Independent Monitoring and Evaluation of the Coordinated Veterans’ Care (CVC) Program

Final Evaluation Report

27 August 2015
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<tr>
<td>ADRG</td>
<td>Adjacent Diagnosis Related Group</td>
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<tr>
<td>AML Alliance</td>
<td>Australian Medicare Local Alliance</td>
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<tr>
<td>BHD</td>
<td>Bupa Health Dialog</td>
</tr>
<tr>
<td>CAD</td>
<td>coronary artery disease</td>
</tr>
<tr>
<td>CDM</td>
<td>chronic disease management</td>
</tr>
<tr>
<td>CHF</td>
<td>congestive heart failure</td>
</tr>
<tr>
<td>CNAT</td>
<td>comprehensive needs assessment tool</td>
</tr>
<tr>
<td>COPD</td>
<td>chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>CVC</td>
<td>Coordinated Veterans’ Care</td>
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<tr>
<td>DMIS</td>
<td>Departmental Management Information System</td>
</tr>
<tr>
<td>DVA</td>
<td>Department of Veterans’ Affairs</td>
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<tr>
<td>GP</td>
<td>general practitioner</td>
</tr>
<tr>
<td>Grosvenor</td>
<td>Grosvenor Management Consulting</td>
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<tr>
<td>healthcare professionals</td>
<td>in the context of this report, healthcare professionals refers solely to GPs and nurses</td>
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<tr>
<td>HPOS</td>
<td>Health Professional Online Services</td>
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<tr>
<td>ICT</td>
<td>information and communications technology</td>
</tr>
<tr>
<td>K10</td>
<td>Kessler psychological distress scale</td>
</tr>
<tr>
<td>M&amp;E Framework</td>
<td>Monitoring and Evaluation Framework</td>
</tr>
<tr>
<td>MBS</td>
<td>Medicare Benefits Schedule</td>
</tr>
<tr>
<td>ON</td>
<td>overnight</td>
</tr>
<tr>
<td>PIH</td>
<td>Partners In Health</td>
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<tr>
<td>PTRs</td>
<td>patient treatment reports</td>
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<tr>
<td>PTSD</td>
<td>post-traumatic stress disorder</td>
</tr>
<tr>
<td>RAC</td>
<td>residential aged care</td>
</tr>
<tr>
<td>SNAP</td>
<td>special needs assessment profile</td>
</tr>
<tr>
<td>TC</td>
<td>target (chronic) conditions</td>
</tr>
<tr>
<td>TCA</td>
<td>Team Care Arrangements</td>
</tr>
<tr>
<td>VHC</td>
<td>Veterans’ Home Care</td>
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1 Executive summary

About the Coordinated Veterans’ Care (CVC) Program

The CVC Program was a 2010-11 Federal Budget initiative that commenced 1 May 2011. The Program provides ongoing, planned and coordinated primary and community care, led by a general practitioner (GP) with a Nurse Coordinator, to eligible Gold Card holders. These comprise veterans, war widows, war widowers and dependants, who have chronic conditions, complex care needs and are at risk of unplanned hospitalisation.

The CVC Program primarily targets Gold Card holders with the following chronic conditions:

- congestive heart failure
- coronary artery disease
- pneumonia
- chronic obstructive pulmonary disease
- diabetes.

The primary desired program outcome is to decrease unplanned hospitalisations for CVC enrollees thereby reducing health service outlays. The desired CVC Program outcomes are fully detailed in section 11.2.

About this evaluation report

This report is the third and final of the three annual evaluation reports which have been produced as part of the evaluation activities for the CVC Program and conducted by Grosvenor Management Consulting.

It combines the results of the quantitative and qualitative analyses from May 2011 to December 2013 undertaken between October and November 2014. Quantitative analysis in this report was limited by the available data and reports on Gold Card holders enrolled by December 2013. Collection of the qualitative data occurred in October and November 2014.

Key findings

The key findings of the evaluation outlined below indicate that while the expectations for cost and hospitalisation reductions have not yet been met, there is evidence that suggests some savings could arise with long term enrolment. Furthermore, feedback derived from interviews, case studies, and the GP survey indicates the Program is delivering positive qualitative benefits to both general practices and Gold Card holder participants that are less easily measured.

The terms Nurse Coordinator, Practice Nurse and nurse are used interchangeably in this report. Nurse Coordinator is the term used by DVA in the CVC Program guidance material and refers to a Practice Nurse, Aboriginal Health Worker or a DVA contracted community nurse.
Aside from the CVC Program’s impact on health system outcomes, there are a number of opportunities for improvement of the CVC Program’s design, delivery and management as well as lessons learnt for other programs.

1. Impact on health system outcomes

The CVC Program was originally expected to deliver savings in health care expenditure to DVA through the reduction of unplanned hospital admissions for enrolled Gold Card holders. While the anticipated savings have not yet been achieved, there is evidence that suggests savings could arise further into the future with long term enrolment in an appropriately focused program. As expected, anticipated savings are likely to arise from slower increases, and perhaps decreases, in hospital admissions among enrollees. However, savings may be difficult to realise given the current average age of the enrollees and the length of time before savings arise.

Further analysis was performed to determine which CVC enrollees have the strongest potential to deliver savings and was based on the estimated likelihood of an enrollee being hospitalised in the year following enrolment. This is referred to as a risk rating and can be represented as a percentile band for both genders. The risk rating range from the 80th to 95th percentile is the band that shows the strongest evidence of potential savings, and the 60th to 80th percentile band has similar results. For these groups, enrolment in the CVC Program immediately increases health service outlays by approximately 50% (primarily due to the initial CVC payments to GPs), but future costs slowly decrease. In contrast, costs continue to gradually increase for those not enrolled in the program.

It will take approximately 3 (female) to 8 (male) years after enrolment for the expected cost of an enrollee and a never enrolled Gold Card holder to equalise. Further years are required to offset the additional costs occurred prior to equalisation, and yet more time to achieve savings.

The extended period before achieving savings leads to a practical problem. Even among the most responsive population groups, clients would need to be enrolled on the CVC Program for many years in order to achieve overall savings. As the target population is predominantly elderly, it is likely that a significant proportion would enter residential aged care or die before these savings were realised.

It was expected that Gold Card holders at higher risk of hospitalisation would be most likely to experience decreased unplanned hospital admissions and produce savings when enrolled in the CVC Program. There is some evidence to support this expectation, with the 80th to 95th percentile risk band showing a decrease in costs of hospitalisation following enrolment. However, Gold Card holders in that risk percentile band who did not enrol in CVC also showed such a decrease. Furthermore, analysis of the hospital episodes by average length of stay and type of episode showed no clear patterns that can be attributed to CVC enrolment.

The results mirror the shift in the literature, which has shown some movement away from the premise of care coordination resulting in savings towards a focus on the quality of care and cost neutrality. Where results of cost savings have been reported in the literature, the analysis has often been critiqued in terms of the quality and completeness of data resulting in
the relatively poor evidence base for achieving savings through care coordination.

The data available for analysis in this evaluation is more complete and of higher quality than for many of the previous care coordination programs. However, while the statistical evidence of savings potential is reasonably strong and consistent, the relationship extrapolates beyond the timeframes of the existing data and may not continue once more years of data are collected.

2. Benefits for Gold Card holders and general practices

General practices are confident that the additional level of support is beneficial to Gold Card holders, making it easier for them to manage safely in their homes and giving them confidence to continue to do so. General practices and Gold Card holders are able to provide many constructive examples of benefits and outcomes as a consequence of participating in the CVC program.

The survey and interview results emphasise cases of improved:

- health status and quality of life
- health literacy and ability to self manage
- social connectedness
- avoided hospitalisations.

CVC participants acknowledged feeling secure, having peace of mind as well as a greater ability to navigate the healthcare system.

In addition, general practices have indicated that involvement in CVC Program delivery has enhanced their capability and capacity to deliver coordinated care.

Enhanced capability has been demonstrated through training uptake and other self-reported indicators such as improved knowledge of care coordination and effectiveness of the Nurse Coordinator role. The Program has also built capability through increasing importantly collaboration within general practice and between general practice and other health providers.

Positive changes within general practice such as employing additional nurse resources or extending existing nurse hours has meant additional capacity. In the 2014 survey 55.9% of respondents reported that their general practice had employed additional nurse resources or extended the hours of existing nurse resources. A small proportion of general practices also reported increases to capacity by employing additional GPs, or increasing the hours of existing GPs.

Another key benefit identified through the qualitative analysis is the increased time spent with CVC participants allows for a more holistic understanding of their condition and needs. Nurse coordinators have reported the additional time has also enabled a greater trust and open
relationship to facilitate effective care coordination and health outcomes for the person.

The CVC Program’s funding model is successful in incentivising practice participation in the program, as demonstrated by service provider feedback that remuneration is a key consideration for deciding to deliver CVC Program services. The vast majority (over 90%) of survey respondents also report that their practice plans to continue to deliver the CVC Program.

3. Lessons learnt and opportunities for improvement of program design, delivery and management

The lessons learnt and opportunities for improvement of the CVC Program’s design, delivery and management are outlined below and in more detail in section 10.3:

1. Existing practice business models have been noted as a barrier to increased capacity within general practices, as some business models do not support DVAs intent of the CVC funding model that was to enable general practice to fund additional Practice Nurse resources. These issues are driven by individual business decisions and by the broader Medicare Benefits Schedule fee for service model. As such, the CVC Program has a limited ability to influence these issues.

2. The retrospective claiming model for quarterly care payments is noted by some general practices as being one of the most frustrating aspects when establishing the program within their practice. However, these difficulties are often resolved once the practice has embedded the billing process in its administrative processes.

3. While the eligibility criteria and recruitment activities have shaped enrolment on the CVC Program to some extent, the current flexibility in the eligibility criteria has contributed to diluting the overall effectiveness of CVC. The eligibility criteria could be further narrowed to increase enrolment of those Gold Card Holders with the strongest evidence of potential savings. Changes to the eligibility criteria should be implemented using a robust change management approach.

4. There are indications that condition flags produced from the Department’s Management Information System (DMIS) dataset and used for targeting and Patient Treatment Report (PTR) purposes are producing false positives and false negatives. Exploratory work to establish the error rate and refine the algorithms may be warranted, but may be limited by the nature of the DMIS dataset which is primarily administrative. The extent to which this is contributing to low access rates of PTRs through the Health Professional Online Services system and increases in the survey rating of PTRs as ‘not very useful’ should also be explored.

5. There is opportunity to improve service quality and obtain assurance of compliance by further leveraging the better practices of CVC Program high performing general practices and enhancing the compliance regime for the CVC Program. The prevalence of general practices who are categorised as either ‘CVC requires improvement’ or ‘existing Chronic Disease Management (CDM) general practices’ may have
impacted on the results achieved to date. If this explanation is correct, a greater proportion of ‘CVC Program high performer’ general practices should improve the results.

6. General practices required substantial support and had a strong desire for training and practical support and resources during implementation. The availability of the training modules continues to be relevant for new practices commencing delivery of the program as well as continuing service providers who experience turnover or require the training material for reference.

7. The uptake of CVC Social Assistance services has been consistently low across all years of the evaluation. Based on the information available the need for the services is unable to be accurately assessed. Exploratory work to establish the need should be considered, and inform decisions about the service design and future.

Grosvenor Management Consulting notes that a detailed service delivery and implementation study of the CVC Program in general practice is currently being undertaken by the Flinders University of South Australia. The study is due to be completed in August 2015 and will provide further insight to the how CVC is working in general practice. The findings will assist DVA in understanding how general practice interpret, apply and implement CVC and will inform future opportunities for improvement along with this report.

Ideas for improvement

The following suggestions are made in relation to the CVC Program’s design, delivery and management:

- Place greater emphasis in relevant training/educations material on the claiming model for the CVC Program and the need to keep additional service date records, over and above typical general practice processes.

- Narrow the eligibility criteria to increase enrolment of Gold Card holders in the target percentile risk bands that show the strongest evidence of potential savings from reduced hospitalisations (60th to 95th percentile).

- Use robust change management processes to effectively implement changes to the CVC Program’s eligibility criteria.

- Undertake exploratory work to establish the error rate in the PTRs and their value to general practices. The exploratory work should inform whether:
  - no action is required,
  - refinement should be undertaken to improve accuracy, or
  - PTRs should be discontinued on the basis they do not represent value for money.

- Consider the results of the Flinders University study into the implementation of CVC in general practice in the future program design.
• Enhance the CVC Program’s audit and compliance regime to drive continuous improvement and further assure appropriate claiming practices.

• Continue provision of the online training modules.

• Undertake exploratory work to establish the usefulness, service design and value of CVC Social Assistance services into the future.
2 Introduction

2.1 Background

The Coordinated Veterans’ Care (CVC) Program aims to provide coordinated care for eligible Gold Card holders with chronic conditions and complex care needs, and who are at risk of being admitted or readmitted to hospital.

Grosvenor Management Consulting (Grosvenor) was engaged by the Department of Veterans’ Affairs (DVA) as the Independent Monitoring and Evaluation Provider in March 2011 to conduct a three year evaluation of the CVC Program that monitors consistency of its overview and aim.

2.2 Scope

This report is the third and final of the three annual reports which have been produced as part of the evaluation activities for the CVC Program.

This report brings together the results of the quantitative and qualitative analyses undertaken between September—November 2014 building on the findings in the previous reports and covers:

- an update of the evidence for coordinated care
- enrolment demographics for financial year 2012/132
- analysis of service delivery
- assessment of patterns of care and service utilisation under care plans, including any changes in hospitalisation rates for enrolled Gold Card holders
- analysis of program costs.

The conclusions in this report are a summary of the key findings and themes that have emerged between May 2011 and November 2014. This report also includes Grosvenor’s observations and recommendations for enhancements to the CVC Program.

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2 This is as a result of the lag issues associated with hospitalisation data. Please refer to section 9.1.1 for further detail.
3 Coordinated Veterans’ Care Program

3.1 Overview of the CVC Program

The CVC Program was a 2010-11 Federal Budget initiative. The CVC Program received funding to improve access to community based support for eligible Gold Card holders with chronic conditions and complex care needs at risk of unplanned hospitalisation. The CVC Program is now considered a business as usual program for DVA.

The CVC Program commenced 1 May 2011 and provides ongoing, planned and coordinated primary and community care, led by a general practitioner (GP) with a Nurse Coordinator, to eligible Gold Card holders. These include veterans, war widows, war widowers and dependants, who are Gold Card holders with chronic conditions and complex care needs, and who are at risk of being admitted or readmitted to hospital.

The CVC Program uses a proactive approach to improve the management of participants’ chronic conditions and quality of care. It provides new payments to GPs for initial and ongoing care.

General practices, which decide to be involved in the CVC Program, are required to prepare for the program, enrol participants in the program, and provide ongoing care.

The CVC Program primarily targets Gold Card holders with the following chronic conditions:

- congestive heart failure
- coronary artery disease
- pneumonia
- chronic obstructive pulmonary disease
- diabetes.

At program commencement there were an estimated 170,000 Gold Card holders living in the community. About 10% or 17,000 individuals were expected to participate in the CVC Program.

The uptake of the program has exceeded expectations. As at 8 January 2015, there were 21,276 active participants enrolled on the CVC Program. Note active enrollees are those participants who have not entered a residential aged care facility or passed away or who have exited CVC for another reason.

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3The terms Nurse Coordinator, Practice Nurse and nurse are used interchangeably in this report. Nurse Coordinator is the term used by DVA in the CVC Program guidance material and refers to either a Practice Nurse, Aboriginal Health Worker or a DVA contracted community nurse.

4Figures sourced from BHD monthly report dated 8 January 2015.
3.2 Service delivery requirements

A summary of the expected service delivery requirements for the CVC Program are detailed in Table 1 below. These are based on the information contained in the CVC Program: A Guide for General Practice\(^5\).

**Table 1: Expected service delivery requirements**

<table>
<thead>
<tr>
<th>Program element/requirement</th>
<th>Key requirements</th>
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<tbody>
<tr>
<td><strong>Prepare</strong></td>
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</table>
| Establish a care team       | • core CVC care team includes the veteran, their carer, GP, and Nurse Coordinator  
                              | • pharmacists, allied health providers, discharge planners, hospitals, community health providers, social assistance providers, specialist and other health professionals are part of the broader care team  
                              | • sharing of health information is expected  
                              | • regular communication, empowerment and coaching are key |
| Prepare the practice        | • a Nurse Coordinator must be appointed  
                              | • program requirements and roles must be understood  
                              | • tools for managing the program may need to be set up  
                              | • a discrete space should be provided for the Nurse Coordinator  
                              | • home visit capability is highly recommended |
| **Enrol**                   |                  |
| Enrolment and eligibility   | • enrolments must be in accordance with the eligibility criteria  
                              | • the program should be explained to potential participants fitting the eligibility criteria  
                              | • consent must be explained and patient must provide consent to participate |
| Needs assessment            | • a comprehensive needs assessment must be conducted—preferably in the patient’s home  
                              | • use of the suggested tools is strongly recommended (eg.K10, CNAT, SNAP and PIH) |

\(^5\) 2011, Commonwealth of Australia
<table>
<thead>
<tr>
<th>Program element/requirement</th>
<th>Key requirements</th>
</tr>
</thead>
</table>
| Prepare a care plan | • a comprehensive care plan must be prepared (if there is an existing care plan it must be updated)  
• minimum content requirements are indicated but a template is not mandated  
• the care plan must be discussed with the participant to ensure they understand the plan  
• the patient’s consent to the care plan must be obtained |
| Finalise the care plan | • the GP must be involved in finalisation of the care plan  
• a patient friendly version must be provided to the participant (and their carer/family as agreed)  
• Initial Incentive Payment can be claimed at this point and first quarterly period of care commences |
| Consider need for social assistance | • patient’s need for social assistance should be considered and referral made by the GP to Veterans’ Home Care (VHC) if applicable  
• social assistance assessment and services should be monitored |
| Provide ongoing care | |
4 Approach

4.1 Monitoring and Evaluation Framework

To support the monitoring and evaluation activities of the CVC Program, Grosvenor developed a comprehensive Monitoring & Evaluation Framework (M&E Framework).

Under this framework, Grosvenor has reported on the implementation and impacts of the CVC Program from May 2011 to December 2014, which included the following reports:

- a baseline analysis report, which was delivered in April 2012 and included a review of the evidence about care coordination and detailed the analytical methods proposed to assess the impact of the CVC Program
- two interim reports which were delivered in December 2012 and December 2013
- a final evaluation report (this report) to be delivered in March 2015.

This final evaluation includes an analysis of the CVC Program to answer, to the extent possible, the evaluation questions detailed in the M&E Framework. A copy of the M&E Framework is provided at Attachment A—M&E Framework.

