework.

Tasks to be performed for the implementation of Patient-Level Costing

- The implementation of PLICS systems across all provider organisations begins immediately after the project mobilisation period. It requires a minimum system specification to be written (detailing requirements for operation, production of required outputs, data handling capacity and supporting infrastructure) and is followed by the creation of a procurement framework for 'preferred suppliers' to assist both providers and PLICS suppliers;
- Each provider will be required to undergo local governance processes for procurement (business case production and board approval), recruitment of suitably experienced and trained staff to support the system, and the actual procurement and implementation of the system itself; and
- This will be supported by the design, procurement and implementation of the centralised data warehouse and analysis tools needed to begin to store and use the submitted cost collection data.

Tasks to be performed to implement the proposed PLICS Cost Collection

- These tasks start immediately on mandating of the costing standards and guidance. However it is anticipated that many providers will be keen to commence development of their data collection design and implementation on a voluntary basis prior to the new standards and guidance becoming compulsory;

- It is assumed that providers will require at least 6 months to design processes required to collect and process this 'new' data;
- The first year of the proposed new cost collection format is predicated on the successful delivery of the following, ALL prior to 1st April of the collection year: Completed costing standards and guidance, all relevant impact assessments, the implementation of PLICS at ALL organisations by provider type, 'new' data collection processes being in place, recruitment of sufficient costing staff and the establishment of both the national support framework and both levels of assurance framework; and
- Two cycles of cost submissions in the new format are needed to confirm the quality and veracity of the data collected as discussed earlier.

Programme for the Baseline transition path

Based on the delivery vehicles, assumptions and detailed planning of task interdependencies, the proposed overall programme for the Baseline transition path is illustrated in Figure 24 right.

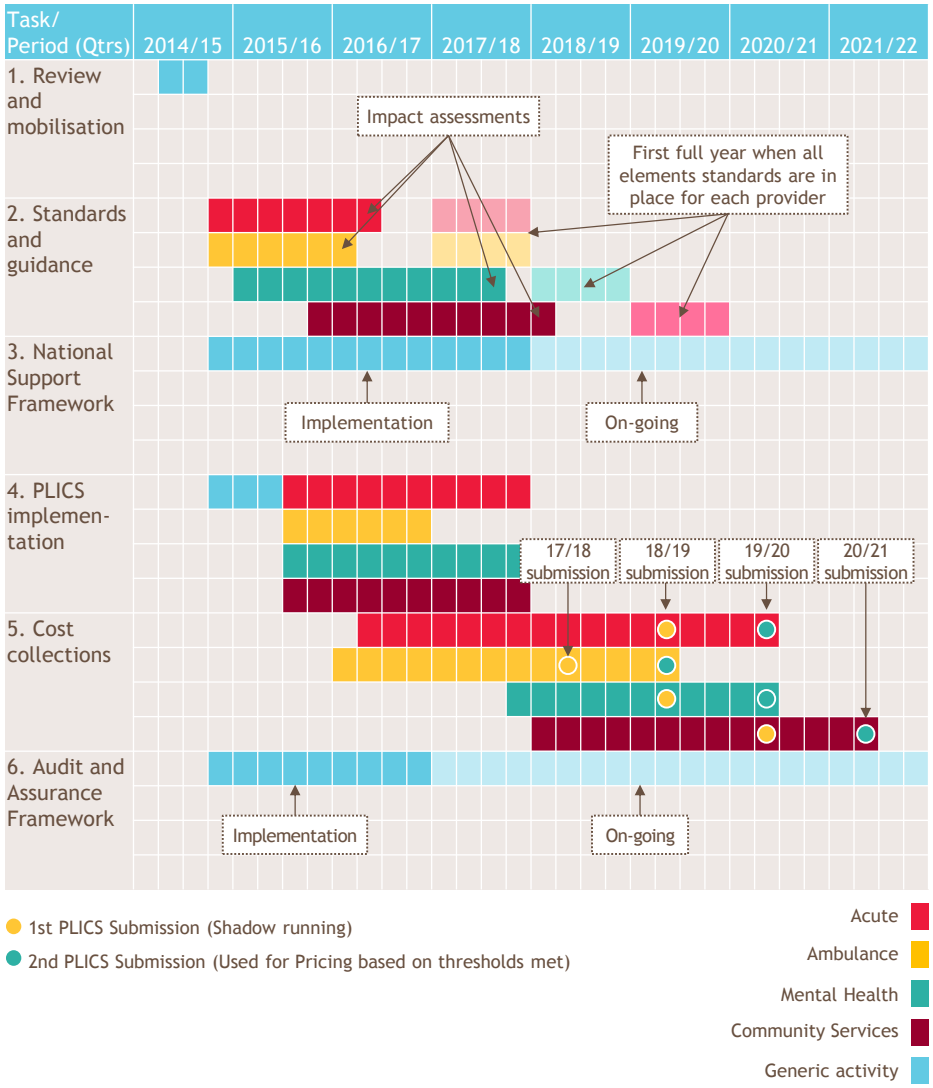


Figure 24: Baseline Transition path timescales

This diagram shows that the first year for cost collection under the new standards and guidance will take place for:

- Acute providers in 2018/19;
- Ambulance providers in 2017/18;
- Mental health providers in 2018/19; and
- Community providers in 2019/20.

The preparation and submission of cost collections takes place between May and September following the end of the relevant cost collection year. On receipt of the cost collections, the centre will load the information into a central data base and undertake a process of analysis, interpretation and collaboration with providers. The collected and aggregated data will be made available by the following February.

While organisations are implementing the proposed costing methodology and submitting their new patient-level costs, they will continue to submit their RC submissions.

The headline dates when robust cost information will be made available for pricing, cost management, cost benchmarking, sector development and other parallel uses by provider type are therefore:

- Acute providers: November 2019;
- Ambulance providers: November 2018;
- Mental health providers: November 2019; and
- Community providers: November 2020.

Price development based on the new cost collections

The proposed approach would see pricing based on patient level information being implemented 2 years after the end of the collection year. The diagram at Figure 25 sets out the envisaged timeframe based on the acute provider cost collection. The same time table would hold true for mental health, while community would be a year later and ambulance providers a year earlier.

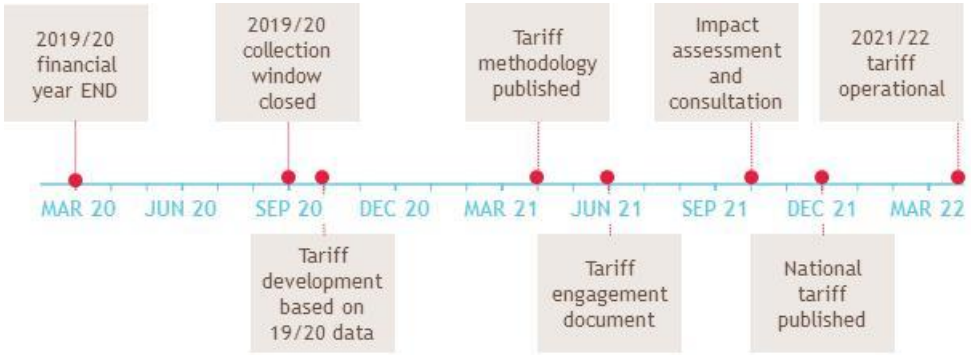


Figure 25: Timetable for production of prices based on new cost collection methodology

Accelerated Transition Path Options

As mentioned above, a further option for the transition to the new costing approach has been identified and considered. This is the Accelerated option. The aim of this option is to deliver the future approach more rapidly. In order to do this, it has greater parallel running of tasks, with shorter task timelines (driven by 'stretch-targets' and reduced contingencies). The option will require more intensive workload for the centre, supplier and providers with a consequent increased burden on resources. The approach leads to the quicker achievement of new format cost collection submissions (but at a risk to overall quality). It assumes that some tasks can start immediately prior to the completion of 'Mobilisation'.

Within this option, a number of sub-options are considered based on the notion of different prioritisation by provider type:

- **Accelerated Sub Option 1:** acute and ambulance services are prioritised for quick wins and early delivery of cost management to acute providers. This option responds to stakeholder views that rapid progress in the areas where most progress has already been made (acute providers) or where delivery is seen as more straightforward (ambulance services) will bring earlier benefits and a war chest of learning which can then be applied to mental health and community services.
- **Accelerated Sub Option 2:** mental health and community services are prioritised to allow a focus on the sectors where the most development is required, ensuring that all provider types are brought up to a reasonable standard as quickly as possible. This will allow concurrent delivery of cost objects with similar development challenges (introduction of mental health PbR, expectation of increased integrated care pathways developing, etc.)
- **Accelerated Sub Option 3:** acute and community services organisations are prioritised to deliver against the integrated care pathway and care setting shift agenda (shifting treatments out of acute settings into care closer to home) earlier.

