

MEDIA RELEASE**19 June 2015**

Integrity of Data in the Health Directorate

The ACT Auditor-General, Dr Maxine Cooper, today presented the report on the **Integrity of Data in the Health Directorate** to the Speaker for tabling in the ACT Legislative Assembly.

Dr Cooper says ‘the audit found that the integrity of Activity Based Funding data reported by the ACT Health Directorate to the Australian Government for Admitted Patient and Emergency Department services is adequate. However, non-admitted Patient data integrity is inadequate’.

The Health Directorate estimates that for the last six months errors in non-admitted patient data, detected by the Audit Office, could have resulted in ‘around \$2 million to \$3 million’ being underclaimed.

Dr Cooper says ‘The Health Directorate has an opportunity to correct this data before its next submission, which is due in September 2015’.

Dr Cooper’s report found that considerable effort by ACT Health over the past two years has led to improvements in areas such as governance, data management, training and user access, resulting in improved data integrity.

‘However, there is more work to be done. It is important for ACT Health to develop and implement standard policies, procedures, systems and training to assist hospital personnel, especially in the non-admitted patient areas’ said Dr Cooper.

The audit conclusions, key findings and the 18 recommendations in **Integrity of Data in the Health Directorate: Report No. 5/2015** are attached to this media release.

Copies of **Integrity of Data in the Health Directorate: Report No. 5/2015**, are available from the ACT Audit Office’s website www.audit.act.gov.au . If you need assistance accessing the report please phone 6207 0833 or go to 11 Moore Street, Canberra City.

Overall conclusion

- 1.1 The integrity of Activity Based Funding (ABF) data reported by the ACT Health Directorate to the Independent Hospital Pricing Authority (IHPA) for Admitted Patient and Emergency Department services is adequate.
- 1.2 Non-admitted Patient data integrity is inadequate. The Health Directorate needs to continue to address the root causes and impacts of errors in Non-admitted Patient data, and develop and implement policies and procedures for improvement, as a high priority. This is needed to improve the integrity of data for management information purposes and for presenting accurate information to IHPA so the ACT receives the appropriate funding. The Health Directorate estimates that for the last six months the errors in Non-admitted patient data, detected by the Audit Office, could have resulted in 'around \$2 million to \$3 million' being underclaimed. The Health Directorate has an opportunity to correct this data before its next submission, which is due in September 2015.
- 1.3 With the exception of Non-admitted Patient data the Health Directorate's management of ABF data is generally effective; however, there are opportunities for improvement.

Chapter conclusions

GOVERNANCE AND ACCOUNTABILITY

Improvements have been made in relation to governance over the integrity of health data since the ACT Auditor-General's report on *Emergency Department Performance Information* in 2012. However, there is scope for further improvement. Governance arrangements need to be strengthened by ensuring greater clarity in the allocation of roles and responsibilities across the Health Directorate, its Performance Information Branch, Canberra Hospital and Calvary Public Hospital in relation to data integrity. Further, the lack of outcome measures and Key Performance Indicators (KPIs) by which to manage data integrity, and the lack of assurance activities targeted at managing the key data integrity risks associated with ABF data submissions, need to be addressed.

Considerable effort has been directed to addressing most of the findings in the Audit Office's *Emergency Department Performance Information* report. Improvements in areas such as training staff in systems usage, managing user access to the systems, procedural improvements and data integrity routines implemented in the Health Directorate data warehouse environment have contributed to improved data integrity. However, there is more work to be done with respect to training, documentation and allocation of responsibilities, outcome measures, evaluation, corrective actions and assurance.

COLLECTION PROCESSES FOR ABF DATA

The internal controls for the collection of ABF-related data are adequate at both hospitals' Emergency Department and Admitted Patient areas in addressing relevant data integrity risks. Controls are established and operating such that the risk of missing data, duplication of data and data not recorded in the correct period are minimised. The risks are mitigated by both application controls in the ACT Patient Admission System (ACTPAS) and the Emergency Department Information Solution (EDIS), as well as process controls in the Admitted Patient and Emergency Department areas. ACTPAS and EDIS, as the key operational systems of the hospitals, are used in relation to every patient visit, and staff are well versed in the use and collection of ABF-related data.