4.2 Evaluation method

The interim evaluations and this final evaluation utilised a mixed methods approach, which included:

- a literature review update (to the literature review conducted in the as part of the baseline analysis)
- a survey released to general practices
- consultations with both healthcare professionals and the Gold Card holder community (Gold Card holders and carers)
- use of available monitoring data
- quantitative analysis of healthcare data.

Ethics approval from the DVA Human Research Ethics Committee (HREC) was provided for this evaluation.

Analysis of the findings has been conducted with reference to the outcomes hierarchy developed for the CVC Program and included at Attachment B—CVC Outcomes Hierarchy.

Further details on evaluation participants for the survey and consultations are provided in Attachment C—Evaluation participants.
**Literature review update**

As part of the baseline report, Grosvenor conducted a literature review, which considered the outcomes for similar programs.

For each interim report and this final report, Grosvenor has updated the literature review with the aim of identifying additional articles which may highlight further elements related to the CVC Program.

The literature update utilised a broad search to capture additional literature. Search terms used include chronic disease care, chronic care models, chronic disease management, multidisciplinary care, care planning, enhanced primary care, coordinated care, reducing hospital admissions and re-admissions.

An overview and analysis of the findings of the most recent literature review update can be found in section 6.

**General practice survey**

For each interim and this final evaluation Grosvenor has released a survey to all general practices within Australia that are recorded as having one or more patient enrolled in the CVC Program. The survey is open to healthcare professionals including GPs, nurses, DVA contracted Community Nurses, Aboriginal Health Workers and Practice Managers.

For a full set of survey questions and responses refer to Attachment D—General practice survey report 2014.

**Consultations**

For the interim evaluations and this final evaluation, the consultations were designed to be complementary to one another and included two streams:

- **Stream 1**: consultations with healthcare professionals, including:
  - individual GPs
  - individual Nurse Coordinators
  - focus groups of GPs and nurses

- **Stream 2**: consultations (case studies) with the Gold Card holder community, which were separated into individual Gold Card holder and individual carer interviews.

The aim of the case studies in Stream 2 was to explore the patient journey. Case studies were not intended to be representative of the entire enrolled population.

All enrolled Gold Card holders, except those with a mental health flag in DMIS, were eligible to partake in the evaluation.
Sampling was based on postcodes within contracted Medicare Locals, which offered clusters of patients. Once postcodes were selected, a sample of enrolled Gold Card holders was drawn from the available data for the purpose of identifying enrolled Gold Card holders for interviews.

**Monitoring data**

The following monitoring data was utilised to triangulate findings from the consultations and survey:

- Bupa Heath Dialog (BHD) monthly reports—containing enrolment, targeting and claims data
- BHD CVC Helpline reporting
- AML Alliance and Flinders University training progress reports
- HPOS data available from Department of Human Services for PTRs
- practice level enrolment records provided by DVA up to October 2013.

**Quantitative analysis**

The DMIS dataset was used to analyse health service usage and to assess the impact of the CVC Program on patterns of care and health service costs.

Further details of the analysis performed for this final report are provided in sections 7.1, 7.2 and 9 of this report.

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6 DVA’s DMIS records claims data at the individual provider level. For the CVC Program this means that each enrolment (UP01 or UP02 claim) is attributed to an individual GP rather than a general practice. The Health Innovation team (responsible for the CVC Program) manually maintained a spread sheet of CVC enrolment data at the practice level up to October 2013.
5 Findings

The findings are divided into four sections as follows:

- **Section 6—Evidence for care coordination**: This section discusses evidence from the literature review and annual updates

- **Section 7—Targeting and enrolment**: Details the general characteristics of the CVC Program’s enrollee and potential enrollee population, and discusses the recruitment approach and eligibility criteria for the CVC Program

- **Section 8—Service delivery**: Findings in this section relate to the delivery of the CVC Program by participating general practices and the feedback of Gold Card holders receiving CVC Program services

- **Section 9—CVC Program impact on health service activity**: Contains results of the quantitative analysis, assessing the impact of the CVC Program on service patterns and healthcare costs.
6 Evidence for care coordination

The initial literature review was undertaken in February 2012 and was documented in the baseline report. The purpose of the review was to examine the current evidence of effectiveness for care coordination for people with chronic diseases, including those chronic diseases targeted under the CVC Program.

The baseline literature review discussed ten seminal articles in relation to four key themes, namely:

- benefits of care coordination for patients with chronic diseases
- cost implications of care coordination, including potential savings
- barriers to providing effective care coordination
- models of care coordination which work best in the primary healthcare sector.

The literature review is not intended to critique the available literature, or individual studies that were selected for the review. Nor is it a synthesis of the selected studies. While the original literature review focused on seminal articles to understand the evidence for care coordination, the articles selected for review each year of the evaluation have been broader in nature (i.e. not necessarily seminal articles). This has been in order to remain abreast of the changing evidence relating to care coordination. Thus, the review discusses the major themes that the selected studies raise that are of relevance to the CVC Program and its evaluation.

The baseline literature review was updated as part of the first interim evaluation in November 2012. The update discussed an additional two articles against the four themes identified above. In 2013 the second interim review canvassed four new articles to assess any shifts in the evidence base. This year a third and final scan has been undertaken as a means to identify further relevant articles.

The following articles were selected for this third and final review:


- Murphy, S., & Neven, D. (2014). Cost-Effective: Emergency Department Care Coordination with A Regional Hospital Information System. The Journal of Emergency Medicine, 223-231


These studies were determined to be relevant to the CVC Program as these studies focus on coordinated care programs and provide context for the evolving evidence base in the external environment. The length of the studies and the timeframes for achieving outcomes were considered as part of this literature review update.

**Benefits and costs**

All studies reviewed this year identified that cost savings are expected to come from decreased length of stay or reduced preventable admissions. This is consistent with the findings of previous literature reviews. In particular Petigout et al. (2013) suggested that savings could be attributed to reductions in surgical procedures associated with known high costs. Similarly, Murphy and Neven (2014) noted that reduced frequency of visits would decrease crowding, wait times, strain on staff and adverse outcomes. However, as noted in the second interim review, the literature did not provide definitive conclusions as to the likelihood of care coordination programs achieving breakeven or generating substantial cost savings to support long term program viability.

Moreover, all articles identified that care coordination, when implemented as planned, resulted in improvements in patient relationships, clinical measurement and overall patient well-being. Further, it was suggested that care coordination programs could reduce the costs associated with care fragmentation, such as those caused by involving multiple clinicians who are not effectively communicating or sharing information. The results reported by the studies identified the benefits of care coordination programs to include the ability of such programs to foster cooperation between providers, stabilise patients and reduce hospital use. Further, Petitgout’s study reported that there was a direct impact on length of stay, patient stabilisation, cost and satisfaction between provider and patient as a result of care coordination.

**Barriers**

A number of barriers to the successful implementation of coordinated care were presented in the literature. As previously identified in prior literature reviews, lack of collaboration and poor information sharing were common barriers.

This year the literature review update reconfirmed the presence of these barriers to providing care coordination. Additional barriers which were noted in this year of the literature review update include:

- incompatibility between the administrative processes associated with following healthcare guidelines and providing effective coordinated care. The guidelines were often used to ensure care provision is compliant with a funding claim rather than to guide care quality
• insufficient funding to achieve coordinated care requirements, through ensuring that there is ongoing funding and support for registered nurses who are delivering the coordinated care.

Models of care

All articles considered care coordination in a range of environments and compared and analysed the features of successful programs. The importance of appropriately targeting patients to be involved in these programs was frequently discussed.

The literature identified that patients who had a high-moderate risk of hospitalisation, or patients who had a high frequency of hospital usage, were more likely to experience benefits. This is due to improved disease management and the potential to reduce symptoms that may result in hospitalisation.

Despite some common elements of successful coordinated care models being identified, two articles (Murphy & Neven, 2014; Ehrlich et al., 2013) reasoned that care coordination must be developed with the aim of improving conditions for the individual patient, as opposed to solely being viewed as a cost saving initiative for healthcare providers. Therefore, coordinated care programs should be targeted to the individual, with policies and procedures specifically tailored to a targeted patient cohort as a means to achieve successful outcomes.

Study length and scope

The studies under review varied in terms of length and scope. The longest study was evaluated after 10 years and the shortest after two years. The frequency of reporting and the sample size of each study also varied. Due to the long implementation period for these projects and the length of time it may take to achieve results, there was a view in some articles that it would be beneficial to conduct longer term studies.
7 Targeting and enrolment

7.1 Gold Card holders and their health service use

This section of the report presents summary information about DVA Gold Card clients, the CVC Program enrollee and potential enrollee population. It includes those DVA clients who held a Gold Card for at least part of the analysis period of July 2010 to March 2014 and whose data is of sufficient quality to be included in the statistical analyses. Clients who held a Gold Card for only part of the period are only included in the analyses while holding the Gold Card. For simplicity, this population is referred to as Gold Card holders throughout the analysis, even though the dataset does not exactly represent all such DVA clients. Totals are not expected to match DVA summary data.\(^7\)

There are two significant eligibility restrictions for enrolment on the CVC Program. The client must hold a Gold Card and must not be in residential aged care. While clients in residential aged care are ineligible to enrol on the CVC Program, there are clients in residential aged care who were previously enrolled on the program. Thus, Gold Card holders are included in the contextual analysis, regardless of the residential aged care status.

The analysis briefly describes the general characteristics of this group, such as size and demographic structure. However, the focus is on the patterns of care and costs that these clients attract. The purpose is to provide context for the specific analyses that compare the patterns of care for CVC enrollees with their Gold Card holder peers who did not enrol.

As shown in Table 2, Gold Card holders comprise a substantial group within the DVA client base in terms of number of clients and outlay on health care. In the financial year 2012-13, there were 206,999 DVA clients who held a Gold Card for at least one day at some stage within the year. The number of clients had been declining by approximately 10,000 per year, but this decline reversed temporarily in 2011-12 as more members of the Vietnam Veteran cohort became eligible for a Gold Card. Nevertheless, the total client years\(^8\) continued to decline as the older veterans died.

The average cost per Gold Card holder has continued to increase (to $17,995 in 2012-13), offsetting the decline in client years and resulting in a relatively stable outlay of over $3.2 billion per year (Table 2). While overnight hospital costs comprise the largest expenditure group, other health services are also substantial, particularly for medical and pharmaceutical care (Table 3).

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\(^7\) As the dataset is constantly being revised, the included clients can also change and there are small differences between our reports even for the same historical period.

\(^8\) Client years means the total number of full years of Gold Card ownership among the client base. Clients who only held a Gold Card for part of the year are included on a pro rata basis.
Table 2: DVA Outlay for Gold Card holders by financial year

<table>
<thead>
<tr>
<th></th>
<th>FY 09-10</th>
<th>FY 10-11</th>
<th>FY 11-12</th>
<th>FY 12-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients¹</td>
<td>225,252</td>
<td>214,195</td>
<td>219,700</td>
<td>206,999</td>
</tr>
<tr>
<td>Total client years</td>
<td>213,046</td>
<td>201,966</td>
<td>190,344</td>
<td>178,937</td>
</tr>
<tr>
<td>Total outlay</td>
<td>$3,283 m</td>
<td>$3,225 m</td>
<td>$3,280 m</td>
<td>$3,220 m</td>
</tr>
<tr>
<td>Outlay per client year</td>
<td>$15,408</td>
<td>$15,968</td>
<td>$17,230</td>
<td>$17,995</td>
</tr>
</tbody>
</table>

Note 1: Number of people who held a Gold Card on any day within the financial year.

Table 3: DVA Outlay by service for Gold Card holders (2012-13)

<table>
<thead>
<tr>
<th>Service</th>
<th>Total</th>
<th>Per client¹</th>
<th>%</th>
<th>Number</th>
<th>Per client¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital (Overnight)</td>
<td>$1,580 m</td>
<td>$8,827</td>
<td>49.1%</td>
<td>0.16</td>
<td>0.9</td>
</tr>
<tr>
<td>Hospital (Same day)</td>
<td>$218 m</td>
<td>$1,221</td>
<td>6.8%</td>
<td>0.14</td>
<td>0.8</td>
</tr>
<tr>
<td>Medical</td>
<td>$502 m</td>
<td>$2,807</td>
<td>15.6%</td>
<td>10.8</td>
<td>60</td>
</tr>
<tr>
<td>Pharmaceutical</td>
<td>$389 m</td>
<td>$2,174</td>
<td>12.1%</td>
<td>11.5</td>
<td>64</td>
</tr>
<tr>
<td>Allied Health</td>
<td>$294 m</td>
<td>$1,643</td>
<td>9.1%</td>
<td>3.7</td>
<td>21</td>
</tr>
<tr>
<td>Community Nursing</td>
<td>$125 m</td>
<td>$701</td>
<td>3.9%</td>
<td>0.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Veterans Homecare</td>
<td>$90 m</td>
<td>$503</td>
<td>2.8%</td>
<td>1.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Other</td>
<td>$21 m</td>
<td>$119</td>
<td>0.7%</td>
<td>0.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>$3,220 m</td>
<td>$17,995</td>
<td>100%</td>
<td>28.4</td>
<td>159</td>
</tr>
</tbody>
</table>

Note 1: Those clients who held a Gold Card for only part of the year were included on a pro rata basis.

7.1.1 Hospital utilisation

Clearly the cost of overnight hospital services is a substantial DVA expenditure, at almost half of all DVA outlays for Gold Card clients (Table 3). A reduction in hospital utilisation and/or average length of stay is also the expected source of savings from the CVC Program as a key goal of coordinated care is to avoid hospitalisation arising from unmanaged medical conditions. This could arise from either a small reduction in common services or a substantial reduction in rarer services that are potentially more responsive to care coordination.

Table 4 summarises overnight and same day hospital episodes over the past four years. Despite a decrease in length of stay per episode, the increasing cost per episode has combined with an increase in episodes per client to lead to a substantial growth in expenditure per client (examined further in the impact analysis at section 9). Total expenditure on hospitalisation for Gold Card clients has remained stable as the client population decreases.
### Table 4: Hospital utilisation by Gold Card holders by financial year

<table>
<thead>
<tr>
<th></th>
<th>FY 09-10</th>
<th>FY 10-11</th>
<th>FY 11-12</th>
<th>FY 12-13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outlay ($m)</strong></td>
<td>$1,838</td>
<td>$1,784</td>
<td>$1,845</td>
<td>$1,803</td>
</tr>
<tr>
<td><strong>&gt; per client year ($)</strong></td>
<td>$8,627</td>
<td>$8,834</td>
<td>$9,691</td>
<td>$10,078</td>
</tr>
<tr>
<td><strong>Episodes</strong></td>
<td>329,380</td>
<td>316,631</td>
<td>309,586</td>
<td>293,711</td>
</tr>
<tr>
<td><strong>&gt; per client year</strong></td>
<td>1.55</td>
<td>1.57</td>
<td>1.63</td>
<td>1.64</td>
</tr>
<tr>
<td><strong>Proportion same day</strong></td>
<td>47%</td>
<td>47%</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td><strong>General readmissions</strong></td>
<td>18.9%</td>
<td>18.8%</td>
<td>19.1%</td>
<td>18.8%</td>
</tr>
<tr>
<td><strong>Ave length of stay</strong></td>
<td>4.87</td>
<td>4.77</td>
<td>4.69</td>
<td>4.59</td>
</tr>
<tr>
<td><strong>&gt; overnight only</strong></td>
<td>8.29</td>
<td>8.10</td>
<td>7.93</td>
<td>7.73</td>
</tr>
</tbody>
</table>

**Note 1:** Admission within 30 days of end of overnight episode. This is not comparable to readmission as defined in the data collections managed by the Australian Institute of Health and Welfare.

**Note 2:** Average length of stay including both overnight and same day admissions.

Adjacent Diagnosis Related Groups (ADRGs) classify hospital episodes by broadly similar clinical and resources requirements. In 2012-13, excluding the poorly defined (Z64) or unclassifiable episodes, there were 22 different ADRGs that were in the top 10 (for Gold Card holders) for at least one of: number of overnight episodes, number of same day episodes, expenditure per episode, or total outlay. These ADRGs are identified at Table 5, ordered by total outlay.
Table 5: Characteristics of selected episode types (financial year 2012-13)

<table>
<thead>
<tr>
<th>ADRG</th>
<th>Description</th>
<th>Episodes</th>
<th>Outlay $m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z60</td>
<td>Rehabilitation</td>
<td>20,440</td>
<td>179.5</td>
</tr>
<tr>
<td>I03</td>
<td>Hip Replacement</td>
<td>1,835</td>
<td>54.1</td>
</tr>
<tr>
<td>E62</td>
<td>Respiratory Infections/Inflammations</td>
<td>5,729</td>
<td>50.8</td>
</tr>
<tr>
<td>F62</td>
<td>Heart Failure and Shock</td>
<td>5,274</td>
<td>45.9</td>
</tr>
<tr>
<td>I04</td>
<td>Knee Replacement</td>
<td>1,646</td>
<td>43.0</td>
</tr>
<tr>
<td>C16</td>
<td>Lens Procedures</td>
<td>8,993</td>
<td>38.2</td>
</tr>
<tr>
<td>E65</td>
<td>Chronic Obstructive Airways Disease</td>
<td>4,727</td>
<td>37.8</td>
</tr>
<tr>
<td>I08</td>
<td>Other Hip and Femur Procedures</td>
<td>1,516</td>
<td>34.7</td>
</tr>
<tr>
<td>F12</td>
<td>Implantation or Replacement of Pacemaker, Total System</td>
<td>1,250</td>
<td>30.3</td>
</tr>
<tr>
<td>I68</td>
<td>Non-surgical Spinal Disorders</td>
<td>4,687</td>
<td>29.0</td>
</tr>
<tr>
<td>L63</td>
<td>Kidney and Urinary Tract Infections</td>
<td>3,668</td>
<td>26.1</td>
</tr>
<tr>
<td>G67</td>
<td>Oesophagitis and Gastroenteritis</td>
<td>4,708</td>
<td>23.4</td>
</tr>
<tr>
<td>L61</td>
<td>Haemodialysis</td>
<td>30,282</td>
<td>18.0</td>
</tr>
<tr>
<td>X60</td>
<td>Injuries</td>
<td>3,286</td>
<td>16.5</td>
</tr>
<tr>
<td>F73</td>
<td>Syncope and Collapse</td>
<td>3,137</td>
<td>15.3</td>
</tr>
<tr>
<td>G44</td>
<td>Colonoscopy</td>
<td>5,463</td>
<td>14.3</td>
</tr>
<tr>
<td>C03</td>
<td>Retinal Procedures</td>
<td>8,824</td>
<td>14.0</td>
</tr>
<tr>
<td>F74</td>
<td>Chest Pain</td>
<td>3,272</td>
<td>9.5</td>
</tr>
<tr>
<td>J11</td>
<td>Other Skin, Subcutaneous Tissue and Breast Procedures</td>
<td>3,756</td>
<td>8.2</td>
</tr>
<tr>
<td>R63</td>
<td>Chemotherapy</td>
<td>9,259</td>
<td>7.0</td>
</tr>
<tr>
<td>Z40</td>
<td>Endoscopy W Diagnoses of Other Contacts W Health Services, Sameday</td>
<td>3,430</td>
<td>5.4</td>
</tr>
<tr>
<td>U60</td>
<td>Mental Health Treatment, Sameday, W/O ECT</td>
<td>11,686</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Readmission is another area explicitly targeted with the CVC Program. For the purposes of the CVC Program, if there are two periods of hospitalisation for the same client with a gap between separation and subsequent admission is up to 30 days, the latter is defined as a general readmission. A period of hospitalisation combines episodes that occur on adjacent days, provided at least one is an overnight episode. General readmissions are a measure only of the gap between pairs of overnight admissions for the same person, even if the later admission is planned. This should not be compared to readmission rates reported as part of hospital quality monitoring programs and other data managed by the Australian Institute of Health and Welfare.
7.1.2 Demographic considerations

The Gold Card holder population is not the same as the general Australian population. There are specific age groups for which there are large (or small) subpopulations. For example, there is a large group aged 61 to 70 and another aged 86 to 90, coinciding with veteran (or marriage) status arising from the Vietnam War and World War II respectively.

