

Victorian Ambulatory Classification System (VACS) clinical verification and activity audit

Executive summary



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***This report was completed by Healthcare Management Advisors Pty Ltd
(September 2005) on behalf of the Department of Human Services***

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Introduction

The Department of Human Services Victoria engaged Healthcare Management Advisors in January 2005 to: ‘...investigate outpatient clinic services in those Victorian hospitals funded through the Victorian Ambulatory Classification System (VACS)...’ *Victorian Ambulatory Classification System Clinical Verification and Activity Audit Tender Brief (T 3138), Department of Human Services, 2005.*

The Victorian Ambulatory Classification and Funding System (VACS) is a capped, weighted, output-based funding system for general and specialist services in acute hospital outpatient departments. It forms part of the Acute Health non-admitted patient grant. The 19 hospitals funded under VACS receive a VACS variable grant, allied health grant and other specified grants for activity not counted under VACS. VACS also comprises a teaching grant and a base grant and the total funding to VACS funded hospitals in 2004–05 was approximately \$301 m.

VACS data are collected in respect of 47 categories to which clinics are allocated. The hospitals are required to report monthly, via the Agency Information Management System (AIMS) electronic data collection system using the S9 form, the aggregated episodes at VACS approved clinics:

- provide notification of and seek approval for clinics which they wish to fund under VACS
- notify the department of changes to approved clinics so that the department can maintain an up-to-date schedule of all approved clinics for each site, with individual hospital clinics assigned to one of the VACS categories
- respond to the annual departments’ request for updating the schedule.

Summary of findings

Findings showed that overall the system is working well. There are a few minor findings, but also some which need to be addressed in order to improve the value of the VACS reporting and funding system. Where there are issues (data accuracy, non compliance with counting and reporting, definitions for counting and reporting and Multidisciplinary clinics - definition, counting, reporting) further discussion and resolution is required. The recommendations in this document reflect that.

Methodology

The methodology for the project was divided into four main stages (following the initial setup and initiation). These were a:

- desk audit
- systems review and consultation at 19 hospitals
- record audit at six sites
- reporting (interim and final reports).

This document constitutes the executive summary of the final report of the project and incorporates the interim report completed before the record review phase of the project.

Desk audit and comparison

Comparison of the department data with schedule

The main purpose of the desk audit was to ascertain if reported activity for each site matched the clinics in the schedule by VACS category. The desk audit matched VACS clinics and data from October 2003 to November 2004. General observations were:

- Systematic problems in the data were rectified by the department prior to discussion with hospitals.
- Approximately 30 percent of hospitals had on their schedule at least one or two clinics which were listed as approved, but for which there were no data.
- Clinics were found which were not listed as approved, but for which there were data.
- There were significant monthly fluctuations in data (some possibly due to incomplete submissions for a month, but this was not consistent, even within one site).
- Unexpectedly high numbers of episodes were found at some hospitals, in VACS categories that are usually associated with groups, such as hydrotherapy and cardiac rehabilitation (VACS defines that a group of patients should be counted as **one** occasion of service, not as one occasion of service for every patient who attends the group).

Changes resulted from one or more of the following:

1. The schedule was not up-to-date (minor changes were needed for the majority of hospital schedules, but about 60 percent had major errors) including:
 - Four (21 percent) hospitals had no approval for clinics for which they were submitting data.
 - Six (32 percent) hospitals had sought approval but clinics had not operated (due to changed circumstances, such as non-appointment of clinician, insufficient VACS, lack of space, or clinic operated as a privatised clinic).
 - Two (11 percent) hospitals had submitted data for clinics identified as private.
2. At least 26 percent of hospitals had begun updating their schedule as a result of the audit or recent staff changes and four said they were unaware of the department's requirements for changes to be submitted. The department, on hearing of this, re-distributed VACS submission rules to all hospitals and Healthcare Management Advisors advised hospitals, with major discrepancies in their schedule, to contact the department and sort them out straight away.

Comparison between the department and hospital-supplied data

Data from both sources were compared and proportional differences derived for each VACS category. There were three reasons for requesting these data:

- (a) to compare the total figures from both sources (only possible at the VACS category level)
- (b) to see details of actual clinic numbers for the record audit, that is, to identify clinics with both high level activity and high weight (on the basis of numbers of attendances and VACS weight)
- (c) to give another indication of the appropriateness of the data content (especially in the *609: Other Allied Health* category).