All the accelerated options are based on the Baseline transition option. The differences in tasks between this option and the Baseline option include:

- A reduced timescale for the completion of the costing standards and guidance (28 months compared to 41 months in the Baseline);
- A reduced timescale for PLICS implementations – all organisations having an implemented PLICS system that meets minimum requirements will take 29 months compared to 39 months in the Baseline through more implementations per supplier per year (this has been tested with suppliers and they believe this is achievable);
- These shortened timeframes allow the first (test) cost collections in the new format to take place in 2016/17 with submissions in August 2017 for all organisations. Costing standards and guidance will NOT be fully complete for mental health and community services and there will not be sufficient time for full data collection processes to be in place during the year other than potentially for Ambulance services. The 2016/17 collection would therefore be based on a retrospective review of costs incurred at the end of the year. However, this approach does allow ALL providers to submit costs to the centre in the revised format for the first time 24/36 months earlier and at a quality level sufficient for pricing 12/24 months earlier than the Baseline option;
- The costing standards and guidance will be complete in time for the 2017/18 cost collection, meaning that this is the first year that fully standardised and consistent costs can be collected, with the expected minimum quality standards being reached in the 2018/19 cost collection;
- This sees RC collections retired for the 2019/20 cost collection and RCs being calculated on a patient level basis thereafter; and
- Other key differences between the Accelerated option and the Baseline option includes:
  - The starting of the costing standards and guidance revision prior to the completion of the mobilisation period (in order to meet these stretch-targets, this work stream must begin in August 2014; and
  - All other vehicles remain as per the baseline option.

Programme for the Accelerated transition path

The programme for the Accelerated transition path is shown in Figure 26 below.

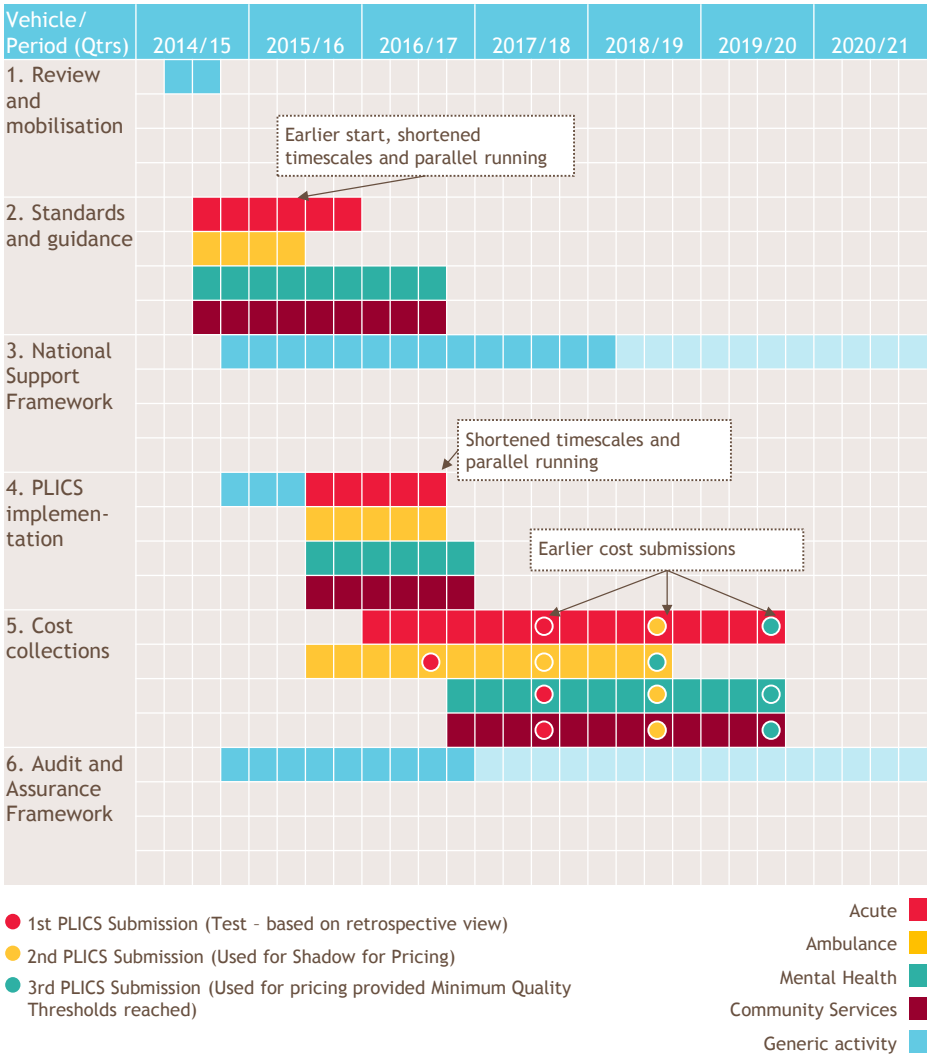


Figure 26: Accelerated transition path timescales

The sub options for the Accelerated transition path stagger delivery by provider type based on different priorities as described earlier and as a result add one year to the date by which the cost collections across all providers are sufficiently robust for use in pricing. Otherwise all of the timelines and interdependencies in the sub options remain the same. The summary of the time lines for the Baseline, Accelerated and Accelerated sub options are shown below in Figure 27. The key differences between each option and sub-option in terms of individual tasks and their prioritisation are:

Between the Baseline and Accelerated transition paths:

1. Shortening of timescales for completion of the costing standards and guidance;
2. Shortening of the timescales for completion of the PLICS implementations; and
3. Moving more tasks/activities to be delivered and completed in parallel.

Between the Accelerated and Accelerated sub-options:

4. Changes of prioritisation between provider types to reduce the amount of parallel running of tasks/activities.

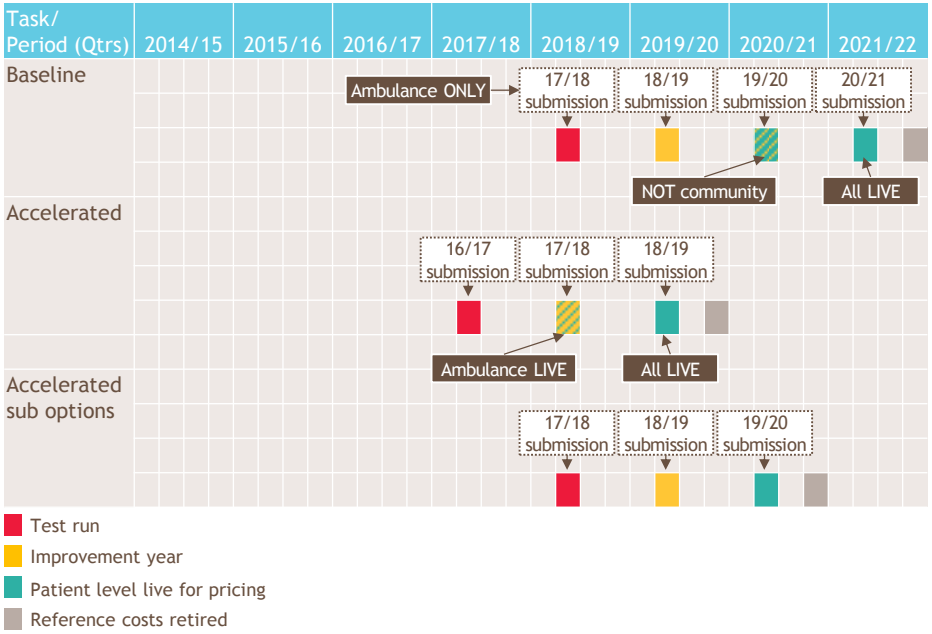


Figure 27: Summary headline dates for all transition path options

Exploration of the benefits and risks of each option

The following section examines the benefits and risks of each of the options and sub options developed. It is important to note that the future approach delivers the most major step change to costing in the NHS since its inception and the benefits will be delivered long into the future. Taking this into consideration, the value of getting the solution right first time to embed an enduring solution must be weighted heavily against the short-term 'burning platforms' which exist.

All the options are exposed to some degree of risk. Generic risks, common to each option, include:

- Changing priorities which result in decisions for alternative investment of time and money for greater patient benefit;
- The ability to recruit and retain high quality costing staff across the NHS to support the delivery of patient level costing;
- Escalating costs due to greater than anticipated complexity in developing the local and national systems to support the future approach;
- Escalating timescales due to unforeseen difficulties reaching agreement with regard to standards and guidance particularly where these cut across provider types and settings of care;
- Push back from independent sector providers who do not see the value in patient level costing to their businesses;
- Inability to engage boards, clinicians and operational management;
- Escalating costs due to the inability of or inconsistency between clinical and operational feeder systems to meet the requirements of the new minimum data sets; and
- Benefits realisation and impact analysis activities do not demonstrate the required levels of value for money and patient benefit for the delivery of such a comprehensive solution.