In general, costs increase with age, with male clients more expensive in every age group except children (Table 6, Table 7 and Figure 1). Thus, costs per client are likely to level off and perhaps fall over the next 10 years as the World War II group die, and then increase again as the Vietnam War group age.

Table 6: Utilisation by age group, male Gold Card holders (2012-13)

<table>
<thead>
<tr>
<th>Age Band</th>
<th>Clients</th>
<th>Client Years</th>
<th>Outlay</th>
<th>$ per year</th>
<th>Episodes per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 18</td>
<td>173</td>
<td>152</td>
<td>$0.3 m</td>
<td>$1,682</td>
<td>0.1</td>
</tr>
<tr>
<td>19 to 30</td>
<td>111</td>
<td>82</td>
<td>$0.8 m</td>
<td>$9,801</td>
<td>0.8</td>
</tr>
<tr>
<td>31 to 50</td>
<td>2,140</td>
<td>1,999</td>
<td>$21.9 m</td>
<td>$10,964</td>
<td>1.1</td>
</tr>
<tr>
<td>51 to 60</td>
<td>3,744</td>
<td>3,569</td>
<td>$50.3 m</td>
<td>$14,098</td>
<td>1.5</td>
</tr>
<tr>
<td>61 to 65</td>
<td>15,461</td>
<td>15,018</td>
<td>$190.7 m</td>
<td>$12,701</td>
<td>1.3</td>
</tr>
<tr>
<td>66 to 70</td>
<td>14,992</td>
<td>14,559</td>
<td>$202.4 m</td>
<td>$13,902</td>
<td>1.4</td>
</tr>
<tr>
<td>71 to 75</td>
<td>6,954</td>
<td>6,822</td>
<td>$116.0 m</td>
<td>$16,996</td>
<td>1.9</td>
</tr>
<tr>
<td>76 to 80</td>
<td>5,052</td>
<td>4,909</td>
<td>$95.3 m</td>
<td>$19,402</td>
<td>2.3</td>
</tr>
<tr>
<td>81 to 85</td>
<td>5,581</td>
<td>5,290</td>
<td>$123.6 m</td>
<td>$23,355</td>
<td>2.4</td>
</tr>
<tr>
<td>86 to 90</td>
<td>25,918</td>
<td>23,995</td>
<td>$561.3 m</td>
<td>$23,395</td>
<td>2.2</td>
</tr>
<tr>
<td>91 to 95</td>
<td>11,684</td>
<td>10,309</td>
<td>$251.8 m</td>
<td>$24,428</td>
<td>2.1</td>
</tr>
<tr>
<td>96 to 100</td>
<td>1,437</td>
<td>1,195</td>
<td>$27.7 m</td>
<td>$23,141</td>
<td>1.9</td>
</tr>
<tr>
<td>&gt; 100</td>
<td>81</td>
<td>64</td>
<td>$1.6 m</td>
<td>$24,754</td>
<td>1.9</td>
</tr>
<tr>
<td>Total / all</td>
<td>93,328</td>
<td>87,964</td>
<td>$1,643.6 m</td>
<td>$18,685</td>
<td>1.8</td>
</tr>
</tbody>
</table>
Table 7: Utilisation by age group, female Gold Card holders (2012-13)

<table>
<thead>
<tr>
<th>Age Band</th>
<th>Clients</th>
<th>Client Years</th>
<th>Outlay</th>
<th>$ per year</th>
<th>Episodes per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 18</td>
<td>201</td>
<td>176</td>
<td>$0.3 m</td>
<td>$1,719</td>
<td>0.1</td>
</tr>
<tr>
<td>19 to 30</td>
<td>129</td>
<td>91</td>
<td>$0.3 m</td>
<td>$3,541</td>
<td>0.5</td>
</tr>
<tr>
<td>31 to 50</td>
<td>616</td>
<td>584</td>
<td>$4.8 m</td>
<td>$8,297</td>
<td>0.7</td>
</tr>
<tr>
<td>51 to 60</td>
<td>1,752</td>
<td>1,689</td>
<td>$13.2 m</td>
<td>$7,843</td>
<td>0.7</td>
</tr>
<tr>
<td>61 to 65</td>
<td>2,398</td>
<td>2,298</td>
<td>$19.6 m</td>
<td>$8,506</td>
<td>0.9</td>
</tr>
<tr>
<td>66 to 70</td>
<td>2,823</td>
<td>2,725</td>
<td>$31.2 m</td>
<td>$11,467</td>
<td>1.1</td>
</tr>
<tr>
<td>71 to 75</td>
<td>4,064</td>
<td>3,914</td>
<td>$54.2 m</td>
<td>$13,845</td>
<td>1.5</td>
</tr>
<tr>
<td>76 to 80</td>
<td>7,955</td>
<td>7,670</td>
<td>$124.2 m</td>
<td>$16,196</td>
<td>1.6</td>
</tr>
<tr>
<td>81 to 85</td>
<td>24,389</td>
<td>23,273</td>
<td>$412.9 m</td>
<td>$17,741</td>
<td>1.5</td>
</tr>
<tr>
<td>86 to 90</td>
<td>34,735</td>
<td>32,568</td>
<td>$617.6 m</td>
<td>$18,963</td>
<td>1.5</td>
</tr>
<tr>
<td>91 to 95</td>
<td>15,024</td>
<td>13,623</td>
<td>$258.3 m</td>
<td>$18,959</td>
<td>1.4</td>
</tr>
<tr>
<td>96 to 100</td>
<td>2,562</td>
<td>2,189</td>
<td>$37.9 m</td>
<td>$17,297</td>
<td>1.2</td>
</tr>
<tr>
<td>&gt; 100</td>
<td>205</td>
<td>163</td>
<td>$1.8 m</td>
<td>$11,061</td>
<td>0.7</td>
</tr>
<tr>
<td>Total / all</td>
<td>96,853</td>
<td>90,964</td>
<td>$1,576.3 m</td>
<td>$17,329</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Figure 1: Claim per client year by age (40 to 100) and gender (2012-13)

However, age is not sufficient to identify potentially high cost DVA clients. Overnight hospitalisation is required for only half the Gold Card holders even among the oldest groups. This supports the CVC approach of using more
diverse information to encourage enrolment for those DVA clients at higher risk of hospitalisation.

7.1.3 Target populations

The CVC Program is based on the premise that coordination of care is best directed to those with sufficient healthcare needs to benefit from coordination but who are not too unwell to change their treatment. Algorithms were developed by BHD to estimate the risk of overnight hospitalisation in the forthcoming year and to identify those Gold Card holders with one of five specified conditions: coronary artery disease (CAD), chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), diabetes and pneumonia. The CVC Program is targeted to those Gold Card holders with hospitalisation risk in the 80th to 95th percentile of the risk distribution and at least one of the five conditions.

At the request of DVA, the condition identification algorithm was changed during 2012 to include pharmaceuticals. This resulted in higher levels of condition identification. In particular, 21% of Gold Card holders were identified as having coronary artery disease in September 2012, which increased to 28% in October 2012 and then to 40% in December 2012. Similarly, those identified with chronic obstructive pulmonary disease increased from 7% in September 2012 to 37% in October 2012 and then dropped to 13% at December 2012. For congestive heart failure, there was only one substantial change, from 8% in September to 19% in October 2012. The identification rates for diabetes and pneumonia were not noticeably affected by the algorithm adjustment.

Targeted conditions are effective at identifying those Gold Card holders who attract high health care benefits. In 2012-13, the annual outlay per person with a targeted condition ranged from over $20,000 for diabetes to over $30,000 for pneumonia (Table 8). These outlays are higher than the average over all Gold Card holders of approximately $18,000.

It is apparent, however, that broadening identification of target conditions did somewhat dilute the effect of targeting. In particular, the outlays per client year in 2011-12 (with the previous identification algorithm) were approximately $3,000-$4,000 higher for CAD, COPD and CHF. That is, the new algorithm also included people with lower costs than the previous algorithm, so the cost of Gold Card holders with targeted conditions is closer to the average cost for all Gold Card holders than in previous reports.
Table 8: Utilisation by target condition (2012-13), identified at Dec 2012

<table>
<thead>
<tr>
<th>Condition</th>
<th>Clients</th>
<th>Client Years</th>
<th>Outlay $ per year</th>
<th>Episodes per year</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAD</td>
<td>71,805</td>
<td>71,752</td>
<td>$1,616.3 m</td>
<td>2.2</td>
<td>59%</td>
</tr>
<tr>
<td>COPD</td>
<td>23,708</td>
<td>23,686</td>
<td>$616.9 m</td>
<td>2.3</td>
<td>64%</td>
</tr>
<tr>
<td>CHF</td>
<td>33,534</td>
<td>33,507</td>
<td>$885.6 m</td>
<td>2.5</td>
<td>62%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>46,008</td>
<td>45,954</td>
<td>$963.5 m</td>
<td>2.1</td>
<td>55%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>8,825</td>
<td>8,817</td>
<td>$277.7 m</td>
<td>3.2</td>
<td>70%</td>
</tr>
</tbody>
</table>

Note 1: Those clients who held a Gold Card for only part of the year were included on a pro rata basis.
Note 2: ON indicates the proportion of Gold Card holders in the specified risk band who incurred at least one overnight hospital episode during the financial year 2012-13.

Much of the variation in expenditure by condition is attributable to overnight hospital episodes Figure 2). However, even among clients with the target conditions, between 30% and 45% did not require hospitalisation during 2012-13 (from ON column in Table 8). This suggests that the risk of hospitalisation is a more precise indicator of high cost than diagnosis and supports the use of hospitalisation risk to supplement condition information in targeting of CVC enrolment.

Figure 2: Target condition by service outlay per person (2012-13)

Table 9 displays key information about the number of Gold Card holders and their utilisation, grouped by risk of overnight hospitalisation and number of target conditions. While the outlay per year generally increases with risk, the outlay and the risk of hospitalisation decrease with a higher number of target conditions for most risk groups, suggesting that co-morbidities may be discouraging some hospital based treatment for some clients. The high cost of the no target condition but higher hospital risk groups indicates that
conditions not specifically targeted by the CVC Program (including those that are not amenable to intervention) can also involve significant costs.

Table 9: Utilisation (2012-13) by December 2012 risk value and indicated number of target conditions, with CVC Program target group shaded

<table>
<thead>
<tr>
<th>Risk Band</th>
<th>TC(^1)</th>
<th>Clients(^2)</th>
<th>Client Years</th>
<th>Outlay</th>
<th>$ per year</th>
<th>Episodes per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt; 40th percentile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>47,513</td>
<td>47,286</td>
<td></td>
<td>$326.3 m</td>
<td>6,900</td>
<td>0.5</td>
</tr>
<tr>
<td>1</td>
<td>19,614</td>
<td>19,598</td>
<td></td>
<td>$159.8 m</td>
<td>8,155</td>
<td>0.6</td>
</tr>
<tr>
<td>2+</td>
<td>4,813</td>
<td>4,812</td>
<td></td>
<td>$44.3 m</td>
<td>9,210</td>
<td>0.8</td>
</tr>
<tr>
<td>Moderate 40 to 60th percentile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>15,196</td>
<td>14,928</td>
<td></td>
<td>$232.4 m</td>
<td>15,570</td>
<td>1.3</td>
</tr>
<tr>
<td>1</td>
<td>14,444</td>
<td>14,416</td>
<td></td>
<td>$204.1 m</td>
<td>14,160</td>
<td>1.1</td>
</tr>
<tr>
<td>2+</td>
<td>6,358</td>
<td>6,354</td>
<td></td>
<td>$96.8 m</td>
<td>15,232</td>
<td>1.4</td>
</tr>
<tr>
<td>High 60th to 80th percentile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>7,169</td>
<td>7,125</td>
<td></td>
<td>$196.5 m</td>
<td>27,584</td>
<td>2.6</td>
</tr>
<tr>
<td>1</td>
<td>15,830</td>
<td>15,812</td>
<td></td>
<td>$321.8 m</td>
<td>20,354</td>
<td>1.7</td>
</tr>
<tr>
<td>2+</td>
<td>13,000</td>
<td>12,992</td>
<td></td>
<td>$247.0 m</td>
<td>19,014</td>
<td>1.8</td>
</tr>
<tr>
<td>Targeted 80th to 95th percentile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1,401</td>
<td>1,395</td>
<td></td>
<td>$65.0 m</td>
<td>46,563</td>
<td>4.9</td>
</tr>
<tr>
<td>1</td>
<td>7,253</td>
<td>7,245</td>
<td></td>
<td>$251.5 m</td>
<td>34,708</td>
<td>3.5</td>
</tr>
<tr>
<td>2+</td>
<td>18,347</td>
<td>18,333</td>
<td></td>
<td>$518.2 m</td>
<td>28,268</td>
<td>2.8</td>
</tr>
<tr>
<td>Top 5%</td>
<td>any</td>
<td>9,000</td>
<td>8,990</td>
<td>$425.5 m</td>
<td>47,330</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Note 1: Number of indicated target conditions.
Note 2: Some Gold Card holders included in Table 9 were not allocated risk values and are excluded from this table.

7.2 CVC Program enrolment

To investigate the impact of the CVC Program, this report focuses on those Gold Card holders who had enrolled by 31 March 2013. Claims data is available up to 31 March 2014, so this deadline permits analysis of one year of post enrolment claims. Due to the need to use a delayed extract to ensure all claims are included, these enrolment statistics do not match those provided in the regular BHD enrolment reports. For detail, refer to the later discussion of lag issues (section 9.1.1).
CVC Program enrolment has been steady, at approximately 500 enrollees per month to September 2011, increasing to 1,000 per month after that date, and then falling back to 500 per month at December 2012 (Figure 3). At 31 March 2013, there were 11,843 current enrollees, 3,058 had exited the CVC Program of which 855 were due to death.

The targeted Gold Card holders, those with an estimated risk of overnight hospitalisation in the 80th to 95th percentile together with indicators of at least one target condition (as at December 2012, shaded in Table 10) make up 21.7% of the current enrollees at March 2013. This is higher than their 13.2% representation in the overall Gold Card holder population, which demonstrates that targeting of invitations to enrol has shaped the actual enrolment.\(^9\)

There is some evidence that Gold Card holders and/or their medical practitioners have sought enrolment because of the presence of one or more of the target conditions. In particular, a further 43.0% of enrollees have an estimated risk value below the target threshold but have indicators of at least one of the target conditions (Table 10). Nevertheless, 27.2% of the enrollees do not meet the risk threshold and do not appear to have one of the five specified target conditions, even with the broader identification algorithm.

\(^9\) No explicit targeting has been undertaken since May 2012, with the exception of a small trial of different targeting methods for a total of 600 Gold Card holders.
Table 10: Current enrollees at March 2013 by December 2012 risk value and number of (indicated) target conditions

<table>
<thead>
<tr>
<th>Risk Band</th>
<th>In CVC</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt; 40th percentile</td>
<td>2,795</td>
<td>1,635</td>
<td>904</td>
<td>225</td>
<td>27</td>
<td>4</td>
<td>—</td>
</tr>
<tr>
<td>Moderate 40th to 60th</td>
<td>2,542</td>
<td>1,015</td>
<td>1,061</td>
<td>380</td>
<td>83</td>
<td>3</td>
<td>—</td>
</tr>
<tr>
<td>High 60th to 80th</td>
<td>2,915</td>
<td>544</td>
<td>1,318</td>
<td>819</td>
<td>211</td>
<td>23</td>
<td>—</td>
</tr>
<tr>
<td>Targeted 80th to 95th</td>
<td>2,662</td>
<td>113</td>
<td>770</td>
<td>1,105</td>
<td>556</td>
<td>114</td>
<td>4</td>
</tr>
<tr>
<td>Extreme &gt; 95th percentile</td>
<td>849</td>
<td>5</td>
<td>41</td>
<td>203</td>
<td>330</td>
<td>215</td>
<td>55</td>
</tr>
<tr>
<td>Total1</td>
<td>11,763</td>
<td>3,312</td>
<td>4,094</td>
<td>2,732</td>
<td>1,207</td>
<td>359</td>
<td>59</td>
</tr>
</tbody>
</table>

Note 1: 80 enrollees did not have risk value and target condition information, so are not included in this table.

Table 11: Current enrollees at March 2013 by December 2012 risk value and (indicated) target condition

<table>
<thead>
<tr>
<th>Risk Band</th>
<th>In CVC</th>
<th>CAD</th>
<th>COPD</th>
<th>CHF</th>
<th>Diabetes</th>
<th>Pneumonia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt; 40th percentile</td>
<td>2,795</td>
<td>520</td>
<td>184</td>
<td>161</td>
<td>586</td>
<td>—</td>
</tr>
<tr>
<td>Moderate 40th to 60th</td>
<td>2,542</td>
<td>815</td>
<td>209</td>
<td>278</td>
<td>779</td>
<td>1</td>
</tr>
<tr>
<td>High 60th to 80th</td>
<td>2,915</td>
<td>1,658</td>
<td>452</td>
<td>565</td>
<td>979</td>
<td>27</td>
</tr>
<tr>
<td>Targeted 80th to 95th</td>
<td>2,662</td>
<td>2,065</td>
<td>721</td>
<td>1,031</td>
<td>1,051</td>
<td>256</td>
</tr>
<tr>
<td>Extreme &gt; 95th percentile</td>
<td>849</td>
<td>749</td>
<td>470</td>
<td>575</td>
<td>388</td>
<td>390</td>
</tr>
<tr>
<td>Total1</td>
<td>11,763</td>
<td>5,807</td>
<td>2,036</td>
<td>2,610</td>
<td>3,783</td>
<td>674</td>
</tr>
</tbody>
</table>

Note 1: 80 enrollees did not have risk value and target condition information, so are not included in this table.