Internal controls for the collection of ABF-related data in both hospitals' Non-Admitted Patient areas are inadequate to address the relevant data integrity risks. There are insufficient controls to detect missing data, duplication of data and data not recorded in the correct period, or to provide an appropriate level of data integrity over ABF-related data.

The completeness, accuracy and consistency of data collection is heavily reliant on the experience and training of clerical staff. Therefore it is important for the ACT Health Directorate to develop and implement standard policies, procedures, systems and training to assist hospital personnel, especially in the Non-admitted Patient areas.

VALIDATION OF ABF DATA

The internal controls for the validation of ABF-related data are adequate at both hospitals' Emergency Department and Admitted Patient areas in addressing relevant data integrity risks. Controls are established and operating such that the risk of invalid data is minimised.

Internal controls in the Non-Admitted Patient areas are inadequate to address the relevant data integrity risks. There are insufficient validation controls to detect mismatched or unreasonable data.

REPORTING OF ABF DATA

The ACT Health Directorate's internal controls for the reporting of ABF data are inadequate for both the ABF six monthly and annual costing data submissions, in addressing the relevant data integrity risks.

The informality of procedures adversely affects the integrity of the reporting process and places a heavy reliance on a few key individuals. The lack of analytical review of the ABF six monthly data submission, and limited validation activities for the ABF costing submission, need to be

addressed.

TESTING OF ABF DATA

The Admitted Patient and Emergency Department ABF data reported to IHPA has an adequate level of data integrity. Testing identified coding errors, largely associated with front-end data entry, in the Admitted Patient and Emergency Department data; however the error rate was low. The clinical coding error rate was around seven per cent, which is reasonable. There is a low risk that the Admitted Patient and Emergency Department data reported to the Independent Hospital Pricing Authority is materially incorrect.

The quality of the Non-admitted Patient ABF data reported to IHPA requires urgent attention at both hospitals and at the Health Directorate level. The Audit Office's high level review of the data identified a high number of errors. These appear to have been due to the variety of clinics and systems that feed into the Non-admitted Patient data, the lack of standardised methods and systems across the various outpatient facilities in the two hospitals, and the lack of data assurance conducted by the hospitals and the Health Directorate. The high number of errors means that the ACT could forego Commonwealth funding (because of records with an unknown funding source).

Further, the Health Directorate does not have accurate information to plan, manage and report on Non-admitted hospital services.

Key findings

GOVERNANCE AND ACCOUNTABILITY

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The ACT Health Directorate's *Data Quality Policy* (DGD14-006) and associated *Data Quality Framework*, both dated December 2013, existed within the Directorate during the period 1 July 2014 to 31 December 2014, and therefore supported data integrity over the Independent Hospital Pricing Authority (IHPA) submission (31 December 2014). However, despite the generic outline of roles and responsibilities of different individuals in applying the *Data Quality Policy* and Framework, there is limited understanding and a lack of documentation of data integrity roles and responsibilities in relation to ACTPAS and EDIS. For example, Canberra Hospital's Ward Division was unclear on the procedure to resolve data validation errors or whom to go to for escalation or clarification of such errors. In addition, there was confusion generally as to responsibilities between the two hospitals and the Health Directorate's Performance Information Branch in relation to data integrity.

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Shared Services ICT facilitates management of the key IT general controls of

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relevance to ACTPAS and EDIS: user access administration, the software change process and IT operational controls. These were tested during this audit and found to support data integrity in these systems adequately. IT general controls over the EDIS system for Calvary Hospital were also tested and found to support data integrity in the system adequately.

