

April 2016

PLICS toolkit for acute services – the basics



Contents

| | |
|--|-----------|
| Foreword | 3 |
| Section A: Introduction | 4 |
| Section B: The roll out of PLICS reports and dashboards | 8 |
| Section C: Information requirements for different audiences | 9 |
| • Boards | 9 |
| • Finance teams | 11 |
| • Clinical and operational managers | 14 |
| • Costing and information teams | 18 |
| Section D: Top tips | 19 |
| Section E: Future direction | 21 |
| Section F: Acknowledgements | 24 |
| | |
| Appendix A: Summary pack of reports for boards | 25 |
| Appendix B: Summary pack of reports for finance teams | 31 |
| Appendix C: Summary pack of reports for clinicians and operational managers | 44 |

Foreword

Costing has a major role to play in supporting the delivery of sustainable services across the NHS. It should underpin decision-making, ensuring local decisions are informed by a clear understanding of current costs and the likely costs of any new ways of working.

Good cost data can help health economies to understand variations in costs and treatment between different patients, helping to optimise service delivery. It also provides the bedrock for new payment systems.

The majority of acute trusts have implemented patient-level costing. But how many are maximising the value of patient-level information and costing system (PLICS) data within their organisation?

The Healthcare Costing for Value Institute has developed this PLICS toolkit to support members turn the data generated by PLICS into powerful intelligence.

A significant benefit of PLICS is that the data can be sliced and diced in many different ways. This toolkit provides examples of how the data can be presented in different ways to different audiences – for example, the executive team, clinicians and the wider finance team. It also shares the learning from those trusts who are more advanced on their PLICS journey.

We hope that you will find our *PLICS toolkit for acute services – the basics* helps you to maximise the value of PLICS data. This is only the start in our series of PLICS toolkits. In 2016/17 we plan to publish a second toolkit for acute services, focusing on more advanced analysis. And we have plans to publish a separate toolkit for mental health services. If you have ideas that you would like to share about what should be in future PLICS toolkits, please email Becky Vine at becky.vine@hfma.org.uk.



Catherine Mitchell
HFMA head of costing and value

Section A

Introduction

Why is PLICS important?

In the current financial climate of the NHS, patient-level cost and information (PLICS) must surely play a vital role in improving the efficiency and effectiveness of how patient care is delivered. PLICS is not solely about cost information. It brings together information about the resources consumed by individual patients on a daily basis and combines this with the cost of this resource. This type of blended financial information is new for many organisations and is incredibly powerful.

PLICS allows organisations to identify variation against standardised bundles or pathways of care, between clinical teams, or between different groups of patients. When PLICS is analysed alongside other performance and quality information, it becomes even more powerful in understanding the delivery and performance of services.

PLICS also facilitates much more meaningful and constructive discussions between finance professionals and clinical/operational teams. This benefit should not be underestimated. PLICS allows discussions to centre on individual patients. It also provides financial information that better reflects how services operate, which makes it easier for clinical and managerial staff to interact with it, and to better assess the impact that making changes will have. This is vital in obtaining trust and confidence in the data and in allowing it to support services to provide the best possible care to each patient.

It is widely acknowledged that PLICS data will take time to improve and stabilise. It relies on many data feeds, and knowledge of many services. However, unless organisations actively engage with PLICS the roll-out phase will become far lengthier. Given the increasing pressure on organisations to improve financial positions, PLICS data surely cannot be ignored. Even those organisations that are currently implementing or rolling out PLICS, can still use the data to inform discussions on service developments or improvements.

One of the most powerful reports in this toolkit is the 'patient bill' (see Figure 1). This reports highlights perfectly the depth and type of information that is available within PLICS. As well as including patient-specific information about diagnoses and demographics, the bill details the types of resources consumed by the patient and the associated costs.

PLICS can be also used to produce the national reference cost return. NHS Improvement has indicated its intent to mandate patient-level costing over the next few years for all sectors. PLICS therefore is not only a powerful management information tool, but also an important tool in producing national cost returns both now and in the future.

Figure 1: Sample patient bill

| Item | Label | Date | Quantity | Unit | Cost (£) | Income (£) | Net cost |
|---|---|----------|----------|------|-------------------|--------------------|-------------|
| MRN | Age: 60 Sex: F POD: EL Speciality: ORTHOPAEDICS | | | | | | |
| Prim Diag: S831 | DISLOCATION OF KNEE | | | | | | |
| Prim Proc: W401 | PRIMARY TOTAL PROSTHETIC REPLACEMENT OF KNEE JOINT USING CEMENT | | | | | | |
| HRG: HB21C - MAJOR KNEE PROCEDURES FOR NON-TRAUMA CATEGORY 2 WITHOUT CC | | | | | | | |
| | | | | | 6 | | |
| | | | | | | 0 | |
| | | | | | Total episode LOS | Days past FCE trim | |
| Diagnoses | F171: Mental and behavioural disorders due to use of tobacco: Harmful use | 12/01/16 | | | | | |
| Diagnoses | I10X: Essential (primary) hypertension | 12/01/16 | | | | | |
| Diagnoses | I252: Old myocardial infarction | 12/01/16 | | | | | |
| Diagnoses | M139: Arthritis, unspecified | 12/01/16 | | | | | |
| Diagnoses | Z922: Personal history of long-term (current) use of other medicaments | 12/01/16 | | | | | |
| Diagnoses | Z958: Presence of other cardiac and vascular implants and grafts | 12/01/16 | | | | | |
| Procedures | W401: Primary total prosthetic replacement of knee joint using cement | 12/01/16 | | | | | |
| Medical staff (ward rounds & junior doctors) | | 12/01/16 | | | 38 | | |
| Ward | Admissions lounge | 12/01/16 | 0.38 | Days | 199 | | |
| Theatres - anaesthetics | Theatre 1 | 12/01/16 | 120.00 | Mins | 672 | 0 | |
| Theatres - downtime | Theatre 1 | 12/01/16 | 32.33 | Mins | 232 | 0 | |
| Theatres - general | Theatre 1 | 12/01/16 | 63.00 | Mins | 471 | 0 | |
| Theatres - surgeon | Theatre 1 | 12/01/16 | 62.00 | Mins | 500 | 0 | |
| Implants | | 12/01/16 | | | 1,618 | 0 | |
| Radiology | X-ray right knee | 12/01/16 | 1.00 | Scan | 35 | 0 | |
| Ward | Ward 2 | 12/01/16 | 0.33 | Days | 69 | 0 | |
| Medical staff (ward rounds & junior doctors) | | 13/01/16 | | | 38 | 0 | |
| Pathology | P202: Urea and electrolytes | 13/01/16 | 1.00 | Test | 4 | 0 | |
| Pathology | P103: Full blood count | 13/01/16 | 1.00 | Test | 6 | 0 | |
| Ward | Ward 2 | 13/01/16 | 1.00 | Days | 206 | 0 | |
| Medical staff (ward rounds & junior doctors) | | 14/01/16 | | | 38 | 0 | |
| Ward | Ward 2 | 14/01/16 | 1.00 | Days | 206 | 0 | |
| Medical staff (ward rounds & junior doctors) | | 15/01/16 | | | 38 | 0 | |
| Ward | Ward 2 | 15/01/16 | 1.00 | Days | 206 | 0 | |
| Pharmacy | D1000: Candesartan 2mg tablets | 16/01/16 | | | 1 | 0 | |
| Ward | Ward 2 | 16/01/16 | 0.78 | Days | 162 | 0 | |
| Pharmacy | D0014: Dihydrocodeine 30mg tablets | 17/01/16 | | | 1 | 0 | |
| Pharmacy | D1235: Docusate Sodium 100mg capsules | 17/01/16 | | | 3 | 0 | |
| Pharmacy | D0078: Tinzaparin sharps kit | 17/01/16 | | | 1 | 0 | |
| Episode-related costs (medical records, clinical coding) | | 17/01/16 | | | 56 | 0 | |
| Specialty-related costs (director management and admin) | | 17/01/16 | | | 298 | 0 | |
| Clinical Negligence Scheme | | 17/01/16 | | | 16 | 0 | |
| Contract income base tariff | HB21C: Major knee procedures for non-trauma category 2 without CC | 17/01/16 | | | 0 | 5,846 | |
| Total | | | | | 5,129 | 5,846 | -717 |

Why has this PLICS toolkit been developed?

This toolkit provides some basic outputs and reports that have helped trusts realise significant benefits. It also incorporates many lessons learned from those organisations that are more advanced in their PLICS journey, and which have spent considerable time working with the users of the data (clinicians, operational managers and finance teams in particular) to improve the content, functionality, usefulness and presentation of reports.

By incorporating these reports within their own organisation, it is hoped that organisations can better engage with the users of PLICS and more quickly digest, analyse and use the wealth of information it provides.

If your organisation has already implemented a PLIC system, this toolkit will provide a useful checklist of reports and dashboards. The toolkit also sets out a number of areas to consider when rolling out PLICS, to maximise the value and use of the information.

Scope of this toolkit

This PLICS toolkit is aimed specifically at acute organisations. Future toolkits are planned to support mental health and community organisations and services.

This toolkit sets out the key reports and dashboards that can be generated from PLICS information. It also illustrates the wealth of information available in PLICS and provides ideas on how best to present this within your organisation.

The data provided in the reports is for illustrative purposes only. The reports in this toolkit have been re-created by the HFMA in order to ensure the toolkit is generic and applicable to all NHS acute trusts and PLIC system suppliers.

Who should use this toolkit?

As well as costing teams, this toolkit is written with three other audiences in mind:

- boards
- finance teams
- clinicians and operational managers

It provides ideas on how best to maximise the value of PLICS information for each of these groups. For each group there is an appendix providing a pack of reports and dashboards. These can be built into your PLIC system by your organisation or PLICS supplier or they can be replicated in excel or other reporting tools.

How will this toolkit develop in the future?

The intention of the Healthcare Costing for Value Institute is for this online toolkit to be updated regularly, as new reports and dashboards are developed and used across the NHS.

In order to truly drive value, this cost and resource information needs to be triangulated with quality and outcome measures. This will allow leaders of services to better assess and understand the overall performance of a particular treatment, pathway of care or service. It is often the case that the highest quality care is the cheapest because there is less waste, and where this can be identified there is the potential for significant improvements to both patient care and financial performance.

Section E of this toolkit provides details of reports that some organisations have started to develop. These reports highlight the depth of information available within PLICS and how integral it can become to driving value across organisations in these challenging financial times. This section will be developed further in future updates.

Acknowledgements

This toolkit has been produced after discussions with a number of organisations, some of whom are at the start of their PLICS journey, and others more advanced.

The Healthcare Costing for Value Institute would like to thank all of the organisations who have been involved in this project (see Section F for a full list of contributions).

Section B

The roll-out of PLICS reports and dashboards

Who are the key users?

At the beginning of a PLICS implementation, each organisation will need to identify who the main users of PLICS information will be. This will shape the format and style of the PLICS reports. In many organisations different reports or views are created for different groups of users.

Many costing systems have interactive, web-based front ends. These allow reports to be flexible and allow users to drill down into reports. These types of reporting tools have completely changed the nature of discussions that finance professionals can have with clinical and operational teams because the data can be interrogated immediately and specific episodes of care discussed, not just averages. Each organisation will need to understand how many users they wish to access these reports as part of the PLICS package, and who these users will be.

If your costing system has a series of reports but no drill-down available, careful consideration will need to be given as to the reports required and the additional information users will want to see in order to investigate and understand the costing outputs.

Who will have access to PLICS information/reports?

Ownership of the PLICS reports usually starts with the costing team. The data will then be validated with finance teams as part of the review process. In order for finance teams to become familiar with the data, training will be required. This will ensure that finance teams understand how the costs have been built up, how to interrogate them and how to analyse the reports or dashboards.

In some organisations the reporting tool is not routinely used outside of the finance function. However, in other organisations clinical and operational managers are provided with training and are able to access the reporting tool. Where this has occurred, the finance lead for the service or directorate is usually the first point of contact for any queries. This approach will allow the wealth and depth of information produced by PLICS to be explored and utilised more quickly.

The training of users may take place in a variety of ways. Some organisations have operated a series of workshops at differing times of the day in an IT training room. Other organisations have developed a quiz for each service, so that users navigate the system whilst answering the questions. The type of training will depend on the time and resource available. In addition to generic training, many organisations have undertaken meetings with individual services to discuss their data as part of the training and roll-out process, and this has achieved excellent results and buy-in.

Section C

Information requirements for different audiences

This section sets out how PLICS can be used by different stakeholders. It provides ideas on how to use PLICS reports and comments on some of the things to be considered when using the information.

Information requirements for boards

Appendix A provides a summary pack of PLICS reports for boards.

EBITDA (earnings before interest, tax, depreciation and amortisation) and summary financial reports

In simple terms, PLICS allocates all of a trust's costs and income to the individual patients that they provide care for. The information can be viewed and aggregated at various levels, from patient bills that display the resources consumed, all the way up to specialty 'service lines' to understand the contributions they make to the overall financial position.

PLICS data can therefore be used to generate a series of reports that will be useful for a board or a sub-committee of the board to review on a regular basis. PLICS can also be used to generate service line reports as set out by Monitor. These reports include an 'EBITDA' report and a 'portfolio matrix' report, which show a more strategic overview of a trust's services.

Figure 2 overleaf shows an example of an EBITDA report at directorate level.

How the financial performance of directorates or services changes over time will be vital to engagement within the organisation. A directorate or service may be shown as loss-making during the roll-out of PLICS, but there may be many different reasons for this. It is therefore important that services look to understand the reasons and drivers of their financial position as well as strive to reduce the size.

Figure 2: Sample EBITDA report at directorate level

| Directorate | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|----------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Medical division | 50,110 | 26,908,082 | 30,595,825 | 15,498,863 | 6,411,177 | 4,998,042 | 5,980,874 | -982,832 | 2,704,911 | -3,687,743 | |
| Surgical division | 43,304 | 20,321,756 | 19,729,859 | 12,376,452 | 2,661,468 | 5,283,836 | 3,080,855 | 2,202,981 | 1,611,084 | 591,897 | |
| Women's & children's | 48,247 | 19,708,454 | 19,863,796 | 14,375,449 | 1,584,458 | 3,748,547 | 3,013,707 | 734,840 | 890,182 | -155,342 | |
| Clinical support | 6,257 | 1,277,818 | 1,512,731 | 115,973 | 1,125,572 | 36,273 | 211,143 | -174,870 | 60,043 | -234,913 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 147,918 | 68,216,110 | 71,702,211 | 42,366,737 | 11,782,675 | 14,066,698 | 12,286,579 | 1,780,119 | 5,266,220 | -3,486,101 | |

Data quality and costing improvements

As improvements are made to the quality of the data input into the costing process and the costing methodology itself, the results may change over time. It is therefore important that a board understands the risks in the data being presented. A simple way to do this is to outline all of the key information feeding into PLICS and rate each one depending on the quality of the data and whether it is at a patient level or not. This provides a very quick and simple overview to highlight where risks are.

The HFMA MAQS (materiality and quality score) template will provide a more in-depth analysis of the strengths and weaknesses in an organisation's costing. Many organisations present the summary MAQS template to the board. The MAQS template highlights areas where the costing process could be improved and therefore where the limited resources available could be used to achieve the greatest impact on the quality of the costs produced.

Using PLICS data with different groups of professionals

A significant benefit of PLICS is that the data can be sliced and diced in many different ways. This means that the same data can be used to engage different groups of professionals.

For example, patient-level cost information can be viewed at ward level, which greatly supports discussions with nursing colleagues. PLICS can also generate reports to identify how costs compare across different wards or between groups of patients who have similar procedures and diagnoses. If electronic rostering systems are in place, the information can be integrated into PLICS in order to produce costs which better reflect the changes in staff and skill mix on different shifts.

PLICS can also provide valuable information to support work with clinical teams as PLICS can be viewed at individual consultant level. For example, the costs of patients under a particular consultant or clinical team can be compared. In addition, it should be possible to view not only the cost information for each patient, but also the resources consumed, such as the diagnostic tests undertaken, the drugs prescribed, the length of stay of the patient and the time in theatre.

This allows useful discussions to take place within the medical directorate regarding the reasons for variations between clinical teams or against standard pathways of care or care bundles.

