Data Quality Assurance

Board Update

Date: 2nd July 2014

Contents

Background and context

1. Good quality data are, and have always been, a key part of improving services through informed decision making, regardless of whether those decisions affect a single individual or the whole of the health and social care system.

2. The Francis report and Dame Fiona Caldicott's review of information governance both acknowledged this by highlighting issues with data quality in health and social care and the impact these issues have on direct and indirect uses of data.

3. The HSCIC's statutory data quality role is to assess the extent to which the data it collects meets applicable published standards and to publish the results of the assessments. In addition, the HSCIC may give advice or guidance on data quality relating to the collection, analysis, publication or other dissemination of data and information

4. The Secondary Uses Service (SUS) data quality processes give a good example of how the HSCIC carries out this role. The high level processes are:

    a. XML schema validation prior to submitting data to SUS which may result in submission rejections or data quality warnings dependent on the severity of the validation issue

    b. Data quality assessment of key data items on receipt of the SUS data resulting in the publication of data quality dashboards and KPIs which give data providers the opportunity to resolve any data quality issues prior to full reconciliation of the monthly SUS data

    More detailed information, including user guidance, can be found on the HSCIC website at http://www.hscic.gov.uk/susguidance

5. However, in CFH and the NHS IC each programme area had responsibility for data quality assurance. As a consequence, programme teams developed different processes and tools. This has resulted in inconsistent inputs to and outputs from data quality assurance processes. Attempts to implement a standardised approach were not successful.

6. A high-level common service model approach to data quality assurance is shown in figure 1 below.
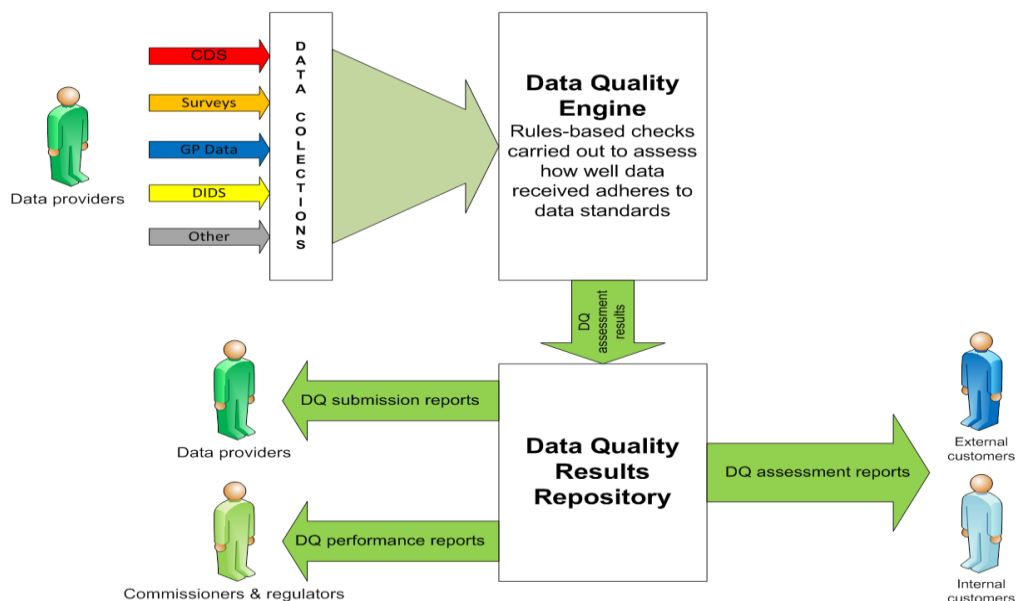
7. Developing this model by building on the best of successful internal HSCIC processes and recognised international best practice, e.g. the Canadian Institute for Health Information (CIHI), would give the following benefits:

    a. An increase in productivity and efficiency through the use of common automated assessment processes where practicable

    b. An understanding of stakeholders data quality reporting requirements and the consistent production of reports in the formats and timeframes they specify

    c. Giving all providers and users of data a consistently high standard of data quality support and service irrespective of the programme area they work with

8. The Productivity and Efficiency team in the Data and Information Services directorate is responsible for the development and implementation of standardised data quality assurance processes and tools in the current HSCIC. It is also responsible for monitoring and reporting on their consistent use. To support this work, the Head of Data Quality moved to the team from the Information Governance team in January 2014. This paper updates the Board on the progress being made on key aspects of this work.