The health service expenditure for CVC Program enrollees includes additional outlays on services that would not have been incurred without the program, those directly associated with providing CVC services. The total expenditure to March 2014 for these services was almost $40 million, of which $6 million was for enrolment and preparation of the initial care plan (items UP01 and UP02).

7.3 Eligibility criteria

It is important to note that the eligibility criteria for the CVC Program are broader than the target group criteria discussed in section 3.1. The eligibility criteria although specifies one or more of the five targeted chronic conditions does also provide for a GP to enrol a Gold Card holder who has other chronic conditions, complex care needs and who are at risk of unplanned hospitalisation. In most cases, GPs and Practice Nurses do not have access to the risk percentile prior to enrolment of a Gold Card holder.10

While the broader eligibility criteria allow for GP discretion, this has resulted in enrolment of Gold Card holders outside of the target group.

10 DVA can provide this information upon request to healthcare professionals, however, not all healthcare professionals may be aware that this is an option.
The majority (91%) of GPs and Practice Nurses surveyed indicated that they believed the current eligibility criteria were suitable (in 2013 this was 95.5%). Of those who did not believe the eligibility criteria were suitable the reasons were:

- post-traumatic stress disorder (PTSD) and other mental health conditions should be included
- terminal illness should not be excluded, nor patients who are in residential aged care
- osteoporosis, rheumatoid and osteoarthritis should be included due to increased falls risk
- should allow all veterans/Gold Card holders to access the CVC Program, or all of the general population who meet the criteria
- the criteria should be clearer (ie. confusion between the eligibility criteria and the target conditions).

Feedback from GPs and Practice Nurses who participated in interviews was similar. Most agreed that the current eligibility criteria were largely suitable, and that other patients outside the eligibility criteria could also benefit from the CVC Program. However, as indicated in the 2013 and 2012 reports, understanding of the eligibility criteria remains variable and is often confused with the targeted conditions.

The CVC Program’s Clinical Reference Group (CRG) has an ongoing role in providing clinical advice about the CVC Program. Refinements to the CVC Program have been discussed by the CRG including potential changes to the eligibility criteria to improve enrolment to the CVC Program.

Accordingly, the CRG made a recommendation to DVA however any progression has been paused until the outcomes of this evaluation are considered.

Quality audits are also being considered by DVA as a compliance and support mechanism. Quality audits would assess general practice compliance with the CVC Program’s service requirements.

No changes to the eligibility criteria or compliance regime have been implemented at this point in time.
8 Service delivery

This section of the report deals with the delivery of the CVC Program by participating general practices and the feedback of Gold Card holders receiving CVC Program services. The findings in this section include the themes identified through interviews, case studies, and the GP survey, with the analysis guided by the CVC Outcomes Hierarchy (refer to Attachment B—CVC Outcomes Hierarchy).

Throughout the following sections and in the conclusions of this report reference is made to the themes identified from the qualitative consultations with healthcare professionals and Gold Card holders. As per the approved Monitoring and Evaluation Framework, the qualitative methods are intended to explore, identify and understand the underlying factors affecting:

- program performance
- participant and provider experience and satisfaction
- program access, participation and retention.

Therefore, it is not the purpose of the qualitative feedback to be quantified, particularly given the sample size proportional to total CVC program participants, but rather to provide an indication of the general trends and themes relating to key aspects of the CVC Program.

8.1 Care coordination and planning

The 2013 interim evaluation identified three general practice typologies which vary in the level of care coordination and planning provided to enrolled Gold Card holders at those practices. While some general practices have substantially increased the quality of their care coordination and planning, other general practices require improvement to adequately meet the requirements and/or intent of the CVC Program.

These three practice typologies are summarised in Table 12.11

11 No data was collected on non-participating general practices so they have not been included as a typology.
### Table 12: Overview of practice typologies

<table>
<thead>
<tr>
<th>Typology</th>
<th>Description</th>
</tr>
</thead>
</table>
| CVC Program high performer                   | • Delivering services aligned with the requirements and intent of the CVC Program  
• Have often added additional resources  
• Have established systems and process for delivery of the program  
• Have established roles and responsibilities in the practice with regard to the CVC Program  
• Have regular quality contact with patients  
• Have undertaken CVC Program training (mostly modules 1 and 2) |
| Existing Chronic Disease Management (CDM) general practice | • General practice was delivering similar services prior to implementation of the CVC Program  
• Implementation of the CVC Program required few, or no, changes to service delivery  
• Services aligned with the requirements and intent of the CVC Program, although few changes have been made  
• Appreciate the reimbursement as a form of recognition for their efforts of going ‘over and above’ for so many years  
• General practice staff (either GP or nurse) may have specific expertise in CDM  
• May not feel need to undertake CVC Program training due to their CDM expertise  
• Generally maintain existing levels of contact with patients and care planning/GP Management Plan (GPMP) arrangements  
• Communication and collaboration within the general practice is good and has been established over an extended period |
| CVC Program requires improvement             | • May not meet all CVC Program requirements or may not be delivering the requirements in alignment with the CVC Program intent (eg. quality expectations)  
• May not have added any additional resources  
• Insufficient ownership of the CVC Program within the general practice  
• Less likely to indicate that changes have been made to systems and processes  
• One or more key aspects of service delivery require improvement  
• Nurses may be less empowered to make decisions  
• Less frequent interaction with patients; interaction often driven by patients in ‘business as usual’ GP consults  
• Less likely to have undertaken CVC Program training |
While the relative volumes of the three practice typologies are unable to be accurately estimated based on our fieldwork, the volume of the last practice type (CVC Program requires improvement) does not appear to be insubstantial. The survey also indicates that the level of compliance and quality of service delivery may need increased attention:

- compliance with the development or update of a comprehensive care plan may not have been completed for upwards of 8.2% of CVC Program enrollees (Figure 4)
- patient-friendly versions of care plans may not have been developed for upwards of 11.7% of CVC Program enrollees (Figure 5).

Figure 4: Results from survey question ‘To the best of your knowledge, have care plans been introduced or enhanced for your patients as a result of the CVC Program?’

12 There was no pattern found between the number of patients a healthcare professional provides care for and the likelihood of care plans being completed for patients.
8.2 Funding model

The CVC Program items provide a financial incentive for GPs to participate in the delivery of the program. The following payment types are available:

- initial incentive payment for enrolling a participant on the program
- quarterly care payments for ongoing care.

The payment amounts are outlined in Table 13.\(^{13}\)

\(^{13}\) Source:
Figures correct as at 1 July 2014.
Table 13: Summary of CVC Program MBS items

<table>
<thead>
<tr>
<th>Payment type</th>
<th>Initial Incentive Payment</th>
<th>Quarterly Care Payments</th>
<th>Total year 1</th>
<th>Total year 2 onward</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP with practice nurse</td>
<td>$424.15</td>
<td>$442.65</td>
<td>$2,194.75</td>
<td>$1,770.60</td>
</tr>
<tr>
<td>GP without practice nurse</td>
<td>$265.05</td>
<td>$198.80</td>
<td>$1,060.25</td>
<td>$795.20</td>
</tr>
</tbody>
</table>

The CVC Program’s funding model is successful in incentivising practice participation in the program, as demonstrated by service provider feedback that remuneration is a key consideration for deciding to deliver CVC Program services (Figure 6).

Figure 6: Results from survey question ‘Do Medicare items adequately fund the level of service expected under the CVC Program?’

8.2.1 Quarterly care payment

The CVC Program’s quarterly care payment items are different to other MBS items which currently exist. The CVC Program model, which requires the quarterly care payments to be claimed on or after a date that is exactly 90 calendar days after the patient was first seen by the healthcare professional, has created some confusion for practices as they embed the program into their practice.

The CVC Program quarterly care payment is the first MBS payment of this type and is a shift from the usual way of dating claims for GP services. The day on which a patient attended the general practice has previously always been used as the date of service, including for the CVC Program initial incentive payment (UP01/UP02).
Many practices report difficulties claiming the quarterly care payment when they begin implementation of the program within their existing practice processes. This has been a consistent theme throughout all years of the evaluation. The ‘CVC requires improvement’ practices may be more susceptible to claiming difficulties, but this is not true in all instances. Based on feedback provided through the consultations, the majority of practices resolve these difficulties and are able to claim the quarterly care payment successfully. Examples provided of methods used to overcome billing difficulties include:

- contacting Medicare or the CVC Helpline for assistance
- using the ready reckoner tool
- changing their administrative processes.

The majority (83%) of practices consulted with this year reported that they no longer experienced any difficulties with the billing, although they may have done throughout the implementation of the program into their practice.

This is supported by the decline in the proportion of calls regarding billing to the CVC Helpline. Queries relating to the billing have accounted for approximately 24% of the total volume of calls to the CVC Helpline since May 2011. In the period October 2013 to October 2014, the proportion of calls relating to claiming issues has fallen to 16% of the CVC Helpline’s total call volume (Table 14).

**Table 14: Summary of CVC Helpline calls relating to billing up to October 2014**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of calls to the CVC Helpline</td>
<td>7,854</td>
<td>2,471</td>
</tr>
<tr>
<td>Total number of calls related to payments and claiming</td>
<td>1,848</td>
<td>388</td>
</tr>
<tr>
<td>Percentage of calls to the CVC Helpline</td>
<td>24%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Despite the fall in calls, there are a minority of practices which never resolve their difficulties claiming the quarterly care payment, due to the practice’s administration processes, capacity or capability, as well as those practices which do not know where to access assistance. For example, 34% of practices reported in this year’s survey found it ‘Difficult’ or ‘Very Difficult’ to claim the Medicare items for the program (Figure 7). While some of this 34% of practices may resolve their billing difficulties with time (or may be reflecting on their implementation experiences), others may cease or consider ceasing the program. Ongoing difficulty with claiming has been cited by a discontinuing practice consulted with as the reason why the CVC program is no longer delivered and has been cited as a reason in the surveys (among others).
8.2.2 Nurse Coordinator recognition and business models

In the 2013 evaluation feedback was received that Nurse Coordinators did not always feel sufficiently recognised by the funding model, given their role in service delivery for the CVC Program.

Furthermore, there was feedback received that the business model in some general practices restricts the ability for some practices to implement the CVC Program and/or restricts the volume of patients a general practice is able to accommodate on the CVC Program. It was indicated that this is sometimes the case where the enrolling GP receives 100% of the CVC claim and no funding is ‘pooled’ by the general practice, limiting the ability of the general practice to increase the amount of Practice Nurses.

While neither of these issues were raised during the 2014 consultations (nor survey), the small number of consults may be masking these, or other issues and strengths.

8.3 Training and resources

A number of training options and support resources are available to assist practices with the implementation and delivery of the CVC Program. Training is available in both online and USB formats, across four modules which cover:

- Module 1: Coordinated Veterans’ Care: Is your service ready?
- Module 2: Care Planning and Coordination
- Module 3: Managing Care Plans with disease-specific elements
- Module 4: Veterans’ social isolation, mental health and wellbeing.

The online training was originally developed by Flinders University in conjunction with Australian Medicare Local (AML) Alliance. Module 2 previously included a face to face workshop which provided attendees with practical training. Following the dissolution of AML Alliance and subsequent engagement of Flinders University for training delivery in July 2014, the following modifications have been made:

- the face-to-face workshop for module 2 has discontinued due to high cost and low overall participation
- hard copy formats are no longer available as consolidation of training moved to online
- the CVC information sessions delivered by contracted Medicare Locals have ceased as the contracts ended in June 2014

- the training website has been updated by Flinders University
- a training short course has been implemented.

Other support resources including the CVC Helpline, A Guide for General Practice, Patient Treatment Reports (PTRs), and sample care plans and tools are also available on the DVA and CVC Program training website.

There has been a consistently high level of awareness of the CVC Program training, with over 80% of survey respondents across all years of the evaluation reporting awareness.

The uptake of the online training for the CVC Program continues to grow. The number of online training registrations per state is summarised below in Table 15.

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14 A small number of Medicare Locals are continuing to provide support to the CVC Program, mostly through their nurse networks.
Table 15: Summary of participating practices and online training registrations by State/Territory

<table>
<thead>
<tr>
<th>State / Territory</th>
<th>Number of participating practices as at Oct 2013(^{15})</th>
<th>Number of online training registrations up to Oct 2014(^{16})</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>16</td>
<td>37</td>
</tr>
<tr>
<td>NSW</td>
<td>435</td>
<td>729</td>
</tr>
<tr>
<td>NT</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>QLD</td>
<td>419</td>
<td>679</td>
</tr>
<tr>
<td>SA</td>
<td>101</td>
<td>185</td>
</tr>
<tr>
<td>TAS</td>
<td>55</td>
<td>113</td>
</tr>
<tr>
<td>VIC</td>
<td>303</td>
<td>572</td>
</tr>
<tr>
<td>WA</td>
<td>94</td>
<td>193</td>
</tr>
<tr>
<td>Not defined</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,424</strong></td>
<td><strong>2,548</strong></td>
</tr>
</tbody>
</table>

Over 60% of survey respondents in each year of the evaluation have reported commencing the training. However, it is rare for participants to complete all four modules. The reasons for non-completion are consistent with the findings of previous years and include:

- belief that they have insufficient time to complete the training
- belief that the training is not suitable or that they do not require training (i.e. they feel they don’t need training to deliver the program, or they have sufficient previous knowledge).

Module 1 continues to be the most popular module with all registrants. Module 1 has 56% of the total number of online training registrations, as shown in Table 16. Nurses (in particular registered nurses) are the most common registrant occupation and continue to demonstrate strong interest in enrolling for the training modules. There is an overall completion rate of 56% across all modules. This completion rate varied from 53% for Module 1 to 64% for Module 4.\(^{17,18}\)

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\(^{15}\) Data is from a spreadsheet that grouped patients by practice and was developed and maintained by DVA. DVA ceased to updating this information from October 2013, therefore this is the most current information available.

\(^{16}\) Data is from Flinders University, May 2012-October 2014 inclusive.

\(^{17}\) Data from Flinders University training report to DVA dated October 2014.

\(^{18}\) ‘Completion’ is defined as the registrant having completed the learning content. There is no requirement for the registrant to have completed the evaluation activities or have requested a completion certificate. This definition of completion is consistent across modules 1, 2, 3 and 4;
Table 16: Summary of enrolments per module by enrollee occupation

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Module 1</th>
<th>Module 2</th>
<th>Module 3</th>
<th>Module 4</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurse</td>
<td>1,601</td>
<td>808</td>
<td>325</td>
<td>137</td>
<td>2,871</td>
<td>74%</td>
</tr>
<tr>
<td>Enrolled nurse</td>
<td>278</td>
<td>131</td>
<td>52</td>
<td>24</td>
<td>485</td>
<td>13%</td>
</tr>
<tr>
<td>GP</td>
<td>169</td>
<td>62</td>
<td>25</td>
<td>7</td>
<td>263</td>
<td>7%</td>
</tr>
<tr>
<td>Allied Health</td>
<td>15</td>
<td>16</td>
<td>8</td>
<td>2</td>
<td>41</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>117</td>
<td>59</td>
<td>17</td>
<td>10</td>
<td>203</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>2,180</td>
<td>1,076</td>
<td>427</td>
<td>180</td>
<td>3,863</td>
<td>100%</td>
</tr>
</tbody>
</table>

% enrolled      56%  28%  11%  5%  100%
% completed      53%  61%  57%  64%

Those survey respondents who indicated that they had completed one or more training modules reported that it was useful on average, with 57% of survey respondents who had completed the training reported it to be 'Very useful' or 'Useful' (refer to Figure 8). Overall, nurses (both registered nurses and practices nurses) found the training to be more useful than GPs, with 60% of nurses who had completed the training reported the training was 'Very useful' or 'Useful' compared to only 40% of GPs. The qualitative feedback provided in the survey demonstrated that the nurses valued the module 2 workshop for the ability to network and ask questions, and for the ability to practise interview techniques on volunteer patients. The training was also reported to be useful in increasing care planning skills and knowledge. More detailed feedback on the training is provided in the survey report located at Attachment D—General practice survey report 2014.

However, module 2 has the additional requirement for the registrant to submit a care plan for assessment in order to be deemed as complete.

19 Data is from Flinders University dated October 2014.
Previous challenges identified in relation to accessing the online training included:

- difficulty navigating the online training
- unable to complete the training within a single time period
- not enough time allocated within the practice for the completion of training.

The new CVC short course was introduced in late 2014 and is hoped to address the challenges above.

Little commentary was provided by the general practices consulted this year in relation to CVC Program resources and guidance materials, compared with the feedback from previous years. This previous feedback noted that:

- nurses who have accessed CVC Program resources and guidance have expressed a strong preference for more directive resources to provide them with clarity in relation to DVA’s expectations of service delivery
- nurses commented that the needs assessment tools can be very onerous for patients
- there were numerous comments from GPs and nurses relating to the desire for more resources which were process-driven and detailed the CVC Program requirements clearly.

We note that all practices consulted with in 2014 had been delivering the program for at least two years.
8.3.1 Patient Treatment Reports (PTRs)

The Patient Treatment Report (PTR) is a practice support tool that has been designed to support evidence-based care for the management of chronic conditions. It is an information report distributed to GPs which provides information on a patient’s:

- chronic conditions (as predicted by the BHD algorithm)
- services received in the last 12 months
- hospital admissions in the last six months
- allied health services received in the last three months
- medication history for the last three months.

The PTR does not, nor is it intended to, replace the professional clinical judgement of the patient’s treating GP.\(^{20}\)

PTRs are first delivered to practices in hard copy and are then available every quarter thereafter through HPOS, unless the practice elects to receive the PTRs in hard copy instead.\(^{21}\)

Many practices report awareness of the PTRs (75.8% of survey respondents); however, they do not necessarily use them when delivering the CVC Program. The Department of Human Services’ HPOS data shows that between December 2013 and November 2014, there were only 2,351 PTRs downloaded of approximately 20,878 produced. Of the 2014 survey respondents only 24.1% (n=41) of those who were aware of PTRs reported that they accessed PTRs using HPOS.

There is not one clear reason for the low uptake via HPOS. The range of reasons is shown in Figure 9.


\(^{21}\) There are currently 37 GPs who elect to receive hard copy PTRs from 19 different practices, as per BHD data provided 8 December 2014.
Figure 9: Results from survey question 'Why don’t you use HPOS to access the quarterly PTRs?'