Findings were:

- The majority of categories showed no differences between the department and hospital supplied data.
- Differences found were in both directions (the department - higher and lower) and usually resulted from timeliness (data submitted or changed by the hospital after extractions for Healthcare Management Advisors).

Unapproved clinics for which data are submitted

Receiving data at the level of detail not submitted to Agency Information Management System (AIMS) allowed Healthcare Management Advisors to identify: cases for which non-VACS data are being submitted.

Findings were:

- Services provided by interpreters and at staff clinic were submitted by two sites.
- Data for cardiology testing were included in the data (two sites).
- Hospitals had clinics listed under particular categories that did not match those on the schedule.

Errors arose from:

- typographical errors
- errors from poor and unsophisticated IT systems
- duplicated systems of data collection
- too many people involved in the approval, clinic service provision and data collection phases of VACS submissions
- the involvement in these processes of people who have no understanding of clinic function and VACS data definition and procedures.

Incorrect submissions were also discovered in the process of the system reviews but especially in respect of Category 609 Other Allied Health (10 – 11 percent of sites' data had errors in this category). Category 609 was seen by about 80 percent of hospitals as the category in which they could submit episodes for non-medical services which they described as 'unfunded' because there is no VACS category. It is common to find (the majority of Allied Health and Specialist Nurses believe this) that if there is no VACS category then the service is not funded. They were not aware of additional non-admitted funding provided to hospitals in the form of a base grant and teaching grant, which cover items outside the Allied Health grant and recognise more complex patients.

In conclusion, the desk audit found:

- The majority of schedules had minor errors, but about a third (six hospitals' schedules) were considerably out-of date.

- Inconsistencies in data were due to timing, transcription error, failure to notify the department of changes to clinics, lack of knowledge of VACS requirements and staff changes.
- Inconsistent data were most often in allied health categories.
- Data were being submitted for non-approved clinics and not submitted for approved clinics.

Clinic definition (verifying existing clinics)

In this section Healthcare Management Advisors describe the findings from site visits:

- how hospitals manage the accuracy of the schedule
- the processes for seeking approval within the hospital to establish or change clinics
- the means by which the hospitals obtain approval from the VACS Clinical Panel (the Panel) in the department
- how hospitals notify the department of changes to approved clinics.

The desk audit and a consultation framework were the basis for questions.

Starting a new clinic and making changes to approved clinics

Hospitals notify the department of new clinics using the VACS Notification Form, which has to be forwarded to the VACS Clinical Panel, consisting of clinicians from a range of specialties and other representatives from the field, which meets annually to assess the requests. Following review, comments from the Panel are relayed back to the hospital and to the Access and Metro Health Performance branch of the Department of Human Service. The department also requires information on changes to approved clinics (closure, name change and expansion). The department updates the schedule on receipt of requests and following approval.

Findings were:

- Verification identified some errors, albeit often minor, at almost all sites.
- Alterations were usually a result of hospitals either not having submitted changes as they occurred, confusion at the hospital as to who was responsible for responding to the departments' annual request to verify the schedule, uncertainty as to whether it had been done in recent years and some errors in maintaining the schedule by the department.

- At least four (22 percent) hospitals had undergone changes in staff in the past year and the responsibility for maintaining the schedule had not been passed on to the replacement.
- In three other sites (16 percent), the audit prompted hospitals to review the schedule and they instigated action (including liaising with the department) prior to the Healthcare Management Advisors system review visit.
- The audit process was seen as useful by most hospitals as it led to their checking and updating the schedule.
- It revealed flaws in internal systems in respect of responsibility for and timing of notifications to the department.
- It highlighted that almost 50 percent of hospitals were not aware of all, or aspects of, the rules surrounding the VACS data submission, or approval processes (and what level of detail regarding changes to approved clinics the department requires to know about).
- One third of hospitals had formal structures in place for ensuring changes are notified to the department.
- Staff involved in the processes between patient attendance and data submission were not always aware of changes either.
- Most reported that they respond to the annual request from the department to update the schedule (the department estimates that 10 to 20 percent of hospitals actually respond).
- Almost all the hospitals commented that they have not sought approval for all required (public) clinics recently as they are 'over their VACS targets' (so either a clinic is not established as a VACS clinic or is established as privatised).
- The lack of the resources (space, staff, money) required to conduct additional clinics was cited by four hospitals (21 percent) as the reason for not asking for new clinics, even though there was a need.
- Internal (hospital) policies for seeking approval vary from formal (business cases, approval meetings) to less structured (discussion between clinician and Nurse Unit Manager (NUM) who then approaches Executive).