The Health Directorate's December 2013 *Data Quality Framework* states that the number of business units that had implemented the Framework, and the number of Data Quality Statements and indicator scores being used to benchmark data quality and monitor improvements in data quality, would be measured. Performance Information Branch was restructured and a new strategy for information management is under development. No outcome based reporting, as outlined in the *Data Quality Policy*, has been undertaken. The number of business units that have implemented the *Data Quality Framework*, and the number of Data Quality Statements and indicator scores being used to benchmark data quality and monitor improvements in data quality, have also not been measured. The effectiveness of data quality initiatives undertaken by the Health Directorate since December 2013 and any improvements that resulted are therefore unknown. 2.25

No data integrity assurance activities were undertaken by the Health Directorate to confirm that the 31 December 2014 data submission was correct. Consequently, the Health Directorate did not identify a range of data integrity issues subsequently detected by the Audit Office during fieldwork for this audit. These were: 2.28

- Admitted Patients data not able to be traced between ACTPAS and the IHPA data submission;
- data matching errors;
- significant errors and omissions associated with Non-admitted Patient data detected by the Audit Office's high level review; and
- the data errors identified in the Audit Office's substantive testing.

Further, there are no assurance activities outlined in the *Data Quality Policy* and Framework. The Health Directorate is developing a new *Information Management Strategy 2015-2016*, and this presents an opportunity to introduce the concept of assurance-related activities over ABF data into this strategy, and subsequently to apply appropriate assurance activities over IHPA data submissions in future. 2.30

COLLECTION PROCESSES FOR ABF DATA

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Significant process design improvements have been implemented in the last two years, including:

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- implementation of ICT Security Plans for ACTPAS at both hospitals and the Health Directorate, and for EDIS at Canberra Hospital. The ICT Security Plans outline the commitment by the Business System Owners to put in place adequate measures to avoid, mitigate or transfer risks associated with an information system. They include security objectives, a risk assessment, logical access controls, training requirements and requirements for audit; and
- implementation of IMPRIVATA in Canberra Hospital to provide a single log on to EDIS. This was implemented under the Rapid Sign-On initiatives. It allows users to access EDIS via swipe card technology, and also strengthens the security and accountability of EDIS records. IMPRIVATA removes the need to repeatedly type usernames and passwords, which streamlines and provides efficiency in the Emergency Department process. It enables clinicians and clerical staff to access EDIS quickly and securely.

Data mapping is different in the two hospitals' Emergency Departments. In the case of 'Review' codes, this has compromised the validity of the Health Directorate's ABF data, with possible funding implications¹ and a distortion of management information regarding the type of visit.

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At both Canberra Hospital and Calvary Public Hospital there are some controls in place to enable the key aspects of EDIS usage to be monitored and to reduce the risk of data manipulation by unauthorised personnel. Both hospitals have implemented a timeframe for locking Emergency Department patient records after discharge. During a patient's care in the Emergency Department, the patient record can be changed by authorised users and all the changes are logged. On patient discharge, front-end EDIS users only have a certain period to amend patient records, and this requires an additional password to make any changes. After the specified timeframe, any changes to the patient records require action from an EDIS administrative user. Currently, this specified timeframe is different in the two hospitals. Canberra Hospital has implemented a two-day timeframe, while Calvary Public Hospital has implemented a seven-day timeframe. Given the extended

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¹ The Health Directorate estimates that the value of overclaiming from the Australian Government due to the data mapping issue is in the order of \$16,000 over the six month period covered by the IHPA submission (December 2014).

timeframe, Calvary Public Hospital has an increased risk that data could be manipulated or changed within the time period.

As a general rule, training is required for all users before they are given access to EDIS. Calvary Public Hospital has developed an *EDIS Competency Assessment Framework* to support the EDIS training required by different EDIS users. The Framework covers the various EDIS user groups including ED Doctor, Clerk, Clinical Staff, ED Support, Nursing, Clinical Manager and Other units. The Competency Assessment sheet requires sign off by the trainer prior to an individual being granted access to EDIS. Canberra Hospital provides on-the-job training for Emergency Department clerical staff and doctors; however, no formalised training material is maintained centrally. Training documents prepared for training Canberra Hospital staff remain in draft (variously dated from December 2014 to April 2015).