Baseline Transition Path

Benefits

The Baseline transition path is designed to be low risk and high quality. It delivers all the needs established by stakeholders in a robust and managed process which establishes a strong platform for further development and flexibility for the future.

The Baseline transition path follows a set of logical steps which build upon each other and allows for opportunities and risks encountered in one provider area to be factored into the development of subsequent ones through the staggering of development of the standards and guidance. This also allows time for consideration of the areas which require consistency between provider types where they form part of the same care pathway or deliver care in the same setting.

A key task is the development, design and implementation of data collections for costing. The Baseline approach provides sufficient time in advance of costing and collection activities for this task to be carried out. It builds in contingency for each task to allow for slippage and the management of tasks across the centre, providers and suppliers has been designed to avoid significant resource constraints. The pace at which the Baseline option is delivered will allow time for the introduction of early benefits to the costing system to enhance current approaches and engage providers and users of cost information in the future approach.

Risks

The key risk relates to the timescales to deliver patient-level costing to the whole system. There is a risk that such a long-term project could lose momentum and engagement along the way.

Accelerated Transition Path and sub options

Benefits

The key benefit of the Accelerated transition path is that it delivers earlier. The sub options present the opportunity to achieve a quicker solution while responding to different stakeholder views about the benefits of delivering certain provider types in advance of others.

Risks

The key risks associated with the Accelerated transition path and its sub options relate to deliverability, quality, work load placed on the system and lack of short-term gain.

With regard to deliverability there is significant risk in terms of the shortened timescales for completing the various tasks and the lack of significant contingency. There is greater risk that the centre, providers and suppliers will not be able to meet the aggressive timescales set with consequent knock on effect on dependent tasks. Concurrent running of similar tasks in different provider types limits the ability to learn across providers with similar problems being encountered simultaneously.

This problem is exacerbated as the centre will be managing a large number of tasks at the same time and therefore may not be able to dedicate attention to support resolution of specific problems.

The shortened timescales present the risk that compromise solutions may have to be reached to keep the project on track, potentially leading to a poorer overall delivery of benefits and the need for longer term remedial actions and reworking of solutions. A particular area of risk in this respect is the design and development of data collection processes which is a key and potentially complex step, requiring automation of manual collection of data and alterations to clinical systems. In the Accelerated transition path and its sub options, the timescales for this activity are reduced to a mere 2 months which is likely to be inadequate.

The shortening and parallel running of tasks under the Accelerated transition path and its sub options will require greater resource to deliver and more central coordination due to the greater intensity of workload. There is a risk that the cost of such an approach will escalate and the value for money of the solution will be compromised. Additionally, the potential for deadlines to be missed increases and the central resource will become a single point of failure. Suppliers are comfortable that they can 'tool up' to meet the increased number of implementations required under these options but there is a risk that this proves not to be the case as suppliers compete for costing resource with NHS providers to support programme activities.

The intensity of the programme precludes the ability to make any meaningful progress in the meantime. This presents the potential risk of stagnation of improvement in the current costing approach and potentially a loss of momentum for the longer term solution as key players focus on the here and now rather than longer term objectives.

Preferred way forward

When the risks and benefits of the options are compared our conclusion is that the Baseline transition path supported by a programme of short-term gain fed by the emerging future approach delivers the best solution. This approach supports the need for a comprehensive, robust and high quality future approach built in a logical stepwise manner whilst seeking to address short-term needs through continuation of current activities supported by output from the main project once it is available and valuable to the costing system.

Our recommendation is for the Baseline transition path to be adopted as the preferred option and progressed to mobilisation.

Variants to the Baseline to deliver short-term benefit

As mentioned in the introduction to this chapter the timescales for the full patient level basis for cost collections and the employment of the better information for cost management, cost benchmarking, price regulation, sector development and other parallel uses under the Baseline transition path is long. This raises the issue of what can be achieved to improve the costing system in the meantime. The following section identifies the potential variant options to the Baseline to feed benefits into current costing practice in the short-term.

Different variant paths were developed and evaluated. These were considered at a summary level based on the extent to which they were determined able to effectively deliver the Baseline future approach for the long-term while meeting short-term needs in the interim.

The options considered are:

5. Focus on the long-term alone (this is the Baseline option alone, as described above. While it is the most technically sound and viable option to deliver the required needs in the long-term, it will not accelerate short-term progress in any meaningful way and therefore does not address any of the needs required in the short to medium-term);
6. Parallel running with feeds from long-term approach (adding early benefits from feeding in outputs as soon as they are available); and
7. Interim simplified approach (establishing proxy resource and activity groups based on existing PLICS systems prior to confirmation under the proposed methodology).

Options 2 and 3 are considered in more detail in the following pages.

Option 2: Parallel running with feeds from long-term approach

An approach to ensuring that the long-term requirements are met whilst achieving credible progress in the near-term is to manage the two activities separately but to feed-in outputs from the long-term approach as soon as they become available to add early benefit.

Approach

The development of patient-level costing in the short-term will look to increase the detail extracted from PLICS systems in place. The content of cost collections will be advanced to exploit the data currently collected and to provide this data for use in the development and delivery of prices and, based on assessment of its comprehensiveness and accuracy, also start to inform better cost benchmarking and therefore cost management. Specific examples of what activities can be performed in the short-term alongside the implementation of the proposed new costing methodology include:

- Expand the scope of the current PLICS voluntary submission to include outpatient and emergency activity within the acute sector and subsequently mental health and community activity;
- Ensure that the PLICS voluntary submission facilitates a clear reconciliation between RC submissions and the patient-level submissions – this will provide some insight into the implications of the change and improve the degree of confidence in the way forward. Patient-level figures can then start to be used by organisations (e.g. to inform tariffs) prior to the full implementation of the proposed new costing methodology; and
- Revise current costing standards and guidance to reduce the level of interpretation needed in their implement.

The long-term approach remains, but is designed to feed through short-term benefits as they arise. For example, when cost objects are defined, they will form a comprehensive picture of all services provided by the NHS and they can be adopted early to enhance PLICS outputs and familiarise producers and users of cost information with the future approach.

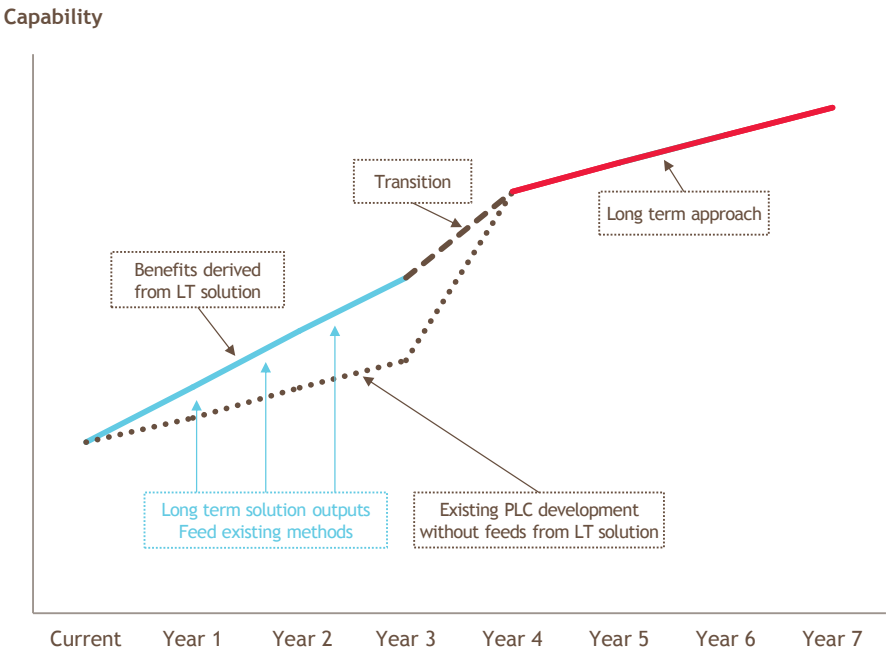


Figure 28: Parallel running with feeds from long-term approach

Critique

The advantage of this approach is to deliver short-term progress without compromising the long-term solution. It supports benefits flowing through from the long-term solution and maintains momentum and buy-in through the realisation of short-term benefits. It also smooth's the size of the step change from business-as-usual to the future approach through early adoption of some of the elements of the future approach.