- The VACS Clinical Panel's meeting only once a year is seen as a disadvantage by 30 percent of sites. If Panel approval or funding approval is not given, some sites continue the clinic anyway, whilst others stop it, or make it private.
- The process of gaining Panel approval for clinics from one department branch and submitting approval for the funding of clinics to another department branch was described by one site as disconnected and confusing and was also raised by four others as a problem.

Hospitals with the more formal internal approval processes, with one designated person who guides the various stages whether through individuals or committees, were more likely to have an accurate listing of clinics in the schedule.

Minor errors were found in almost 100 percent of hospitals, but more serious errors in approximately 30 percent and only about 10 percent are submitting changes to the schedule as they occur.

Clinic operations

Although there are differences across and within hospitals, many of the processes were found to be similar. However, the processes oriented around Allied Health service provision (patient bookings, arrival and counting) by allied health providers within hospitals usually differed to those for the general medical clinics in the hospitals. For that reason, Healthcare Management Advisors separated the discussion into *Medical and Surgical clinics* and *Allied Health clinics* in the individual reports on each site and in this report. The differences (*Medical and Surgical clinics* and *Allied Health clinics*) have an impact on data accuracy, usually because of different IT systems, and staff involvement. The more integrated the IT systems, the greater the accuracy.

Findings were:

- All hospitals operated their 'main' clinics (those usually conducted by medical clinicians) in a similar way.
- All hospitals operated their Allied Health clinics in a manner different to the main clinics in the same hospital and these differences (between doctor clinics and allied health provider clinics) lead to errors.
- The main cause of error was the different systems for clinic scheduling and data collection, a variety of electronic and manual systems being in place in all hospitals and about 30 percent of them having poor data as a result.

- 100 percent of hospitals have at least two internal systems (for clerical procedures and IT and data collection systems) operating (the allied health provider system differs from the main system) and 100 percent also have at least some data contributed to VACS which is derived from manual diaries. The latter particularly affects allied health services, however, approximately 95 percent of sites are disadvantaged by the variety of systems.
- The way a system is set up (how the clinics within the scheduling system are labelled) will influence data accuracy.
- There was consistency (across hospitals) in how referrals are received and triaged (allocated a priority), but there are differences in how and when patients are notified and appointments made.
- Patients might be booked to privatised clinics and three hospitals (16 percent) have over 50 percent privatised clinics.
- If the appointment is made in an electronic system, demographic data might be (and often is) accessed but if the appointment is in a manual system less demographic or financial information is available. This means that if a patient is Hospital In The Home, Department of Veterans' Affairs, or an inpatient, the information is not aligned to the attendance. Thus, patients are not excluded (Hospital In The Home) from or compiled in the separate column (Department of Veterans' Affairs) in the VACS submission
- At the time of patient attendance, 100 percent of hospitals used one of the following systems to mark the patient's arrival:
 - marking the name off in a book
 - ticking off a hard copy list or in the scheduling system and this acknowledgement translates into the VACS episode. This is true of all clinics but the difference is whether that hard copy acknowledgement is entered immediately into the electronic system or is used as the basis for manual compilation of statistics).
- Reconciliation of attendances against the booking list is found at 80 percent of sites. Three (16 percent) hospitals fail to exclude inpatients and about 20 percent of the 19 said it is possible that Hospital In The Home patients might be included in VACS (though all say there are few cases). Two hospitals (wrongly) counted records for review (that is when the patient is not to come to the clinic but the clinician reviews the notes only).

- On the whole private clinics data are properly excluded from counting. Only two sites appeared to have included data, but again, the numbers were small and each affected only one clinic in one VACS category.
- More errors are in allied health provider data especially when manual systems do not relate Department of Veterans' Affairs or financial status to the booking so all patients are counted and submitted. The 'Other Allied Health' VACS category (609) contains data for unapproved clinics in about four hospitals (interpreter services (one), staff clinic (two) and cardiac diagnostic testing (two)). (Note: Department of Veterans' Affairs data are also submitted separately to the department, as patient level data, for submission to the Department of Veterans' Affairs and Healthcare Management Advisors is not suggesting those data are incorrect).