PLICS can therefore be a very powerful tool to all executive directors. It can be an important source of information in strategic discussions regarding the future direction of services, redesigning services and identifying where the efficiency of service provision may be improved.

Information requirements for finance teams

Appendix B provides a summary pack of PLICS reports for finance teams.

Financial management teams can engage with PLICS in a number of ways:

- To support cost improvement or efficiency programmes
- To inform business or investment cases
- To review how costs are allocated in order to improve the accuracy of the costs produced
- To support services to better understand the delivery of their services and identify opportunities to improve.

Usually the costing team will support the finance team to become expert users of the reports available. In most organisations, finance teams have access to more in-depth reports, with data often being displayed in charts in order to incorporate more variables.

A very popular report for finance teams is the EBITDA report. This is a good starting point and a useful report to use for board reporting. It provides a summary of financial performance broken down by service line or directorate, depending on the structure of the organisation. It will show the costs and income broken down by cost type, the EBITDA and net surplus/deficit.

This report can also be produced at specialty level and for each specialty, it can be further broken down by point of delivery and/or HRG level. Figure 3 overleaf shows a summary EBITDA report at specialty level.

Figure 3: Sample summary EBITDA report at specialty level

| Specialty | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Breast surgery | 3,351 | 798,157 | 518,030 | 295,368 | 138,208 | 364,581 | 69,165 | 295,416 | 15,289 | 280,127 | |
| Cardiothoracic surgery | 30 | 10,388 | 3,024 | 2,232 | 279 | 7,877 | 426 | 7,451 | 87 | 7,364 | |
| Clinical oncology | 1,839 | 1,178,076 | 729,903 | 310,762 | 301,111 | 566,203 | 83,359 | 482,844 | 34,671 | 448,173 | |
| Colorectal surgery | 2,116 | 407,400 | 249,521 | 159,568 | 49,907 | 197,925 | 32,981 | 164,944 | 7,065 | 157,879 | |
| Ear, nose and throat | 8,684 | 2,289,908 | 2,115,162 | 1,505,856 | 162,168 | 621,884 | 313,624 | 308,260 | 133,514 | 174,746 | |
| General surgery | 4,990 | 5,089,468 | 6,624,814 | 4,317,721 | 439,891 | 331,856 | 1,187,295 | -855,439 | 679,907 | -1,535,346 | |
| Oral surgery | 1,855 | 513,921 | 477,775 | 334,246 | 43,973 | 135,702 | 69,083 | 66,619 | 30,473 | 36,146 | |
| Plastic surgery | 957 | 132,097 | 75,208 | 53,954 | 7,893 | 70,250 | 11,059 | 59,191 | 2,302 | 56,889 | |
| Trauma/orthopaedics | 14,308 | 6,879,090 | 7,468,479 | 4,187,470 | 1,663,010 | 1,028,610 | 1,108,096 | -79,486 | 509,903 | -589,389 | |
| Urology | 5,266 | 1,824,101 | 1,498,973 | 983,901 | 192,231 | 647,969 | 226,074 | 421,895 | 96,767 | 325,128 | |
| Vascular surgery | 620 | 132,045 | 57,416 | 44,020 | 3,939 | 84,086 | 7,866 | 76,220 | 1,591 | 74,629 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 44,016 | 19,254,651 | 19,818,305 | 12,195,098 | 3,002,610 | 4,056,943 | 3,109,028 | 947,915 | 1,511,569 | -563,654 | |

In many organisations, finance teams are given access to reports which drill right down to the individual cost centres. This is important to support finance teams in understanding how costs are built up, and to support the validation of costing outputs and the ongoing review of how cost centres are allocated.

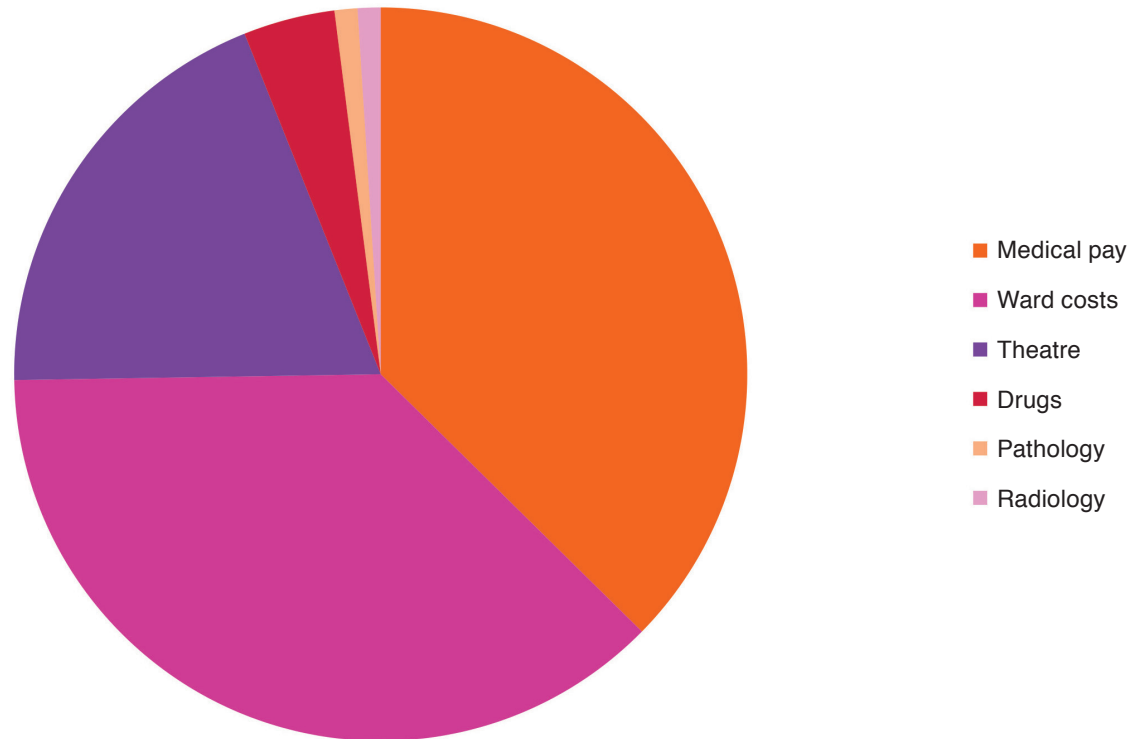
A useful report is a breakdown of the cost centres that make up a particular HRG. Figure 4 provides an example of this type of report.

Figure 4: Sample HRG report showing breakdown of cost centres

| Cost driver name | Final cost centre | Cost centre name | Cost/Income allocated (£) |
|------------------|-------------------|----------------------|---------------------------|
| Therapies | CC0510 | Dietetics | 32,896 |
| | CC3500 | Reablement team | 1,595 |
| | CC6820 | Occupational therapy | 64,056 |
| | CC0376 | Physiotherapy | 75,600 |
| Blood | CC0872 | Blood bank | 53,400 |
| Critical care | CC5560 | Intensive care ward | 84,881 |
| Wards | CC6227 | Ward 5 | 600 |
| | CC6228 | Ward 6 | 60 |
| Drugs | CC4775 | Drug issues | 100 |

Another report that is useful is a breakdown of the different types of resources that make up a particular cost. This will highlight which resources are driving the cost of a particular HRG or specialty. This report can be presented as a pie chart or a bar chart. Figure 5 provides an example.

Figure 5: Sample HRG report showing breakdown of different types of resources



Information requirements for clinicians and operational managers

Many organisations produce a different set of reports, or views of data for clinicians and operational managers. In some organisations these views are generated from an individual's login so that users can start viewing data relevant to their service immediately. This can also be achieved through the use of bookmarks.

Appendix C provides a summary pack of PLICS reports for clinicians and operational managers.

Summary reports of directorate financial position

It is useful to present a directorate or service's overall financial position as a starting point. This may be a simpler version of the EBITDA report. This could be shown by sub-specialty or treatment function code level. It may be useful to break this down further by point of delivery in order to identify which type of activity is driving the overall financial position.

A pie chart or bar chart showing the breakdown of a specialty's costs by resource type is also useful. This will highlight the key cost drivers for each specialty. This can be used to focus later discussions regarding where variations may be investigated.

Average cost reports

From the specialty view, graphs to show the average costs for a particular HRG/procedure/diagnosis or specialty, can be produced by individual clinician. Most organisations use GMC codes to identify consultants. This will enable an individual clinician to see their activity and how it compares to their peers. It can also be useful to incorporate non-financial information into these reports – for example, the average length of stay, number of radiology tests, number of pathology tests or theatre time. In many systems, clinicians are then able to look at the costs of the individual patients that make up this cost. If this is not possible in your costing system, you may wish to pre-empt this request and set up additional reports in order to support services as they investigate the reasons behind costs and the reasons for variations.

When looking at average costs for each clinician, it is useful to plot the actual activity undertaken onto the graph, as it may be the case that one consultant has a higher average cost but very low levels of activity (see Figures 6 and 7).

Figure 6: Sample clinician report comparing unit costs and activity levels

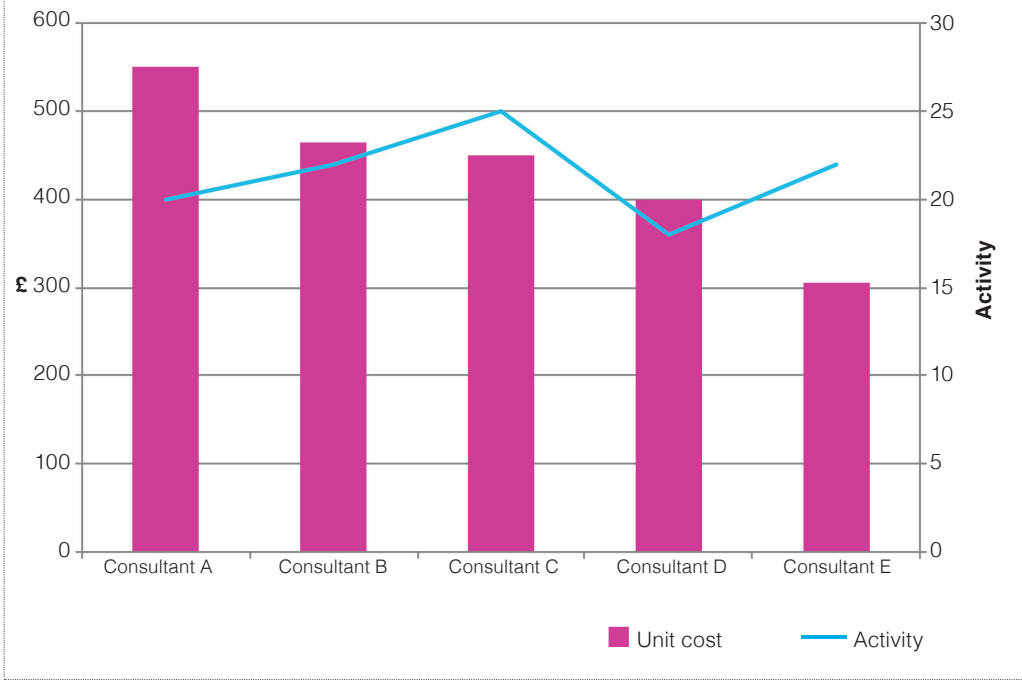
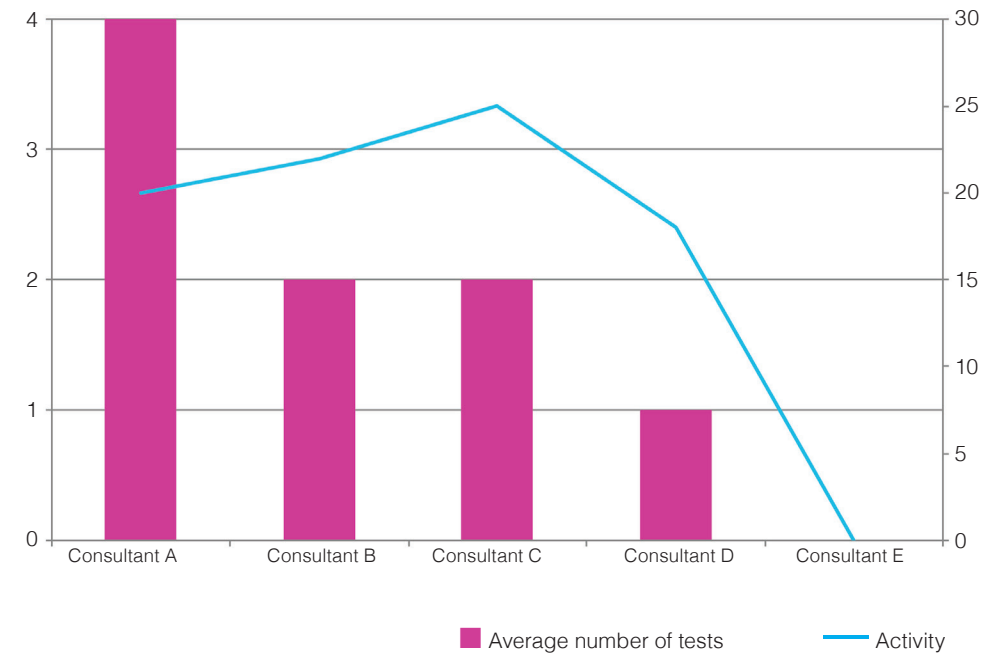


Figure 7: Sample clinician report comparing average number of tests and activity levels



One of the pitfalls of PLICS is that it generates so much data that it is easy for users to become lost and therefore not focus on the key issues and variances. Many organisations have found that producing the following reports can provide a focus:

- Top five high-volume HRGs
- Top five loss-making HRGs (see Figure 8)
- Top five most profitable HRGs
- Top five HRGs where there is the greatest variation in costs between patients.

Figure 8: Sample report listing top five loss-making HRGs

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|---|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | LA04D | Kidney or urinary tract infections, with length of stay two days or more, with major CC | 351 | -3,824 | 2,501 | -1,323 | -1,342,062 | 877,748 | -464,314 |
| 2 | JC11Z | Other diagnostic skin tests | 285 | -1,584 | 146 | -1,438 | -451,463 | 39,130 | -412,333 |
| 3 | DZ11A | Lobar, atypical or viral pneumonia, with major CC | 593 | -2,419 | 1,730 | -689 | -1,434,691 | 1,025,951 | -408,740 |
| 4 | PB02Z | Minor neonatal diagnoses | 238 | -4,229 | 2,918 | -1,311 | -1,006,552 | 694,443 | -312,109 |
| 5 | SA05F | Megaloblastic anaemia without CC | 193 | -1,196 | 274 | -922 | -230,823 | 53,450 | -177,373 |

In addition, it is possible to generate the top five HRGs where there is the greatest variation in cost (total or average) between clinicians (Figure 9).

Figure 9: Sample report listing top five HRGs where there is the greatest variation in cost between clinicians

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) | Minimum cost (£) | Median cost (£) | Maximum cost (£) | Standard deviation |
|------|-------|---|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|------------------|-----------------|------------------|--------------------|
| 1 | FZ01A | Complex oesophageal procedures 19 years and over with CC | 445 | -9,910 | 11,011 | 1,101 | -4,409,950 | 4,899,895 | 489,945 | -8,721 | -10,901 | -13,081 | 2,616 |
| 2 | FZ67B | Major small intestine procedures 19 years and over without CC | 201 | -2,655 | 2,950 | 295 | -533,655 | 592,950 | 59,295 | -2,336 | -2,921 | -3,505 | 701 |
| 3 | HA25B | Minor knee procedures category 2 for trauma with CC | 14 | -2,435 | 2,706 | 271 | -34,090 | 37,884 | 3,794 | -2,143 | -2,679 | -3,214 | 643 |
| 4 | HA14C | Minor hip procedures for trauma without CC | 702 | -1,816 | 1,513 | -303 | -1,274,832 | 1,062,126 | -212,706 | -1,598 | -1,998 | -2,397 | 479 |
| 5 | PA26A | Other gastrointestinal or metabolic disorders with CC | 238 | -1,432 | 1,591 | 159 | -340,816 | 378,658 | 37,842 | -1,260 | -1,575 | -1,890 | 378 |

These reports will help to focus investigations with services and to help them understand how activity is counted and presented in PLICS and where there may be the greatest opportunity for improvements in service delivery.