Likely Output

This approach will bring good short-term progress, and it maximises the likelihood of long-term delivery through benefits being realised from work done on the future approach being utilised to address short-term challenges. This approach is progressed as a viable option.

Option 3 - Interim simplified approach

During the assessment of the options, stakeholders questioned whether a simplified approach to the future approach delivered earlier could bring benefits and pave the way to the longer term.

Approach

This requires the establishment of the Resource and Activity Groups prior to the description and confirmation of the component resources and activities of the proposed costing methodology. It is anticipated that this can be performed due to the existing proliferation of PLICS systems that currently operate using this methodology.

Once these Activity and Resource Groups have been identified, the costing standards for the next financial year will be revised to incorporate these, alongside the existing cost pool group definitions. The voluntary PLICS submission can then be reformatted to include submissions with activity and resource group components instead of the current cost pool group components. It is expected that this could be accomplished in time for the 2015/16 PLICS submission for acute organisations only to be in this interim format.

Once this has been achieved, a selected sample of trusts that have a "mature" and well-established PLICS system in operation will be asked to submit their costs on a voluntary basis. In essence, standards developed around resources and activities can be tested with these trusts during the 2015/16 collection before being embedded in 2016/17.

Alongside this, the Activity and Resource Groups can also be identified for mental health and community services in time for them to be included within the scope of the 2016/17 voluntary PLICS submission.

This will be performed in tandem with the longer-term approach, as it is expected that the longer-term work on defining activities, resources and cost objects will align itself to the groups already described during this interim phase.

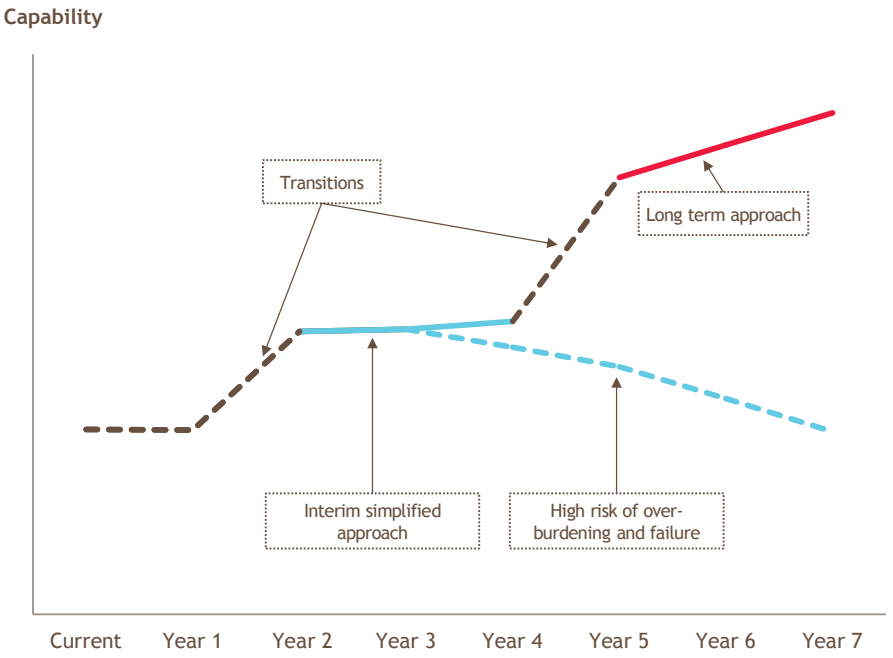


Figure 29: Interim Simplified Approach

Critique

The effort required to develop an interim solution at the same time as progressing the long-term solution represents a significant challenge and this would potentially over-burden providers with new approaches. In addition, it gives rise to the likelihood of confusion and consequent degradation of benefits.

This effort would be significant, with limited short-term benefits. For providers with existing and better developed patient-level costing capability, there is a risk that the simplified approach could be perceived as (or actually) taking them backwards.

There is clearly a risk that solutions adopted through the simplified approach later require revision due to the longer term approach finding better solutions through more detailed analysis and engagement. Finally, the imposition of a medium-term simplified solution would delay the completion of the comprehensive long-term approach as it would be impossible to run the two processes in parallel.

Likely Output

It is likely that this approach will result in over-burdening of the sector with doubts over limited benefits and this could lead to reversion to old practices. It will delay and potentially conflict with the longer term solution, reducing buy-in and momentum. Whilst this option does present the opportunity to act as a test bed for the development of the longer term solution and allows a gradual introduction of some of the key concepts into the system it is felt that the risks associated with the additional complexity outweigh the benefits. This option is not progressed.

Summary of options

In conclusion we assessed that Option 2: Parallel running with feeds from the long-term approach provided the best balance of a long-term comprehensive solution together with the delivery of benefit and significant additional progress in the short-term.

Short-term benefit realisation

The table at Figure 30 overleaf shows how the longer-term transition to the proposed future costing approach will yield specific benefits in the much shorter-term. The table uses acute organisations as an example, where the current status of costing is more advanced and robust than other service types. Therefore the resulting benefits will be in improving consistency in the current costing system (in terms of methodologies, approaches and deliverables). In non-acute services, these benefits will have a more significant impact on the provider organisations in terms of improving cost information and cost management.

The development of short-term benefits will be considered in detail during the mobilisation phase of the project.

Year/Delivery Vehicle	15/16	16/17	17/18
Cost objects	Detailed list of cost objects and minimum data sets distributed. Benefit: consistency, learning, systems development, methodology development and data collection requirements initiated.		
Activities	Detailed list of Activities, Activity Groups and drivers, with minimum data sets distributed. Benefits: increased understanding of key work delivered by organisational staff (will help identify financial and operational efficiency) in providers, early sight of detailed cost components to inform local/national price setting discussions regarding potential currencies and reimbursement mechanisms.		
Resources		Detailed list of Resources, Resource Groups and their drivers, with minimum data sets distributed. Benefits: initiate potential standardisation of resource type to activities – ensuring appropriate staff perform appropriate activities, thus increasing efficiency and patient safety in providers.	
G/L mapping		Detailed mapping of general ledger codes to resources. Benefits: increases consistency of financial planning, business cases and external financial returns, allowing better comparisons to be made between organisations.	
National support framework	Establish and publish PLICS evidence showing VFM. Benefits: engages non-financial staff to better understand the costs incurred in care delivery, how and where they are incurred and what role the staff play in reducing them without negatively impacting on patient care. Encourages earlier adoption of patient level costing on a voluntary basis.	Continued engagement to support ownership at Board level and among clinical and operation staff. Benefits: greater organisation wide cooperation around the development of patient level costing, greater use of costing information to support operational and strategic planning, better decision making and improved cost efficiency releasing benefits to patients.	Support and training programme in place for revised standards and guidance AND minimum data set collection design. Benefits: provision of a structured training and support package to assist providers make the transition to collecting and implementing these new data sets and methodologies, again ensuring that interpretation of documentation is clear and implemented in a consistent manner – thus ensuring costing increases its standardisation and consistency between organisations.
Assurance framework		Implementation of a national assurance framework supporting the introduction of the proposed cost collection methodology. Benefits: a clear and focussed assurance programme from the 'centre' on what costing will look like and how it should be carried out, giving providers a clear direction of what is required from them, thus allowing the beginnings of increased costing standardisation. Development of audit	Implementation of local assurance frameworks supporting the introduction of the proposed cost collection methodology. Benefits: clear interpretation of national requirements into a localised operational plan will ensure that national requirements will be delivered from this point.

Year/Delivery Vehicle	15/16	16/17	17/18
		approaches and techniques to drive quality and consistency improvement.	
PLICS implementation	Production of a minimum system specification for PLICS solutions. Benefits: allows consistency between solutions to be obtained from this point on, for all solutions currently in place. Will also allow identification of solutions currently in use that are not fit for purpose. Potentially accelerates voluntary adoption of PLICS.		Implementation of standardised and 'fit for purpose' PLICS solutions in ALL acute organisations. Benefits: localised costing at an appropriately granular level so as to engage the organisation and provide it with sufficiently detailed cost information for improved cost management.

Figure 30: Short-term benefits

Potential considerations for future developments – NEXT STEPS

Throughout this project, a number of other future opportunities have been discussed that are outside of the scope of this project but should be considered as they will have definite and significant impacts on the future of costing in the NHS. These would be accommodated in the Baseline transition path and developed at the appropriate time subject to priority and consideration through the programme governance structure.

Inclusion of Primary Care within scope of cost collections

The inclusion of primary care in cost collections would deliver a complete picture of all costs of care. This would support end-to-end care pathways and enable comparison of care in different settings. There are advantages to bringing greater rigour to primary care costing in terms of support for funding decisions and system reform.