VACS reporting

The hospitals with the most accurate reporting contained most of the following features. Only one site (five percent) had the majority of these features, but another six (32 percent) had a reasonable number (with consequently more accurate data):

- a formal internal structure for approving clinics and monitoring VACS
- common use of one IT system from which VACS data are easily extracted through a simple report request which is generated monthly
- scheduling systems and 'attend' or 'did not attend' functions integrated with patient details so the appropriate exclusions occur as part of the report extraction process (compensable, inpatients)
- minimal use of manual booking schedules and manual data compilation; data which can be extracted centrally
- minimal need for central person to send reminders each month to service providers who compile data (manually) and convey it by email, informal photocopied forms and by phone or fax to the central person
- minimal requirement to transcribe data from one system to another. Less than 25 percent of hospitals had IT systems that compiled spreadsheets of data by clinic, rolled up to the VACS category and easily entered into the S9 (95 percent of sites have no integration between their own system and S9 to avoid transcribing data)

- a more senior member of staff responsible for extracting and submitting the data (one site only)
- that person knows the VACS rules and is involved in setting up clinic templates to ensure non-VACS patients are not included in the counts
- the internal system ensures the schedule is up-to-date and changes are notified as they occur to the department
- hospital administrations that recognised the importance of accurate ambulatory data collections were found at about 25 percent of sites.

The majority of hospitals display at least some inefficient practices in respect of data submission, with at least 50 percent being related to labour-intensive practices and they can be summarised as:

- **manual (personal) intervention** to identify and then subtract non-valid public VACS cases such as Department of Veterans' Affairs, compensable and 'record only' (review) patients and duplicated UR numbers
- **data transcription by an individual** from one system to one or more other systems before submission to Agency Information Management System (AIMS) S9
- **monthly, personally instigated reminders to departments** that manually compiled data must be submitted to the staff responsible for submitting S9 form
- **no cross-checking at the point of S9 entry** to see data are for approved clinics and no edits in the AIMS system which would question apparent anomalies in the data.

These cause error.

Specific issues

The project sought to identify and document the existence, nature and activity of reporting practices of multidisciplinary clinics, clinical nurse specialist clinics, pre-admission clinics, and midwife or nurse run clinics reported under the VACS Obstetrics category. The means used for costing ambulatory services and how VACS specified grants were treated, were discussed in order to understand how patients and episodes are treated for costing and counting patients under VACS specific grants.

Multidisciplinary clinics

Multidisciplinary clinics are an important feature of ambulatory care at all the hospitals and at least half deliberately made the point during site visits that medical models have changed. The current move towards *health streams* is ensuring that more services have a multidisciplinary focus (oncology services was the area raised most frequently and about 30 percent of hospitals commented on the impact of the department's recent emphasis on its policy for *cancer streams*).

Findings were:

- Some hospitals use different terms to discriminate between two types of multidisciplinary clinics [clinics in which services are provided by a mix of specialist doctors (only) and clinics in which the mix is of different professionals, such as allied health, doctors and specialist nurses (these two different types of multidisciplinary clinics potentially have an impact on the appropriateness of costing and counting such clinics)].
- The greater use of resources in multidisciplinary clinics and the perception that VACS weights do not recognise the extent of resources in multidisciplinary clinics is common to all hospitals.
- Multidisciplinary clinic meetings where there are group discussions (by the professionals) in advance of the clinic or after it, at which the patient is not present, are seen as being inadequately funded as there is no *count* for the discussion at which the patient is not present.
- VACS categories most affected by multidisciplinary clinics are Oncology, Plastic Surgery (burns, trauma), Endocrine (diabetes), Ear Nose and Throat and clinics within categories which tend to involve allied health providers or nurse specialists.
- The scenarios in which patients see different professionals vary and have an impact on the way they are counted. The way the allied health providers or nurse specialists intervention is counted varies [about 70 percent of hospitals have their own rules and will count the patient on the basis of time spent (say greater than 10 minutes will be counted) or if the patient is seen in a room other than in the same room as the doctor's, but at the majority of hospitals, the allied health providers or nurse specialists will count the patient as a VACS occasion of service].

- Staff of all hospitals argued that the current situation in respect of multidisciplinary clinics creates a clear disincentive to patient care and reflects a failure of the VACS funding model to keep pace with changes to clinical practice.