Data quality assurance

Making data quality information accessible

9. Making information about our data quality assurance activities accessible allows users and providers of data to understand what we do, and why, and provides them with the opportunity to suggest further improvements to meet their current and future requirements. It also demonstrates that we meet our statutory data quality assurance obligations.

10. A single web page will be developed to give a single point of access to all HSCIC data quality information and is expected to go live in December 2014. This page will include links to data quality metadata for data assets recorded in our information register. It will also give access to the data quality results output from the HSCIC's data quality assessment processes for each data provider expected to submit mandatory data collections, which include:

Commissioning Datasets	Clinical Datasets
Accident And Emergency	Diagnostic Imaging
Out-Patient	Improving Access to Psychological Therapies
Finished Birth Episode	Mental Health (V4-1)
Finished General Episode	National Cancer Waiting Times Monitoring
Finished Delivery Episode	NHS Health Checks
Other Birth	Sexual and Reproductive Health Activity
Other Delivery	
The Detained and/or Long Term Psychiatric Census	
Unfinished Birth Episode	
Unfinished General Episode	
Unfinished Delivery Episode	

11. These results will give data providers and users an understanding of the quality of data submitted and will allow the identification of areas requiring improvement and areas of good practice which could be shared.

Data quality assurance key performance indicator

12. The current data quality KPI, although providing useful management information, does not monitor the performance of the data quality assurance processes that the HSCIC can control. A new data quality KPI is being developed which supports the work on making data quality information accessible and the delivery of the benefits associated with that work. It will go live in September 2014 and will allow direct management of performance.

13. The KPI will be reported in two parts:

    a. Percentage of key data assets for which the data quality assessment methodology is documented and can be accessed easily by data providers and users

    b. Percentage of key data assets for which the results of data quality assessments are reported and can be accessed easily by data providers and users.

Working with partners

14. Because our partners have the contractual and financial powers to force improvement, we need to work with them to understand what information they can use from our data quality assurance activities to influence providers.

15. A meeting has been arranged with Monitor's Pricing Enforcement director on 1st July 2014 to establish how we can work together to develop data quality enforcement processes and tools. How both organisations can work together to support reporting and investigation into the proposed False or Misleading Information (FOMI) offences will also be discussed. This is an important area of collaboration for the HSCIC as it is only through organisations such as regulators and commissioners that real pressure can be brought to bear on data providers that need to improve the quality of their data.

16. A meeting has already taken place with Monitor's National Tariff team to understand some issues they highlighted with HES data and how we could support their resolution. It also allowed the SUS/HES data quality team to describe their processes to Monitor. They appreciated this insight and have requested further input to other Monitor teams.

Escalation process for significant data quality issues

17. An escalation process for data provider data quality issues that significantly affect usability is in the latter stages of development. The process starts when advice and guidance on the resolution of data quality issues has been ignored by data providers. The escalation will be via formal letter and the proposed escalation route is:

    a. Data provider Senior Information Risk Owner

    b. Data provider Chief Executive

    c. Commissioners of service from the data provider

    d. NHS England, Monitor and CQC

18. All escalations will be tracked and the results of the escalations monitored for effectiveness and potential process improvement.

19. Once the proposed False or Misleading Information (FOMI) offences are agreed the escalation process will be reviewed to establish how FOMI reporting requirements can be incorporated.

Establishing the data which each organisation should submit

20. Establishing which organisations we expect to receive data from is vital to measuring an important aspect of data quality, i.e. coverage. Being unable to measure coverage means that we are unable to:

    a. Assess and report on data provider performance against their contractual data provision commitments

    b. Establish whether or not the data we use and share may have been skewed or biased in any way as a result of non-provision of expected data

21. The HSCIC, including NHS Choices, does not have access to the level of information needed at present and requests for this information from CQC and Monitor have been unsuccessful, although everyone agrees that it would be useful. The problem is that data provider information is available at organisation level rather than service provision level. This makes it difficult to determine which organisations should be submitting which data, as most data is requested at service level, e.g. inpatient, outpatient, and psychological therapies.

