

health

Department of Health

Data Integrity Guidelines for Health Services

August 2014

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Introduction

The guidelines provided in this document are intended to assist health services in meeting the requirements for accuracy, integrity and transparency in the data provided by health services to the Department of Health.

These data are used principally for public reporting of health services performance and, in addition, for funding purposes.

The guidelines are compiled from both formal directions to health services concerning practices, procedures and processes designed to provide assurance about the reliability of data compiled and reported to the Department, together with instances of health service good practice, identified by the Department through its audit program and through other means, such as literature searches.

The Department of Health's external data integrity audit program will continue in coming years, with some changes following the expanded implementation of Activity Based Funding, with further datasets included within the scope of the program.

Health services are encouraged to ensure their data and information management practices are in accord with these data integrity guidelines.

Readers are also encouraged to refer to the Victorian Public Service (VPS) Data Integrity Manual, published by the Department of Treasury and Finance.

Enquiries and suggestions can be addressed to the Office of Data Integrity, Corporate Services Division, Department of Health.

Lance Wallace

Deputy Secretary, Corporate Services

August 2014

Health data

Data reported to the Department of Health by health services are used for a range of important purposes. These range from satisfying Victoria's reporting obligations under the National Health Information Agreement, through monitoring health service performance and viability to medium and long term service planning.

The data are also used for reporting to the Government and the Victorian community concerning the performance of the Victorian health system. They are a key element of accountability to both Government and the Victorian community.

Other significant uses include research, particularly epidemiology and studies intended, among other things, to improve health outcomes for the Victorian community.

Health services themselves use both internally produced data and data from the Department for their own performance monitoring purposes, together with benchmarking and planning purposes.

It is therefore critical that data provided to the Department reflects the strong commitment of all health services to data integrity practices supportive of high quality data.

The Department of Health provides comprehensive documentation for the information and guidance of health services and agencies providing data to the key health datasets (Victorian Admitted Episodes Dataset - VAED, Victorian Emergency Minimum Dataset - VEMD, Elective Surgery Information System - ESIS and Victorian Integrated Non-Admitted Health data set - VINAH). These are available at <http://www.health.vic.gov.au/hdss/>. Manuals and related documentation for other datasets are located at the appropriate locations within the [health.vic.gov.au](http://www.health.vic.gov.au) site.

Data integrity requirements of health services

In order to ensure greater reliability and confidence in data used for measuring health system performance, health services have been advised of some specific data integrity actions taken by the Department and of requirements expected to be implemented by health services in the context of data reported externally by the health service:

Health service boards of management are accountable for the accuracy of data upon which their hospital(s) reports, ensuring that data are subject to appropriate controls over data accuracy. Boards are expected to make this a responsibility of their audit committees.

Health service annual reports to Parliament are required to include a statement concerning the systems and processes in place at the health service to assure the quality of reported data. Health services should refer to the Minister for Finance Standing Direction 3.4.13 for further information.

The Government has directed the Department of Health to take steps to ensure the integrity of data reported concerning the health system, including specific actions required of the Office of Data Integrity. These include:

- Conduct of system-wide audits of health service data
- Monitoring health service implementation of audit recommendations
- Investigation of complaints about public hospital data
- Liaison with health services about data integrity, including developing and promoting data integrity best practice
- Requiring health services to provide advice to patients on elective surgery waiting lists of any change to their status or their surgery date
- Health service staff using emergency department and elective surgery data recording and reporting systems must have a unique identifier and password to access these systems
- All entries and changes to data in emergency department and elective surgery systems are to be recorded in IT system transaction logs, with the name of the person creating or amending the data, the original and changed value, the date and time of the change
- The name of the senior staff member authorising a change to previously recorded data must be recorded in the system at the time of the change being made.

The requirements of health services listed above should not be considered comprehensive. They represent the minimum requirements expected of health services consistent with the delivery of high quality data from a health service environment where data integrity is a key aspect of day to day operations.

Further steps

Further data integrity steps that should be progressively adopted by health services include:

- Periodic reviews of access control registers for IT systems to ensure that access is only provided for staff with a genuine business requirement
- Regular process reviews of data recording and reporting practices, particularly relating to authorisation of changes to data
- Internal audits of source data for all externally reported data
- Management reviews of IT system transaction logs relating to changes to data
- Spot checking of IT system controls and their use, in particular ensuring that user identification and passwords are not being shared
- Implementation of password expiry regimes, requiring users of IT systems to regularly change passwords (30 days is considered good practice for the expiration of each user password)
- Enforcement of password structures requiring a minimum number of characters (8 characters is considered good practice), a mix of alphabetic and numeric characters, with no repetition of passwords permitted

- Implementation of ‘screen timeouts’, requiring re-entry of the user password after a period of inactivity at a terminal (2 minutes of inactivity triggering screen timeout is considered good practice).