Specialist nurse and midwife

Apart from findings common to multidisciplinary clinics and specialist nurse or midwife clinics there were no significant findings in respect of nurse clinics and midwife-run clinics. There are, however, differences in the way they are managed (manual and electronic systems) with implications for counting.

Pre-admission clinic

The variations in process mean that there are three main effects on VACS data:

- Two hospitals admit patients instead of counting them as VACS attendances at a pre-admission clinic.
- Patients who are seen by a combination of health professionals but counted as one VACS occasion of service no matter who sees them [12 sites (63 percent) do this].
- Patients who are seen by a combination of health professionals, but counted once for the nurse or doctor and once more for the allied health intervention (six sites or 32 percent).

VACS specified grants

Of the 19 VACS funded hospitals, 14 receive funding for dedicated purposes, and represent special funding. The grants are given for a range of services, some of which are clinic specific (burns, heart transplant, spinal clinic, foetal diagnostic clinic and cochlear implant clinic) but others are less directly related to a service for which episodes can be counted (service development: pain management). Understanding the means by which these grants can be accounted for is more difficult than it is for grants to specific clinics with defined attendances by patients who can be counted (or excluded from counting) as required.

The majority of sites recognise that the attendances are not to be counted as VACS, although some have counted patients in the past. The only hospital which has been incorrectly counting the patients in the current financial year appears to be one at which staff stated 'the counting of patients has been sporadic' and it is probable that patients attending adult burns, heart lung transplant, haemophilia and melanoma have been included.

Outpatient ambulance transport grants apply to 13 sites and are not reportable and Healthcare Management Advisors found none were submitting data. One interesting finding in respect of the ambulance transport is that patients transported could be attending privatised clinics. This may be outside the transport rules, but they are seen as, and are in fact, public patients attending private clinics. It is an anomalous situation.

Group clinics

Group clinics tend to be held by allied health professionals (hydrotherapy and cardiac rehabilitation physiotherapists) or midwives (antenatal classes). There are always more patients than providers in a group session, but there may be more than one provider for the group of patients. Providers of services tend to discriminate between groups that are education, that is, a class, and groups that are treatment oriented where although there are a few people present, each person gets at least some individual attention from the provider.

Findings were:

- Allied health providers are concerned about the VACS rule applicable to groups which is that the group can only be counted as one VACS occasion of service.
- All providers would like to see a distinction between how they count patients who receive an individual treatment plan and some individual attention, compared to classes where all patients are doing the same thing.

Costing data

Three sites (16 percent) stated they do not collect or analyse any outpatient cost data. Ten sites (53 percent) use Power Cost Manager, five (26 percent) use other systems (internally developed or COMBO CC) and all these allow patient level data to be analysed. One sends their data to Royal Melbourne Hospital (high level data only) and Royal Melbourne Hospital says that although they use Power Cost Manager to collect their own costing data they rarely use this data internally.

Findings were:

- All sites were aware of the rule regarding bundling ancillary services to the VACS clinic appointment.
- None of the IT systems were sophisticated enough to allow them to be certain that they were accurate in matching an ancillary service to the correct outpatient department attendance.

- Systems find the first outpatient department appointment in the 30-day widow and bundle with that.
- IT systems cannot always tell if the ancillary services was generated as part of an emergency department attendance (as distinct from the VACS clinic).
- Since the medical and surgical scheduling systems do not report the time a health professional spends with the patient (although some have slots 'new' and 'review' which represent different length appointments) or the number of professionals involved in a multidisciplinary clinic, the data for costing can best be described as *estimated*
- Consumables are rarely allocated to the specific clinic (for example, dressing clinic) but are spread across a range of clinics.
- Hospitals are concerned that the data are not collected from all sites, that one complex specialist hospital has only submitted cost data in the last year and about the use of a four year rolling average (it is relevant to note that cost data for inpatients is not collected from all hospitals either and the proportion of VACS funded hospitals submitting costing data used in establishing the weights is higher than the proportion for inpatients).

In some sites the number of professionals involved in a multidisciplinary clinic is cost modelled across all patients by allocating a percentage of the professionals' time to the clinic, though this is an estimate it does mean the system captures more than the cost of just one individual.

There was a consistent message from hospitals that the VACS system has not kept pace with changes in medical and clinical practice, especially in multidisciplinary clinics and groups.