Early inclusion of primary care brings with it additional complexity, data challenges and stakeholder engagement issues. There is no doubt that any sort of parallel approach in this area would heavily impact on the timescales for other providers and add significantly to the central burden and workload for suppliers of PLICS.

It should be noted that the proposed future costing methodology presented here is expected to be fully suitable for costing primary care.

Inclusion of Independent/Private Providers within the scope of cost collections

The issue described above regarding obtaining costs across all organisations involved with patient care apply for independent and private providers not funded through the NHS (NHS funded care is already included in this project). However added complexity will be likely with regard to the challenge these organisations will likely place to their inclusion within the scope of these national cost collections, based on market competition (for publication of results) and provision of commercially sensitive information.

Future payment approaches

Anticipated future approaches to payment may consider funding revolving around care types - centres of excellence, planned care, proactive/ integrated care and urgent and emergency care.

The joined up nature of these care types across provider types would argue for common cost objects. This in turn suggests a generic component to cost object development to support consistency and compatibility relating to same/similar activities in different settings as a precursor to the development of provider specific cost objects.

The options described consider consistency of cost objects through a 'cross check' but do not focus on this as a key enabler and need of the system. Further consideration needs to be given to whether this should be the case.

CHAPTER 7
Conclusions

CONCLUSION

Recommended option for the Costing Roadmap

BDO recommends that Monitor adopt the proposed new approach to costing. A key element of this approach is the identification of suitable resources to invest in both systems and people both at provider organisations that will be involved in the production of these new costs and centrally, where the outputs of this new approach will be utilised. It is also recommended that the Baseline transition path is the preferred route for delivery of significant and much needed improvement to the system of costing, cost information and cost collection for the NHS funded system.

BDO have reached this conclusion through careful examination of the uses of cost information and the needs for better cost information for:

- Cost management;
- Cost benchmarking;
- Price regulation;
- Sector development; and
- Other parallel uses of cost information.

Whilst users have identified a range of needs there is a consistent message that greater rigour in costing is required. Costing needs to be universal in its approach to meet the needs that exist now and in the future and cultural and behavioural change needs to be harnessed through central control and direction for consistent quality over the long-term.

This Costing Roadmap is a long-term endeavour to fundamentally change the quality, profile and impact of costing for the benefit of patients. It will not be delivered overnight and maintaining momentum and buy-in over the whole timeline of the programme will be challenging. The recommended transition path seeks to augment current practice through delivering benefits as new data, methodologies and support frameworks come on line. This will protect the integrity of the future approach whilst making significant progress immediately.

Next Steps

Following a programme of further engagement with the sector, BDO recommends that Monitor establish a detailed delivery plan and the project move into implementation during the third quarter of 2014/15 subject to relevant approvals.

APPENDIX 1
Stakeholders

Stakeholder Type	Stakeholder Name
Provider - Acute	Alder Hey Children's NHS FT
	Calderdale and Huddersfield NHS FT
	Cambridge University Hospitals NHS FT
	East Kent Hospitals University NHS FT
	Guys & St Thomas' NHS FT
	Imperial College Healthcare NHS Trust
	Kings College Hospital NHS FT
	Leeds Teaching Hospitals NHS Trust
	Maidstone and Tunbridge Wells NHS Trust
	Mid Essex Hospital Services NHS Trust
	North Tees and Hartlepool NHS FT
	North West London Hospitals NHS Trust
	Oxford University Hospitals NHS Trust
	Plymouth Hospitals NHS Trust
	Royal Devon and Exeter NHS FT
	Royal Free London NHS FT
	Royal Wolverhampton NHS Trust
	Salford Royal NHS FT
	Stockport NHS FT
	The Christie NHS FT
	The Walton Centre NHS FT
	University Hospital Birmingham NHS FT
	University Hospital of South Manchester NHS FT
	West Suffolk NHS FT
	Wrightington, Wigan and Leigh NHS FT
	York Teaching Hospital NHS FT

Stakeholder Type	Stakeholder Name
Provider - Ambulance	East Midlands Ambulance Service NHS Trust
	South Central Ambulance Service NHS Trust
Provider - Community	Bridgewater Community Healthcare NHS Trust
	Liverpool Community Health NHS Trust
	Wirral Community NHS Trust
Provider - Mental Health	Camden and Islington NHS FT
	Central and North West London NHS FT
	Cumbria Partnership NHS FT
	Kent and Medway NHS and Social Care Partnership Trust
	North East London NHS FT
	North Staffordshire Combined Healthcare NHS Trust
	South London and Maudsley NHS FT
	Somerset Partnership NHS FT
Provider - Independent	Care UK
	Circle Partnership
	Cygnet Health
	Virgin Care
Commissioner - CCG	Ashford CCG
	Canterbury & Coastal CCG
	NHS Vale of York CCG
	Thanet CCG
Commissioner - CSU	Central Southern CSU

APPENDIX 2
Needs Delivery

HOW THE PROPOSED COST APPROACH MEETS THE NEEDS OF THE COSTING SYSTEM

Need Group	Specific Need	Needs Reference	How met by proposed approach
Context and incentives	Patient-level costing systems	1	The recommended approach builds on an extensive body of previous work in developing and implementing PLICS. The capabilities and qualities of PLICS vary greatly across the NHS, particularly in the case of acute providers who make up the large majority of implementations. A number have upgraded already from systems that purely apportioned costs for tariff data submission purposes to systems that are ABC-based to gain the benefits identified in this document. We anticipate that a number will do this and also that the software suppliers will develop their systems to provide the needed functionality so that providers can fully realise the potential benefits of PLICS.
	Direction from the centre	2	Being based on a much more standardised approach to both costing and cost collection significantly enhances the ability of the "centre" (primarily Monitor) to provide direction and support. By mandating PLICS and therefore giving costing a significant "boost" in terms of priority, the centre will provide a very clear and much needed direction of travel from the outset. The greater the ability of the centre to set this direction, the greater the ability of all organisations to be able to follow – increased standardisation, increased accuracy, etc.
	Prescribing and mandating	3	There is a wider debate about the extent to which costing and the approach to cost collection is mandated. However, it is absolutely clear this if the benefits that are ascribed to the adoption of a universal approach to cost collection are to be achieved, then it will be essential that the cost collection will NEED to describe costs by Resource Groups and Activity Groups. The way to address this is to mandate the production in such a format; by taking this more detailed and flexible approach, the mandating of these should be far more straightforward, based on the assurance that it will be supported by a standard set of minimum costing data. Trusts that are more advanced in their approach to costing are concerned that mandation might cause them to regress to a less robust approach to costing. This concern will be addressed by ensuring that the current MAQS is developed for each material Resource Group/Activity Group combination and the MAQ scores set so that those with a more advanced approach to costing in a specific areas of their trust, such as theatres, will achieve a higher score. MAQS should in future set rigorous targets for the "gold" standard.
	Clear link between the costing system and tariff	4	Monitor is in the process of publishing a document that explicitly identifies the link between costing and national tariffs. The proposed approach will continue to allow this link to be identified. However, the proposed approach will better allow the link to be made once tariffs start to move away from the current format.
	Continuous improvement	5	The key to continuous improvement in costing is to have sufficient resource available to not only produce the costing information, but to engage sufficiently with the organisation so that improvements can be identified and implemented. The standardised approach being proposed will allow the time spent by costing teams on the production of costing data to be reduced, therefore increasing the time available for engagement and improvement. In addition, the establishment of standard minimum data sets for costing, plus the better identification of best practice and establishment of a national support framework for costing, should also see a significant increase in the ability for organisations to continue to improve their costing outputs year on year.
	Evidence base of the benefits of an improved costing system	6	There is a need to draw together and publish evidence from PLICS providers of the benefits they have realised to date from using PLICS data. This will provide a firm foundation for Monitor to mandate PLICS and move to using PLICS data for tariff-setting. It will also encourage providers to implement PLICS as proposed ahead of the mandated date.