One issue with this type of analysis is that the data may be skewed by a relatively small number of patients. This can be of significant concern to clinicians. This issue should be considered in the building of reports. For example, it may be possible to set some statistical parameters into reports in order to exclude outliers.

Discussions with a service regarding PLICS data will inevitably end by reviewing individual patients. Many PLICS systems produce a 'patient bill'. This usually includes the patient-specific information and demographics at the top (for example, age, sex, date of admission, OPCS and ICD10 coding). The bill will usually then be split into the different cost types and the costs and unit of resource displayed by day, if that level of analysis is possible. The patient bill is an excellent tool because it allows individual patient records to be compared to the patient's notes and any other clinical records available. A 'work in progress' (WIP) flag is useful to include in the patient bill, as this will allow easy identification of those patients whose full costs and income may not be included.

An example of a patient bill is provided in Section A.

Information requirements for costing and information teams

Costing and information teams will require a set of reconciliation reports from the PLICS system. This will allow reconciliations to take place between the costs and income input into the system against the outputs. This should include a variety of reports at direct, indirect and overhead level, and cost pool level in order to monitor how costs have been processed and absorbed.

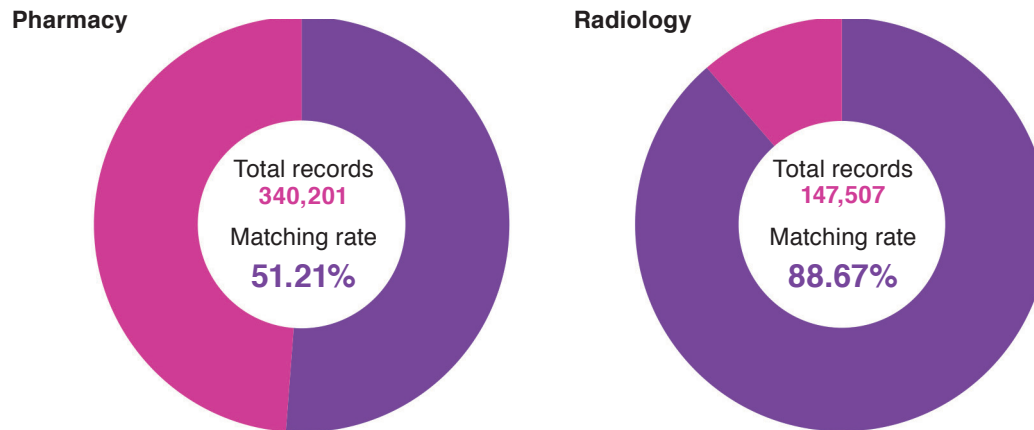
The HFMA has published a guidance paper (February 2016), called *Understanding the general ledger for costing*, which provides further guidance on reconciling costs.

The quality of the PLICS outputs is heavily dependent on the quality of the data input into the costing process. Data quality reports will therefore be required for the costing and information teams to provide checks on the quality and robustness of the data. The HFMA has published a guidance paper (February 2016) entitled *Improving the quality of the source data for costing in acute and community services*, which provides more information on data quality and data quality reports.

Both guidance papers can be found at www.hfma.org.uk/costing/standards.

A key data quality report will be a matching report. These reports may be set out as speed dials, pie charts or bar charts and would indicate the percentage of records that have been matched. This may include the number of pathology tests, radiology tests, drugs, theatre minutes, ward minutes etc. In some systems users can click on a percent score and identify the reasons why records have not matched successfully. This is important because low matching scores will impact on the accuracy of PLICS data. Figure 10 provides an example.

Figure 10: Sample data quality matching reports



Section D

Top tips

This section sets out the key lessons learned from those organisations that have successfully developed PLICS reports and dashboards and rolled them out across their organisations.

Huge volumes of data

- Ensure that navigation through the reports is logical and the sequence in which users drill down into the data is considered – for example, from directorate, going down to specialty then consultant or HRGs etc.
- Ensure that users are directed towards meaningful reports (such as top five loss-making HRGs) that provide an initial focus for investigation.
- Be creative in finding uses for the data. For example, talk and listen to clinicians, operational managers and finance teams to find out what is important to them, what are the main problems and opportunities in your trust and how PLICS data can provide any insight into these.

Presentation

- Keep reports and dashboards uncluttered and visually appealing.
- Ensure that reports and dashboards are free of jargon, and that labels and titles are understood by users.
- Wherever possible use graphical or pictorial presentation, particularly in clinical views, as trends are easier to identify.
- Consider a different set of reports and dashboards for different types of users. These could be linked to their log-in or bookmarked within the reporting system.

Training

- Provide training on how to interrogate and interface with the PLICS reporting for all users.
- Ensure reports are easy to understand and navigate by road testing them with users.
- Consider producing user guides to help users navigate the information efficiently and accurately. A quiz can also be a fun and effective way of engaging with users as part of the training process.
- Consider developing a PLICS intranet site. This could be used to store user guides, costing developments planned and when they will go live.

Engagement

- Ensure the executive team is on board early to help promote participation in PLICS and ensure appropriate allocation of resources to it.
- Ensure the presentation of PLICS reports is precise and clear. Clinicians have a huge number of competing priorities and limited time available.
- Engage with people from other disciplines as much as possible. The benefits of PLICS can only be maximised if people use it.
- Training and clinical engagement is an iterative process that will require regular follow-up and reinforcement to be successful.
- Keep developing reports. As the organisation starts to use PLICS, there will be an increased appetite for the information and interest in improving the reports.

Time trends

- Consideration should be given as to how information will be presented over different time periods. After the initial roll-out, most organisations update their PLICS data either monthly or quarterly.

Section E

Future direction

This toolkit has provided examples of the basic reports that PLICS can provide. In the initial implementation and roll-out phase, organisations will need to spend time understanding what PLICS reveals about their organisation and the services it provides.

After this initial roll-out phase, organisations may wish to focus on clinical variation and identifying opportunities to deliver patient care more effectively and efficiently.

This section sets out examples of how some organisations are developing PLICS reports in this way, and highlights the innovations that are taking place with PLICS reporting in the NHS.

The Healthcare Costing for Value Institute plans to publish *PLICS toolkit for acute services – beyond the basics* in 2017, building on some of the ideas listed below.

Costing the impact of hospital acquired infections (HCAs)

A flag is attached to patients who have contracted MRSA or C Difficile during their hospital stay or who were diagnosed on admission. This enables the costs of these patients to be identified and their costs compared with similar groups of patients who did not acquire such infections.

Daily cost profiles and costing the impact of delays to the discharge of patients

The date that a patient is assessed as fit for discharge can be included within the activity information uploaded into PLICS. This will enable the costs after this date to be identified, if costing is reported on a daily basis. This can be very useful to demonstrate the impact and cost that delays in discharges have on an organisation.

Costing the impact of DNAs in outpatients

If DNA (did not attend) attendances are included within the activity data input into the costing process, the costs of DNAs can be calculated. Likewise, the impact on costs and profitability could be modelled if a certain reduction in DNAs is made.

Costing the impact of delays in theatre or outpatients

Some organisations are incorporating theatre information on a sessional basis into their PLICS models. In essence the cost of each theatre session is absorbed by the patients operated on in that list, rather than being spread as an overhead across all theatre procedures. This helps to focus clinicians on sessional utilisation and list booking. Similar calculations could also be made in outpatients.

Identifying inappropriate use of diagnostics

In Section A, the patient bill example shows the types of radiology and pathology tests undertaken and the day they were performed. This allows several types of reports to be produced. First, by aggregating the number of tests for all of the patients recorded under a particular consultant, it is possible to compare the average number of tests per patient by clinician. In addition, the type of test and the day it was carried out can be compared against a standard care pathway to identify where there are variations.

Benchmarking

At present, PLIC systems calculate the costs for a particular organisation. This allows internal benchmarking to take place – for example, comparisons across clinical teams. However, it does not allow for any external benchmarking.

Some organisations have undertaken benchmarking of PLICS data either with a specific organisation or as part of a benchmarking group. In the future, it is possible that PLICS data from one organisation could be incorporated into another organisation's PLIC system. This would allow direct comparison of data for a patient with a particular diagnosis, for example.

It is also possible that national average cost data could be incorporated into a PLIC system in order to provide a benchmark. Inclusion of this data, perhaps for a particular service, would provide a more complete picture when investigating variances in costs or understanding whether costs are high or low overall.

Linking cost and resource information to basic outcome and measures

In theory, it is possible to include certain patient quality or outcome measures as an additional field within PLICS. These additional measures would provide a more rounded view of patient care and patients' experiences in hospital. Possible measures could include mortality rates, readmission rates, discharge destination. PROMS data could also be incorporated in order to provide an additional view of the care each patient received.

The case study on the next page highlights some of the ways PLICS information has been used to work with services to provide better patient care and more efficient services at one acute trust.

case study

Maximising the value of PLICS data at Nottingham University Hospitals NHS Trust

“Our PLICS system shows us the resources consumed by each patient on a daily basis. This enables users of PLICS to look at the costs incurred after a particular date – for example, we are looking at the costs that are incurred after a patient is flagged as ‘medically safe for discharge’.

This is incredibly powerful information as it can be aggregated by consultant/specialty/division/trust-wide level to understand the financial impact of keeping patients in hospital beds rather than in the community. This information also enables PLICS users to identify when patients have contracted hospital acquired infections and identify if any of these were past ‘medically safe dates’ – that is, potentially avoidable.

Our PLICS users also noticed that a lot of money was being spent on radiology tests at the weekends. This was in part due to the shortage of consultants (junior doctors ordering more tests). This is not good for the patients (extra radiation) and not good for the costs! As a result, this finding was included within a review of staffing on wards at weekends.

Our PLICS users in pathology noticed that spending on pathology had reduced and argued that all the focus had been on reducing pathology costs, whilst length of stay had been creeping up. It was suggested that more money should be spent on pathology and a focus on getting the testing done in day one of a patient’s stay. In theory this should reduce length of stay. This is currently being trialled to assess the impact.”

Scott Hodgson, head of costing, Nottingham University Hospitals NHS Trust

Section F

Acknowledgements

The HFMA would like to thank the following people who have contributed to this toolkit.

Deanne Arden, East Cheshire NHS Trust

Vinod Bassi, The Leeds Teaching Hospitals NHS Trust

Jeremy Brinley-Codd, Guy's and St. Thomas' NHS Foundation Trust

Simon Bruce, Salisbury NHS Foundation Trust

Neil Buckee, Harrogate and District NHS Foundation Trust

Stuart Burney, North Tees and Hartlepool NHS Foundation Trust

Mark Cornwell, University Hospitals Bristol NHS Foundation Trust

Jason Dean, Alder Hey Children's NHS Foundation Trust

Kevin Downs, Derby Teaching Hospitals NHS Foundation Trust

Helen Franklin, Buckinghamshire Healthcare NHS Trust

Scott Hodgson, Nottingham University Hospitals NHS Trust

Dave Kendall, Heart of England NHS Foundation Trust

Steven Lee, University Hospitals of Leicester NHS Trust

Sarah McQuarry, Plymouth Hospitals NHS Trust

Ieuan Marks, Chelsea and Westminster Hospital NHS Foundation Trust

Adele Oneill, Salford Royal NHS Foundation Trust

Vahid Patel, Royal Brompton and Harefield NHS Foundation Trust

Gan Raman, Liverpool Heart and Chest Hospital NHS Foundation Trust

Sarah Renshaw, Chesterfield Royal Hospital NHS Foundation Trust

Hayley Ringrose, Stockport NHS Foundation Trust

Jeanette Scales, The Queen Elizabeth Hospital King's Lynn NHS Foundation Trust

Simon Sheppard, The Rotherham NHS Foundation Trust

Rob Storey, Royal Devon and Exeter NHS Foundation Trust

Ruth Stott, The Walton Centre NHS Foundation Trust

Boo Tse, York Teaching Hospital NHS Foundation Trust

Andy Weaver, Sheffield Teaching Hospitals NHS Foundation Trust

Lucie Westwood, Great Western Hospitals NHSFT

Amanda Wharton, Sandwell and West Birmingham Hospitals NHS Trust

PLICS toolkit for acute services – the basics

Appendix A: Sample reporting pack for boards



PLICS toolkit reports – for boards

Sample reporting pack



PLICS reports can provide the board with a strategic overview of financial performance. PLICS reporting can provide insights to manage a portfolio of specialties and inform the long-term vision of an organisation.

The board should use PLICS information to explore the level of confidence that the organisation has in its cost data. This will enable resources to be targeted in order to achieve the maximum possible improvement to the quality of the cost information produced.

The board reporting pack includes key strategic performance reports.

Contents

- EBITDA report (earnings before interest, taxes, depreciation and amortisation)
- Specialty portfolio report
- Materiality and quality score (MAQS) summary report

PLICS toolkit reports – for boards

EBITDA report (earnings before interest, taxes, depreciation and amortisation)



Report summary: The EBITDA report shows the main summary of financial performance by directorate. Types of cost and income are broken down separately. EBITDA and net surplus/deficit are presented.

Main users: Board members, clinical directors, finance department, and operational managers.

| Directorate | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|----------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Medical division | 50,110 | 26,908,082 | 30,595,825 | 15,498,863 | 6,411,177 | 4,998,042 | 5,980,874 | -982,832 | 2,704,911 | -3,687,743 | |
| Surgical division | 43,304 | 20,321,756 | 19,729,859 | 12,376,452 | 2,661,468 | 5,283,836 | 3,080,855 | 2,202,981 | 1,611,084 | 591,897 | |
| Women's & children's | 48,247 | 19,708,454 | 19,863,796 | 14,375,449 | 1,584,458 | 3,748,547 | 3,013,707 | 734,840 | 890,182 | -155,342 | |
| Clinical support | 6,257 | 1,277,818 | 1,512,731 | 115,973 | 1,125,572 | 36,273 | 211,143 | -174,870 | 60,043 | -234,913 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 147,918 | 68,216,110 | 71,702,211 | 42,366,737 | 11,782,675 | 14,066,698 | 12,286,579 | 1,780,119 | 5,266,220 | -3,486,101 | |

The EBITDA report can also be used to show the financial performance at more granular levels within an organisation. The example below shows a report at specialty level.

| Specialty | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Breast surgery | 3,351 | 798,157 | 518,030 | 295,368 | 138,208 | 364,581 | 69,165 | 295,416 | 15,289 | 280,127 | |
| Cardiothoracic surgery | 30 | 10,388 | 3,024 | 2,232 | 279 | 7,877 | 426 | 7,451 | 87 | 7,364 | |
| Clinical oncology | 1,839 | 1,178,076 | 729,903 | 310,762 | 301,111 | 566,203 | 83,359 | 482,844 | 34,671 | 448,173 | |
| Colorectal surgery | 2,116 | 407,400 | 249,521 | 159,568 | 49,907 | 197,925 | 32,981 | 164,944 | 7,065 | 157,879 | |
| Ear, nose and throat | 8,684 | 2,289,908 | 2,115,162 | 1,505,856 | 162,168 | 621,884 | 313,624 | 308,260 | 133,514 | 174,746 | |
| General surgery | 4,990 | 5,089,468 | 6,624,814 | 4,317,721 | 439,891 | 331,856 | 1,187,295 | -855,439 | 679,907 | -1,535,346 | |
| Oral surgery | 1,855 | 513,921 | 477,775 | 334,246 | 43,973 | 135,702 | 69,083 | 66,619 | 30,473 | 36,146 | |
| Plastic surgery | 957 | 132,097 | 75,208 | 53,954 | 7,893 | 70,250 | 11,059 | 59,191 | 2,302 | 56,889 | |
| Trauma/orthopaedics | 14,308 | 6,879,090 | 7,468,479 | 4,187,470 | 1,663,010 | 1,028,610 | 1,108,096 | -79,486 | 509,903 | -589,389 | |
| Urology | 5,266 | 1,824,101 | 1,498,973 | 983,901 | 192,231 | 647,969 | 226,074 | 421,895 | 96,767 | 325,128 | |
| Vascular surgery | 620 | 132,045 | 57,416 | 44,020 | 3,939 | 84,086 | 7,866 | 76,220 | 1,591 | 74,629 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 44,016 | 19,254,651 | 19,818,305 | 12,195,098 | 3,002,610 | 4,056,943 | 3,109,028 | 947,915 | 1,511,569 | -563,654 | |

Please note: these reports use sample information for some directorates and surgical specialties and are for illustrative purposes only.