Other issues raised were:

- Hospitals have not placed emphasis on VACS (rather they concentrated on inpatient data and systems) and this has affected data accuracy.
- The guidelines for VACS are not considered by hospitals to be clear or easily accessible.
- Increasing complexity in outpatients is not being recognised.
- Approximately 26 percent of hospitals stated (others implied it) the VACS system had perverse incentives for patient care.

- The increasing use of telephone consultation, communication by email with patients, particularly in allied health provider services is not adequately recognised.
- Privatised clinics, whilst earning income for specialists (and depending on the arrangements, pass on a proportion to the hospital) do not always cover their costs.
- Hospitals would like to see weights given to allied health provided categories based on costing data.
- Specialist nurse clinics should be given a category so that they are not included in 'Other Allied Health'.
- Midwives should be distinguished from specialist nurses.
- Weights do not take into account the teaching aspects of patient care at the teaching hospitals.
- Clinics which have initial funding outside the VACS system (such as the Immigrant Health Clinic at Royal Children's Hospital) tend to grow beyond the level of funding but there is no capacity in the VACS target, and possibly cannot be privatised, as many patients do not have Medicare eligibility.

In VACS-funded hospitals, providers are becoming so aware of the VACS targets and method of funding that they fail to realise that other funding is provided for ambulatory and allied health services (and teaching) that is not attributable to a VACS category and is to meet outpatient costs. A perception in hospitals that 'if it isn't coming from VACS, then there is no funding' may explain why many professionals are so enthusiastic in counting every service (multidisciplinary clinics and groups) as a VACS occasion of service. Funding outside the VACS system comes from a separate source and is for clinics which are not VACS appropriate.

Other findings were:

- Hospitals dislike the duplication between S2 and S9 (and since July 2005, the forms have been amalgamated).

Record audit

The integrity of the data needed to be assessed to ensure compliance with the agreed definitions and the audit project was a combination of systems level work and medical record level observations. Audits at six of the 19 hospitals (32 percent) were

suggested with a sample of 20 clinics in each hospital and 50 cases to be taken at random from each clinic to make up the selected sample of 1,000 cases per hospital (a total of 6,000 cases). The sample was also to represent a relatively current time and July to October 2004 data were sought from:

- The Alfred
- Ballarat Health Services
- Barwon Health Services
- Box Hill Hospital
- Southern Health (Monash Medical Centre)
- St. Vincent's Hospital.

For each site, clinics were selected which represent higher levels of activity, higher weights, areas that the site visits indicated might be of interest (for example, allied health) and special clinics: multidisciplinary, specialist nurse and pre-admission clinics. Data for each patient comprised:

- the clinic name and VACS category (name and code), patient identifier and clinic date
- new or review patient (Healthcare Management Advisors discovered could not be identified in the records)
- the primary health professional seen (by profession)
- other health professionals seen in that clinic or on that day in another clinic or service (by profession or service)
- any indicator if the other visit was ad hoc or scheduled
- indicator if the other services are VACS clinics
- compensable status, Department of Veterans' Affairs status, indicator of whether it was a private clinic, indicator of current inpatient or Hospital In The Home status
- outcome: re-book to same clinic, admit, referred to other clinic, discharged
- other: comments.

There were cases for which the auditor could find no entry or evidence of 'failed to attend' on the given date. Healthcare Management Advisors subsequently asked

hospitals if the missing data resulted from poor documentation or whether the patient was a non-attender for whom data was submitted to VACS. The latter suggested that the 50 records had been retrieved from the anticipated attendances, not from the actual attendances list. All hospitals but two confirmed they had selected the cases on the basis that the patient had ‘attended’ and they were VACS episodes.

Surprisingly there was a proportion (13 percent of cases) of records in which the auditors could find no entry or proof of attendance or which was an apparently incorrect attendance. This particularly affected allied health records when hospitals had systems whereby allied health documents were filed in other than in the *main* medical record and those hospitals failed to retrieve the allied health records for the auditors. Table 1 summarises the apparently inappropriate VACS episodes (note only 5,977 records of an estimated 6,000 were available).