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The audit logs produced in both hospitals are insufficient to adequately monitor EDIS user activities, including through supporting reporting of unauthorised information processing activities. This deficiency increases the risk that any unauthorised information processing might not be detected.

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There are inconsistent data collection processes across different Non-admitted patient areas and there are different referral management repositories in use, such as ACTPAS, Concerto, hospital share drive and e-referral system. The *Non-Admitted Patient Activity Data Standards - Data standards for the recording and counting of non-admitted patient activity*, which Health Directorate commenced work on in June 2013, are still in draft. There are no overarching policies and procedures to standardise data collection activities in the Non-admitted patient areas. This significantly compromises the accuracy and consistency of ABF-related data collected by the Non-admitted patient areas in both hospitals, as demonstrated by the testing results reported in Chapter 6.

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VALIDATION OF ABF DATA

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Calvary Public Hospital has its own policies and procedures for EDIS data validation processes. Canberra Hospital commenced developing draft EDIS policies and procedures related to the validation processes in August 2014; however, they have not been finalised and published for use by hospital personnel. This is resulting in inconsistent practices and different terminology for the types of validation activities undertaken by the hospitals. A data validation policy and associated standard procedures need to be developed and implemented covering all data validation activities in the Health Directorate, Canberra Hospital and Calvary Public Hospital.

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There is a lack of tracking of the validation activities flagged by the data warehouse. Performance Information Branch is unable to keep track of whether potential errors have been addressed, or to identify the root cause of errors. For example, once action officers from the hospitals request to un-flag a potential error, the patient visit entry will disappear from the potential error list. An audit log could be generated from the data warehouse, which would identify who made changes to the data and when; however, this capability is not used. There is a risk that errors remain unaddressed by the incorrect unflagging of potential errors and there is no ability for the Health Directorate to identify error trends and systemic issues.

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There are no KPIs in place to monitor data integrity activities undertaken at the hospitals or in the ACT Health Directorate. For example, there is no KPI for the timeliness of correcting flagged potential errors. An email reminder is sent to the hospital action officers weekly; however, the data warehouse does not provide an ageing report stating the number of outstanding days for uncorrected potential errors. The capability is available in the data warehouse but has not been used.

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Validation Reports from the data warehouse are generally communicated, via either SharePoint² or emails, with the hospital action officers on a weekly basis. However, this does not always occur. Ambulatory Care staff at Canberra Hospital (a Non-admitted Patient area) indicated that they had never received any validation reports from SharePoint. Additionally, the Calvary Public Hospital's Emergency Department and Casemix and Performance Unit staff indicated that they had not received any validation reports via email for the Emergency Department or Non-admitted Patients area since August 2014. The Health Directorate advised that validation reports to Calvary have been intentionally suspended until Calvary completes work to update its classification system version. The Health Directorate further advised that validation reports for the Non-admitted Patients area were not being generated into SharePoint due to the migration of data into the data warehouse in 2014 and the implementation of new business rules. The Health Directorate is also still in the process of agreeing the new business rules. Emergency Department validation reports have been ceased due to consideration of standardising the Emergency Department validation method between the two hospitals in the data warehouse. In these circumstances, unacceptable risks to the integrity of ABF-related data remain. Many potential errors in Emergency Department and Non-admitted Patient data in both hospitals are not being examined or corrected.

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² SharePoint is an intranet, content management, and document management platform.

During the audit, the Audit Office identified a process improvement opportunity in the validation process. Validation reports are linked to the 'Visit Identifier'/'Episode Number' for all flagged potential errors. Errors related to a patient's demographics will therefore re-flag each time the patient re-presents. If demographic validation flags were linked to the patient's 'Unit Record Number' rather than the 'Visit Identifier'/'Episode Number', multiple flags requiring attention would be reduced. For example, if a 100 year old patient presents to the hospital and is subsequently discharged home, the validation reports will flag it as a potential error due to the age of the patient. The hospital will check the potential error against the patient record and confirm that it is not an error, and therefore un-flag the entry. If the same patient presents again, the validation report will flag it as a potential error again due to the linkage to the 'Visit Identifier'/'Episode Number'. If it were linked to the patient's 'Unit Record Number' the error would not re-flag.