Need Group	Specific Need	Needs Reference	How met by proposed approach
Scope and content	Completeness	7	Integral to the proposed approach to national cost collections is the need to include all costs, removing the need for the exclusions normally associated with RCs. Supplementary non-financial data should be included to facilitate further analysis and understanding of cost behaviour. This has a number of advantages: • Misinterpretation of what has to be excluded is eliminated • The cost collection is simplified and costs are reduced • There is one version of the truth which supports different cost needs. Patient-level costs, Education and Training costs and Research and Development costs are all traced to their respective currencies from the same cost base It becomes easier to reconcile costs back to the general ledger
	Relevance	8	The use of the patient as the focus of the cost unit in the proposed new format of cost collection will greatly increase the relevance of costing and cost information for non-financial users. The use of HRGs as the cost object and the approach to calculating reference costs acted as a barrier to clinical and operational engagement (stakeholders identified many instances where engagement was hindered due to the lack of understanding how a patient treatment was categorised), which the new format will address.
	Timeliness	9	By creating a single source of cost data for each trust for all national cost submissions and basing the submission on a system output rather than a manual document, the proposed approach simplifies cost collection dramatically, reducing workload and saving time and effort. However, rather than shortening the delivery timescale, greater benefit will be gained by spending more time analysing, validating and improving the quality of the submission; something for which most providers have insufficient time at present.
	Productive efficiency	10	When costs are understood in terms of both Resource and Activity Groups and their constituents, as is proposed, whatever the care setting, it becomes easier to support productive efficiency initiatives: • Cost management at trust level; • Cost benchmarking; and • Tariff-setting at both national and local levels. Also, as previously mentioned, the use of a patient level cost object will also increase the relevance of costing to operational and clinical staff across all organisations, which in turn establishes a positive feedback loop = increased usage = increased scrutiny = increased identification of errors = increased accuracy of outputs = increased usage, ad infinitum.
	Outcomes and Quality	11	While work continues to produce national standards for desired patient outcomes, ensuring that financial and outcome data are comparable and compatible is imperative. Outcome measures, whatever they may be, will be measured at a patient-level – therefore the identification of credible and standardised patient-level cost information will allow national views on "value" (the outcome achieved for the £ spent) to start to be identified.
	Patient-level	12	The use of a patient-level cost unit increases the relevance of costing to operational and clinical staff across all organisations, which in turn establishes a positive feedback loop = increased usage = increased scrutiny = increased identification of errors = increased accuracy of outputs = increased usage, ad infinitum.
	Cost of Care across different settings	13	Having a consistent cost object (based on the same core – the patient) across ALL care settings will allow the "true" cost of a patient's treatment to be identified. The increased cost granularity developed on a consistent basis across different care settings also has the potential to allow the patient journey as a whole to be understood and costed. While this is dependent on all patient records having patient-unique identifiers and care pathway identifiers, the flexibility to determine more appropriate integrated

Need Group	Specific Need	Needs Reference	How met by proposed approach
			care/treatment plans and subsequent associated reimbursement mechanisms would greatly increase the identification and uptake of more unique and innovative approaches to patients' treatment.
	Separation of costs from currencies	14	The recommended approach focuses on costing with the aim of providing detailed, accurate cost information in a format that is NOT directly linked to any particular cost currency. Because the costing methodology and cost collection submission is separate from any form of reimbursement currency, it better supports the current and future needs for currency development and tariff-setting due to the malleability of the underlying data. If a cost collection exercise is undertaken whereby costs are submitted in a specific format as it is currently, especially one where there is no associated detail or view of its constituent parts, then the format of any future tariffs is severely limited to the current format/currency.
Costing system rigour	Input Accuracy	15	The accuracy of patient-level costs is heavily dependent on the accuracy of the operational data on which it is based. The proposed approach to costing and the cost collection format creates much greater transparency of the resources in a provider and the activities to which they relate and allows actual costs to be more readily understood. The more transparent and realistic the patient-level costing approach, the easier it is for clinicians and managers to validate the results. Provided that errors and refinements are fed back to those who originate the data and incorporate it into the cost model, data quality will improve, thereby encouraging staff to identify further improvements. The implementation of minimum data sets for costing will help increase the accuracy of the source data used in costing as operational teams are made aware of the relative importance of the source data and made responsible for its production, format and delivery to the costing teams.
	Clear and comprehensive Costing Standards	16	The introduction of costing principles, as well as the revisions to current clinical costing standards around the introduction of activity, resource and their respective Groups, will see the introduction of a single, standard set of costing standards that will offer significantly reduced levels of ambiguity and the need for interpretation. The prime component of this reduced ambiguity is the use of a standard set of national cost dictionaries, which describe the resources, activities, measures and drivers to be used in allocating costs from the general ledger to the patient event. This standard data set will mean that standards can be significantly more prescriptive than they currently are, thus reducing ambiguity and the need for interpretation by providers when identifying the costing information, as well as reducing the variation in the results caused by differing implementations of the standards.
	Adherence to Costing Standards	17	The greater the prescriptive nature of costing standards and collection guidance, the greater the adherence (due to the lack of interpretation needed) and the greater the benefit: To Providers: • Reduced time spent in production of cost information; • Increased time available for analysis of cost collection information, increasing the overall accuracy of final outputs; • Greater confidence in benchmarking based on the cost collection outputs; To users: • Greater assurance of reduced variation in results due to standards/guidance application; Increased accuracy of outputs due to more time available to review and analyse as a result of reduced production times.
	Stability	18	Currently, a number of changes are made to the RCs grouper each year - as HRGs evolve and become more granular and therefore increase in number, it becomes difficult to measure costs consistently over time. The costs of a patient's treatment may remain the same year on year but the activity unit to which those costs will be allocated may change, meaning a year on year comparison of those costs is less valid. By making the currency of the cost collection the patient event, this lack of stability is addressed. The patient event will not only have the costs but also the full set of diagnosis and treatment codes identified, meaning that even if the grouper should allocate

