PLICS data quality tool: user guide

October 2017
We support providers to give patients safe, high quality, compassionate care within local health systems that are financially sustainable.
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Contact costing@improvement.nhs.uk for further queries or support on the PLICS data quality tool.
Introduction

What is the PLICS data quality tool?

We have developed the PLICS data quality (DQ) tool to present NHS providers with an interactive view of data from their patient-level information and costing systems (PLICS). It aims to improve data quality and help providers identify and address any outliers in their data.

The tool extracts nationally collected PLICS data and combines it with hospital episode statistics (HES) data to enable providers to identify cost outliers on several levels. It also allows them to identify potential data quality and costing quality issues. The tool gives users access to a range of specific reports based on their PLICS submission.

Accessing the portal

Access to the portal is via our website’s identity management service, OKTA. This acts as a central entrance point to many of our existing tools including the Model Hospital. To access the log-in, click on ‘My account’ at the top right of the NHS Improvement home page (https://improvement.nhs.uk/).

At the log-in page, enter your username and password:

If you don’t have log-in details, please contact costing@improvement.nhs.uk

You must agree to the Terms and Conditions before continuing to the tool.
Using the tool

General use

Filters: The tool’s interactive reports contain filters. These allow users to customise the report to fit their individual needs and drill down into specific data. Once a filter is selected, the report will update to reflect a user’s specifications.

Tool tips: Hover over graphs, reference lines, tabs, tables to view more details.

Highlighting: When you click on a graph or a legend for a graph, all of the graphical elements that are associated with that data point will be highlighted. To remove the highlighting, click again (sometimes twice) on the same graphical element.

Navigating the reports

Tabs: Some reports have tabs across the top of the screen, which contain different views of the data. To move to a different report, just click on the tab.

Home: You can click on home to return to the home page at any time to change your provider, peers, financial year, and to select on other reports you want to view.
Select peers

This is where you select your provider and peers to compare with.

Selections are made using the filters to the left. The steps to follow are:

1. **Select your provider using the Select your provider filter.**

2. **Then select peer providers to include in comparisons in the ‘Select your peers’ filter.** Click on the check box next to each chosen provider and then click ‘Apply’. **You MUST include your own provider in this selection. If you do not do this, you will not see any data.**

3. **You can also filter the list of peers by using Filter peers by provider size and Filter peers by provider type.** Your selections here affect patient cost index, activity, resource and CAT reports.
4. Select the financial year you are interested in. You can select from more than one financial year.\(^1\)

5. Select whether to have the cost adjusted by market forces factor (MFF) from all calculations. By default, data will be MFF-adjusted but this filter allows you to choose between the two options.

**Other functions**

**Buttons**

A range of buttons appears above an interactive report. See below for what they do, and how you can use them:

- **Download**: This button allows the user to export the report and its data.

- **PDF**: A user can download the current dashboard or the entire report as a PDF, allowing you to print what you see.

- **Image**: This allows a user to save an image of the current graph (i.e. with current filters applied).

- **Data**: The data feeding the report will open in a new window. This data can then be downloaded as a text file.

- **Crosstab**: Download the data from the dashboard into Excel by selecting any of the data from the report.

- **Revert**: This button allows the user to clear all filters and view the original report.

- **Pause/Resume**: As you interact with a report, you may find the report takes some time to update any changes made with a filter. Use the ‘Pause’ button to delay those changes from occurring as you update the filters. Once you have selected all filters you desire, click the ‘Resume’ button to update the report.

\(^1\) Currently the tool will only show data for the financial year 2016/17.
**Plus [+] button:** This button expands any table to reveal an additional level of detail to a visualisation (similar to a pivot table in Excel). Text reading ‘Click [+] icon…’ will display where this function is available.
Key terms

**Activity**: A measurable amount of work performed using resources to deliver elements of patient care.

**Activity group**: A set of activities with shared characteristics.

**Activity report**: Compares each provider’s percentage usage of each activity group/activity with the average cost of the same activity for selected peers. Activity groups with highest usage variance will be highlighted.

**Casemix**: A system whereby the complexity (mix) of the care provided to a patient (case) is reflected in an aggregate secondary healthcare classification. Casemix-adjusted payment means that providers are not just paid for the number of patients they treat in each specialty, but also for the complexity or severity of the mix of patients they treat.

**Casemix checks**: Report summarising the number of potential issues and the potential issue values.

**Duplicate epis/atttd checks**: Checks the HRGs where episode/attendance have the same cost. The top 10 HRGs where epis/atttd have the same cost are listed, presented by percentage of duplicated epis/atttd cost, duplicate cost count, total duplicated epis/atttd cost.

**Expected cost/activity count checks**: Expected cost and expected activity count checks summarise the number of potential issues and the potential issue values.

**GAPI data**: The Group Advising on Pricing Implementation (GAPI) is a pilot project to see if reported costs align with clinical expectation for seven HRGs linked to orthopaedics. The data presented will be the provider costs for the seven HRGs mentioned, along with their costs from Reference Costs.

**Improbable/impossible checks**: Improbable check is a filter that highlights any unlikely combinations of HRG and POD. Impossible check is a filter that lists any combinations that cannot be expected to occur together.
**Market forces factor (MFF):** An index used to estimate the unavoidable cost differences of providing healthcare.

**Patient cost index (PCI):** An index which compares each provider’s average patient-level cost of an activity with the average cost of the same activity for selected peers, multiplied by 100. A trust with a PCI of 100 has costs equal to the peer average; a trust with an index of 110 costs 10% more than the peer average and one with an index of 90 costs 10% less.

**PCI by healthcare resource groups (HRGs):** PCI compared at HRG level. HRGs are standard groupings of clinically similar diagnosis and procedure codes that use similar levels of resources.

**PCI by ICD-10:** PCI compared at ICD-10 level. ICD-10 is the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD), a medical classification list produced by the World Health Organization (WHO).

**PCI by OPCS:** PCI compared at OPCS level. The OPCS Classification of Interventions and Procedures (OPCS-4) is a Fundamental Information Standard which is revised periodically. The classification is used by healthcare providers and national and regional organisations.

**PCI by point of delivery (POD):** PCI compared at POD level. POD is the department within a hospital where a procedure/intervention is carried out.

**PCI by treatment function code (TFC):** PCI compared at TFC level. TFC is a unique identifier for a treatment function. A treatment function is a division of clinical work based on main specialty, but incorporating approved sub-specialties and treatment interests used by lead care professionals including consultants.

**Patient-level costing:** The practice of allocating costs to individual patients by recording and/or calculating the support resources and patient-facing resources consumed in activities related to patient care.

**Patient-level costs:** Calculated by tracing individual patients’ actual resource use. Patient-level costs are the output of patient-level information and costing systems.
**Patient-level information costing system (PLICS):** Systems that combine activity, financial and operational data to cost individual episodes of patient care.

**Reference costs:** Reference costs are the average unit cost to the NHS of providing defined services in a given financial year to NHS patients in England.

**Resource report:** Compares each provider’s percentage usage of each resource with the average cost of the same resources for selected peers. Resources with highest usage variance will be highlighted.

**Sense checks report:** A check on data submitted by providers that seeks to filter out data not within a specified norm. It is aimed at reducing errors made due to inaccurate data input.

**Small numbers suppression:** Information about an individual that is not public must not be identifiable, or able to be deduced from the data from the PLICS data quality tool. Figures that may identify individuals when subtracted from totals, subtotals or other published figures must be suppressed.