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REPORTING OF ABF DATA

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The six monthly ABF data submission by the Health Directorate to the Independent Hospital Pricing Authority is largely prepared by one staff member from the Information Support Unit. There is no formal review of the accuracy or completeness of the data before submission, despite the fact that this data is published externally and is used to determine funding of health services in the ACT. IHPA's submission error reporting process, and validation processes undertaken on data in the data warehouse, examine data validity (i.e. conformance with business rules). However, these controls do not provide assurance as to the reasonableness of the data submission. For example, errors may occur during the process to extract ABF-related data from the data warehouse, and/or in the process to modify the raw data to meet the relevant ABF reporting requirement, that will not be detected without an appropriate level of review.

5.9

The allocation of roles and responsibilities between the Health Directorate and hospitals in the review of costing data are unclear to both the hospitals and the Business Intelligence Unit.

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TESTING OF ABF DATA

Paragraph

A high level review conducted by the Audit Office of the half-yearly IHPA submission for the July to December 2014 period revealed significant errors and omissions associated with Non-admitted Patient data. Of the 525,608 records in the dataset:

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- 189,272 (36 per cent) contained funding source '98' (Not known)
- 310,089 (59 per cent) contained the default postcode, 9999.

These errors and omissions are concerning, for two reasons. First, they demonstrate that the integrity of Non-admitted data in the submission is low, confirming the results of the Audit Office's substantive testing of a sample of records. Second, they indicate a risk that the ACT might not be claiming its correct funding levels; Australian Government funding is not paid for services where the funding source, as reported in the IHPA submission, contains the value '98' (Not known).

The Health Directorate advised that:

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Of the 189,272 records noted by the Audit Report that do not have a funding source:

155,030 records (or 82 percent of the records) related to community mental health services. While these do not have a 'funding source' within the system in which they are captured, they do have a national funding source of 'block funded'. The absence of the 'funding source' field in the data set does not impact on the level of funding from the Commonwealth for these services.

A further 15,370 records (8 percent) relate to services which are not covered by Commonwealth funding arrangements (including breast screening, primary health care and aged care assessment services).

The remaining 10 percent of cases without a valid funding source code equate to 3.9 per cent of total non-admitted services and less than one per cent of total in-scope public hospital services. ACT Health is working to address these outstanding items prior to the final submission of data to the IHPA in September 2014.

Also, in determining the state of residence of a patient or health care consumer, the 'state of residence' field is used instead of post codes. While the correct data should be provided, this error [310,089 records containing the default postcode, 9999] did not impact on funding streams to the ACT. This error has been amended and the final submission to the Commonwealth will incorporate correct postcode information.

These claims by Health were not audited.

The Health Directorate estimates that for the last six months the errors in Non-admitted patient data, detected by the Audit Office, could have resulted in 'around \$2 million to \$3 million' being underclaimed, out of an estimated total of \$304 million for 2014-15 in Australian Government funding for hospital and health services. Health has an opportunity to correct this data before its next submission,

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which is due in September 2015. Health needs to continue to identify the root causes and take corrective action, as noted in Recommendation 17.