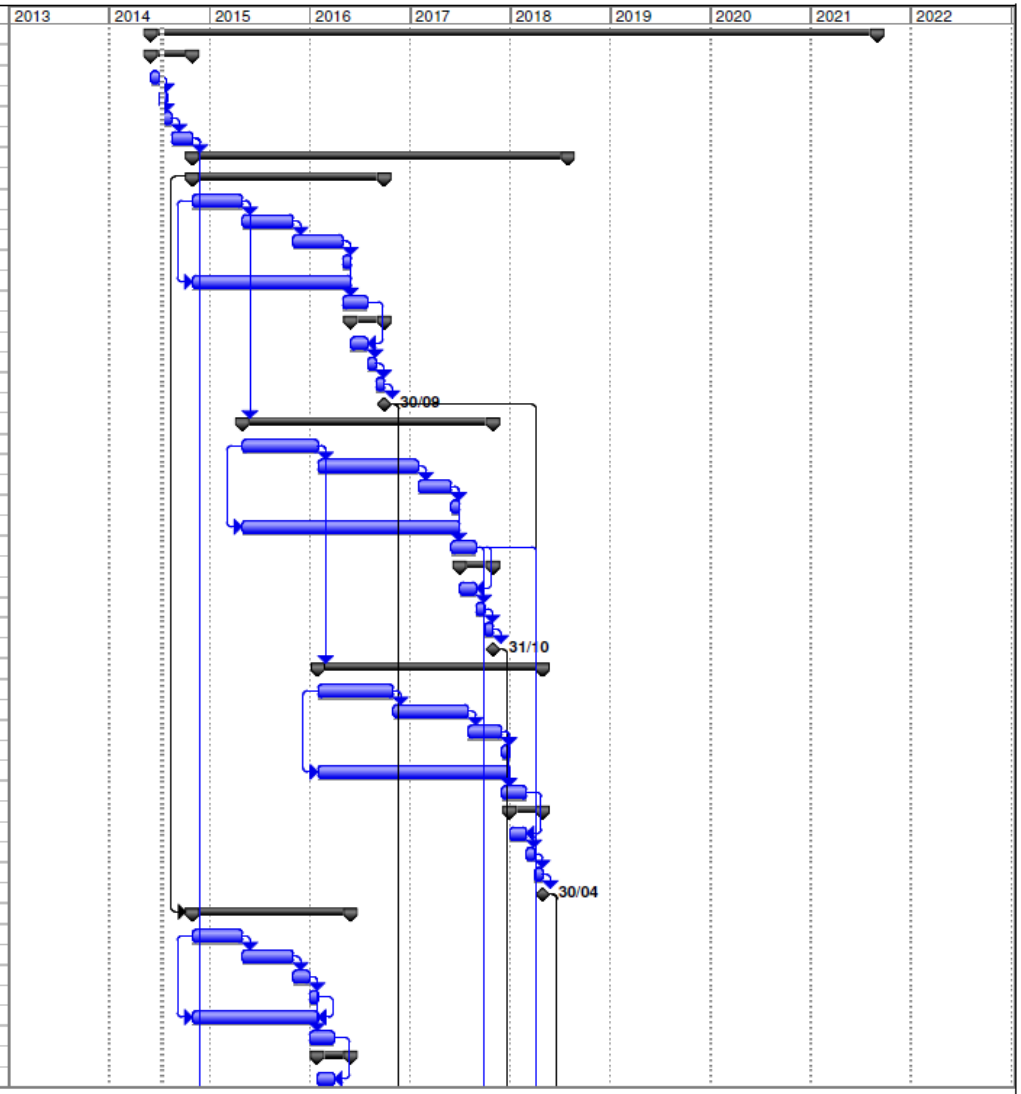
Need Group	Specific Need	Needs Reference	How met by proposed approach
			those codes to a different HRG year on year, the costs can still be compared at the diagnosis/treatment code level, thus creating a more stable costing currency for trend analysis and comparison.
	Single source of cost information ("One version of the Truth")	19	Currently, the many requirements of the outputs of costing lead to a number of different "versions of the truth". The Reference Cost submission requires specific costs to be excluded from its "full" cost calculations, while the recent PLICS submission, requested that these exclusions be reinstated. Finally, the use of ad hoc costings for business cases and service developments, means that often marginal impacts are identified separately. The end result is that all costing outputs tend to be produced using different foundations. The use of the proposed costing approach will mean that the increased granularity and transparency of the costs and their components will mean that a "single version of the truth" CAN be used as the foundation for all costing requirements, due to the ease by which cost components can be identified, analysed and excluded/ignored if appropriate.
	Audit and Assurance	20	The proposed approach to patient-level costing is designed to give transparency of the resources and activities that are traced to patients. This alone is expected to facilitate a more objective auditing of costing at any particular provider, as well as providers' compliance with costing guidance. The ability to compare resource utilisation of similar activities in different trusts on a consistent basis will make audits and the assurance of costing quality easier to undertake and therefore more rigorous.
	Advancement of Best Practice	21	In the absence of a shared framework by which to compare organisations, best practice is difficult to identify. A common framework of costs by resource and activity groups, as is proposed, will facilitate the comparisons necessary for the identification, management, and dissemination and monitoring of best practice and could provide the basis for a programme of costing quality improvements. Using such a framework, it would be possible to make comparisons at the activity group level between different trusts. Such comparisons could allow the identification of beacons of best clinical practice, which would be significantly more powerful than the current Reference Cost Index or the current approach to MAQS.
Organisational investment	Board Leadership and Responsibility	22	Patient-level costing demands that all patient-related data be integrated at the patient event level in order to understand the costs and profitability of the patient care provided – it therefore presents the Board and senior management with a unique opportunity to take a holistic view of their organisation from board to ward to patient home. The ability to relate the cost of patient care back to resource and activity offers those responsible for the data the opportunity to understand its relative accuracy and the operational and financial consequences of poor data quality and to take responsibility for its improvement.
	Clinical and Operational Engagement	23	The identification of patient events as cost objects, which in turn are supported by more granular details of their care, allows those providing the care to more readily relate to the costs of the care provided. Patient-level costing effectively allows the creation of a "patient bill", which details the activity and related cost of all aspects of patient care, allowing clinicians to better understand the exact nature of every aspect of the care delivered. The more readily clinicians can recognise the cost of their work and the patients they care for, the more readily they will accept it, engage with it and respond to it.
	Appropriate investment in systems	24	It is expected that the proposed approach to costing and the cost collection methodology will lead to a reduced cost for providers in implementing and using PLICS. The proposed new cost collection format, being a system output, rather than a manual input as per the current RCs submission, should also help reduce the costs of system support.
	Appropriate investment in people	25	The increased standardisation of the costing approach and all that this entails (introduction of minimum costing data sets, increased visibility of costing and its outputs, increased clinical and managerial input and usage, etc.), will help to address the current recruitment and retention issues seen among costing staff – an increase in the perceived "worth" of their roles will help improve staff motivation. The expected increase in the usage of costing information and the associated realisation of benefits should justify increased investment in costing, again ensuring that costing teams remain suitably resourced and skilled not only to produce, review and

Need Group	Specific Need	Needs Reference	How met by proposed approach
			improve the quality of the costing outputs, but also to help the organisation to use the information to derive additional benefits. The emphasis of costing teams will move from processing and refreshing costs to interpreting results and supporting users to maximise benefits, with a consequent change in skill sets.
Information for Decision Making	Cost Management	26	Identifying costs at a patient-level and cost components by resource and activity allows a greater understanding of how and where costs are incurred during the delivery of patient care and how much they vary by patient. The proposed approach will allow increased visibility of cost variability by patient and over time, and identify key profitability issues, in turn allowing cost improvement plans, service redesigns and investment decisions to be better informed
	Cost Benchmarking	27	The delivery of "one version of the truth", i.e. consistent/transparent across all care providers, has the potential to deliver the consistency needed for more robust benchmarking across all organisations. The proposed approach includes extra granularity of cost data, identification of best practice, peer group comparisons, internal performance monitoring of individuals/services, all of which will help inform service and tariff redesigns and local price modifications
	Price Regulation	28	The proposed approach improves the level of visibility of the Resource and Activity components, leading to: • Price development: – new tariffs can be set with greater precision and the bundling, unbundling and re-bundling of tariffs becomes easier as the causes of costs and their variability will be apparent – separation of costing and currencies will ensure a less volatile environment where changes in costs year-on-year can more easily be understood as they will not be driven by currency changes but by costing issues alone • Price Delivery: – better understanding of local variations in cost will allow better targeted local modifications of tariffs – costs understood at the patient level may allow for better targeting of tariffs for specific patient cohorts and pathways • Price enforcement: – Tariffs will be based on reliable cost information and cost calculation will be consistent – The influence of changing costing practices on tariff should be removed, or at least minimised
	Sector Development	29	The proposed approach will support: • Identifying the level of variation in individual patient costs and treatments for clinical areas/treatment groups that are looking to develop in the future; • Increasing the ease with which the costs of a patient's treatment can be traced as they move from one care setting to another by the use of a standard, patient-level cost object; • Aligning the costs of a patient's treatment with the outcome achieved in order to understand the "value" of a patient's care (outcome achieved per £ spent in care); and Increasing the understanding of the link between the resources of an organisation and the work which they undertake will increase the understanding of both capacity and demand. This, in turn, will lead to an increase in information with which to identify and improve the productivity of an organisation's resources, such as workforce
	Parallel Uses	30	The proposed approach treats the costing of all types of organisational activity in exactly the same way: a standard cost object, broken down into resources and activities (grouped into relevant resource and activity groups) which can be standardised across all organisations. This will mean that as these parallel uses start to develop, the costing methodology and national cost collections

Need Group	Specific Need	Needs Reference	How met by proposed approach
			can be readily adapted to include the costs of all activities, patient and non-patient. There will be no need to resort to excluding costs for specific uses, which results in unwanted cost variation (due to different interpretation of guidance) and increases the burden of cost production and collection

APPENDIX 3
Detailed Gantt Chart for Baseline Transition Option

ID	Task Name
1	**Costing Roadmap**
2	**Project approvals & mobilisation**
3	Roadmap Review and Approval Process
4	CPAG Involvement
5	Direction of Travel Document
6	Project Mobilisation
7	**Development of Clinical and Non-Clinical Costing Standards & Guidance**
8	**Acute**
9	Define cost objects and cost object MDS
10	Define activity groups, activities, activity MDS, and drivers to cost objects
11	Define resource groups, resources, resource MDS, and drivers to activities
12	Define G/L cost system requirements, and resource maps
13	Write guidance, standards, MAQS and dictionary chapter
14	Engagement with providers and refinement of dcumentation
15	**Impact assessment**
16	Pre consultation
17	Consultation
18	Post consultation
19	Mandate new standards and guidance
20	**Mental Health**
21	Define cost objects and cost object MDS
22	Define activity groups, activities, activity MDS, and drivers to cost objects
23	Define resource groups, resources, resource MDS, and drivers to activities
24	Define G/L cost system requirements, and resource maps
25	Write guidance, standards, MAQS and dictionary chapter
26	Engagement with providers and refinement of dcumentation
27	**Impact assessment**
28	Pre consultation
29	Consultation
30	Post consultation
31	Mandate new standards and guidance
32	**Community Services**
33	Define cost objects and cost object MDS
34	Define activity groups, activities, activity MDS, and drivers to cost objects
35	Define resource groups, resources, resource MDS, and drivers to activities
36	Define G/L cost system requirements, and resource maps
37	Write guidance, standards, MAQS and dictionary chapter
38	Engagement with providers and refinement of dcumentation
39	**Impact assessment**
40	Pre consultation
41	Consultation
42	Post consultation
43	Mandate new standards and guidance
44	**Ambulance**
45	Define cost objects and cost object MDS
46	Define activity groups, activities, activity MDS, and drivers to cost objects
47	Define resource groups, resources, resource MDS, and drivers to activities
48	Define G/L cost system requirements, and resource maps
49	Write guidance, standards, MAQS and dictionary chapter
50	Engagement with providers and refinement of dcumentation
51	**Impact assessment**
52	Pre consultation