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t have time</td>
<td>9.0%</td>
</tr>
<tr>
<td>I don’t find PTRs useful</td>
<td>8.5%</td>
</tr>
<tr>
<td>PTRs are provided to me by the GP</td>
<td>8.5%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>7.7%</td>
</tr>
<tr>
<td>I find HPOS difficult to use</td>
<td>6.7%</td>
</tr>
<tr>
<td>I’m not registered to use HPOS</td>
<td>6.3%</td>
</tr>
<tr>
<td>I didn’t know they were there</td>
<td>6.3%</td>
</tr>
<tr>
<td>I don’t remember to check HPOS</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

An email notification has been introduced to HPOS to advise those registered that new items are available. This may assist to increase access rates.

Service provider views on the usefulness of PTRs are inconsistent; however over the three years there has been an increase in ratings of ‘1’ or ‘not very useful’ (Figure 10) and is likely to drive some of the poor HPOS uptake.

In previous years of the evaluation, some GPs and nurses reported that they did not understand why the PTRs occasionally showed their patient’s chronic conditions incorrectly. Instances of false positives and false negatives for condition markers in PTRs can create confusion and sometimes frustration for GPs.

The five condition markers are created by BHD using an algorithm which analyses information in the DMIS dataset. It is noted that DMIS is primarily an administrative data set that was not created for diagnostic purposes and therefore the fidelity of the condition markers is not known.
8.4 Social assistance services

CVC Social Assistance is a short-term service available to CVC enrolled patients designed to re-engage participants in community based activities. The service assists a CVC participant to join in community life through social contact and/or accompaniment to a social activity. CVC Social Assistance is delivered through VHC.\(^{22}\)

The CVC Social Assistance services are a small component of the CVC Program. These services have had low utilisation since commencement, with only 28\(^{23}\) enrolments recorded to date. The reasons reported for low utilisation remained similar to those identified previously and include:

- apparent confusion for practices in distinguishing between CVC Social Assistance and other similar services, meaning that CVC Social Assistance is not taken up
- barriers to enrolment, such as the patient being rejected by VHC as not meeting the eligibility criteria
- lack of interest by Gold Card holders to participate in the services.

The reported awareness of the CVC Social Assistance services is moderate (65.5\% of survey respondents; refer to Figure 11). As noted in previous

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\(^{23}\) As reported in the BHD report dated 7 November 2014. There were two additional enrolments in CVC Social Assistance services who were reported to not have CVC Program enrolment.
years, a confounding factor impacting the reported level of awareness may be confusion with other similar services.24

Figure 11: Results from survey question ‘Are you aware of the CVC Social Assistance service which can be accessed as part of the CVC Program?’

GPs and Practice Nurses interviewed continue to report instances of difficulty accessing CVC Social Assistance services for their CVC patients. As per the findings of the 2013 interim report, difficulties experienced by general practices trying to enrol their CVC patients included:

- patients being assessed as ineligible
- VHC assessment agencies indicating the services were not provided by VHC and/or redirection to various individuals/areas within VHC/DVA without resolution
- no follow-up/advice to the general practice on the outcome of submitted referrals.

Some practices are aware of the CVC Social Assistance services but have not used it as their patients had no requirement for those services. Reasons given included:

- patients already well-supported in clubs and existing networks

24 49 survey respondents indicated that some of their Gold Card holders are accessing CVC Social Assistance services, while only 28 claims for services have been made. There was a similar pattern of responses in the 2013 and 2012 surveys. An alternative explanation is that VHC providers may be placing Gold Card holders onto other social assistance programs.
nurse expects their patients would need services over a longer duration than the 12 weeks offered by CVC Social Assistance.

- nurse already coordinates services for her patients by using existing community services and support organisations.

From the information available it is difficult to assess the prevalence of the reported enrolment barriers as well as the consistency of the eligibility assessments with the eligibility criteria and program intent. In the absence of this information an assessment of the need for this part of the CVC program is difficult to establish.

8.5 Progress towards general practice outcomes

8.5.1 Capacity

The CVC Program has been effective in improving the capacity of general practices to deliver coordinated care. Much of this capacity increase was a result of general practices employing additional or extending the hours of existing nurses (55.9% (n=202) of survey respondents who had changed their practice in some way had increased nurse resources). A few practices increased their capacity through employing additional or extending the hours of existing GPs.

One of the key benefits of the CVC Program perceived by general practices is that it allows the Nurse Coordinator to spend an increased amount of time with the patients, as a result of the additional funding. The benefits of this were reported to be nurses enhancing the ability of the general practice to:

- develop a more holistic understanding of their patients
- understand the needs of their patients more effectively, through increased contact and opportunities for additional interaction, such as the home visit, phone calls and health assessments
- build a trusting and open relationship with their patients.

Some practices also stated that the additional time assists the patients to be independent at home through ensuring that they have the aids to navigate around the home safely and have someone to contact when needed.

"It’s guaranteed time for the nurse’s involvement. The nurse can contact the patients, keep an eye on them and provide this feedback to the GP. Patients will ask the nurse for things they wouldn’t tell me. Also, we’re a busy practice so it makes sure patients get an appointment when they need it."—GP, FG #20

8.5.2 Staff turnover

The capacity and capability of general practices to deliver the CVC Program can be impacted by staff turnover. Staff turnover may impact the delivery of the program where staff leave or retire from a practice without a sufficient plan for the transfer of CVC Program service delivery responsibilities. Staff turnover was reported by three practices (out of the 18 consulted with this
year) as posing a potential risk to CVC Program delivery within those practices. To illustrate these challenges, two examples from separate practices are provided below:

a) the primary Nurse Coordinator retiring (nurse #26)
b) the primary Nurse Coordinator seeking to upskill other Practice Nurses for CVC Program delivery, to provide patients with an additional point of contact (nurse #25).

In these two examples, resources had already been identified within the practices to transition service delivery responsibilities. The key challenge associated with this transition is patient resistance, as outlined in the following case studies.

Case study #26 (situation a)
The primary Nurse Coordinator is retiring and is handing over CVC Program responsibilities to another nurse within the practice. The new nurse will bring a different perspective and focus to their care which is a good thing, more of a focus on social issues and exercise. To assist the new nurse, they deliberately wound down the number of enrollees from 12 to six so that the new nurse was not overwhelmed. A few patients have offered to take the primary Nurse Coordinator out for dinner to thank her for her work with them. The patients don't want her to retire.

Case study #25 (situation b)
The primary Nurse Coordinator initially established the CVC Program within the practice and has delivered it ever since. She is concerned that some of her patients are too dependent on her and having her there to talk to. She is trying to get some other nurses involved in CVC Program delivery by having them work through the online training and undertake the over 75 health assessments for some patients. Some of her patients won't talk to anyone other than the primary Nurse Coordinator, which is a big frustration for her and the nurses she is seeking to upskill.

Another example provided was of the impact of GP turnover in a practice. Where there is GP turnover within the practice it can lead to a lack of commitment to the program and for the practice to cease CVC Program delivery.

"I’m still trying to get the doctors on board with the program but I’m hitting a brick wall."—nurse, #3

Where practices experience staff turnover, the CVC Program requirements may not be effectively transitioned to the new resource(s) and may lead to disruption of the care and/or cessation of the CVC Program. Where practices experience staff turnover, the availability of training and program support from DVA remains relevant as a supporting mechanism to assist in transitioning to a new resource.
8.5.3 Capability

The CVC Program has been effective in improving the capability of general practices to deliver coordinated care. Self-reported indicators such as training uptake and improved knowledge of care coordination, effectiveness of the Nurse Coordinator role and ability to deliver improved care to enrolled Gold Card holders have remained consistently high over each year of the evaluation (Figure 13: Which benefits have you experienced?).

As noted in the CVC Program model of care, regular communication, empowerment and coaching are key to the success of the coordinated care team.25 The CVC Program has built additional capability through enhancing collaboration within general practices (ie. between GP and nurse) and between general practices and other health providers (ie. between nurse and other healthcare services). The majority of survey respondents continue to report improvements to collaboration both within the practice and with other healthcare providers (Figure 12, Figure 13).

One better practice identified in this year’s evaluation that also serves as a good example of collaboration outside the practice is that of a practice which has coordinated with a local pharmacy for the delivery of medications to a patients’ home in under two hours, if required urgently (refer to Attachment E—Identified better practices).

Figure 12: Results from survey question ‘Has the CVC Program enabled greater teamwork between GPs and nurses from survey question ‘Which benefits have you experienced?’

![Figure 12: Results from survey question ‘Has the CVC Program enabled greater teamwork between GPs and nurses?'](http://www.dva.gov.au/health_and_wellbeing/health_programs/cvc/Documents/GGP.pdf)
Figure 13: Which benefits have you experienced?

<table>
<thead>
<tr>
<th>Benefit</th>
<th>2014 (n=194)</th>
<th>2013 (n=176)</th>
<th>2012 (n=151)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to deliver improved care to eligible Gold Card holders</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Increased understanding of care coordination</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Better utilisation of my skills and knowledge</td>
<td>60%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>Improved collaboration within the practice</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Able to spend more time providing coordinated care</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Improved collaboration with health services providers outside the practice</td>
<td>30%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

8.5.4 Willingness to continue program delivery

As part of the CVC Program’s provision of ongoing care it is expected that most participants who are enrolled in the program will stay on the program indefinitely.26 This is contingent on the willingness of general practices to continue delivery of the program.

The vast majority (over 90%) of 2014 survey respondents and practices consulted advised the willingness to continue program delivery. However, the survey shows that the proportion of respondents indicating they are unsure if the practice will continue to deliver of the CVC Program has grown since 2012 (Figure 14) but is still less than 10%. Some of the reasons for this which were provided in the survey included:

- respondent has difficulties with billing
- respondent is not convinced the program improves outcomes and that there is too much paperwork
- practice has experienced GP and PN turnover
- practice has a lack of time, resources and funding.

Over the course of the evaluation Grosvenor has also consulted with two general practices (out of 42 unique practices through the course of the evaluation) that indicated delivery of the CVC Program has ceased in their

26 Source:
practice. In one instance the reason for ceasing delivery was unresolved issues with claiming, in the other instance it was due to GP turnover.

While the qualitative feedback can only taken to be indicative of trends relating to the CVC Program, based on the consultations Grosvenor has undertaken over the three year evaluation, this means that over 95% of practices consulted with have continued program delivery. This corresponds with the data from the annual evaluation surveys, as discussed above (Figure 14).

Figure 14: Results from survey question ‘Do you plan to provide services under the CVC Program in the future?’

8.6 Enrolled Gold Card holder outcomes

The desired outcomes for Gold Card holders enrolled on the CVC Program are:

- improved health status and quality of life
- improved health literacy and to be empowered to take control and self-manage
- greater social connectedness.

8.6.1 Improved health status and quality of life

Overall, general practices remain optimistic that the CVC Program enables enrolled Gold Card holders to achieve an improved health status and quality of life, with improved or similar average ratings across the range of benefit
categories compared to the 2013 and 2012 survey results (Table 17). The survey responses did not provide any clarity in relation to the changes from year to year.

### Table 17: Results from survey question 'How likely is it that Gold Card holders will experience the following benefits from enrolment on the CVC Program?'

<table>
<thead>
<tr>
<th>Answer options</th>
<th>2014 rating</th>
<th>2013 rating</th>
<th>2012 rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved health outcomes</td>
<td>4.27</td>
<td>4.28</td>
<td>3.99</td>
</tr>
<tr>
<td>Reduced hospital admissions</td>
<td>4.05</td>
<td>4.03</td>
<td>3.83</td>
</tr>
<tr>
<td>Improved self-management</td>
<td>4.17</td>
<td>4.23</td>
<td>3.97</td>
</tr>
<tr>
<td>Improved quality of life</td>
<td>4.23</td>
<td>4.20</td>
<td>4.07</td>
</tr>
<tr>
<td>Enable Gold Card holder to remain in own home longer</td>
<td>4.30</td>
<td>4.28</td>
<td>4.20</td>
</tr>
<tr>
<td>Improved emotional well-being</td>
<td>4.28</td>
<td>4.37</td>
<td>4.10</td>
</tr>
<tr>
<td>Reduced social isolation</td>
<td>4.08</td>
<td>4.14</td>
<td>3.77</td>
</tr>
</tbody>
</table>

During consultations the feedback received from participating practices was more varied and represented the full continuum of results for enrolled Gold Card holders. Feedback ranged from substantially improved health status and quality of life as a result of the program, to those with no noticeable differences and to those with a worsening health status and quality of life as the result of their chronic conditions progressing and ageing (and not as a result of CVC). Examples of the range of results are provided at the end of this section.

Few specific examples were provided by enrolled Gold Card holders to demonstrate improvements to their health status and quality of life; however, they were generally positive about the care provided by their healthcare providers and DVA.

Improved quality of life indicators previously identified through the interim reports by both general practices and enrolled Gold Card holders include:

- enhanced security and peace of mind
- improved ability to live at home independently and safely.

The key enabler identified by general practices to achieve improvements in quality of life and health status is the time the Nurse Coordinator spends with the Gold Card holder to identify health issues, coordinate services and establish a baseline of patient health so that changes are noticed and addressed.

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27 These ratings are the average by survey respondents out of 5. The number of respondents for 2014 was n=224; in 2013 n=195; and in 2012 n=155 for this question.
For general practices with the ability to undertake them, the home visits are noted as an important aspect of the CVC Program in supporting Gold Card holders to achieve an improved health status and quality of life. The practices reported that the home visits provided the following benefits:

- developing a trusting relationship with the Gold Card holder
- checking the medication in the home to assess the need for a medication review
- assessing home safety and domestic and care support needs.

Some practices reported constraints in undertaking the home visits, such as insurance provisions not being sufficient to cover staff attending patients at home, insufficient capacity within the practice or GP/practice policies not allowing nurses to visit patients at home.

The following provides a few illustrative examples of differences in the levels of improvement for enrolled Gold Card holders.

**Potentially avoided hospitalisations**

“A couple of patients have had leaking leg ulcers recently. We would normally send them to hospital, but the nurse was able to care for them as a result of the program.” – GP, #9

“One of my patients recently had a stroke and was in the hospital. The program got him home earlier and is keeping him at home.” – GP, #10

“The patient of another doctor in the practice never goes out of his home and his doctor went on holidays. No one was checking up on the patient. I went to his house to check on him and he was quite unwell. He would have been a coroner’s case if I hadn’t checked on him. The nurse keeps an eye on him through the phone calls now.” – GP, #20

**Other benefits**

“Dad was able to access the pain specialist and rehab. He previously couldn’t walk from the lounge to his bedroom without stopping to catch his breath. He was a prisoner in his own home. Now he is a different person who feels quite comfortable with his health.” – carer, #15
8.6.2 Improved health literacy and ability to self-manage

The CVC Program places the patient at the centre of the coordinated care team and actively involves them in the management of their own care. It is intended that an outcome of this is for the patient to have improved health literacy and ability to self-manage. A patient that improves their health literacy and ability to self-manage contributes to the achievement of an improved health status and quality of life for themselves.

The qualitative reports of whether enrolled Gold Card holders have achieved improved health literacy and ability to self-manage are mixed, with key barriers noted as including low levels of awareness of care plans and resistance to change.

The enrolled Gold Card holders consulted often have little\textsuperscript{28} to no\textsuperscript{29} awareness of their enrolment on the CVC Program, seeing the services as part of the overall care they receive through DVA. Further, enrolled Gold Card holders also often have little to no active awareness of the contents of their care plan, where it is located or whether they have a copy of it. By way of example, one Gold Card holder advised Grosvenor that he did not have a care plan. His carer was present during the interview and located a copy of

\textsuperscript{28} Little awareness is characterised as the enrolled Gold Card holder having a recollection of program but uncertain of enrolment status.

\textsuperscript{29} No awareness is characterised as the enrolled Gold Card holder having no recollection or understanding of the program whatsoever.
the care plan from within the household. Some general practices break the care plan down into a series of monthly goals, which may explain why Gold Card holders don’t necessarily understand what their ‘care plan’ is, or they may be unfamiliar with the terminology.

In contrast, general practices indicated that Gold Card holders were relatively compliant with their care plans (Figure 15). This suggests that there could be a discrepancy between the general practices’ perception of their patients’ awareness and understanding of their care and their patients’ awareness and understanding. However, general practices did acknowledge that changing the behaviour of enrolled Gold Card holders could take a long time, which may explain this discrepancy.

“We had one patient who used a chair that was not suited to his height and who refused to give it up. He kept falling out of the chair when he tried to stand up from it. Now we have finally arranged for him to have a new chair that suits his height and that has been a long struggle.”—GP, #4

“One of our old couples had no landline phone and their neighbours were never home. I had to work with them for several months for them to get a mobile phone so that they could call for help if needed.”—nurse, #12

Figure 15: Results from survey question ‘In your experience to date, do patients on the CVC Program adhere to their care plan?’

“...I did the depression scale for one of my patients and they were not comfortable in telling me the truth about how they really felt in their answers. They are a very stalwart generation.”—nurse, #8
"I’ve been warned off lots of alcohol so I just have a few glasses of red wine a day."—Gold Card holder, #34

Patient resistance to change and self-management may inhibit the achievement of program outcomes. If a patient is unwilling to make changes to their care, then their health status may not improve. This resistance to change and self-management was demonstrated through the following sources:

- some examples provided by Gold Card holders of non-compliance with care plans, including seeing their GP only when they wanted to, or excessive alcohol intake
- some examples provided by general practices of patients not following through on care plan goals
- the majority of enrolled Gold Card holders consulted reporting low levels of awareness of their care plan.

8.6.3 Greater social connectedness

Social isolation, in the context of the CVC Program, is defined as an enrolled Gold Card holder who is not satisfied with their level of activity or social connectivity. The following three distinct levels of social activity and outlooks among enrolled Gold Card holders provide greater context:

- active and socially connected, and content with that level—not socially isolated
- not very active or socially connected, and content with that level—not socially isolated
- those who expressed discontent or frustration with the level of activity, but felt restricted in their ability to do more (potentially due to their (poor) health)—socially isolated.

The majority of general practices consulted with over the evaluation period commented that their patients were socially connected, either through their families, neighbours or organised social activities such as clubs and recreation activities. Other general practices acknowledged that only a few of their patients were socially isolated.

General practices provided positive feedback to the effectiveness of the CVC Program for addressing social isolation issues. This was attributed by general practices to the increased frequency of contact with the patient and the trusting relationship which is developed with the patient.

"One of my patients comes in every week, it helps with their social isolation. The program helps with social outcomes for the higher needs patients."—nurse, #8
Specific findings in relation to the CVC Social Assistance package (including uptake and barriers to access) have been captured separately at section 8.4.
9 CVC Program impact on health service activity

9.1 CVC Program impact on health service activity

The impact of the CVC Program cannot be assessed by simply measuring the change in health service patterns before and after enrolment. Monthly outlays are highly variable and include substantial seasonal variation. The irregular timing of enrolments can combine with this variation to create anomalous changes in services. Furthermore, underlying growth in health care costs and episodes due to ageing will contribute to post-enrolment costs being higher than pre-enrolment for the same client.