The targeted sampling detected errors for Admitted Patients length of stay, Admitted Patients overlapping admissions and Emergency Department type of visit. However, the errors detected are unlikely to have a material impact on overall ABF payments. 6.18

The substantive testing identified several data fields with extremely high error rates. These require urgent investigation. The highest error rates were associated with Non-admitted patient data, particularly for the indigenous status, postcode and funding source fields. There were also a high proportion of patient notes missing for Non-admitted patient services. The results of the substantive testing indicate that there are systemic issues associated with the integrity of Non-admitted patient data. 6.22

The Health Directorate advised that the postcode error rate was related to the new IHPA submission process for the data warehouse and has subsequently been rectified, and that a new submission to IHPA with corrected postcode data has been provided and accepted by that organisation. 6.23

The two hospitals had similar clinical coding critical error rates (errors that may have an impact on ABF payments, or do not capture the episode of care correctly). The critical error rate (around seven per cent) is reasonable³. 6.26

³ As a comparison, a 2014 clinical coding audit program across 50 National Health Service hospitals in the United Kingdom detected an average error rate of 7%. See: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364476/The_quality_of_clinical_coding_in_the_NHS.pdf. Published results of Australian clinical coding audits include Cheng, Gilchrist, Robinson and Paul (2009): 16% error rate; Reid, Allen and McIntosh (2005): 15% error rate; and MacIntyre et al. (1997): 22% error rate.

Recommendations

RECOMMENDATION 1 CHANGE MANAGEMENT (CHAPTER 2)

As the Health Directorate implements its *Information Management Strategy 2015-2016*, change management activities should include:

- a) training Health Directorate and hospital staff to ensure they have an adequate understanding of the Strategy and specifically data integrity activities; and
- b) documenting and allocating responsibility for data integrity activities for the key systems, including ACTPAS, EDIS and the Health Directorate data warehouse.

RECOMMENDATION 2 OUTCOME MEASURES (CHAPTER 2)

Outcome measures for data quality (including data integrity metrics) should be developed and incorporated into the Health Directorate's *Information Strategy 2015-2016*. These should be monitored to assure the adequacy of data integrity, particularly for ABF-related data.

RECOMMENDATION 3 EVALUATION, CORRECTIVE ACTIONS AND ASSURANCE (CHAPTER 2)

The ACT Health Directorate's *Information Management Strategy 2015-2016* should clearly articulate the following:

- a) key data integrity risks associated with ABF-related data and ACT Health Directorate's IHPA data submissions; and
- b) frequency and scope of controls assessments and other assurance activities that will be undertaken to provide assurance in relation to ABF data integrity.

The ABF data integrity risks and controls assessments above will need to be updated from year to year as IHPA's data submission requirements change.

RECOMMENDATION 4 DEFINE ABF-RELATED DATA MAPPING (CHAPTER 3)

HIGH PRIORITY RECOMMENDATION

Health Directorate should develop an Emergency Department Data Dictionary to standardise the definition of ABF-related data and define ABF-related data mapping from EDIS in both hospitals to the data warehouse.

RECOMMENDATION 5 PATIENT RECORD CLOSE PERIOD (CHAPTER 3)

- a) Calvary Public Hospital should align its EDIS record close period (i.e the period after which records are locked) with that of Canberra Hospital.
- b) The Health Directorate should undertake a monthly assessment to monitor changes to patient records after the close period.

RECOMMENDATION 6 TRAINING MATERIALS (CHAPTER 3)

Canberra Hospital should finalise its draft EDIS training documents and implement a mandatory requirement for staff to complete EDIS training before receiving access to the system.

RECOMMENDATION 7 AUDIT LOGS (CHAPTER 3)

HIGH PRIORITY RECOMMENDATION

Both Canberra Hospital and Calvary Public Hospital should establish useable audit logs for EDIS to allow monitoring activities after the close off period. The audit logs should be reviewed regularly, with results presented to the accountable hospital executives and to the Health Directorate.

RECOMMENDATION 8 GUIDELINE FOR THE NON-ADMITTED PATIENT DATA COLLECTION PROCESS (CHAPTER 3)

HIGH PRIORITY RECOMMENDATION

The Health Directorate should finalise and implement the *Non-Admitted Patient Activity Data Standards - Data standards for the recording and counting of non-admitted patient activity*.