Table 1: Estimated non-VACS episodes of service by reason (summary)

Reason	Total	
	n	%
No evidence/insufficient	595	10.0%
Record destroyed	2	0.0%
FTA*/cancelled	9	0.2%
Incorrect UR	1	0.0%
Patient did not wait	5	0.1%
Not Indicated	43	0.7%
Inpatient/Hospital In The Home (HITH)	38	0.6%
Record review only†	13	0.2%
Compensable‡	31	0.5%
Department of Veterans’ Affairs (DVA)	31	0.5%
Medicare	2	0.0%
Other	6	0.1%
Sub-total/% difference	776	13.0%
Evidence of attendance	5,201	87.0%
Total	5,977	100.0%

Notes:

* FTA = Failed to attend

† at one site, one ‘record review only’ was also compensable and Medicare, one ‘record review only’ was also DVA

‡ at one site, one compensable was also Medicare

In order to determine the impact of the apparently non-VACS encounters the VACS category weights were applied to the sampled categories. The weight was then applied to the cases per category which the audit suggested should not have been included as VACS episodes and the percentage difference calculated. This process was only performed for the medical categories, which are weighted, not for allied health categories which do not have a weight. The total impact on medical categories was an over-estimate of 4.6 percent. There were four categories with an overestimate of weights greater than 10 percent. The categories most affected were:

- dental (16 percent) all of which were at one hospitals
- general medical which showed a 13.7 percent over estimate of weights (two sites)
- infectious diseases of 10.6 percent (two sites)
- ophthalmology (11.3 percent) at three (one of which subsequently advised Healthcare Management Advisors that the cases for audit were based on booked lists, so failures to attend were not necessarily submitted to VACS so the Healthcare Management Advisors findings may be slightly over-estimated).

Of the individual hospitals, one with a 6.7 percent difference was the most significant and another with almost 6 percent (5.8 percent) was the next highest. The following Table 2 shows the impact of applying weights to the medical categories (summary data, see Table 8.9 in Chapter 8 of the full report for detail by hospital).

Table 2: Impact on expected weights of non-VACS episodes for medical clinics

Category	Description	Weight	Total		
			VACS wt.	non-VACS wt.	% non-VACS
101	General Medicine	1.225	366.3	50.2	13.7%
102	Allergy	1.573	78.7	0.0	0.0%
103	Cardiology	1.626	325.2	1.6	0.5%
104	Diabetes	1.081	217.3	4.3	2.0%
105	Endocrine	1.343	134.3	1.3	1.0%
106	Gastro	1.195	239.0	9.6	4.0%
107	Haematology	1.416	133.1	0.0	0.0%
108	Nephrology	1.622	243.3	0.0	0.0%
109	Neurology	1.429	71.5	0.0	0.0%
110	Oncology	1.668	500.4	11.7	2.3%
114	Infectious	1.796	271.2	28.7	10.6%
201	General Surgery	1.178	294.5	8.2	2.8%
202	Cardiothoracic	1.636	163.6	4.9	3.0%
204	Ophthalmology	0.828	124.2	14.1	11.3%
205	ENT	0.887	88.7	4.4	5.0%
206	Plastic	0.806	201.5	13.7	6.8%
207	Urology	0.978	244.5	11.7	4.8%
208	Vascular	1.104	55.2	1.1	2.0%
209	Pre-admit	1.704	937.2	27.3	2.9%
301	Dental	1.115	55.8	8.9	16.0%
310	Orthopaedics	1.013	455.9	28.4	6.2%
350	Psychiatry	1.622	81.1	3.2	4.0%
402	Obstetrics	0.774	309.6	25.5	8.3%
403	Gynaecology	0.867	130.1	6.1	4.7%
502	Paediatric Medical	1.231	61.6	0.0	0.0%
Total			5,783.5	265.1	4.6%

Conclusion

The findings from the record review supports the conclusions drawn after completing the early stages of the project, that is, that whilst there is room for some improvement, VACS is working well with minimal errors (under or over-estimation) in respect of the medical (in the broad sense) clinics at participating hospitals. However, as with the systems review findings, the record review shows that data for allied health clinics is more prone to error (although Healthcare Management Advisors recognises that a number of records were unavailable due to separate documentation practices in allied health, but that *separate-ness* causes incorrect data). The inability to produce sufficient records for some allied health clinics indicates the actual and potential problems experienced in relation to data collection and submission for VACS. Healthcare Management Advisors confirmed through the record review that errors arose predominantly from inadequate IT system coverage (manual and electronic scheduling systems) which proliferates in allied health provider services, the need to clarify counting rules and then consistent application of them.