Instead, the impact of the CVC Program on health service outlay is assessed statistically, by comparison with Gold Card clients who are not enrolled in the CVC Program. However, enrolment is not random; there has been explicit targeting of enrolment to those clients with expected high costs, as well as likely selection biases for those enrolling without explicit targeting.\(^{30}\)

Two broad comparisons are conducted. A matched sample of clients is used to directly compare services and outlay data for the same year, but only for a relatively small number of clients. An exploratory analysis is performed with the matched samples, and statistical tests used to verify the key results.

The second approach uses a much larger number of clients, examining growth in services in the period before and after CVC enrolment. These are compared to those who never enrolled by assigning random nominal enrolment dates. This approach has greater statistical power but a more limited basis for comparison. Several separate analyses are conducted using this unmatched approach.

9.1.1 Timing of analysis and lag requirements

Public hospital episodes comprise a significant component of DVA expenditure on Gold Card holders. The information about such episodes is provided to DVA by State and Territory governments on a periodic basis. To ensure there is sufficient time for the data to be provided, the analysis is conducted on a dataset lagged by nine months. Each month’s extract provides one month of data to the analysis dataset. For example, the data provided by DVA in October 2013 extracts information to the end of September 2013 and was used to provide information about December 2012 (nine months prior).

Even a nine month lag would have led to incomplete data for some months. Longer lags were used in some months to capture missing data where the provisions were delayed from some States (see Table 18). No attempt was made to include Northern Territory episodes as these are only a small number and are provided much later than other jurisdictions.

\(^{30}\) No explicit targeting has been undertaken since May 2012, with the exception of a small trial of different targeting methods for a total of 600 Gold Card holders.
Such incompleteness does not affect the validity of the statistical analysis assessing the impact of the CVC Program, provided that the deleted records are independent of the CVC Program’s effects. The effect of the incompleteness is limited by the (almost) fixed period of the lag. As all jurisdictions had provided public hospital data up to March 2014 by the end of September 2014, the analysis also includes data for January to March 2014, rather than using the strict nine month lag of applying that dataset only to December 2013 services.

Table 18: DVA extracts used for analysis

<table>
<thead>
<tr>
<th>Period</th>
<th>Month of Data Extract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 2010</td>
<td>Jul 2011</td>
</tr>
<tr>
<td>Oct 2010</td>
<td>Aug 2011</td>
</tr>
<tr>
<td>Nov 2010</td>
<td>Sep 2011</td>
</tr>
<tr>
<td>Dec 2010</td>
<td>Oct 2011 + supplement*</td>
</tr>
<tr>
<td>Jan 2011</td>
<td>Nov 2011 + supplement*</td>
</tr>
<tr>
<td>Feb 2011</td>
<td>Dec 2011 + supplement*</td>
</tr>
<tr>
<td>Mar 2011</td>
<td>Jan 2012 + supplement*</td>
</tr>
<tr>
<td>Apr 2011</td>
<td>Feb 2012</td>
</tr>
<tr>
<td>May 2011</td>
<td>Mar 2012</td>
</tr>
<tr>
<td>Jun 2011</td>
<td>Apr 2012</td>
</tr>
<tr>
<td>Jul / Aug / Sep 2011</td>
<td>Jul 2012</td>
</tr>
<tr>
<td>Oct 2011</td>
<td>Aug 2012</td>
</tr>
<tr>
<td>(...monthly throughout...)</td>
<td>(... monthly ...)</td>
</tr>
<tr>
<td>Jun 2012</td>
<td>Apr 2013</td>
</tr>
<tr>
<td>Jul to Nov 2012</td>
<td>Sep 2013</td>
</tr>
<tr>
<td>Dec 2012</td>
<td>Oct 2013</td>
</tr>
<tr>
<td>(...monthly throughout...)</td>
<td>(... monthly ...)</td>
</tr>
<tr>
<td>Jun 2013</td>
<td>Apr 2014</td>
</tr>
<tr>
<td>Jul / Aug / Sep 2013</td>
<td>Jul 2014</td>
</tr>
<tr>
<td>Oct 2013</td>
<td>Aug 2014</td>
</tr>
<tr>
<td>Nov 2013</td>
<td>Sep 2014</td>
</tr>
</tbody>
</table>

Note: * supplement is the claims records between 1 December 2010 and 31 March 2011 for relevant clients who died between 1 December 2010 and 31 March 2011.

While the lag issue is most acute for public hospital care, there are similar problems for other services. On the other hand, introducing a lag also leads to incomplete data as clients are dropped from the dataset. For example, it takes several months for some CVC medical services to be claimed but the nine month lag also leads to some records being missing.
### 9.2 Full year matched sample comparison

It is not appropriate to simply compare pre-enrolment patterns of care to post-enrolment patterns of care to assess the impact of the CVC Program. The change in service use for enrollees must be compared to changes over the same period for other Gold Card holders. Health services claims show seasonal cycles, such as a decrease in hospital episodes each January. It is therefore best if comparisons can be made with a full year of claims data. Health expenditure also increases over time, both for an age-corrected population and also for ageing individuals. It is therefore best if comparisons can be made for expenditure in a specific period.

The first analysis emphasises quality of matching at the expense of data quantity and statistical power. Two groups of DVA Gold Card holders are compared for two periods. The periods are July 2010 to June 2011 and April 2012 to March 2013. The first period is as late as reasonable while avoiding significant numbers of enrollees, and is used to estimate pre-enrolment services. The second period is the latest full year for which the dataset is complete, and is used to estimate post-enrolment services with as much time as possible for the care coordination to have an effect.

The CVC enrollee population comprises those enrollees who were Gold Card holders throughout the pre-enrolment period and CVC enrollees throughout the post-enrolment period. There are 7,714 such enrollees, also excluding those who died within six months of the end of the analysis period or entered RAC before April 2014. These were matched by risk percentile at July 2012 and State of residence to people who were Gold Card holders throughout both periods but never enrolled in the CVC. Due to the limited number of enrollees, other relevant factors (such as condition and age) were not used in the matching process.

The intent of this analysis is to compare the growth in services between the two periods for the CVC enrollees to the matched never enrolled group. It is a post-hoc quasi-experimental approach, with any difference in the growth able to be attributed to the CVC Program due to the matching process.

### 9.2.1 Entire matched sample

It is immediately clear from Figure 16 that the cost of CVC enrollees has increased more quickly than those who were never enrolled. In the pre-enrolment year, CVC enrollees consumed $15,110 of health services per person rising by 40% to $21,092 in the post-enrolment year. In contrast, the costs for those who never enrolled only increased by 32% from $14,652 to $19,329 per person.

The additional expense arises from the medical services directly associated with delivering the CVC Program (see Figure 17). However, consistent with the objectives of coordinated care, the results suggest that CVC Program enrollees have a smaller increase in overnight hospital costs and episodes with some of the hospital care instead provided on a same day basis (Figure 17 and Figure 18) and some avoided entirely.
A difference in differences regression analysis\textsuperscript{31} was performed to assess the statistical validity of these observations. This analysis assumes that the two groups would have shown the same change between periods in the absence of CVC enrolment. Such an assumption is justified by the matching process, which incorporates the key factors expected to contribute to differences in

\textsuperscript{31} Generalised linear models (SPSS GENLIN procedure) were fitted to implement the difference in differences analysis. For outlay, a normal distribution was fitted to the (base 10) logarithmic transformation. A negative binomial distribution was fitted for overnight episodes.
growth rates, admission risk and State (which affects access to services). The statistical analysis considers whether differences in the amount of change are more than would be expected due to random variation.

**Figure 18: Change in hospital episodes per person, matched sample**

![Graph showing change in hospital episodes per person](image)

For total outlay, all differences are statistically significant. For the pre-enrolment period, future CVC enrolment is associated with higher outlay per person of 7% to 14%. This suggests the matching process did not fully capture all the factors that contribute to enrolling in the CVC Program, but does not affect the validity of the statistical analysis unless those missing factors also contribute to different growth rates. The between period growth arising from the ageing of the two groups and changes in health service provision would have been approximately 26% to 33%, but CVC enrolment was associated with additional growth (steeper line) of 16% to 24% in average outlay per person.

There is a statistically significant difference between periods for both overnight ($p<0.001$) and same day ($p<0.05$) episodes per person. The observed slower increase in overnight episodes for CVC enrollees is significant ($p<0.01$) but the apparent shift to same day episodes is not ($p>0.05$). In the initial period, neither overnight or same day episodes shows a significant difference between the CVC enrollees and never enrolled populations, supporting the suitability of the matching process.

Thus, the statistical analysis supports the key results observed in the exploratory analysis. That is, the CVC Program is associated with a reduction in overnight hospital episodes for enrollees (more precisely, slower growth as clients age), but the savings are more than offset by the costs of the additional medical services.

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32 All ranges described are 95% confidence intervals.
9.2.2 Specific subpopulations

The overnight episodes difference in differences analysis was also conducted by risk band (with risk assigned at December 2012). In the post-enrolment period, the overnight episodes were significantly lower for the enrollees compared to the never enrolled group ($p<0.5$) for the 80th to 95th risk percentile, but not the other four risk band subpopulations. Thus, evidence supports the targeting of the CVC Program to this risk group.

The CVC Program is also targeted to those Gold Card holders with five specific conditions. Further analysis was conducted to assess whether hospital episodes associated with those conditions showed a disproportionate effect in slower growth. Key characteristics of high volume and cost types of admissions (identified by ADRGs included in Table 5) were examined for the two population groups in each of the two periods. The characteristics were episodes, same day proportion, average length of stay and outlay.

There were no patterns evident for average length of stay, same day proportion or cost per episode. That is, the CVC enrollees and the matched Gold Card holders who were never enrolled had similar hospital care.

Consistent with the lower number of hospital episodes for enrollees, there are some ADRGs where there is a clear difference in the number of episodes between the two groups. Most intriguing is ADRG F62, which is treatment for heart failure and shock. In the pre-enrolment year, there were 91 episodes for those who later enrolled and 73 for those who did not. In the year April 2013-14, the never enrolled group accounted for 176 episodes, much higher than the 134 episodes provided for CVC enrollees. As cardiac diagnoses comprise two of the five targeted conditions, this relatively low number of episodes could indicate that the CVC Program is particularly effective at reducing future hospitalisations for those clients with heart conditions. However, the episode numbers are volatile. In particular, ADRG I68 (non-surgical spinal disorders) shows a similar pattern of much slower growth amongst CVC enrollees and there is no obvious reason why the CVC should confer benefits for spine problems.

9.3 Comparison with unmatched veterans

Three further analyses were conducted that compared the expenditure growth for CVC enrollees with that of Gold Card holders who did not enrol. However, in contrast to the previous analysis, there was no attempt to match enrollees with similar non-enrolled Gold Card holders. This approach potentially includes all CVC participants in the analyses, rather than only the 7,714 enrollees who were already Gold Card holders by July 2010 and therefore eligible for the matched analysis. For comparison purposes, Gold Card holders who did not enrol by 31 March 2013 are randomly assigned a nominal (or ‘fake’) enrolment date, following the same distribution as enrolment dates of the CVC enrollees.
9.3.1 Unmatched exploratory analysis: 12 months pre- and post-enrolment

This analysis includes all Gold Card holders who enrolled in the CVC Program by 31 March 2013, excluding only those who exited (voluntary or RAC entry) or died within six months. There are 13,485 such enrollees.

The Gold Card holders who did not enrol provide two comparison groups, with and without those who entered residential aged care (RAC), numbering 143,225 and 119,497 veterans respectively. Despite participants being withdrawn from the CVC when they enter RAC, both comparison groups are included because analysis has suggested that the RAC indicator included with the ongoing DMIS extracts is ‘set’ appropriately when a client enters residential aged care but is not ‘reset’ if a client returns home.33

For each group, services and outlays are calculated over the year prior to enrolment (or nominal enrolment for the never enrolled comparison group) and following enrolment. The month of enrolment is included in the post-enrolment total.

Health services expenditure is highly variable month to month at the individual level. Even totalled over a full year, individual changes can be substantial, with change of more than a factor of two for over 40% of clients in each group. That is, the post-enrolment twelve month period involved expenditure of more than twice or less than half of the pre-enrolment period for almost half of the Gold Card holders. Despite this variability, it is clear that participation in the CVC Program increases outlays for most enrollees (see Figure 19, CVC line higher than comparison on right hand part of the diagram and lower on left). For those enrolling in CVC, 68% incur higher outlays over the year following enrolment compared to only 55% in the never enrolled group.

Figure 19: Relative outlay, one year post-enrolment compared to pre-

33 Preliminary analysis in the initial data extract identified a significant number of CVC Program enrollees who apparently enrolled while in residential aged care. Follow up with DVA indicated that this identification reflected poor data quality on the RAC flag rather than significant breaches of the CVC Program criteria.
More detailed analysis shows the increase is due to the cost of overnight hospital episodes (approximately $1,000 per person) and medical services (Figure 20), particularly the CVC payments and some additional attendances (Figure 21).

Other services show little difference between CVC enrollees and the comparison groups, with similar changes between periods of up to $300 for allied health, community nursing and pharmacy. While these are larger increases than the equivalent $200 in the comparison groups, the CVC enrollees are of poorer health overall and start from a higher claiming level.
This same pattern occurs for clients in each risk band (defined by risk percentile in the month prior to CVC or nominal enrolment) except for those in the 80th to 95th percentile band (Figure 22). In that risk band, outlay on overnight hospital episodes decreases in the year following CVC enrolment. That is, if risk band is defined by the percentile risk in the month prior to
actual CVC enrolment or randomly assigned nominal enrolment, those Gold Card holders in the CVC target risk band show a decrease in expenditure on overnight hospital episodes in the year following enrolment regardless of whether the client was actually enrolled in the CVC Program. The decrease in overnight hospital costs is larger for those who never enrolled (from a higher starting point).

Figure 22: Change in one year service expenditure, broad type of service, targeted 80th to 95th percentile risk band

9.3.2 Unmatched exploratory analysis: Extended period

One of the drawbacks of the one year pre- and post- enrolment analysis is that it would not detect longer term savings arising from greater coordination associated with enrolment in the CVC Program. For example, it may be that reductions in hospital episodes occur further into the future because of better management of chronic diseases.

Some enrollees have had considerably more experience than the one year post-enrolment of the previous analysis. With that in mind, the third analysis examines claims by month over an extended period. Enrollees are included regardless of the length of participation, so there are more contributors and hence greater data quality closer to enrolment dates. For this analysis, 12,147 CVC enrollees were compared to those (>170,000) Gold Card holders who were eligible throughout the period July 2010 to March 2013 but did not enrol. The average monthly outlay per person gradually increases for both CVC enrollees and the comparison group of never enrolled Gold Card holders. For the CVC participants, post-enrolment claims display a

34 Claims data are transformed using logarithms so as to stabilise some of the volatility and also to create an approximately normal distribution, in preparation for the regression analysis. This does not affect trends – increases in the logarithm occur with increases in the original data – but averages cannot easily be extracted. In particular, log(average(data)) is not equal to average(log(data)).
jump every three months, which is consistent with the three monthly cycle of additional services for CVC plan revision.

**Figure 23: Monthly claims (log transform) with month of enrolment as reference**

Isolating bands of risk percentile led to similar graphs. The levels were different, with higher risk associated with higher costs. However, no group showed a closing of the gap between lines, which is what is required for longer term savings arising out of the CVC Program. The 80th to 95th risk percentile target group is displayed in Figure 24.
9.3.3 Statistical: Mixed linear model (longitudinal regression analysis)

A more formal statistical version of the extended period analysis fits a mixed linear model to claims data, correcting for age. The model requires an approximately normal distribution and monthly claims data is accordingly transformed using logarithms. To improve the interpretability of the model coefficients, the data is centred with age of 80 taken as the reference point.

The appropriateness of fitting a linear model to logarithmically transformed monthly claims data is shown in Figure 24, which combines the CVC participants and those eligible but never enrolled. For those months (of age) where there is a larger amount of data, claims gradually increases per month of age from age 60 (month -480), with the linear approximation failing only at age 90 to 95 (months 120 to 180).

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35 The reasonableness of the transformation was assessed with a histogram of transformed claims (log base 10) data, not included in the report.
Separate regression models were fitted for men and women. All coefficients are statistically significant (p < 0.001).

For men, CVC enrolment is associated with 63% to 69% additional outlay at age 80, and 55% to 60% for women. For both men and women, the cost per person in the never enrolled group grows at approximately 0.5% per month of age, with zero growth for the CVC enrollee group. It would take several years (5 for men, 4 for women) before this lack of growth offset the additional costs associated with the CVC Program, and further years to recoup the additional outlay during those five years.

A mixed linear model for outlay by age was also fitted by risk band. Results are summarised at Table 19 (male) and Table 20 (female). The CVC column indicates the additional outlay at age 80 associated with enrolment in the CVC Program (95% confidence interval) and the Growth columns display the additional outlay per month of age. For higher risk bands, CVC enrolment reduces outlay for each month of age, and growth is slower than the never enrolled for all gender and risk groups. Therefore the outlay levels will eventually converge (final column), after which the CVC enrollees would incur lower costs than their never enrolled peers. However, assuming the model can be extrapolated, convergence takes at least three years and further years would be required to recoup the additional costs already incurred.

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36 95% confidence interval
### Table 19: Age-corrected monthly outlay mixed linear model (male)

<table>
<thead>
<tr>
<th>Risk Band</th>
<th>CVC (95% CI)</th>
<th>non-CVC Growth</th>
<th>CVC Growth</th>
<th>Converge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (&lt; 40th)</td>
<td>100% to 121%</td>
<td>2.3%</td>
<td>-0.0%</td>
<td>13 years</td>
</tr>
<tr>
<td>Moderate (40th to 60th)</td>
<td>65% to 77%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>88 years</td>
</tr>
<tr>
<td>High (60th to 80th)</td>
<td>57% to 68%</td>
<td>0.1%</td>
<td>-0.3%</td>
<td>7 years</td>
</tr>
<tr>
<td>Targeted (80th to 95th)</td>
<td>41% to 51%</td>
<td>0.1%</td>
<td>-0.1%</td>
<td>8 years</td>
</tr>
<tr>
<td>Extreme (&gt; 95th)</td>
<td>37% to 55%</td>
<td>0.1%</td>
<td>-0.4%</td>
<td>6 years</td>
</tr>
</tbody>
</table>

Note: shading indicates that the mixed linear model was unable to fully resolve and results are not reliable. That is, there were too few data points or the effect was too small to be able to reach a conclusion that has a less than 5% chance of being due to randomness in the data rather than detecting a real difference.