PLICS toolkit reports – for boards

EBITDA report (2)



This EBITDA report is shown by point of delivery. This may be useful when analysing a particular specialty, to identify whether different elements of the service have differing financial positions.

| Point of delivery | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|-----------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Elective | 2,597 | 5,505,640 | 2,639,170 | 1,978,209 | 660,961 | 2,866,470 | 550,564 | 2,315,906 | 1,856,504 | 459,402 | |
| Non-elective | 713 | 1,654,160 | 1,592,957 | 1,300,497 | 292,460 | 61,203 | 181,958 | 120,755 | 1,658,480 | 1,779,235 | |
| Day case | 411 | 953,520 | 1,583,393 | 1,420,051 | 163,342 | 629,873 | 266,986 | 896,859 | 909,911 | 1,806,770 | |
| Outpatient first attendance | 620 | 31,000 | 235,593 | 119,560 | 116,033 | 204,593 | 2,790 | 207,383 | 60,566 | 267,949 | |
| Outpatient follow-up | 1,505 | 30,100 | 183,943 | 23,560 | 160,383 | 153,843 | 3,311 | 157,154 | 60,566 | 217,720 | |
| Outpatient procedures | 62 | 3,100 | 23,643 | 11,960 | 11,683 | 20,543 | 372 | 20,915 | 6,566 | 27,481 | |
| Block payment | 1 | 250,000 | 130,700 | 115,560 | 15,140 | 119,300 | 37,500 | 81,800 | 171,003 | 89,203 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 5,909 | 8,427,520 | 6,389,399 | 4,969,397 | 1,420,002 | 2,038,121 | 1,043,480 | 994,641 | 4,723,596 | 3,728,955 | |

Please note that this report uses sample information for some points of delivery and is for illustrative purposes only.

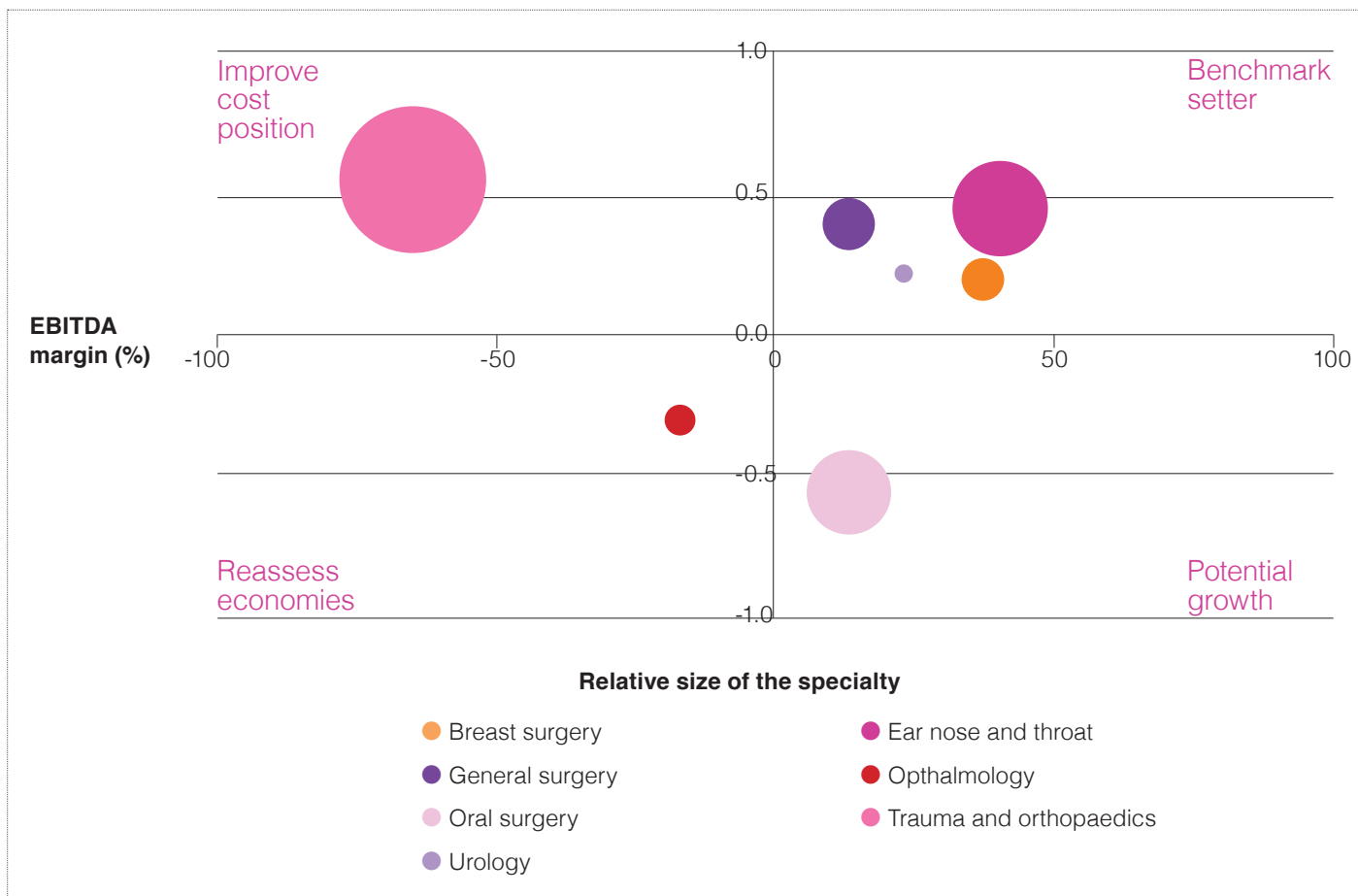
PLICS toolkit reports – for boards

Specialty portfolio report



Report summary: The specialty portfolio report presents a summary of financial performance in a portfolio matrix. The x-axis represents the EBITDA margin (%) and the y axis represents the relative size of the specialty. The size of each bubble represents the total income for each specialty. The position of the bubbles influences strategy discussions.

Main users: Board members, clinical directors, finance department, and operational managers.



PLICS toolkit reports – for boards

Materiality and quality score (MAQS) summary report



Report summary: This MAQS summary report helps the organisation understand and report on the quality of their current costing data and provides a focus for areas that require improvement.

Main users: Finance director, costing accountant, and board members.

| Total MAQS: 77.4% Gold | | Expected MAQS if improvement achieved: 77.6% Gold | | | |
|----------------------------------|--|--|---|--|-------|
| Cost pool groups or cost pools | Total costs | MAQS for cost pool and cost pool groups and other reporting categories | Cost pool groups or cost pools above materiality level but below baseline | Enter the intended MAQS for the cost pool group after improvement work to see effect on total MAQS | |
| Direct Costs | | | | | |
| Blood and blood products | £498,903 | 100.0% Gold | | | |
| CNST | £862,884 | 72.1% Silver | | | |
| Critical care | £2,668,524 | 78.9% Gold | | | |
| Drugs | £1,324,368 | 58.7% Bronze | | | |
| Drugs - chemotherapy | £1,458,535 | 52.0% Bronze | | | |
| Drugs - high cost drugs | £1,106,854 | 75.0% Gold | | | |
| Emergency department | £2,351,187 | 87.9% Gold | | | |
| Imaging | £3,130,367 | 88.1% Gold | | | |
| Medical staffing | £10,642,012 | 60.0% Bronze | | | |
| Operating theatres | £1,703,242 | 94.9% Gold | | | |
| Other clinical services | £4,051,227 | 80.3% Gold | | | |
| Other diagnostics | £1,260,799 | 75.0% Gold | | | |
| Outpatients | £1,969,249 | 64.6% Silver | | | 70.0% |
| Pathology | £2,683,757 | 81.4% Gold | | | |
| Pharmacy costs | £1,199,607 | 80.3% Gold | | | |
| Prostheses/implants/devices | £298,258 | 75.0% Gold | | | |
| Radiotherapy | £3,065,635 | 78.0% Gold | | | |
| Special procedure suites | £1,677,688 | 75.0% Gold | | | |
| Specialist nursing | £2,148,570 | 75.0% Gold | | | |
| Therapies | £165,956 | 100.0% Gold | | | |
| Wards | £1,784,208 | 78.4% Gold | | | |
| Non patient Care activities* | <i>The costs in this cost pool group are currently excluded from the MAQS scoring system</i> | | | | |
| Secondary commissioning costs | <i>The costs in this cost pool group are currently excluded from the MAQS scoring system</i> | | | | |
| Total of Cost Pool Groups | £46,051,830 | | | | |
| Indirect | £9,918,588 | 71.5% Silver | | | |
| Overhead | £21,853,732 | 74.2% Silver | | | |
| Grand total | £77,824,150 | | | | |

Source: HFMA acute clinical costing standards 2016/17 – www.hfma.org.uk/costing/standards

PLICS toolkit for acute services – the basics

**Appendix B:
Sample reporting pack for finance teams**



PLICS toolkit reports

Sample reporting pack for finance teams



The finance reporting pack includes PLICS reports that will support finance teams in using PLICS to better understand how the services they support are being delivered.

They can be used in developing business cases, in identifying efficiency savings, and in working with services to better understand how services are being delivered and the resources being consumed.

Contents

- Specialty portfolio report
- Summary HRG-level reports
- Breakdown of costs by resource type
- Breakdown of costs by individual cost centre
- EBITDA report (earnings before interest, taxes, depreciation and amortisation)
- Data quality report

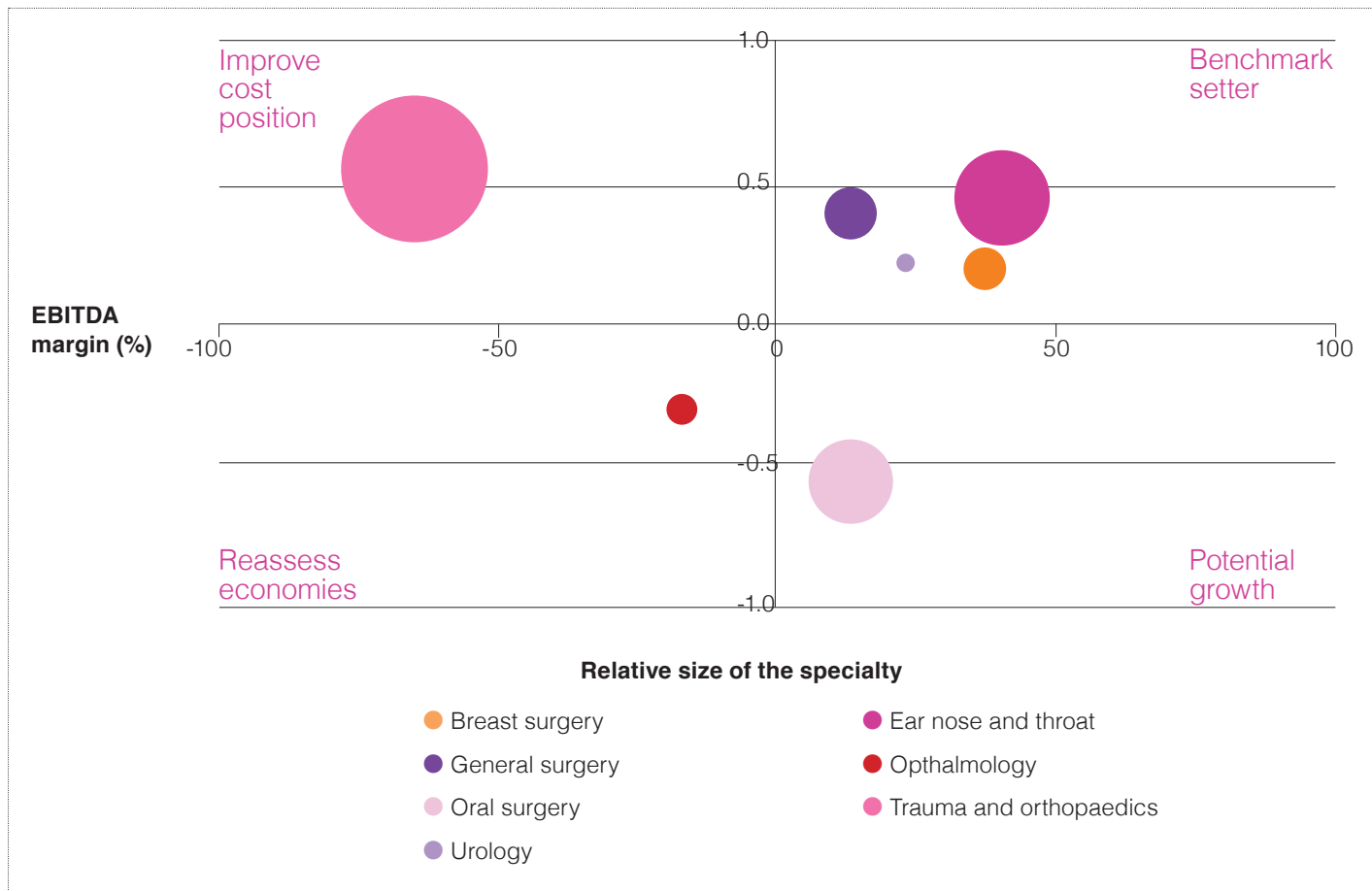
PLICS toolkit reports – for finance teams

Specialty portfolio report



Report summary: The specialty portfolio report presents a summary of financial performance in a portfolio matrix. The x-axis represents the EBITDA margin (%) and the y axis represents the relative size of the specialty. The size of each bubble represents the total income for each specialty. The position of the bubbles influences strategy discussions.

Main users: Board members, clinical directors, finance teams, and operational managers.



PLICS toolkit reports – for finance teams

Summary HRG-level reports



Report summary: This set of reports highlights which HRGs an organisation or service may wish to focus on. The first report below shows the **five HRGs with the highest volume of activity**. These will highlight the most common groups of patients treated within a service or organisation. Types of cost and income are broken down separately. EBITDA and net surplus/deficit are presented.

Main users: Clinical directors, clinicians, operational managers and finance teams.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|--|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | FZ47C | Non-malignant general abdominal disorders, with length of stay one day or less | 756 | -370 | 761 | 391 | -279,652 | 575,034 | 295,382 |
| 2 | DZ11A | Lobar, atypical or viral pneumonia, with major CC | 593 | -2,419 | 1,730 | -689 | -1,434,691 | 1,025,951 | -408,740 |
| 3 | NZ11B | Normal delivery without CC | 570 | -1,809 | 2,050 | 241 | -1,031,169 | 1,168,346 | 137,177 |
| 4 | PA08B | Intermediate injury without intracranial injury without CC | 511 | -336 | 669 | 333 | -122,387 | 243,960 | 121,573 |
| 5 | NZ14A | Emergency or upper uterine caesarean section, with CC | 214 | -2,257 | 3,133 | 876 | -482,940 | 670,465 | 187,525 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

PLICS toolkit reports – for finance teams

Summary HRG-level reports (2)



Top five loss-making HRGs This report highlights the HRGs which make the greatest loss to an organisation or service. This provides a useful starting point for further investigations.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|---|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | LA04D | Kidney or urinary tract infections, with length of stay two days or more, with major CC | 351 | -3,824 | 2,501 | -1,323 | -1,342,062 | 877,748 | -464,314 |
| 2 | JC11Z | Other diagnostic skin tests | 285 | -1,584 | 146 | -1,438 | -451,463 | 39,130 | -412,333 |
| 3 | DZ11A | Lobar, atypical or viral pneumonia, with major CC | 593 | -2,419 | 1,730 | -689 | -1,434,691 | 1,025,951 | -408,740 |
| 4 | PB02Z | Minor neonatal diagnoses | 238 | -4,229 | 2,918 | -1,311 | -1,006,552 | 694,443 | -312,109 |
| 5 | SA05F | Megaloblastic anaemia without CC | 193 | -1,196 | 274 | -922 | -230,823 | 53,450 | -177,373 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

PLICS toolkit reports – for finance teams

Summary HRG-level reports (3)



Top five most profitable HRGs (by volume) This report shows the HRGs which generate the greatest profit for a particular service or organisation.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|--|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | FZ47C | Non-malignant general abdominal disorders, with length of stay one day or less | 756 | -370 | 761 | 391 | -279,652 | 575,034 | 295,382 |
| 2 | AA22A | Non-transient stroke or cerebrovascular accident, nervous system infections or encephalopathy, with CC | 152 | -2,009 | 3,783 | 1,774 | -305,296 | 574,994 | 269,698 |
| 3 | NZ11E | Normal delivery with induction, with CC | 198 | -2,074 | 3,178 | 1,104 | -410,741 | 629,212 | 218,471 |
| 4 | NZ14A | Emergency or upper uterine caesarean section, with CC | 214 | -2,257 | 3,133 | 876 | -482,940 | 670,465 | 187,525 |
| 5 | NZ11A | Normal delivery with CC | 161 | -1,853 | 2,997 | 1,144 | -298,277 | 482,567 | 184,290 |

Organisations may wish to use the top ten HRGs rather than top five if they are looking at trust-wide information or a larger specialty or service.