RECOMMENDATION 9 VALIDATION PROCESSES (CHAPTER 4)

HIGH PRIORITY RECOMMENDATION

The Health Directorate should develop and implement overarching policies and procedures related to data validation processes and activities. These should provide a consistent framework that is flexible and adaptable when needed to reflect local processes and organisation structure.

RECOMMENDATION 10 TRACKING OF VALIDATION ACTIVITIES (CHAPTER 4)

The Health Directorate should review the capability of its data warehouse and develop robust processes to track the validation activities performed by the hospitals. It should also define and promulgate the business rules required in correcting ABF-related data to ensure consistency across hospitals.

RECOMMENDATION 11 KEY PERFORMANCE INDICATORS (CHAPTER 4)

HIGH PRIORITY RECOMMENDATION

The Health Directorate should develop KPIs for the validation of data that can be supported by information from the data warehouse.

RECOMMENDATION 12 DISTRIBUTION OF VALIDATION REPORTS (CHAPTER 4)

HIGH PRIORITY RECOMMENDATION

The Health Directorate should finalise its new business rules for data validation and incorporate these in its data warehouse, then re-commence the distribution of validation reports for the Non-admitted Patient areas at Canberra Hospital and Calvary Public Hospital and for the Calvary Public Hospital Emergency Department.

RECOMMENDATION 13 ANALYTICAL REVIEW OF REPORTING (CHAPTER 5)

HIGH PRIORITY RECOMMENDATION

The Health Directorate should perform an analytical review to quality assure the six-monthly ABF data submission before it is sent to IHPA.

RECOMMENDATION 14 REPORTING OF ABF COSTING DATA (CHAPTER 5)

HIGH PRIORITY RECOMMENDATION

The Health Directorate should develop and publish a costing framework which:

- a) allocates roles and responsibilities between the Health Directorate and hospitals;
- b) specifies a firm schedule for hospitals to submit costings;
- c) incorporates a costing data specification;
- d) outlines a costing review and validation process; and
- e) includes an urgent issue escalation process.

RECOMMENDATION 15 RISK BASED APPROACH TO INVESTIGATIONS (CHAPTER 6)

HIGH PRIORITY RECOMMENDATION

- a) The Health Directorate should undertake further investigation into the inconsistencies and anomalies identified by the data analytics, taking a risk-based approach to the investigation and focussing on the areas that have the potential to materially affect ABF data and funding.
- b) As a priority, the Health Directorate should review the mapping processes used to extract data from EDIS to the data warehouse , and ensure that Admitted Patient principal diagnosis and Emergency Department type of visit are mapped appropriately.

RECOMMENDATION 16 LENGTH OF STAY, OVERLAPPING ADMISSIONS AND TYPE OF VISIT (CHAPTER 6)

- a) Canberra Hospital and Calvary Public Hospital should review patient records on a random and weekly basis with a focus on the fields that are included in ABF reporting.
- b) Canberra Hospital and Calvary Public Hospital should conduct refresher training for Emergency Department clerical staff on how to appropriately classify the 'type of visit' for patients presenting to the Emergency Department.

RECOMMENDATION 17 NON-ADMITTED PATIENT DATA AND SYSTEMS (CHAPTER 6)

HIGH PRIORITY RECOMMENDATION

- a) The Health Directorate and Calvary Public Hospital should investigate the root causes of errors in Non-admitted patient data, including errors in the indigenous status, postcode and funding source fields in the source data and the IHPA submission and develop and implement policies and procedures for improvement.
- b) The Health Directorate should implement a single patient management system, and standardise data management policies and procedures, across all public outpatient clinics.

RECOMMENDATION 18 CLINICAL CODING (CHAPTER 6)

Canberra Hospital and Calvary Public Hospital should improve their clinical coding with the following process changes.

- a) Where coding is completed before the availability of the discharge summary, the medical record should be flagged, to facilitate subsequent identification of potentially incorrectly coded episodes.
- b) Where the discharge summary directly conflicts with information in the record, a query should be forwarded to the treating clinician for clarification. These queries should be followed-up and documented for future reference.