Recommendations - arranged by type, or area of interest

Recommendations relating to the VACS processes

- R1: It is recommended that the rules associated with VACS data submission (approval, notification of changes, categorization of clinics, notification of hospital liaison) be totally reviewed, re-distributed to hospitals regularly and centralised [for example the Policy and Planning Manual and the Agency Information Management System (AIMS) web site].
- R5: It is recommended that the VACS rules be made more specific as to the level of detail required for changes (is it necessary to notify a change of clinic day or time) and that one system for notifying changes be instituted: either an amendment form or submission of the schedule with changed highlighted.
- R6: It is recommended that the department continue to request annual updates and all hospitals be required to respond.
- R7: It is recommended that the annual update also seek the contact details for the current VACS liaison person and that that person should be senior in outpatient management and all VACS communication be channeled through that person.
- R8: It is recommended that the need for 'frequency of clinics' on the schedule be reviewed and if retained, that the current ambiguity be clarified ('hours per week' or 'encounters per month').
- R26: It is recommended that the schedule include all clinics (including privatised) to ensure the department has a complete picture of activity (privatised clinics will not require VACS approval or data submission.)
- R27: It is recommended that hospitals admitting patients to pre-admission clinics should be advised to stop.

Recommendations relating to VACS definitions and categories

- R2: It is recommended that data for category 609: Other Allied Health should be submitted by the individual clinics approved under 609 so the department can monitor the inclusions.

- R3: It is recommended that the department review the appropriateness of including episodes at cardiac laboratories (diagnostic) as an approved clinic.
- R15: It is recommended that a group be established by the department to review all current VACS requirements and definitions.
- R18: It is recommended that definitions for counting pre-admission clinics be reviewed in terms of pre-admission questionnaires and (specialist) nurse-only consultations.
- R19: It is recommended that group clinics be considered in light of number of providers per group, a group with individual treatment plans for participants and classes where all participants receive identical attention from one provider.
- R20: It is recommended that specialist nurse clinics be allocated to a new VACS category which distinguishes them (professionally) from allied health professionals.
- R21: It is recommended that weights be considered for non-weighted categories only after consistent data definitions and accurate data collection are achieved.
- R22: It is recommended that interpreter services (currently covered under separate funding) be considered for inclusion under category 609.
- R23: It is recommended that telephone consultations (currently covered under separate funding) be considered as VACS episodes.

Recommendations relating to VACS Clinical Panel

- R4: It is recommended that the process of clinic approval and funding approval should be reviewed to ensure one area of responsibility in the department for both.
- R10: It is recommended that the Panel meet at least twice per year.
- R25: It is recommended that all clinics currently approved or for which data are submitted under category 609 be re-reviewed by the Panel (to verify clinics such as birthing suite and cardiac testing as valid clinics).

Recommendations relating to multi-disciplinary clinics

- R16: It is recommended that the group focus initially on defining types of multidisciplinary clinics, the counting rules for multidisciplinary and group clinics and specialist nurse clinics.
- R17: It is recommended that the definition and counting of multidisciplinary clinics be considered in light of clinics serviced only by doctors, clinics serviced by a mix of professions and case management meetings (multidisciplinary but no patient present).
- R28: It is recommended that a review of the pre-admission clinics to identify best practice should be commissioned by the department for the purpose of defining appropriate services and hence counting rules.

Recommendations relating to action to be taken by hospitals

- R9: It is recommended that hospitals need to review their internal policies and make them more formal for ensuring compliance with the VACS requirements.
- R11: It is recommended that all hospitals be encouraged to eradicate the use of manual scheduling (and data collection) systems in ambulatory services.
- R12: It is recommended that the compensable status of patients be clearly identified in respect of the ambulatory clinics (individually) and recorded in the hospital outpatient department section of the record.
- R13: It is recommended that future changes to IT systems incorporate features that identify at the time of booking, attending and counting, patients who are non-VACS (Department of Veterans' Affairs, inpatients and compensable).
- R14: It is recommended hospitals streamline systems for collecting and reporting VACS data and minimize and educate the people involved so they understand the VACS requirements, monitor changes to clinics at the hospital and perform a quality review of the data.
- R29: It is recommended that hospital management and clinicians work to improve the standard of outpatient clinic documentation.

Recommendations relating to costing

R24: It is recommended that more emphasis be placed on accurate costing (including bundling ancillary services) of ambulatory data at patient level and reflecting multidisciplinary involvement.