PLICS toolkit reports – for finance teams

Summary HRG-level reports (4)



Top five HRGs with the greatest cost variation This report shows the HRGs which have the greatest variation in cost between the lowest cost patient and the highest cost patient.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) | Minimum cost (£) | Median cost (£) | Maximum cost (£) | Standard deviation |
|------|-------|---|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|------------------|-----------------|------------------|--------------------|
| 1 | FZ01A | Complex oesophageal procedures 19 years and over with CC | 445 | -9,910 | 11,011 | 1,101 | -4,409,950 | 4,899,895 | 489,945 | -8,721 | -10,901 | -13,081 | 2,616 |
| 2 | FZ67B | Major small intestine procedures 19 years and over without CC | 201 | -2,655 | 2,950 | 295 | -533,655 | 592,950 | 59,295 | -2,336 | -2,921 | -3,505 | 701 |
| 3 | HA25B | Minor knee procedures category 2 for trauma with CC | 14 | -2,435 | 2,706 | 271 | -34,090 | 37,884 | 3,794 | -2,143 | -2,679 | -3,214 | 643 |
| 4 | HA14C | Minor hip procedures for trauma without CC | 702 | -1,816 | 1,513 | -303 | -1,274,832 | 1,062,126 | -212,706 | -1,598 | -1,998 | -2,397 | 479 |
| 5 | PA26A | Other gastrointestinal or metabolic disorders with CC | 238 | -1,432 | 1,591 | 159 | -340,816 | 378,658 | 37,842 | -1,260 | -1,575 | -1,890 | 378 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

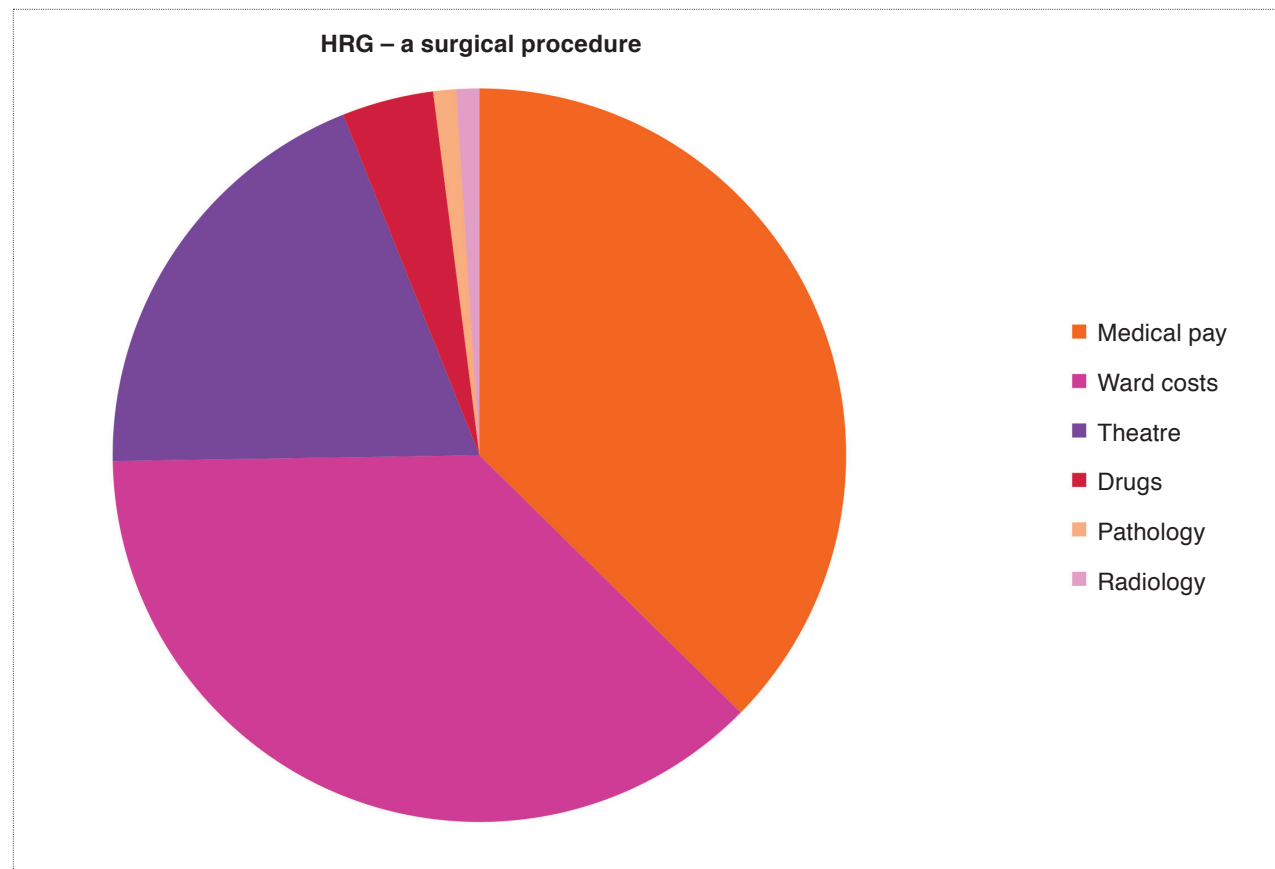
PLICS toolkit reports – for finance teams

Breakdown of costs by resource type



Report summary: This report shows the breakdown of costs by resource type. It can be a useful report to present at specialty level, as it highlights which resources drive the cost.

Main users: Clinical directors, speciality leads, clinicians, finance teams.



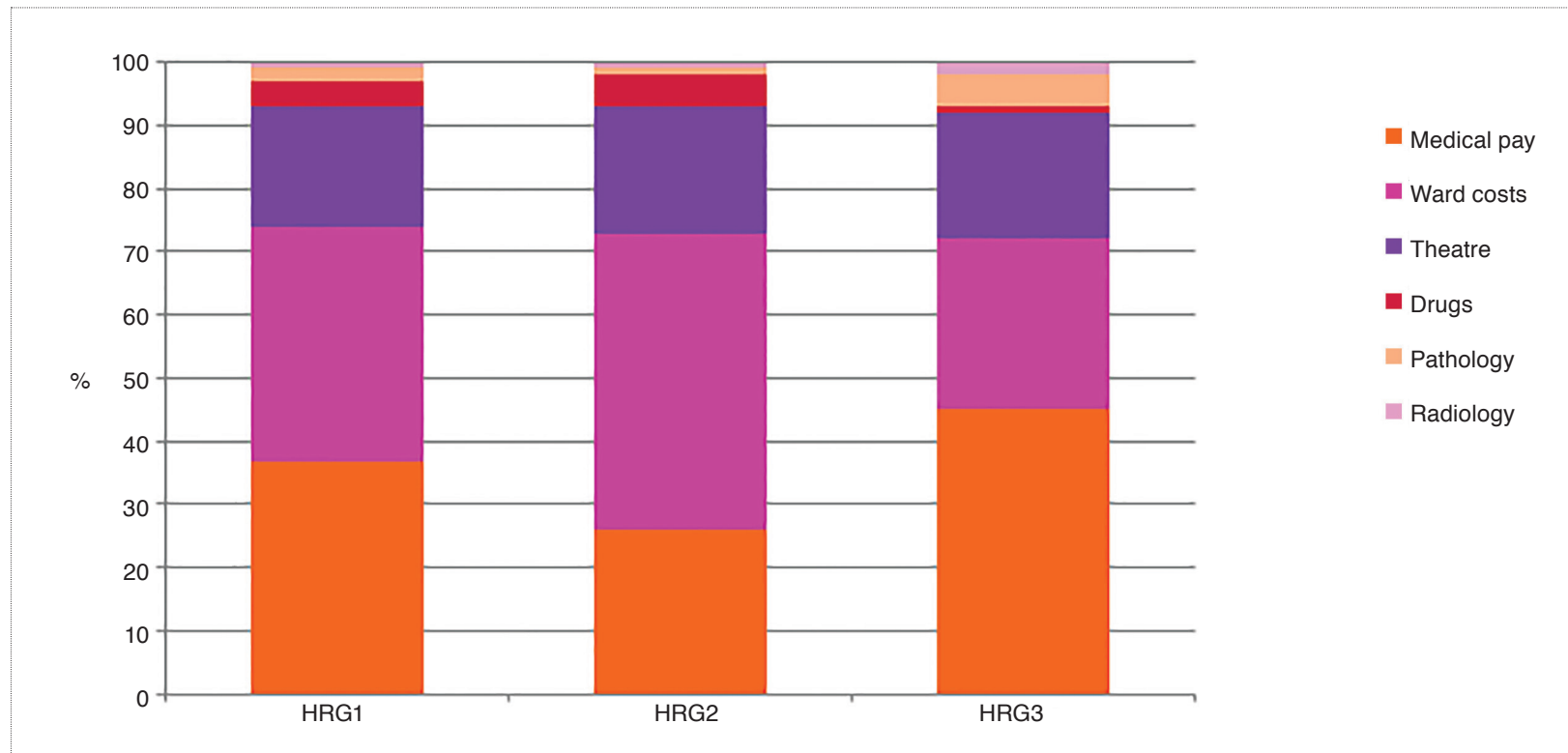
PLICS toolkit reports – for finance teams

Breakdown of costs by resource type (2)



Report summary: This report shows the breakdown of costs by resource type. It can be a useful report to present at HRG, procedure, diagnosis or consultant level, as it highlights which resources drive the cost.

Main users: Clinical directors, speciality leads, clinicians, finance teams.



PLICS toolkit reports – for finance teams

Breakdown of costs by individual cost centre



Report summary: This report is useful for specialty, HRG or even patient-level analysis. It shows how a particular cost is broken down in terms of the individual cost centres that have been allocated to it. It is often presented with the cost driver that has been used to allocate the cost centres. This is a useful report to review the accuracy of the cost allocation process.

Main users: Finance teams predominantly. Clinical directors, speciality leads and clinicians may find it useful in order to understand how costs have been built up.

| Cost driver name | Final cost centre | Cost centre name | Cost/Income allocated (£) |
|------------------|-------------------|----------------------|---------------------------|
| Therapies | CC0510 | Dietetics | 32,896 |
| | CC3500 | Reablement team | 1,595 |
| | CC6820 | Occupational therapy | 64,056 |
| | CC0376 | Physiotherapy | 75,600 |
| Blood | CC0872 | Blood bank | 53,400 |
| Critical care | CC5560 | Intensive care ward | 84,881 |
| Wards | CC6227 | Ward 5 | 600 |
| | CC6228 | Ward 6 | 60 |
| Drugs | CC4775 | Drug issues | 100 |

Please note that not all cost drivers are included. This report uses sample information and is for illustrative purposes only.

PLICS toolkit reports – for finance teams

EBITDA report (earnings before interest, taxes, depreciation and amortisation)



Report summary: The EBITDA report shows a summary of financial performance by directorate. Types of cost and income are broken down separately. EBITDA and net surplus/deficit are presented.

Main users: Board members, clinical directors, finance department, and operational managers.

| Directorate | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|----------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Medical division | 50,110 | 26,908,082 | 30,595,825 | 15,498,863 | 6,411,177 | 4,998,042 | 5,980,874 | -982,832 | 2,704,911 | -3,687,743 | |
| Surgical division | 43,304 | 20,321,756 | 19,729,859 | 12,376,452 | 2,661,468 | 5,283,836 | 3,080,855 | 2,202,981 | 1,611,084 | 591,897 | |
| Women's & children's | 48,247 | 19,708,454 | 19,863,796 | 14,375,449 | 1,584,458 | 3,748,547 | 3,013,707 | 734,840 | 890,182 | -155,342 | |
| Clinical support | 6,257 | 1,277,818 | 1,512,731 | 115,973 | 1,125,572 | 36,273 | 211,143 | -174,870 | 60,043 | -234,913 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 147,918 | 68,216,110 | 71,702,211 | 42,366,737 | 11,782,675 | 14,066,698 | 12,286,579 | 1,780,119 | 5,266,220 | -3,486,101 | |

This report can also show financial performance at more granular levels, such as specialty level, as shown below.

| Specialty | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Breast surgery | 3,351 | 798,157 | 518,030 | 295,368 | 138,208 | 364,581 | 69,165 | 295,416 | 15,289 | 280,127 | |
| Cardiothoracic surgery | 30 | 10,388 | 3,024 | 2,232 | 279 | 7,877 | 426 | 7,451 | 87 | 7,364 | |
| Clinical oncology | 1,839 | 1,178,076 | 729,903 | 310,762 | 301,111 | 566,203 | 83,359 | 482,844 | 34,671 | 448,173 | |
| Colorectal surgery | 2,116 | 407,400 | 249,521 | 159,568 | 49,907 | 197,925 | 32,981 | 164,944 | 7,065 | 157,879 | |
| Ear, nose and throat | 8,684 | 2,289,908 | 2,115,162 | 1,505,856 | 162,168 | 621,884 | 313,624 | 308,260 | 133,514 | 174,746 | |
| General surgery | 4,990 | 5,089,468 | 6,624,814 | 4,317,721 | 439,891 | 331,856 | 1,187,295 | -855,439 | 679,907 | -1,535,346 | |
| Oral surgery | 1,855 | 513,921 | 477,775 | 334,246 | 43,973 | 135,702 | 69,083 | 66,619 | 30,473 | 36,146 | |
| Plastic surgery | 957 | 132,097 | 75,208 | 53,954 | 7,893 | 70,250 | 11,059 | 59,191 | 2,302 | 56,889 | |
| Trauma/orthopaedics | 14,308 | 6,879,090 | 7,468,479 | 4,187,470 | 1,663,010 | 1,028,610 | 1,108,096 | -79,486 | 509,903 | -589,389 | |
| Urology | 5,266 | 1,824,101 | 1,498,973 | 983,901 | 192,231 | 647,969 | 226,074 | 421,895 | 96,767 | 325,128 | |
| Vascular surgery | 620 | 132,045 | 57,416 | 44,020 | 3,939 | 84,086 | 7,866 | 76,220 | 1,591 | 74,629 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 44,016 | 19,254,651 | 19,818,305 | 12,195,098 | 3,002,610 | 4,056,943 | 3,109,028 | 947,915 | 1,511,569 | -563,654 | |

Please note: these reports use sample information for some directorates and surgical specialties and are for illustrative purposes only

PLICS toolkit reports – for finance teams

EBITDA report (2)



This EBITDA report is shown by point of delivery. This may be useful when analysing a particular specialty, to identify whether different elements of the service have differing financial positions.

| Point of delivery | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|-----------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Elective | 2,597 | 5,505,640 | 2,639,170 | 1,978,209 | 660,961 | 2,866,470 | 550,564 | 2,315,906 | 1,856,504 | 459,402 | |
| Non-elective | 713 | 1,654,160 | 1,592,957 | 1,300,497 | 292,460 | 61,203 | 181,958 | 120,755 | 1,658,480 | 1,779,235 | |
| Day case | 411 | 953,520 | 1,583,393 | 1,420,051 | 163,342 | 629,873 | 266,986 | 896,859 | 909,911 | 1,806,770 | |
| Outpatient first attendance | 620 | 31,000 | 235,593 | 119,560 | 116,033 | 204,593 | 2,790 | 207,383 | 60,566 | 267,949 | |
| Outpatient follow-up | 1,505 | 30,100 | 183,943 | 23,560 | 160,383 | 153,843 | 3,311 | 157,154 | 60,566 | 217,720 | |
| Outpatient procedures | 62 | 3,100 | 23,643 | 11,960 | 11,683 | 20,543 | 372 | 20,915 | 6,566 | 27,481 | |
| Block payment | 1 | 250,000 | 130,700 | 115,560 | 15,140 | 119,300 | 37,500 | 81,800 | 171,003 | 89,203 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 5,909 | 8,427,520 | 6,389,399 | 4,969,397 | 1,420,002 | 2,038,121 | 1,043,480 | 994,641 | 4,723,596 | 3,728,955 | |

Please note that this report uses sample information for some points of delivery and the data shown is for illustrative purposes only.