Department of Health internal data integrity practices

Through many years of experience in managing the key health datasets, the Department of Health has identified and implemented steps to ensure the processes and practices relating to management of data reported by health services are of the highest standard. The Department’s processes and practices intended to ensure the integrity of data after receipt from health services include the following:

- Comprehensive manuals, updated as required, are provided for the guidance of health services, software vendors and users of the data, as well as Department of Health staff
- Formal records are maintained of any changes to submission files (source data) requested by health services and processed by the Department of Health
- A highly specified editing regime, articulated in detail in the data collection manuals, is applied to input data from health services
- Permanent secure storage of the original submissions of data are maintained for auditing purposes
- Logging of transmission events is maintained (file received/report sent, users, dates etc)
- Ensuring data integrity in conformance with page 7 of the VPS data integrity manual (to which all data validation procedures conform)
- Change control processes have been specified to ensure that authorization of changes to validation procedures are maintained
- Regular auditing of original submissions against final warehoused data is undertaken to ensure the integrity of the validation and transformation/derivation steps
- In addition, the Department undertakes regular analysis of data after validation processing, to identify outliers, inconsistencies, variance between time periods and apparent unusual patterns in output data.

Department of Health audit program

The Department of Health has conducted health data integrity audits since 1993. The first audits principally related to clinical coding of inpatient data, coinciding with the introduction of casemix funding of Victorian hospitals. Audits of inpatient data have continued since. In 2009, full audits of data reported by health services to the VEMD and the ESIS datasets were conducted. In addition targeted, or spot, audits at health services have been conducted.

Audits of the key health datasets, together with targeted audits of datasets identified by the Department of Health will continue with a new three year program commencing with respect to 2013-14 data. The audits will confirm the validity of data used in casemix funding disbursements to Victorian health services together with the reliability of data reported concerning the performance of the Victorian health system.

The audit programs provide recommendations for adoption by both the Department of Health and health services. Progress by health services in adopting and implementing the audit recommendations is monitored by the Department.

Audit Standards

A review of relevant and appropriate Standards for health data audits has been undertaken on behalf of the Department. The review has identified Auditing and Assurance Standards Board (AUASB) standards appropriate for the conduct of health data audits, enabling firms engaged to conduct audits to provide audit opinions, where appropriate.

Department of Health Evidentiary Standards, Tolerances

Based on experience gained in data audits at health services in recent years, the Department of Health has developed a suite of evidentiary standards and tolerances for application in conducting audits of health data. The standards at the time of publication are shown in the Table 1 below.

Table 1. Evidence standards and time tolerances endorsed by the Department of Health for application by auditors.

Standard or tolerance	Comments
1. Where times recorded in VEMD and in source patient records differ, a tolerance of five minutes (plus or minus) is allowable.	This tolerance acknowledges the dynamic nature of the Emergency Department work environment can lead to delays in data recording.
2. Where departure times from an Emergency Department for patients transferred to ward cannot be determined from the ED patient record, a tolerance of up to one hour is permissible between the VEMD reported time and the time notes/observations are first made in the patients ward file.	While Emergency Department Departure time is always expected to be recorded, in practice it may be overlooked. The tolerance makes a realistic allowance for missing ED departure time and is based on the precedent set by Victorian Auditor-General's Office (VAGO) in their 2008 audit of Victorian health services.
3. Where items are recorded in VEMD as "Null", but information exists in the medical records to indicate that data is available, VEMD data is treated as not agreeing to medical records	
4. Subject to the required controls for authorisation of data changes, user identification, passwords and system transaction logging being met, electronic patient records are acceptable verification for health data audits purposes.	In particular, Emergency Department data recording practices are changing as IT systems evolve, this standard acknowledges that some EDs are moving to higher levels of reliance on IT systems.
5. Where items of data reported to Department of Health data collections are not able to be validated in either hard copy or electronic patient records, the content of those data items are not treated as an exception.	This standard acknowledges the 'benefit of the doubt' should remain with health services and is consistent with the VAGO precedent from their 'Access to Public Hospitals: Measuring Performance' audit, published in April 2009.
6. Notes or other specific references in the Patient Administration System are accepted as evidence of correspondence with patients and medical practitioners when required by the Elective Surgery Access Policy.	The Department of Health has advised health services that it is not necessary to maintain file copies of all correspondence, as long as there is definitive IT system evidence of the correspondence.

Most of these standards have particular application to specific data collections, however they are indicative of the minimum evidentiary standards and tolerances which the Department of Health expects health services will observe in data collection, recording and reporting activities.

Conclusion

The guidance provided in this document will be periodically reviewed and updated by the Department of Health, particularly as information technology in the health sector evolves.

Health services should view the content of this document as indicative of the base level data integrity requirements necessary to provide assurance that data reported to the Department for both performance and funding purposes are accurate and fit for purpose.