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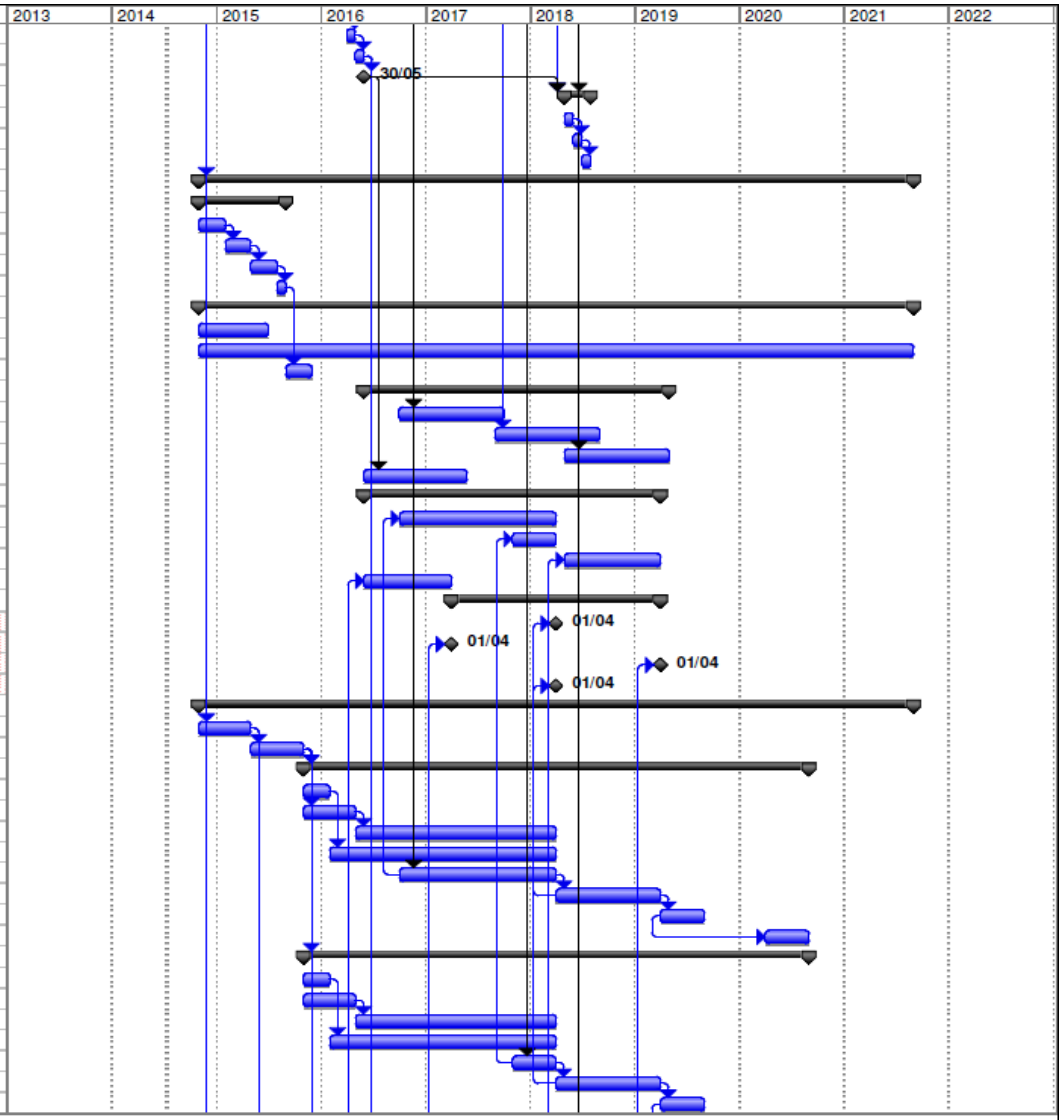
ID	Task Name
53	Consultation
54	Post consultation
55	Mandate new standards and guidance
56	**Compile standards**
57	Guidance
58	Standards
59	Dictionary definitions
60	**Establishment of a national support framework**
61	**Establish Evidence for Patient Level Costing**
62	Evidence for PLICS VFM
63	Publish PLICS VFM evidence
64	Engagement – 'sell' PLICS to providers
65	Approvals (Issue prospective date for mandating PLICS)
66	**Support activities**
67	Establish programme to identify and share best practice
68	Development of costing capability and capacity (Ongoing)
69	Develop national plan for engagement: cultural and behavioural change
70	**Standards and Guidance Training**
71	Acute
72	Mental Health
73	Community
74	Ambulance
75	**Central Support for Data Collection Design**
76	Acute
77	Mental Health
78	Community
79	Ambulance
80	**Confirm date of Mandated use of PLICS by provider type**
81	Mandation date Acute
82	Mandation date Ambulance
83	Mandation date Community
84	Mandation date Mental Health
85	**Implementation of PLICS - ALL SERVICE TYPES**
86	Prepare minimum service specification for PLICS
87	Establishment of PLICS procurement framework
88	**Acutes**
89	Business Cases
90	Recruitment
91	PLICS Implementation New
92	PLICS Migration (Existing)
93	Design of data collection
94	Collection of new data (First Full Year)
95	PLICS Submission 18/19
96	PLICS Submission 19/20
97	**Mental Health**
98	Business Cases
99	Recruitment
100	PLICS Implementation New
101	PLICS Migration (Existing)
102	Design of data collection
103	Collection of new data (First Full Year)
104	PLICS Submission 18/19



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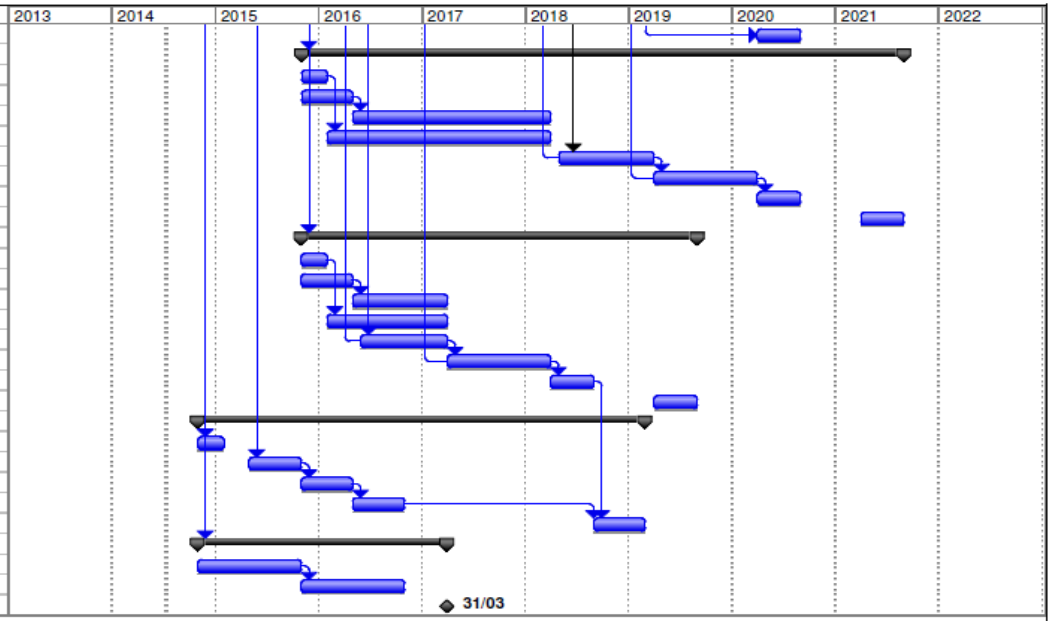
ID	Task Name
105	PLICS Submission 19/20
106	**Community Services**
107	Business Cases
108	Recruitment
109	PLICS Implementation New
110	PLICS Migration (Existing)
111	Design of data collection
112	Collection of new data (First Full Year)
113	PLICS Submission 19/20
114	PLICS Submission 20/21
115	**Ambulance**
116	Business Cases
117	Recruitment
118	PLICS Implementation New
119	PLICS Migration (Existing)
120	Design of data collection
121	Collection of new data (First Full Year)
122	PLICS Submission 17/18
123	PLICS Submission 18/19
124	**Central Data Collection and analysis**
125	Agree responsibility for data management
126	Design specification for database and reporting tools
127	Procure system
128	Implement system
129	Collect and interpret 17/18 PLICS submission
130	**Audit and assurance**
131	Agree and implement national framework
132	Agree and implement local framework
133	Framework in place for 17/18 PLICS



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