PLICS toolkit reports – for finance teams

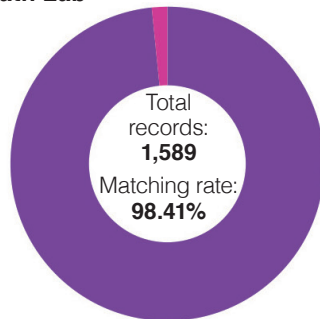
Data quality report



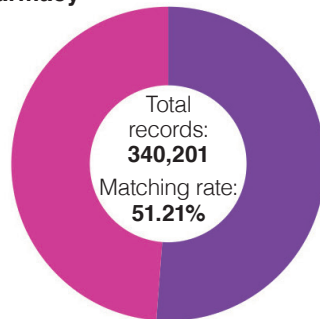
Report summary: This data quality report shows how successfully patient-level resource information has been matched to individual patient episodes of care or attendances. The success of this matching process is an important determinate in the quality of the cost outputs produced.

Main users: Finance director, costing teams, departmental managers and finance teams.

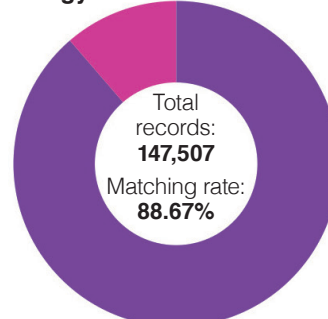
Cath Lab



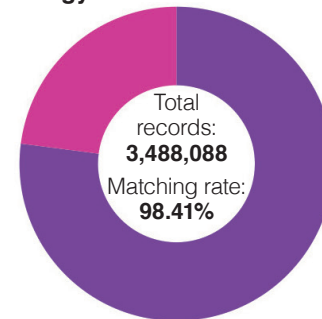
Pharmacy



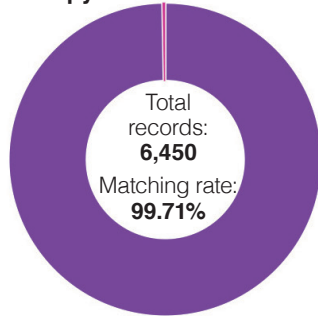
Radiology



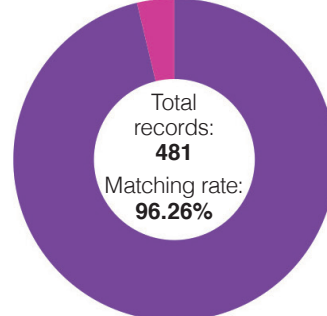
Pathology



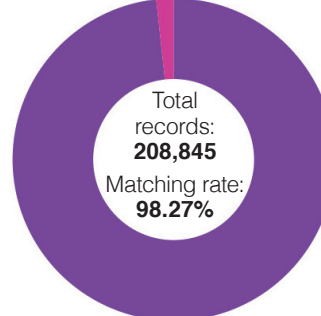
Endoscopy



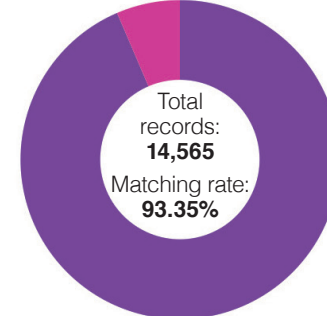
Cardio theatre



Ward



Theatre



PLICS toolkit for acute services – the basics

**Appendix C:
Sample reporting pack for clinicians
and operational managers**



PLICS toolkit reports

Sample reporting pack for clinicians and operational managers



PLICS reporting can enable clinicians to assess performance relative to peers, benchmarks and evidence-based practice guidelines.

As well as communicating financial metrics, PLICS reporting for clinicians may incorporate performance indicators such as clinical process, clinical outcomes, patient experience and measures of use of resources.

The clinician reporting pack ranges from specialty level to individual patient reporting.

Contents

- Patient bill
- Daily cost report
- Patient-level cost report
- Consultant average cost report
- Consultant average resource report
- Specialty portfolio report
- Summary HRG-level reports
- Breakdown of costs by resource type
- EBITDA report (earnings before interest, taxes, depreciation and amortisation)

PLICS toolkit reports – for clinicians/managers

Patient bill



Report summary: The patient bill report shows the costs and resources consumed by an individual patient care episode.

| Item | Label | Date | Quantity | Unit | Cost (£) | Income (£) | Net cost |
|---|---|----------|----------|------|--------------|-------------------|--------------------|
| MRN | Age: 60 Sex: F POD: EL Speciality: ORTHOPAEDICS | | | | | Total episode LOS | Days past FCE trim |
| Prim Diag: S831 | DISLOCATION OF KNEE | | | | | 6 | 0 |
| Prim Proc: W401 | PRIMARY TOTAL PROSTHETIC REPLACEMENT OF KNEE JOINT USING CEMENT | | | | | | |
| HRG: HB21C - MAJOR KNEE PROCEDURES FOR NON-TRAUMA CATEGORY 2 WITHOUT CC | | | | | | | |
| Diagnoses | F171: Mental and behavioural disorders due to use of tobacco: Harmful use | 12/01/16 | | | | | |
| Diagnoses | I10X: Essential (primary) hypertension | 12/01/16 | | | | | |
| Diagnoses | I252: Old myocardial infarction | 12/01/16 | | | | | |
| Diagnoses | M139: Arthritis, unspecified | 12/01/16 | | | | | |
| Diagnoses | Z922: Personal history of long-term (current) use of other medicaments | 12/01/16 | | | | | |
| Diagnoses | Z958: Presence of other cardiac and vascular implants and grafts | 12/01/16 | | | | | |
| Procedures | W401: Primary total prosthetic replacement of knee joint using cement | 12/01/16 | | | | | |
| Medical staff (ward rounds & junior doctors) | | 12/01/16 | | | 38 | | |
| Ward | Admissions lounge | 12/01/16 | 0.38 | Days | 199 | | |
| Theatres - anaesthetics | Theatre 1 | 12/01/16 | 120.00 | Mins | 672 | 0 | |
| Theatres - downtime | Theatre 1 | 12/01/16 | 32.33 | Mins | 232 | 0 | |
| Theatres - general | Theatre 1 | 12/01/16 | 63.00 | Mins | 471 | 0 | |
| Theatres - surgeon | Theatre 1 | 12/01/16 | 62.00 | Mins | 500 | 0 | |
| Implants | | 12/01/16 | | | 1,618 | 0 | |
| Radiology | X-ray right knee | 12/01/16 | 1.00 | Scan | 35 | 0 | |
| Ward | Ward 2 | 12/01/16 | 0.33 | Days | 69 | 0 | |
| Medical staff (ward rounds & junior doctors) | | 13/01/16 | | | 38 | 0 | |
| Pathology | P202: Urea & Electrolytes | 13/01/16 | 1.00 | Test | 4 | 0 | |
| Pathology | P103: Full Blood Count | 13/01/16 | 1.00 | Test | 6 | 0 | |
| Ward | Ward 2 | 13/01/16 | 1.00 | Days | 206 | 0 | |
| Medical staff (ward rounds & junior doctors) | | 14/01/16 | | | 38 | 0 | |
| Ward | Ward 2 | 14/01/16 | 1.00 | Days | 206 | 0 | |
| Medical staff (ward rounds & junior doctors) | | 15/01/16 | | | 38 | 0 | |
| Ward | Ward 2 | 15/01/16 | 1.00 | Days | 206 | 0 | |
| Pharmacy | D1000: Candesartan 2mg tablets | 16/01/16 | | | 1 | 0 | |
| Ward | Ward 2 | 16/01/16 | 0.78 | Days | 162 | 0 | |
| Pharmacy | D0014: Dihydrocodeine 30mg tablets | 17/01/16 | | | 1 | 0 | |
| Pharmacy | D1235: Docusate Sodium 100mg capsules | 17/01/16 | | | 3 | 0 | |
| Pharmacy | D0078: Tinzaparin sharps kit | 17/01/16 | | | 1 | 0 | |
| Episode-related costs (medical records, clinical coding) | | 17/01/16 | | | 56 | 0 | |
| Specialty-related costs (director management and admin) | | 17/01/16 | | | 298 | 0 | |
| Clinical Negligence Scheme | | 17/01/16 | | | 16 | 0 | |
| Contract income base tariff | HB21C: Major knee procedures for non trauma category 2 without CC | 17/01/16 | | | 0 | 5,846 | |
| Total | | | | | 5,129 | 5,846 | -717 |

PLICS toolkit reports – for clinicians/managers

Daily cost report

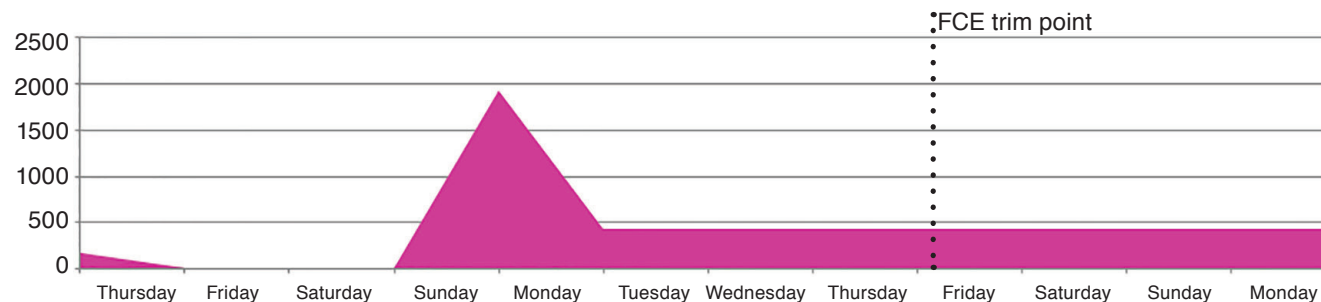


Report summary: The daily cost report shows the costs incurred by a particular patient on each day of their episode of care. This report can also be produced at HRG, procedure and diagnosis level. It is useful to identify how the costs vary over time and to identify the costs that are incurred beyond a certain point in time – for example, the average length of stay for that particular HRG.

Main users: Clinical directors, operational managers, clinicians, finance teams.

| Patient identifier | HRG | HRG description | Consultant ID | Episode start | Episode end | Activity | Length of stay | Total cost (£) | Total income (£) | Net profit (£) |
|--------------------|-------|--|---------------|---------------|-------------|--------------------|----------------|----------------|------------------|----------------|
| 95658563 | QZ15B | Therapeutic endovascular procedures with intermediate CC | 85858 | 16/03/2015 | 20/03/2015 | HRG tariff payment | 5 | 0 | 1480 | 1480 |
| 95658563 | QZ15B | Therapeutic endovascular procedures with intermediate CC | 85858 | 20/03/2015 | 23/03/2015 | Excess bed days | 4 | 0 | 188 | 188 |
| 95658563 | QZ15B | Therapeutic endovascular procedures with intermediate CC | 85858 | 16/03/2015 | 16/03/2015 | Theatre cost | 0 | 1501 | 0 | -1501 |
| 95658563 | QZ15B | Therapeutic endovascular procedures with intermediate CC | 85858 | 16/03/2015 | 20/03/2015 | Ward cost | 0 | 3825 | 0 | -3825 |
| 95658563 | QZ15B | Therapeutic endovascular procedures with intermediate CC | 85858 | 12/03/2015 | 12/03/2015 | Diagnostic cost | 0 | 120 | 0 | -120 |
| 95658563 | QZ15B | Therapeutic endovascular procedures with intermediate CC | 85858 | 12/03/2016 | 12/03/2016 | Outpatient cost | 0 | 43 | 0 | -43 |
| | | | | | | | 9 | 5489 | 1668 | -3821 |

The patient bill report can be set up to show the daily cost profile for the patient episode and to compare this to the trim point for the tariff.



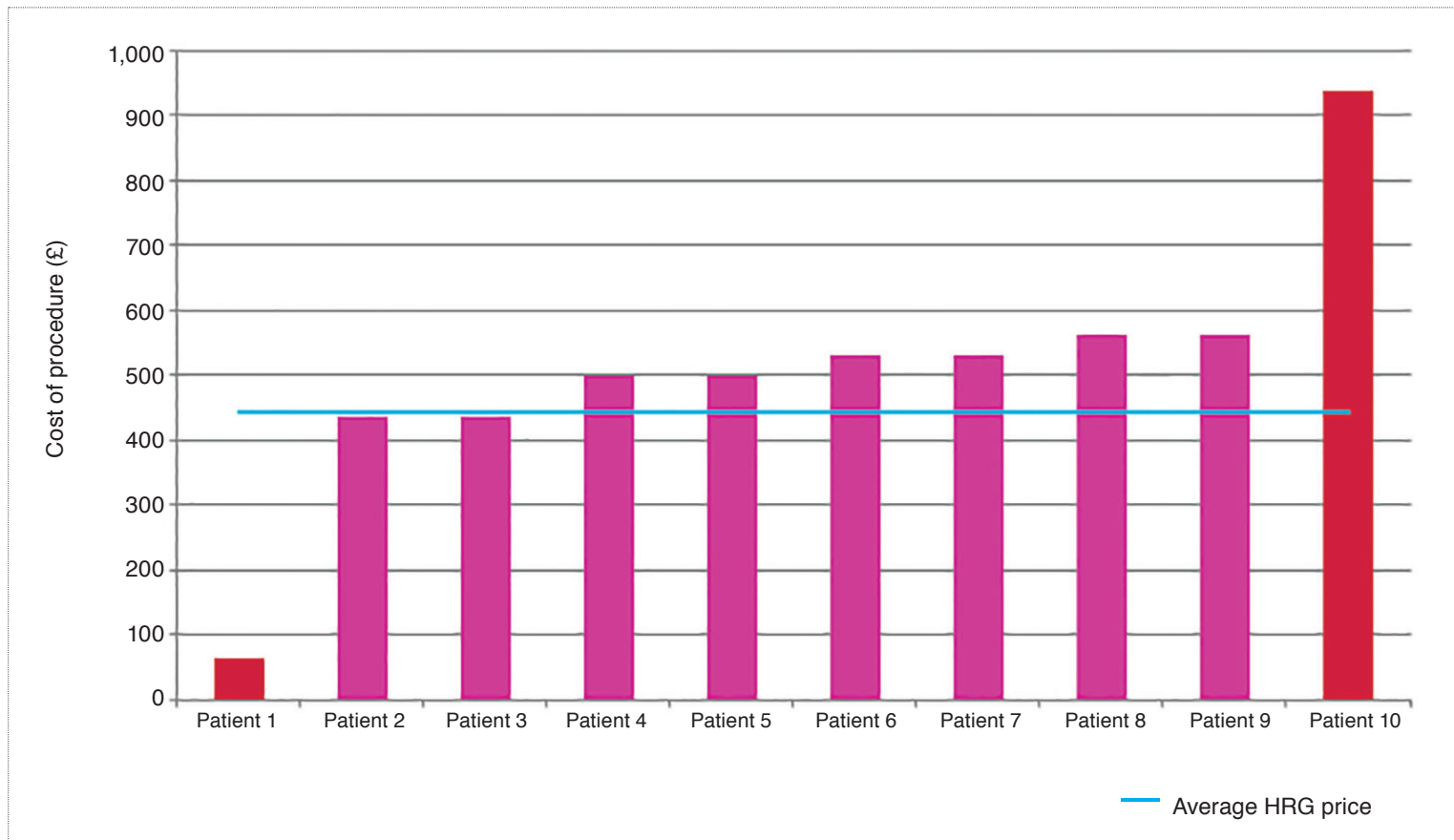
PLICS toolkit reports – for clinicians/managers

Patient-level cost report



Report summary: The patient-level cost report shows the cost and income attributed to individual patients. It can be produced for all patients within a particular HRG, procedure or diagnosis. It is useful to demonstrate the distribution of costs across patients and to identify outliers. Reports may be set up with the option to exclude outlying costs from the analysis.