22. A letter and tool to collect this information at the required level has been developed but, as it involves collecting data from CCGs on a recurring basis to ensure the list is kept up to date, the data collection tool needs to be approved by the Standardisation Committee for Care Information (SCCI) to ensure that the HSCIC meets its statutory responsibility to seek to minimise the burden of data collections and fulfils its obligations as a signatory to the concordat to reduce the burden of national requests for information. It will be submitted to SCCI in the week commencing 30th June 2014.

HSCIC annual data quality assurance report

23. Last year's HSCIC annual report on data quality (Appendix 1) focussed on the HSCIC's current and planned data quality activities and capabilities; data quality performance; key data quality issues experienced by the HSCIC; and what the HSCIC perceives to be good and poor data quality practice by organisations submitting data to the HSCIC. The key points from the report were:

    • It re-emphasised the importance of good quality data to the health and social care sectors, especially in light of the findings and recommendations in the recent report by Mr Robert Francis QC on the Mid Staffordshire NHS Foundation Trust Public Inquiry and Dame Fiona Caldicott's review of information governance

    • The HSCIC's statutory data quality role is only one element of several required to fully support the continuous improvement of data quality across the health and social care sectors

    • There is an issue with regard to the validity of data as opposed to the accuracy of data. Valid data meet published standards and are then used confidently for 'secondary uses', i.e. purposes other than direct clinical care. However, valid data are not necessarily accurate, and the use of inaccurate data in direct clinical care can compromise patient safety. The HSCIC needs to work with its partners to understand the extent and impact of this issue and agree how to resolve it, e.g. by:

        a. Understanding the breadth and depth of data recorded for direct clinical care more fully and making better use of them for secondary purposes

    b. Understanding that data quality requirements are driven by the intended use of data and that the methods used to assess, report and manage data quality will necessarily vary by use and, consequently, by user group

    c. Extending the auditing of data quality beyond Payment by Results to other areas where poor data quality could impact most on direct clinical care

- The HSCIC undertakes a range of data quality activities but needs to continue to work on improving the consistency of these activities and the level of capability across programme areas supported by clear data management processes and policies

- The HSCIC gives data quality advice and guidance to organisations and will continue to do so. However, organisations who submit data to the HSCIC are ultimately responsible for the quality of that data and for continuously improving its fitness for operational and strategic use

24. The objectives of this year's report are to:

- Describe the HSCIC's data quality strategy and objectives

- Describe how data quality assurance is being included in new processes being developed by the HSCIC for data collection, storage and processing

- Give an update on the programme area plans for data quality assessment and reporting described in last year's report

- Provide links to data quality assessment methodologies for key data assets to show the work being done by the HSCIC.

- Provide links to the reports output from the HSCIC's data quality assessments which show the quality of nationally submitted health and social care data for key data assets

- Provide two or three detailed case studies highlighting projects that have improved data quality and describing the benefits delivered through those improvements, one being Moorfield Eye Hospital's OpenEyes project

25. The assessment methods used and reports produced will be analysed and recommendations made for improvement in terms of the use of evidence based practice and its consistent application. After the improvements have been made, the processes will be recommended for use in all areas where data quality assessment and reporting activities take place, and their uptake monitored and reported.

Internal data quality assurance audit

26. A data quality assurance audit by our internal auditors, PwC, is also planned. A preliminary meeting was held on 12th July 2014 to discuss scope, which will focus on customer requirements and process development, use and transparency. Terms of reference for the audit are being produced by PwC.

Actions Required of the Board

27. The Board are asked to note the progress to date and support and engage with future data quality assurance activities.

Appendix 1 – HSCIC Annual Report on Data Quality 2013

http://www.hscic.gov.uk/catalogue/PUB11530/second-annu-data-qual-rep-2013.pdf