### Table 20: Age-corrected monthly outlay mixed linear model (female)

<table>
<thead>
<tr>
<th>Risk Band</th>
<th>CVC (95% CI)</th>
<th>non-CVC Growth</th>
<th>CVC Growth</th>
<th>Converge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (&lt; 40th)</td>
<td>83% to 98%</td>
<td>0.4%</td>
<td>0.3%</td>
<td>10 years</td>
</tr>
<tr>
<td>Moderate (40th to 60th)</td>
<td>50% to 58%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>7 years</td>
</tr>
<tr>
<td>High (60th to 80th)</td>
<td>44% to 52%</td>
<td>0.4%</td>
<td>-0.2%</td>
<td>4 years</td>
</tr>
<tr>
<td>Targeted (80th to 95th)</td>
<td>36% to 45%</td>
<td>0.3%</td>
<td>-0.3%</td>
<td>3 years</td>
</tr>
<tr>
<td>Extreme (&gt; 95th)</td>
<td>30% to 53%</td>
<td>0.2%</td>
<td>-0.5%</td>
<td>3 years</td>
</tr>
</tbody>
</table>

Note: shading indicates that the mixed linear model was unable to fully resolve and results are not reliable. That is, there were too few data points or the effect was too small to be able to reach a conclusion that has a less than 5% chance of being due to randomness in the data rather than detecting a real difference.


10 Conclusions

10.1 Impact on health system outcomes

The CVC Program was expected to deliver savings in health care expenditure to DVA through the reduction of unplanned hospital admissions for enrolled Gold Card holders. While the anticipated savings have not yet been achieved, there is evidence that suggests such savings could arise with long term enrolment in an appropriately focussed program. As expected, anticipated savings are likely to arise from slower increases, and perhaps decreases, in hospital admissions among enrollees. However, savings would be difficult to realise.

The target risk range of 80th to 95th percentile in estimated likelihood of hospitalisation in the following year is the group that shows the strongest evidence of potential savings, and the 60th to 80th percentile has similar results. For these groups, enrolment in the CVC Program immediately increases health service outlays by approximately 50%, but future costs slowly decrease. In contrast, costs gradually increase for those who do not enrol. Approximately 3 (female) to 8 (male) years after enrolment, the expected cost of an enrollee and a never enrolled Gold Card holder would equalise. Of course, it would then take several more years for the additional costs already incurred to be offset in order to achieve savings.

The long period before achieving savings leads to a practical problem. Even among the most responsive population groups, clients would need to be enrolled on the CVC Program for many years in order to achieve overall savings. As the target population are predominantly elderly, it is likely that a significant proportion would enter RAC or die before these savings were realised.

It was expected that Gold Card holders at higher risk of hospitalisation would be most likely to experience decreased unplanned hospital admissions and produce savings when enrolled in the CVC Program. There is some evidence to support this expectation, with the 80th to 95th percentile risk band showing a decrease in costs of hospitalisation following enrolment. However, Gold Card holders in that risk percentile band who did not enrol in the CVC also showed such a decrease. Furthermore, analysis of the hospital episodes by average length of stay and type of episode showed no clear patterns that can be attributed to CVC enrolment.

The results mirror the shift in the literature, which has shown some movement away from the premise of care coordination resulting in savings towards a focus on the quality of care and cost neutrality. Where results of cost savings have been reported in the literature, the analysis has often been critiqued in terms of the quality and completeness of data resulting in the relatively poor evidence base for achieving savings though care coordination.

The data available for analysis in this evaluation is more complete and of higher quality than for many of the previous care coordination programs. However, while the statistical evidence is reasonably strong and consistent, the relationship extrapolates beyond the timeframes of the existing data and may not continue once more years of data are collected.
10.2 Benefits for Gold Card holders and service providers

Many general practices are confident that the additional level of support is beneficial to Gold Card holders, making it easier for them to manage safely in their home and giving them confidence to continue to do so. General practices and Gold Card holders are able to provide examples of benefits ranging from potentially avoided hospitalisations, to improved social connectedness, and greater ability to meet enrollee needs by providing assistance to navigate the healthcare system.

General practices have indicated that involvement in CVC Program delivery has enhanced their capability and capacity to deliver coordinated care.

10.3 Implications for future program delivery

The first two sections of the conclusions deal with the overall CVC Program results in relation to health system outcomes and benefits. These indicate that while the expectations for cost and hospitalisation reductions have not yet been met, there is evidence that suggests such savings could arise with long term enrolment.

Notwithstanding the health system outcomes, there are opportunities for improvement of the CVC Program’s design, delivery and management as well as learnings for other programs. These are outlined below in the following subsections for DVA’s consideration.

10.3.1 Funding model

The funding model has been successful in contributing to general practice uptake of the CVC Program beyond the targeted level of 17,000 Gold Card holders over four years. The majority of survey respondents also indicate that the level of funding is adequate for the service delivery expectations. However, feedback received regarding the current funding model; which consists of payments to a GP (and Community Nurse, if one is involved in delivering care), implies DVAs intent of the payments to support the general practice being able to fund additional Practice Nurse resources may not be occurring. This is the case where the general practice’s business model is for the CVC payments to be paid in full to the GP.

In addition, it is reported that the funding model does not adequately recognise the Nurse Coordinator role given the key supporting role of the Nurse Coordinator to CVC Program delivery.

These issues are driven by individual business decisions and by the broader MBS fee for service model. As such, we acknowledge that the CVC Program has a limited ability to influence these issues. Nonetheless, the lessons learnt in this area should be taken on board and considered, where relevant, in the future of the CVC Program and other similar future programs.

10.3.2 Quarterly care claims

The combination of backdating of quarterly care claims to the first day of the period and only being able to submit a valid claim after the last day of the period continues to be one of the most frustrating aspects of the CVC Program for some general practices, to the extent that there are reports of
this being the reason why some general practices will not participate in the CVC Program, as well as a reason for a minority of general practices ceasing delivery of the CVC Program.

The CVC Program periodic quarterly care items are the first of their type. The rationale for the backdating of quarterly claims ensures general practices are able to make a claim for the quarterly care period in the event that the CVC Program enrollee dies or enters RAC or exits for another reason during the period. There was insufficient anticipation of the difficulties the backdating of the claims would cause in a service area which had previously only ever associated attendances at the general practice with service date.

While there is now a variety of resources available, namely the Ready Reckoner Claiming Date Spread Sheet, the Self Populating Ready Reckoner, more detailed ‘How to Claim’ webpage, and contact number for CVC Program payment queries, most general practices have at least experienced some difficulty at commencement of the CVC Program as they have been unaware of the need to track enrolment claims dates and subsequent commencement dates for each 90 day quarter. Some general practices have continued to experience ongoing difficulties with claiming.

The need to keep additional service date records, over and above typical general practice processes, needs to be made much clearer for commencing general practices. And while the Ready Reckoners are useful, a CVC Program enrollee register that allows general practices to track their enrolments, would further assist implementing general practices to be prepared for quarterly claiming and reduce the implementation workload of all general practices having to individually prepare something of this nature. Seeking a range of existing examples from participating general practices would enable DVA to select, or construct, a better practice exemplar.

It would also be helpful for DVA to arrange for general practices which appear to be experiencing difficulty to be proactively contacted, so that their issues can be resolved. The practicality of this second suggestion has not been assessed and should be considered within the program resourcing constraints, contact methods available to DVA and ability to conduct analysis to identify such practices. For example, the fact that DVA associates claims with individual GPs rather than at a practice level may prevent such a process in the short term. Nor does DVA currently have general practice email contact details, which may facilitate an automated and low resource contact process.

37 Flinders University now has available a checklist (as part of the training short course) that highlights how CVC Program claiming differs from regular MBS claiming in an effort to address this.

38 This would be a practical tool that general practices could use to manage their CVC Program enrollees. It would need to contain formulas to populate service and claiming dates, and relevant patient and service details.
10.3.3 Eligibility criteria

While the eligibility criteria and recruitment activities have shaped enrolment on the CVC Program to some extent, the eligibility criteria could be further narrowed to increase enrolment of the target group and ensure that the Gold Card holders which are enrolled on the program are those which would benefit the most. Acting on the emerging evidence from the previous years’ monitoring and evaluation results, the CVC Program’s CRG has recommended revising the eligibility criteria.

A change in eligibility criteria is further supported by this year’s quantitative analyses, which shows that the target risk ranges of 80th to 95th percentile and 60th to 80th percentile show the strongest evidence of potential savings from reduced hospitalisations. This evidence suggests that more focused eligibility criteria, such as those proposed by the CRG, would support an appropriately directed program.

A robust change management approach should support the revision of eligibility criteria as:

- GPs and Practices Nurses are supportive of the current eligibility criteria
- the majority of the (limited) negative feedback is associated with broadening, rather than narrowing of the criteria.

10.3.4 Target conditions and PTRs

There are indications that condition flags produced from the DMIS dataset and used for targeting and PTR purposes are producing false positives and false negatives. This is not unexpected as the DMIS dataset is primarily administrative and was not designed to enable condition diagnosis. However, when supplied to general practices in the PTRs the information can produce confusion and/or undermine the credibility and usefulness of the PTRs. The error rate is not known. Exploratory work to establish the error rate and refine the algorithms may be warranted, but may be limited by the nature of the DMIS dataset.

The extent to which this is contributing to low access rates of PTRs on HPOS and increases in the rating of PTRs as ‘not very useful’ should also be explored.

10.3.5 Service quality and compliance

Service provision under the CVC Program is variable and includes:

- a proportion of practices, ‘CVC high performer’ general practices, which report delivering a much higher level of care following the introduction of the CVC Program
- a proportion of practices, ‘existing CDM general practices’, which report delivering a similar level of care prior to the introduction of the CVC Program
• a proportion of practices, ‘CVC Program requires improvement’, which may not be delivering the care expected and/or to the quality standard expected.

The program theory for the CVC Program is that improved care coordination is required to produce the desired results. Therefore, according to the CVC Program theory, if there has been no change in the level of care provided to Gold Card holders enrolled on the CVC Program, then we would not expect to see an effect on hospitalisations and costs. The prevalence of ‘CVC requires improvement’ and ‘existing CDM general practices’ may have impacted on the results achieved to date. If this explanation is correct, a greater proportion of ‘CVC Program high performer’ general practices should improve the results.

As the relative proportions of the program typologies are not known an enhanced compliance regime would assist in establishing if there is a service delivery and compliance problem and the extent of any issues. The better practices of ‘CVC Program high performer’ general practices also provide an opportunity to enhance service quality if appropriately communicated.

10.3.6 Practice support

General practices required substantial support and had a strong desire for training and practical support and resources during implementation. The availability of the training modules continues to be relevant for new practices commencing delivery of the program as well as continuing service providers who experience turnover or require the training material for reference.

10.3.7 CVC Social Assistance

The uptake of CVC Social Assistance services has been consistently low across all years of the evaluation. Despite this, it is difficult to assess the true demand for the program as there is a lack of data on the volume of rejected applications and extent to which enquiries for the services have been misdirected or misinformed. These have been identified as key barriers to accessing the CVC Social Assistance services.

It would be worthwhile to conduct exploratory work into these issues to further understand the demand for CVC Social Assistance and to assess the current application and suitability of the Social Assistance eligibility criteria.

If there is sufficient need for the Social Assistance services the currently experienced barriers should be addressed through education and/or program delivery changes. However, if the exploratory work determines that the need is insufficient the program funding could be directed elsewhere.
11 Attachments

11.1 Attachment A—M&E Framework
Department of Veterans Affairs

Coordinated Veterans Care (CVC) Program: Draft Monitoring and Evaluation Framework

10 August 2011
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# Executive summary

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Executive summary

The Monitoring and Evaluation Framework (M&E Framework) for the Coordinated Veterans’ Care (CVC) Program, which is the subject of this report, was developed by Grosvenor Management Consulting (Grosvenor) who was engaged by the Department of Veterans Affairs in as the Independent Monitoring and Evaluation provider for the CVC.

The CVC Program provides ongoing, planned and coordinated primary and community care, led by a general practitioner (GP) with a nurse coordinator, to eligible Gold Card holders who have chronic conditions, complex care needs and are at risk of an unplanned hospitalisation. The CVC Program commenced on 1 May 2011 and:

- uses a proactive approach to improve the management of participants’ chronic diseases and quality of care
- involves a care team of a general practitioner (GP) plus a nurse coordinator who work with the participant (and their carer if applicable) to manage their ongoing care
- provides new payments to GPs for initial and ongoing care.

GPs who decide to be involved in the CVC Program are required to prepare for the Program, enrol participants in the Program, and provide ongoing care.

The CVC Program targets veterans, war widows, war widowers and dependants who are Gold Card holders and are at risk of being admitted or readmitted to hospital. The Program is primarily focussed on Gold Card holders with congestive heart failure, coronary artery disease, pneumonia, chronic obstructive pulmonary disease, and diabetes.

The evaluation of the CVC comprises three stages:

**Stage 1:** Design and planning—develop the M&E Framework

**Stage 2:** Implement the M&E Framework—monitoring and formative evaluation

**Stage 3:** Final evaluation—summative evaluation

This framework, which was developed in Stage 1, outlines the overall approach to monitoring and evaluating the CVC and all analytical methods that will be used between 2011 and 2014. The M&E Framework covers all aspects of monitoring and evaluating the CVC in relation to:

- the implementation of care coordination under new Medicare items commencing on 1 May 2011 to eligible veterans under the CVC
- access to social assistance services
- the impacts and outcomes of the CVC for veterans and service delivery through General Practice
- the health system outcomes that are anticipated by DVA through the implementation of the CVC.
The M&E Framework has two main parts:

**Part A**—provides context for the M&E framework and includes background information on the key features and assumptions underpinning the CVC; as well as related policies and programs that could influence CVC outcomes.

The policy and program environment for the CVC needs to be taken into account to effectively monitor and evaluate the Program. A range of external factors outside of the program per se, can have impacts, both positive and negative, on overall outcomes and impacts over time. The policies and programs thought to be relevant to the CVC will be taken into account during the implementation of the M&E Framework, as part of methods used for monitoring and evaluating the outcomes of the CVC and influencing factors that are external to the CVC.

**Part B**—sets out the proposed monitoring and evaluation approaches and methods. It includes the CVC Program logic, key evaluation questions, monitoring and evaluation approaches and methods, and suggested timeframes for implementation of the M&E Framework.

The outcomes hierarchy (Figure 1, page 20) is a summary overview of the key outcomes of the CVC and is the foundation of the M&E Framework and covers funding, resources and activities to be undertaken under the program leading to outcomes at a service delivery, veteran and broader health system level. The expected outcomes described in the outcomes hierarchy do not occur in isolation of the wider policy, program environment and the service delivery sector. The high level outcomes for veterans may be achieved (or not achieved) as a result of numerous other policies, programs, individual circumstances and life events and the complex interactions between these.

Four major reports will be prepared for the evaluation of the CVC:

- a baseline report in December 2011
- two annual formative evaluation reports in May 2012 and May 2013 respectively
- a final summative evaluation report in May 2014.

Quarterly ongoing monitoring reports on the implementation of the Program over the Program period will also be prepared. The rationale and scope of all reports are provided in section 4.3.

The M&E Framework has developed a number of methods, quantitative and qualitative to answer the key evaluation questions. These methods are described in sections 4.4 and 4.5. The M&E Framework proposes methods that could potentially identify individual veterans or medical practitioners and nurses involved in care coordination as part of the CVC. Both privacy and ethical considerations are of importance here, and hence the evaluation of the CVC will work within the:

- *Privacy Act 1988*
- National Health and Medical Research Council (NHMRC) National Statement on Ethical Conduct in Human Research 2007—Updated 2009 Guide to the ethical conduct of research involving humans
- Australasian Evaluation Society (AES) Guidelines for the ethical conduct of evaluation.

Grosvenor will apply for ethical clearance from the DVA Human Research Ethics Committee in October 2011.
Introduction

1.3 Purpose of the monitoring and evaluation framework

The Department of Veterans Affairs engaged Grosvenor Management Consulting (Grosvenor) to monitor and evaluate the Coordinated Veterans Care (CVC) Program.

Stage 1 of the evaluation involved the development of a comprehensive monitoring and evaluation framework (M&E Framework) to cover all monitoring and evaluation activities to be undertaken by Grosvenor over the duration of the Program.

This framework outlines the overall approach to monitoring and evaluating the CVC and all analytical methods that will be used. These are based on a program logic for the CVC from which key evaluation questions have been derived.

1.4 Scope of the M&E Framework

The scope of the M&E Framework is defined by the key features of the CVC that need to be monitored and evaluated. The key features of the CVC are covered in section 3.2 below. These features include implementation of the Program leading to service delivery and system level outcomes over time; as well as the expected benefits of care coordination for eligible veterans who enrol on the Program.

The scope of this framework covers all aspects of monitoring and evaluating the CVC in relation to:

- the implementation of care coordination under new Medicare items commencing on 1 May 2011 to eligible veterans under the CVC
- access to social assistance services
- the impacts and outcomes of the CVC for veterans and service delivery through General Practice
- the health system outcomes that are anticipated by DVA through the implementation of the CVC.

Why is it important to both monitor and evaluate the CVC?

The CVC is an ambitious program which is being implemented over a four year timeframe. While evaluating the overall impacts and outcomes at the end of the program is important to do, monitoring implementation and assessing immediate, intermediate and longer term outcomes over time through a formative evaluation approach has a number of benefits including:

- assessing the barriers and enablers to implementation at the commencement and early stages of the program
- assessing the structural and organisational underpinnings of the program
- identifying emerging issues that could be addressed through careful monitoring, reporting and feedback
- identifying areas where attention is required and / or where improvement to service delivery is warranted
- enabling the collection of data over the duration of the program which will inform the annual progress reports and the final evaluation at the end of the Program.
Given these benefits, the M&E Framework has been developed to cover a range of monitoring and evaluation activities that can be used throughout the period in which the CVC is being delivered and at the completion of the Program.

1.5 **Structure of the M&E Framework**

The M&E Framework has two main parts:

- **Part A**—provides context for the M&E Framework and includes background information on the key features and assumptions underpinning the CVC; as well as related policies and programs that could influence CVC outcomes

- **Part B**—sets out the proposed monitoring and evaluation approaches and methods. It includes the CVC program logic, key evaluation questions, monitoring and evaluation approaches and methods, and suggested timeframes for implementation of the M&E Framework.

The M&E Framework also includes a number of important attachments which provide more detailed and technical information about the monitoring and evaluation of the CVC that is proposed in the M&E Framework.

Readers who are not familiar with the CVC may benefit from reading both Parts A and B; while readers who are familiar with the CVC and the policy and program context may prefer to focus on Part B, and refer to Part A only as required.
Part A

Background and implementation environment

1.6 Policy and program environment

The policy and program environment for the CVC needs to be taken into account to effectively monitor and evaluate the Program. A range of external factors outside of the program per se, can have impacts, both positive and negative, on overall outcomes and impacts over time.