Main users: Clinical directors, speciality leads, clinicians, finance teams.

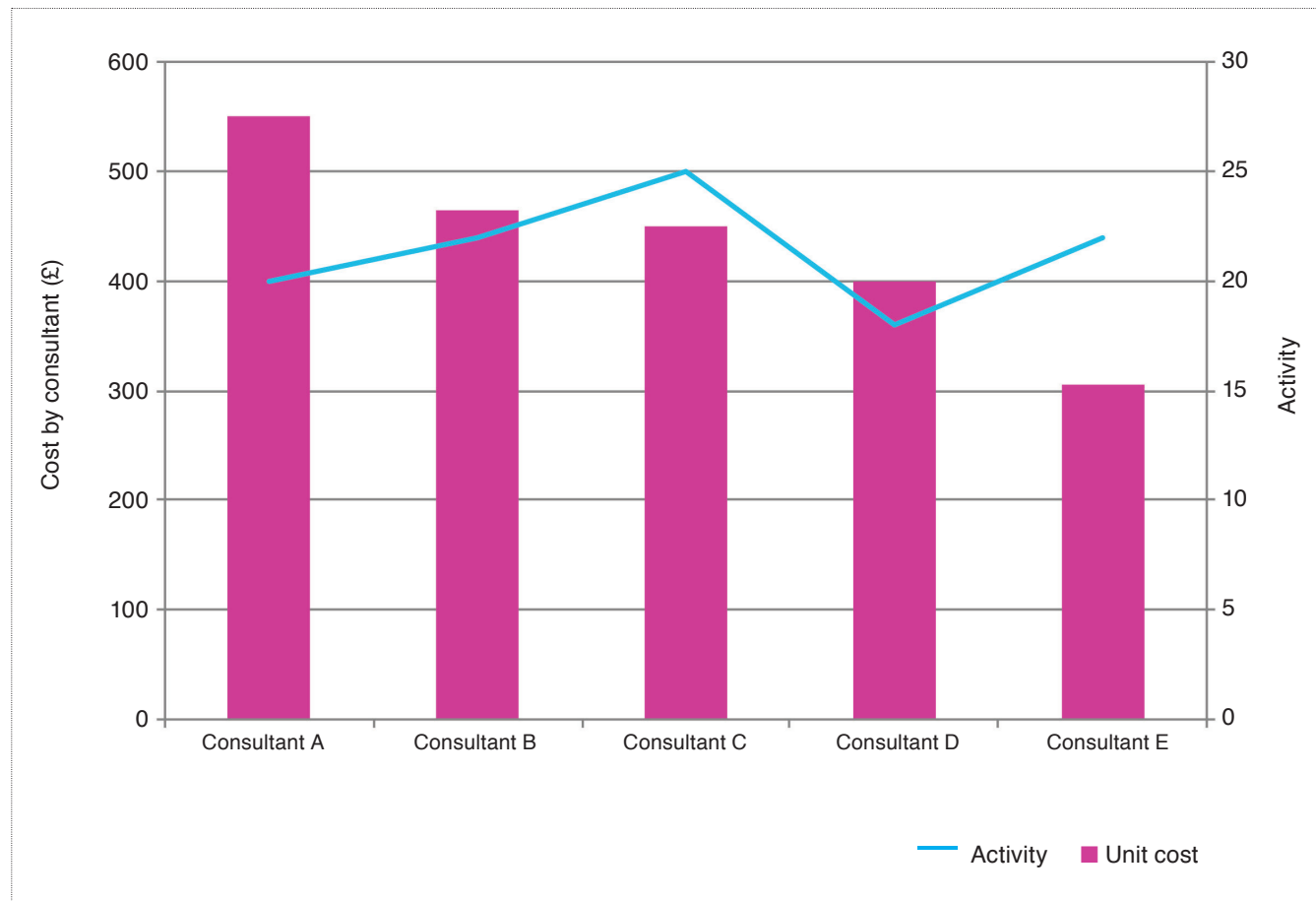


PLICS toolkit reports – for clinicians/managers

Consultant average cost report



Report summary: The average cost by consultant is shown with the number of finished consultant episodes plotted onto the graph. This report could be produced at HRG, procedure or diagnosis level.



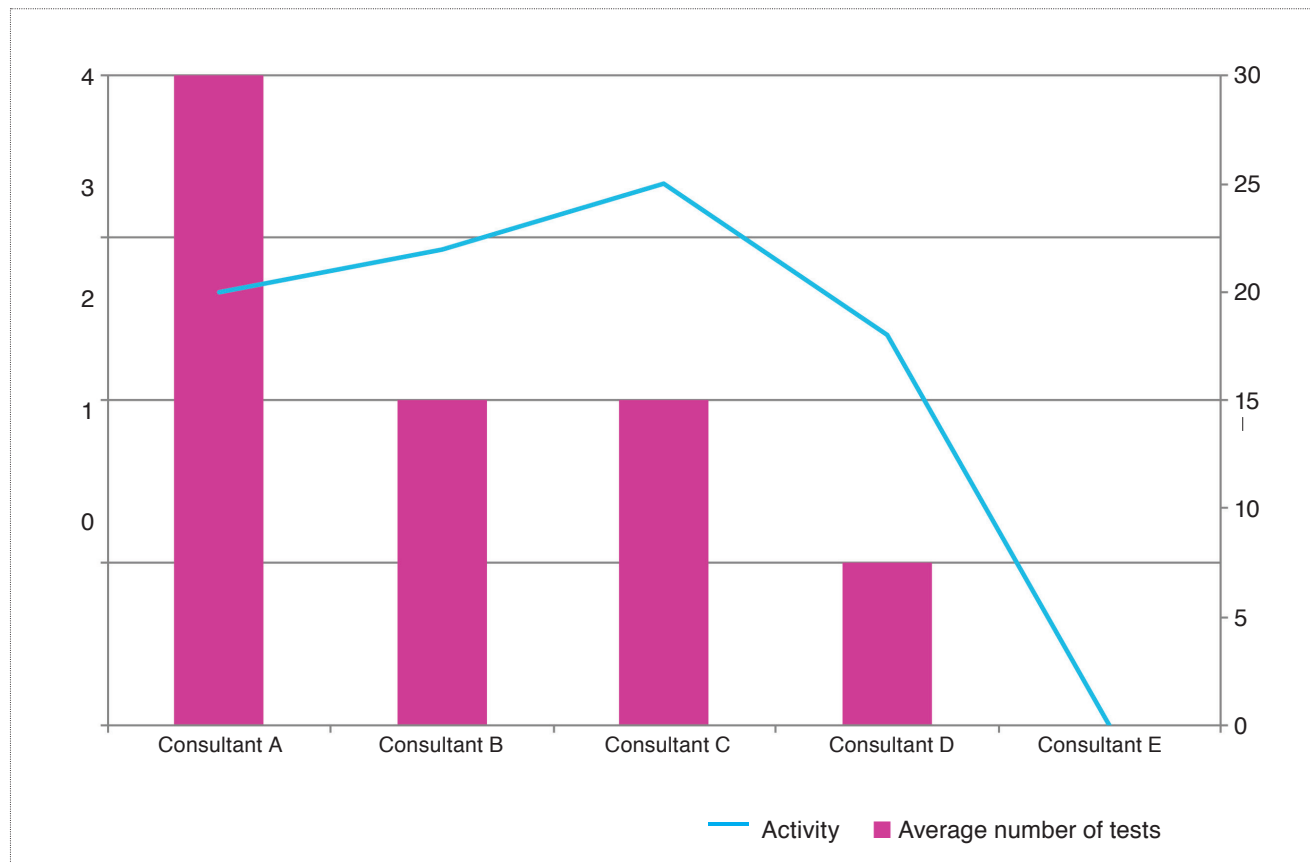
PLICS toolkit reports – for clinicians/managers

Consultant average resource report



Report summary: The average number of tests for each procedure is shown by consultant with the number of finished consultant episodes plotted onto the graph. This report could be produced at HRG, procedure or diagnosis level.

Main users: Clinical directors, speciality leads, clinicians, and finance department.



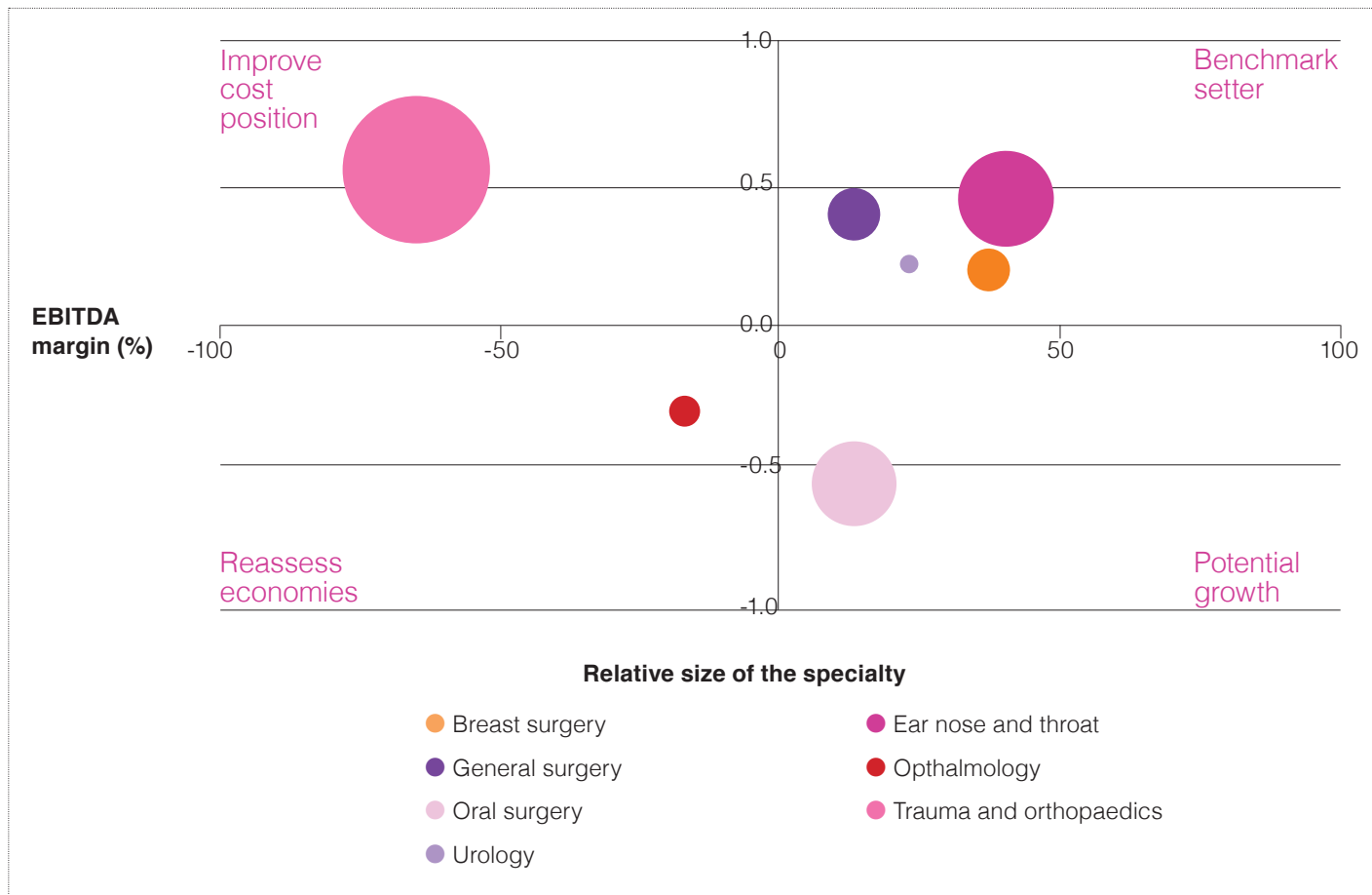
PLICS toolkit reports – for clinicians/managers

Specialty portfolio report



Report summary: This report presents a summary of financial performance in a portfolio matrix. The x-axis represents the EBITDA margin (%) and the y axis represents the relative size of the specialty. The size of each bubble represents the total income for each specialty. The position of the bubbles may be used to influence strategic discussions.

Main users: Board members, clinical directors, finance department, and operational managers.



PLICS toolkit reports – for clinicians/managers

Summary HRG-level reports



Report summary: This set of reports highlight which HRGs an organisation or service may wish to focus on. The first report below shows the five HRGs with the highest volume of activity. These will highlight the most common groups of patients treated within a service or organisation. Types of cost and income are broken down separately. EBITDA and net surplus/deficit are presented.

Main users: Clinical directors, finance department, operational managers, and clinicians.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|--|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | FZ47C | Non-malignant general abdominal disorders, with length of stay one day or less | 756 | -370 | 761 | 391 | -279,652 | 575,034 | 295,382 |
| 2 | DZ11A | Lobar, atypical or viral pneumonia, with major CC | 593 | -2,419 | 1,730 | -689 | -1,434,691 | 1,025,951 | -408,740 |
| 3 | NZ11B | Normal delivery without CC | 570 | -1,809 | 2,050 | 241 | -1,031,169 | 1,168,346 | 137,177 |
| 4 | PA08B | Intermediate injury without intracranial injury without CC | 511 | -336 | 669 | 333 | -122,387 | 243,960 | 121,573 |
| 5 | NZ14A | Emergency or upper uterine caesarean section, with CC | 214 | -2,257 | 3,133 | 876 | -482,940 | 670,465 | 187,525 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

PLICS toolkit reports – for clinicians/managers

Summary HRG-level reports (2)



Top five loss-making HRGs This report highlights the HRGs which make the greatest loss to an organisation or service. This provides a useful starting point for further investigations.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|---|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | LA04D | Kidney or urinary tract infections, with length of stay two days or more, with major CC | 351 | -3,824 | 2,501 | -1,323 | -1,342,062 | 877,748 | -464,314 |
| 2 | JC11Z | Other diagnostic skin tests | 285 | -1,584 | 146 | -1,438 | -451,463 | 39,130 | -412,333 |
| 3 | DZ11A | Lobar, atypical or viral pneumonia, with major CC | 593 | -2,419 | 1,730 | -689 | -1,434,691 | 1,025,951 | -408,740 |
| 4 | PB02Z | Minor neonatal diagnoses | 238 | -4,229 | 2,918 | -1,311 | -1,006,552 | 694,443 | -312,109 |
| 5 | SA05F | Megaloblastic anaemia without CC | 193 | -1,196 | 274 | -922 | -230,823 | 53,450 | -177,373 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

PLICS toolkit reports – for clinicians/managers

Summary HRG-level reports (3)



Top five most profitable HRGs (by volume) This report shows the HRGs which generate the greatest profit for a particular service or organisation.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) |
|------|-------|--|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|
| 1 | FZ47C | Non-malignant general abdominal disorders, with length of stay one day or less | 756 | -370 | 761 | 391 | -279,652 | 575,034 | 295,382 |
| 2 | AA22A | Non-transient stroke or cerebrovascular accident, nervous system infections or encephalopathy, with CC | 152 | -2,009 | 3,783 | 1,774 | -305,296 | 574,994 | 269,698 |
| 3 | NZ11E | Normal delivery with induction, with CC | 198 | -2,074 | 3,178 | 1,104 | -410,741 | 629,212 | 218,471 |
| 4 | NZ14A | Emergency or upper uterine caesarean section, with CC | 214 | -2,257 | 3,133 | 876 | -482,940 | 670,465 | 187,525 |
| 5 | NZ11A | Normal delivery with CC | 161 | -1,853 | 2,997 | 1,144 | -298,277 | 482,567 | 184,290 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

PLICS toolkit reports – for clinicians/managers

Summary HRG-level reports (4)



Top five HRGs with the greatest cost variation This report shows the HRGs where there is the greatest variation in cost between individual patients for a particular service or organisation.

| Rank | HRG | HRG description | Activity | Unit cost (£) | Unit income (£) | Unit profit/loss (£) | Total cost (£) | Total income (£) | Total profit/loss (£) | Minimum cost (£) | Median cost (£) | Maximum cost (£) | Standard deviation |
|------|-------|---|----------|---------------|-----------------|----------------------|----------------|------------------|-----------------------|------------------|-----------------|------------------|--------------------|
| 1 | FZ01A | Complex oesophageal procedures 19 years and over with CC | 445 | -9,910 | 11,011 | 1,101 | -4,409,950 | 4,899,895 | 489,945 | -8,721 | -10,901 | -13,081 | 2,616 |
| 2 | FZ67B | Major small intestine procedures 19 years and over without CC | 201 | -2,655 | 2,950 | 295 | -533,655 | 592,950 | 59,295 | -2,336 | -2,921 | -3,505 | 701 |
| 3 | HA25B | Minor knee procedures category 2 for trauma with CC | 14 | -2,435 | 2,706 | 271 | -34,090 | 37,884 | 3,794 | -2,143 | -2,679 | -3,214 | 643 |
| 4 | HA14C | Minor hip procedures for trauma without CC | 702 | -1,816 | 1,513 | -303 | -1,274,832 | 1,062,126 | -212,706 | -1,598 | -1,998 | -2,397 | 479 |
| 5 | PA26A | Other gastrointestinal or metabolic disorders with CC | 238 | -1,432 | 1,591 | 159 | -340,816 | 378,658 | 37,842 | -1,260 | -1,575 | -1,890 | 378 |

Organisations may wish to use the top 10 HRGs rather than the top five if they are looking at trust-wide information or a larger specialty or service.

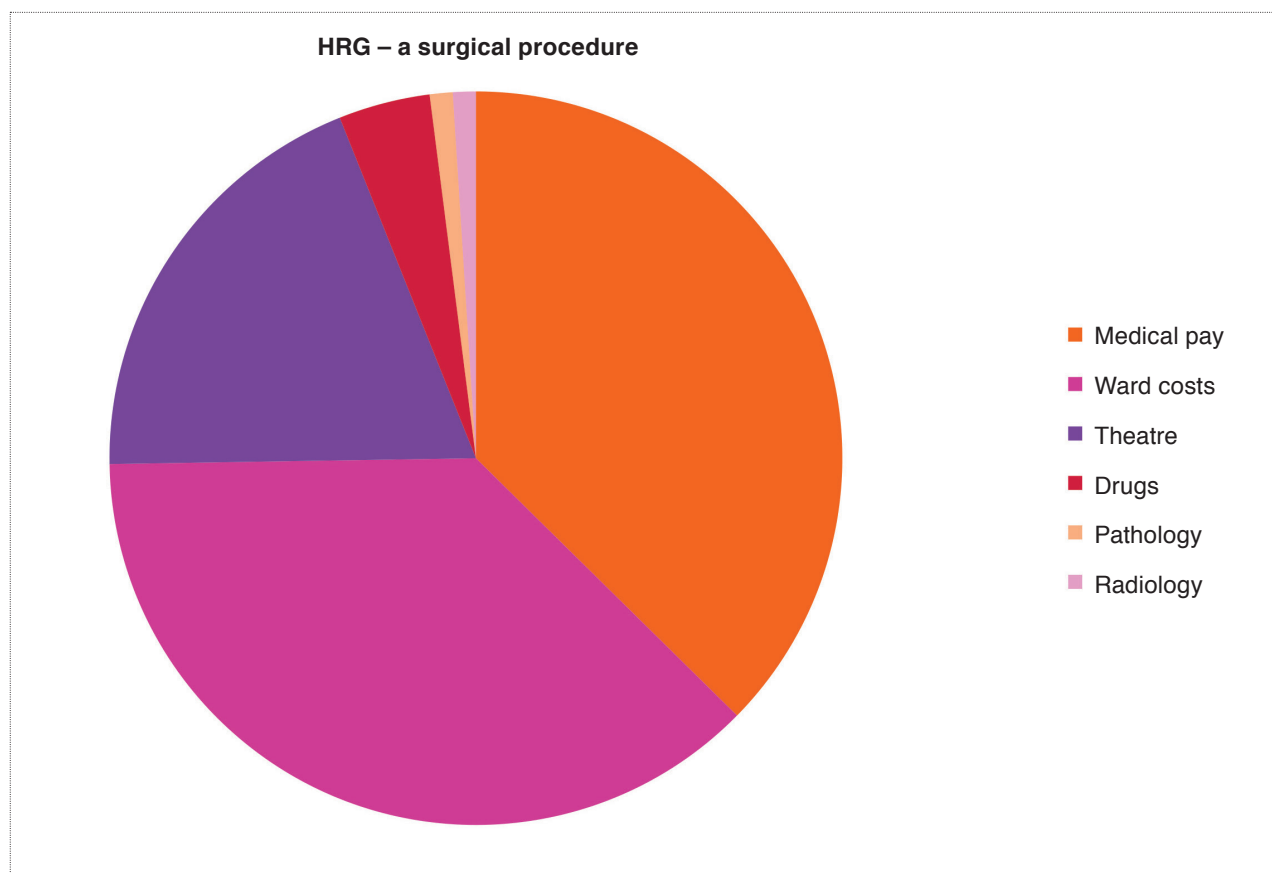
PLICS toolkit reports – for clinicians/managers

Breakdown of costs by resource type



Report summary: This report shows the breakdown of costs by resource type. It can be a useful report to present at specialty level, as it highlights which resources drive the cost.

Main users: Clinical directors, speciality leads, clinicians, finance teams.



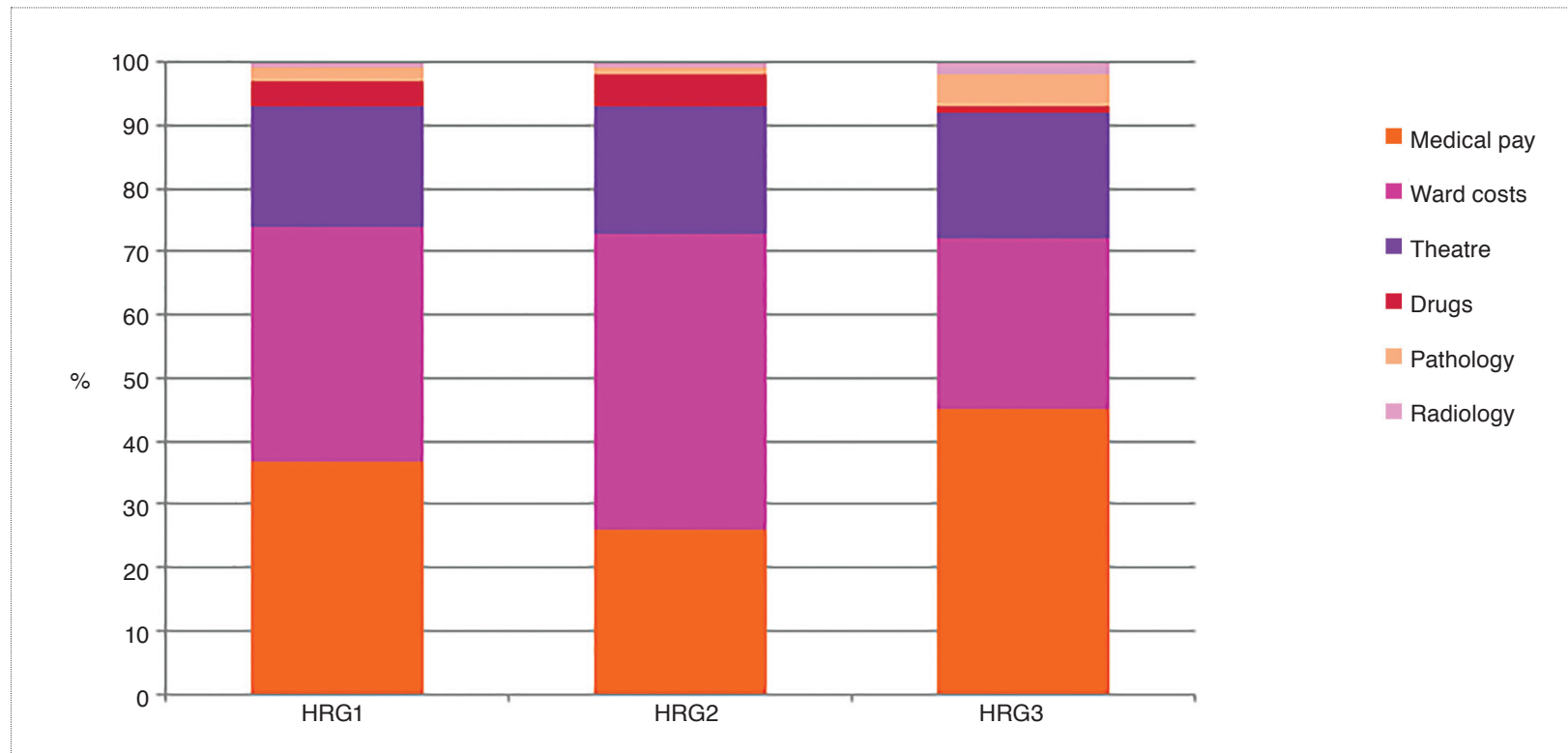
PLICS toolkit reports – for clinicians/managers



Breakdown of costs by resource type (2)

Report summary: This report shows the breakdown of costs by resource type. It can be a useful report to present at HRG, procedure, diagnosis or consultant level, as it highlights which resources drive the cost.

Main users: Clinical directors, speciality leads, clinicians, finance teams.



PLICS toolkit reports – for finance teams

EBITDA report (earnings before interest, taxes, depreciation and amortisation)



Report summary: The EBITDA report shows a summary of financial performance by directorate. Types of cost and income are broken down separately. EBITDA and net surplus/deficit are presented.

Main users: Board members, clinical directors, finance department, and operational managers.

| Directorate | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|----------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Medical division | 50,110 | 26,908,082 | 30,595,825 | 15,498,863 | 6,411,177 | 4,998,042 | 5,980,874 | -982,832 | 2,704,911 | -3,687,743 | |
| Surgical division | 43,304 | 20,321,756 | 19,729,859 | 12,376,452 | 2,661,468 | 5,283,836 | 3,080,855 | 2,202,981 | 1,611,084 | 591,897 | |
| Women's & children's | 48,247 | 19,708,454 | 19,863,796 | 14,375,449 | 1,584,458 | 3,748,547 | 3,013,707 | 734,840 | 890,182 | -155,342 | |
| Clinical support | 6,257 | 1,277,818 | 1,512,731 | 115,973 | 1,125,572 | 36,273 | 211,143 | -174,870 | 60,043 | -234,913 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 147,918 | 68,216,110 | 71,702,211 | 42,366,737 | 11,782,675 | 14,066,698 | 12,286,579 | 1,780,119 | 5,266,220 | -3,486,101 | |

This report can also show financial performance at more granular levels, such as specialty level, as shown below.

| Specialty | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin |
|------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|
| Breast surgery | 3,351 | 798,157 | 518,030 | 295,368 | 138,208 | 364,581 | 69,165 | 295,416 | 15,289 | 280,127 | |
| Cardiothoracic surgery | 30 | 10,388 | 3,024 | 2,232 | 279 | 7,877 | 426 | 7,451 | 87 | 7,364 | |
| Clinical oncology | 1,839 | 1,178,076 | 729,903 | 310,762 | 301,111 | 566,203 | 83,359 | 482,844 | 34,671 | 448,173 | |
| Colorectal surgery | 2,116 | 407,400 | 249,521 | 159,568 | 49,907 | 197,925 | 32,981 | 164,944 | 7,065 | 157,879 | |
| Ear, nose and throat | 8,684 | 2,289,908 | 2,115,162 | 1,505,856 | 162,168 | 621,884 | 313,624 | 308,260 | 133,514 | 174,746 | |
| General surgery | 4,990 | 5,089,468 | 6,624,814 | 4,317,721 | 439,891 | 331,856 | 1,187,295 | -855,439 | 679,907 | -1,535,346 | |
| Oral surgery | 1,855 | 513,921 | 477,775 | 334,246 | 43,973 | 135,702 | 69,083 | 66,619 | 30,473 | 36,146 | |
| Plastic surgery | 957 | 132,097 | 75,208 | 53,954 | 7,893 | 70,250 | 11,059 | 59,191 | 2,302 | 56,889 | |
| Trauma/orthopaedics | 14,308 | 6,879,090 | 7,468,479 | 4,187,470 | 1,663,010 | 1,028,610 | 1,108,096 | -79,486 | 509,903 | -589,389 | |
| Urology | 5,266 | 1,824,101 | 1,498,973 | 983,901 | 192,231 | 647,969 | 226,074 | 421,895 | 96,767 | 325,128 | |
| Vascular surgery | 620 | 132,045 | 57,416 | 44,020 | 3,939 | 84,086 | 7,866 | 76,220 | 1,591 | 74,629 | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | |
| Total | 44,016 | 19,254,651 | 19,818,305 | 12,195,098 | 3,002,610 | 4,056,943 | 3,109,028 | 947,915 | 1,511,569 | -563,654 | |

Please note: these reports use sample information for some directorates and surgical specialties and are for illustrative purposes only

PLICS toolkit reports – for clinicians/managers

EBITDA report (2)



This EBITDA report is shown by point of delivery. This may be useful when analysing a particular specialty, to identify whether different elements of the service have differing financial positions.

| Point of delivery | Activity | Income (£) | Total costs (£) | Direct (£) | Indirect (£) | Contribution (£) | Overhead (£) | EBITDA (£) | Depreciation (£) | Net surplus/deficit (£) | EBITDA margin | |
|-----------------------------|----------|------------|-----------------|------------|--------------|------------------|--------------|------------|------------------|-------------------------|---------------|--|
| Elective | 2,597 | 5,505,640 | 2,639,170 | 1,978,209 | 660,961 | 2,866,470 | 550,564 | 2,315,906 | 1,856,504 | 459,402 | | |
| Non-elective | 713 | 1,654,160 | 1,592,957 | 1,300,497 | 292,460 | 61,203 | 181,958 | 120,755 | 1,658,480 | 1,779,235 | | |
| Day case | 411 | 953,520 | 1,583,393 | 1,420,051 | 163,342 | 629,873 | 266,986 | 896,859 | 909,911 | 1,806,770 | | |
| Outpatient first attendance | 620 | 31,000 | 235,593 | 119,560 | 116,033 | 204,593 | 2,790 | 207,383 | 60,566 | 267,949 | | |
| Outpatient follow-up | 1,505 | 30,100 | 183,943 | 23,560 | 160,383 | 153,843 | 3,311 | 157,154 | 60,566 | 217,720 | | |
| Outpatient procedures | 62 | 3,100 | 23,643 | 11,960 | 11,683 | 20,543 | 372 | 20,915 | 6,566 | 27,481 | | |
| Block payment | 1 | 250,000 | 130,700 | 115,560 | 15,140 | 119,300 | 37,500 | 81,800 | 171,003 | 89,203 | | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | | |
| Total | 5,909 | 8,427,520 | 6,389,399 | 4,969,397 | 1,420,002 | 2,038,121 | 1,043,480 | 994,641 | 4,723,596 | 3,728,955 | | |



Published by the Healthcare Financial Management Association (HFMA)

1 Temple Way, Bristol BS2 0BU

Telephone: 0117 929 4789

Email: info@hfma.org.uk

Web: www.hfma.org.uk

The lead author was Helen Strain, independent consultant, under the direction of Catherine Mitchell, the HFMA's head of costing and value.

While every care has been taken in the preparation of this publication, the publishers and authors cannot in any circumstances accept responsibility for error or omissions, and are not responsible for any loss occasioned to any person or organisation acting or refraining from action as a result of any material within it

© Healthcare Financial Management Association 2016. All rights reserved

The copyright of this material and any related press material featuring on the website is owned by Healthcare Financial Management Association (HFMA). No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopy, recording or otherwise without the permission of the publishers.

Enquiries about reproduction outside of these terms should be sent to the publishers at info@hfma.org.uk or posted to the above address. Published April 2016