This section of the M&E framework therefore provides some initial background on some related policies and programs of particular relevance to the CVC. This includes background information about structural reforms, for example in the health and aged care settings, as well as particular reforms to General Practice, such as the formation of Medicare Locals that may impact on participating general practitioners and practice and community nurses in the CVC.

It is important to acknowledge that this M&E Framework is not an analysis of these policies or program effects, but more a documentation of the key policies and programs that will need to be considered in relation to CVC outcomes within the baseline, annual and final evaluation reports. Attribution of outcomes to a particular program within a complex policy and program environment is an inherently challenging task. The monitoring and evaluation approaches and methods covered in Part B will attempt to take into account how the broader policies and associated programs may affect the implementation and outcomes of the CVC. This will need to be undertaken at the time that evaluation methods are actually undertaken, to ensure how these policy and program effects are impacting at the time.

Also, given policies and associated programs are subject to change over time, this background information is based on information at the time of preparing the M&E Framework. It primarily provides some useful context for the CVC program and the M&E Framework at this particular point in time. For all future reports, the policy and program evidence will be analysed and presented in reports to be as up-to-date and relevant as possible.

It is important to note that the M&E Framework does not provide an exhaustive list of related policies and programs, but the key ones that were thought to be of greatest relevance to designing the evaluation.

1.6.5 Chronic disease policies and strategies

The importance of chronic disease and chronic disease management policies and strategies have been a high priority for governments for a considerable length of time. With an ageing population the burden of chronic disease and the underlying risk factors for these conditions, has stimulated governments, researchers and peak bodies to understand how best to prevent, detect, manage and treat a range of major as well as less common complex chronic conditions.

Needless to say there is a wealth of information, knowledge and research about chronic disease and its impact on individuals and society more broadly. For the purpose of this framework a number of key government and academic research documents are referenced here to illustrate the multi-dimensional nature of policies and programs about chronic disease, their prevention, their management, and the costs to the health system in dealing with chronic disease.

Effective policy and program delivery in this important area is at the heart of the CVC program for veterans. The CVC draws upon the wealth of policy and program
evidence that has been accumulated in over a decade, to assist veterans with complex chronic conditions to better manage their health through care coordination.

Since the early 1990s Australian Governments have focussed on chronic disease through a number of different national strategic approaches including:

- The National Health Goals and Targets
- National Health Priority Areas (NHPAs)—covering diabetes, cardiovascular disease and stroke, asthma, arthritis and musculoskeletal diseases, mental health (depression), and cancer
- National Chronic Disease Strategy (NCDS) 2005

In relation to the National Chronic Disease Strategy seven key principles underpin strategies and action to address chronic disease including:

- adopt a population health approach and reduce health inequalities
- prioritise health promotion and illness prevention
- achieve person centred care and optimise self management
- provide the most effective care
- facilitate integrated and coordinated care across services, settings and sectors
- achieve significant and achievable change
- monitor progress

Under the NCDS, health care practitioners operating in effective primary care networks are best placed to provide a team based approach to facilitate integrated and coordinated care.


1.6.6 National Primary Health Care Strategy

The National Primary Health Care Strategy (the Strategy) represents the first comprehensive national policy statement for primary health care in Australia. It provides a road map to guide current and future policy and practice in the Australian primary health care sector.

The Strategy identifies five key building blocks which are considered essential system-wide underpinnings for a responsive and integrated primary health care system for the 21st century. Drawing from these are four priority directions for change:

- Key Priority Area 1: Improving access and reducing inequity
- Key Priority Area 2: Better management of chronic conditions
- Key Priority Area 3: Increasing the focus on prevention
- Key Priority Area 4: Improving quality, safety, performance and accountability

Key reform initiatives being implemented under the Australian Government’s health reform agenda are identified for each building block and priority area.
1.6.7 National Health Reform Agreement

The objective of this Agreement is to improve health outcomes for all Australians and the sustainability of the Australian health system.

This Agreement sets out the architecture of National Health Reform, which will deliver major structural reforms to establish the foundations of Australia’s future health system. In particular, this Agreement provides for more sustainable funding arrangements for Australia’s health system.

A Joint release from The Hon Julia Gillard Prime Minister and The Hon Nicola Roxon MP Minister for Health and Ageing, 2 August 2011 can be found at


1.6.8 Medicare Locals

Medicare Locals will be independent legal entities (not government bodies) that have strong local governance, including broad community and health professional representation, plus business and management expertise. They will have links to Local Hospital Networks, local communities, health professionals and service providers including GPs, allied health professionals and Aboriginal Medical Services.

Medicare Locals will be established in two phases. A small number of Medicare Locals will start operating by mid-2011. The remaining Medicare Locals will start operating by mid-2012.

Medicare Locals will be responsible for providing better integrated care, making it easier for patients to navigate the local health care system. The roles of these organisations could include:

- facilitating allied health care and other support for people with chronic conditions
- working with local health care professionals to ensure services are integrated and patients can easily access the services they need
- planning to ensure the availability of face-to-face after hours services for their region
- identifying groups of people missing out on GP and primary health care, or services that a local area needs, and responding to those gaps by targeting services better
- working with Local Hospital Networks to assist with patients’ transition out of hospital, and if required, into aged care
- delivering health promotion and preventive health programs to communities with identified risk factors (in cooperation with the Australian National Preventive Health Agency, once it is established).

As part of the Australian Government’s aged-care package, from 2012-13, Medicare Locals will be provided with a flexible funding pool to target gaps in primary health
care services for aged care recipients. Medicare Locals will also help roll out the Australian Government’s chronic disease package for diabetes patients by coordinating allied health services for those enrolled in the diabetes management program. Where possible, Medicare Locals will be drawn from the Divisions of General Practice that have the capacity to take on the roles and functions expected of Medicare Locals. They will be expected to have some common board membership with Local Hospital Networks.


1.6.9 e-Health agenda

The National e-Health Transition Authority (NEHTA) has been tasked with transitioning the Australian health authorities for the preparation and implementation of the eHealth network. Focal points of this program of work include:

- establishing a national approach to identifiers and authentication
- implementing common mechanisms for information protection and privacy
- establishing national e-health information standards.

NEHTA annual report (2010) can be found at


National e-Health Summary (2008) covers vision, strategy, implementation and outcomes for e-Health. It provides a useful guide to the further development of e-Health in Australia. It adopts an incremental and staged approach to developing e-Health capabilities to:

- leverage what currently exists in the Australian e-Health landscape
- manage the underlying variation in capacity across the health sector and states and territories
- allow scope for change as lessons are learned and technology is developed further.

The Personally Controlled Electronic Health Record (PCEHR) System will enable the secure sharing of health information between an individual’s healthcare providers, whilst enabling the individual to control who can access their PCEHR. The Government has invested $466.7 million in the first release of the PCEHR System for individuals to be able to register online for a PCEHR from July 2012.

Information on the PCEHR can be found at:


1.6.10 Aged care reforms

The Productivity Commission is currently undertaking an inquiry into aged care. The inquiry was announced on the 27 April 2010. The final report was released in 8 August 2011. The report recommends wide ranging reforms in the aged care sector.

As part of the Australian Government’s $739 million investment in aged care to better support older Australians, for the first time the Commonwealth will take full policy and funding responsibility for aged care.

The reforms to aged care build on the Government’s commitment to take majority funding responsibility for Australia’s public hospitals and help to address the care needs of Australia’s growing number of elderly are met. These reforms will help to provide:

- seamless transition of care for clients allowing people to move from one level of care to another as their needs change
- simple access to service for clients
- single level of government with funding and regulatory responsibility for aged care
- simplified accountability of governments to the community through clearer responsibility for policy and service provision.

For further information and access to a joint media release from The Hon Julia Gillard Prime Minister and The Hon Nicola Roxon MP Minister for Health and Ageing, 12 April 2010 can be found at:


1.6.11 Mental health reforms

As a result of the 2010/11 and 2011/12 Australian Government budgets, mental health services will receive an investment of $2.2 billion over the next five years. The immediate focus of the reforms is on early intervention services.


1.6.12 Key programs on chronic disease management

1.6.12.1 Coordinated Care Trials (CCT)

Coordinated Care Trials (CCT) began in 1997, with two trial periods completed in 1997-1999, 2002-2005. The trials aim to strengthen primary health care to better meet the challenges associated with chronic disease management. The final evaluation report of the CCT reported:

- each of the mainstream trials successfully targeted different intervention groups with the capacity to benefit from coordinated care:
  - people at risk of and in the early stages of chronic or complex conditions,
  - an older and more chronically ill cohort.
- for the mainstream trials the data showed that:
  - people early in the trajectory of their chronic condition reported improved health and well being, and improved access to services
  - the frail elderly reported better access to services and improved sense of security about their health
  - the evaluation indicated that increases in access to primary care services and decreases in inpatient services for intervention participants during the
trial compared to pre-trial were greater than for control group participants, and

- there were early indications of participants benefiting from a substitution of primary care services for inpatient services.

Further information can be found at:

1.6.12.2. Hospital Admissions Risk Program (HARP) in Victoria

HARP was developed in the late 1990’s to address the increased demand on acute health care services. More than 80 pilot projects were tasked to identify clients at risk of, or already experiencing, frequent emergency presentations or hospital admissions, in order to provide them with alternative interventions.

The HARP projects were formally evaluated in 2004-05, and the results published in the HARP Public Report in 2006. The report demonstrated that in a 12 month period, HARP clients experienced:

- 35 per cent fewer emergency department attendances
- 52 per cent fewer emergency admissions
- 41 per cent fewer days in hospital.

The reduced need for hospital services was equivalent to approximately:

- one emergency department attendance
- two emergency admissions
- six days spent in hospital each year for every HARP client.

Further information can be found at: http://www.health.vic.gov.au/harp/about.htm

1.6.13 HARP Better Care of Older People (HARP BCOP)

The Commonwealth of Australian Governments (COAG) Long Stay Older Patients (LSOP) initiative enabled 13 additional HARP programs to be piloted in rural Victoria between 2007-2010. Initial evaluation findings indicated that HARP BCOP clients experienced:

- 64 per cent reduction in hospital separations post intervention, compared to pre-HARP BCOP utilisation
- 55 per cent reduction in the number of ED presentations, compared to pre-HARP BCOP utilisation
- 39 per cent reduction in the number of clients presenting to the emergency department (ED) post discharge from HARP BCOP.

This suggests HARP BCOP has had a positive impact on hospital utilisation in rural Victoria by significantly reducing the hospital and ED utilisation by HARP BCOP cohort. As of July 2010, the 13 rural HARP BCOP pilots were mainstreamed into the Victorian HARP, resulting in 35 state-wide HARP services.

Further information can be found at: http://www.health.vic.gov.au/harp/about.htm
1.6.13.1. Chronic Disease Management Plans

Two types of plans for the management of people with chronic or terminal medical conditions include:

- GP management plan (GPMP): GP Management Plan can help people with chronic medical conditions by providing an organised approach to care. A GPMP is a plan of action that is agreed with one’s GP.

- Team care arrangements (TCA): For those with a chronic medical condition and complex care needs, a GP may also develop Team Care Arrangements (TCA). These will help coordinate more effectively the care needed from the GP and other health care providers.

Further information can be found at:

Designed with the GPMP and TCA, it describes the Medicare benefits for patients with a GPMP or TCA—a maximum of five services per patient each calendar year.

Refer to the following sites for further information:


1.6.13.2. Mental health care plans

One way in which the Australian Government is addressing the need to integrate mental and physical health care approaches has been through the establishment of the Better Access to Mental Health Care items in the Medicare Benefits Schedule (MBS). The range of new items allow GPs to refer patients with a mental disorder to allied mental health service providers for up to 12 sessions per calendar year. The items also encourage GPs to create a proactive mental health care plan with their patient, which is then reviewed by the GP periodically, ensuring that patients are receiving holistic and integrated care co-ordinated through their GP.

Further information about these MBS items can be found here:

1.6.14. Research, organisations and reports of relevance to the CVC

1.6.14.1. Social isolation in the Australian veteran community

Research on behalf of DVA in 1996 looked at social isolation of veterans. It was a high level investigation which concluded that a few targeted and specific solutions, including broadening awareness, more pilot programs with an emphasis on records and evaluation were required to address social isolation in the veteran community. The report of this research can be found at:


A more recent study (2010) was undertaken by Grosvenor on social isolation in the younger veteran community. The purpose of this research project was to address the following research question:
“What are the effects of military service on social isolation among younger members of the veteran community, which factors increase or decrease the risk of social isolation, how are these factors related, what is the role of and impacts on veterans’ carers, and how can we improve the evidence base for policy-making?”

The final report covered:

- the systematic review of the academic literature (publication proposed)
- statistical modelling of DVA Client data pertaining to social isolation among younger Australian veteran

In recognition of the increasing prevalence of social isolation amongst veterans and war widow / widowers and the impact of social isolation on health outcomes, DVA supports the following strategies to address this issue:

- training to general practitioners and nurses to better understand the effects of social isolation on health outcomes and the identification of social isolation issues in patients
- source and make better use of available resources to address social isolation issues
- better use and understanding of the role and involvement of family, carers and the community in chronic disease management
- new social assistance services available through Veterans’ Home Care (DVA, 2011, page 19)39.

1.6.14.2. Mental health and chronic disease

The presence of co-morbid mental illness can significantly increase the complexity of care for people with chronic diseases. In recognition of this, the theme of World Mental Health Day in 2010 was the impact that mental illness can have on treatments for chronic disease, and the need to integrate the care for both conditions. The report from the World Federation for Mental Health, the organisers of World Mental Health Day, reviewed extensive research into the effects of co-morbid mental illness on chronic disease. Below are some key research findings that illustrate how mental illness can worsen the symptoms of chronic disease, increase the costs of care, and in some cases increase the risk of mortality.

- Mental illness and chronic obstructive pulmonary disease (COPD): Depression and anxiety are associated with worsening of patient-reported respiratory symptoms and decreased lung function
- Depression and heart disease: People who survive heart attacks but suffer from major depression have a 3-4 times greater risk of dying within six months than those who do not suffer from depression.
- Depression and diabetes: The economic burden of diabetes alone is significant. When depression is present with diabetes, there is an additional increase in health care costs by 50-75%.


39 DVA Final Discussion Paper (March 2011) Coordinated Veterans Care Program.
1.6.14.3. Australian Disease Management Association (ADMA)

The Australian Disease Management Association provides a forum and advocacy for the disease management industry to promote programs which improve chronic condition outcomes and quality of life and reduce acute healthcare utilisation and costs. The not-for-profit association represents all stakeholders in the industry and educates healthcare organisations, providers, funders and healthcare policy makers on disease management.

There are currently many disease management initiatives under way across Australia. These are occurring in the private and public sectors and are being funded by state and commonwealth government initiatives, grants and service negotiations. There are various models or components to Disease Management which include self-management, behaviour change, health risk assessments, disease specific programs and programs for complex co-morbid patients (http://www.adma.org.au/).

The ADMA Strategic Framework 2008-2012 can be found at


The ADMA 7th Annual National Conference: Partnerships for Chronic Care Patients, Services, Policy will be held in Canberra in August 2011. The Program for the conference can be found at:


1.6.14.4. Australia’s health 2010

Biannually the Australian Institute of Health and Welfare (AIHW) publish Australia’s Health, which reports on chronic disease, and their underlying risk factors, health services expenditure, hospital admissions, and pharmaceutical benefits.

Of general interest to the CVC Program the latest Australia’s Health, 2010, reported that:

- compared with those in the general community, Defence Force members have better health, although their work can place them at higher risk of injury
- the veteran community is less likely than the general community to report being in very good or excellent health
- between 1998–99 and 2008–0940, there was an increase in general practitioners’ management of some chronic diseases, including hypertension, diabetes and depression
- the number of hospital admissions rose by 37 per cent in the decade to 2007–0841
- in 2007–08, just over 2% of total health expenditure was for preventive services or health promotion.


1.6.14.5. Other relevant documents

A number of other documents and research articles of relevance to care coordination, care planning and hospital admission and re-admission include:

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40 Note this report is for the whole population, not for veterans only
41 ibid
1.7 Description of the Coordinated Veterans Care (CVC) Program

1.7.5 Key features of the CVC Program

This section of the M&E Framework provides contextual information about the CVC Program itself that has been taken into account in developing the approaches and methods outlined in Part B. The following background information about the CVC is largely sourced from the DVA website:


A Guide for General Practice can be found at:


1.7.6 Overview of the CVC Program

The Coordinated Veterans’ Care Program provides ongoing, planned and coordinated primary and community care, led by a general practitioner (GP) with a nurse coordinator, to eligible Gold Card holders who have chronic conditions, complex care needs and are at risk of an unplanned hospitalisation. The CVC Program commenced on 1 May 2011. The CVC:

- uses a proactive approach to improve the management of participants’ chronic diseases and quality of care
- involves a care team of a general practitioner (GP) plus a nurse coordinator who work with the participant (and their carer if applicable) to manage their ongoing care
- provides new payments to GPs for initial and ongoing care.
GPs who decide to be involved in the CVC Program are required to prepare for the Program; enrol participants in the Program, and provide ongoing care.

1.7.7 Veterans who eligible for the CVC

The Program is aimed at veterans, war widows, war widowers and dependants who are Gold Card holders and are at risk of being admitted or readmitted to hospital. GPs can enrol participants in the Program if they:

- pass an eligibility assessment
- give their informed consent to be involved in the Program.

1.7.8 Expected benefits of care coordination under the CVC

As a result of the Program, participants are expected to become:

- healthier, with less need to be admitted to hospital
- more educated and empowered to self manage their conditions.

The expected benefits for health professionals include:

- GPs receive recognition and compensation, including for non face-to-face time spent in providing comprehensive care to eligible participants
- help improve the quality of care of participants
- enhanced opportunity for nurses to work in partnership with the GP
- efficient alignment of nursing roles with nursing skills
- receive training and resources for chronic disease management.

1.7.9 Medicare Items for care coordination services

By participating in the Program, GPs and CNs can claim the following payments through existing payment arrangements with Medicare Australia:

- initial Incentive Payment for enrolling a participant in the Program
- quarterly Care Payments for ongoing care.

1.7.10 Targeting and identification of veterans under the CVC

The CVC Program targets veterans, war widows, war widowers and dependants who are Gold Card holders and are at risk of being admitted or readmitted to hospital.

The Program is primarily focussed on Gold Card holders with the following chronic conditions:

- congestive heart failure
- coronary artery disease
- pneumonia

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42 A Guide for General Practice outlines who must and who must not apply to enrol on the CVC.
43 A Guide for General Practice provide details of the initial and quarterly payments with and without a practice nurse.
- chronic obstructive pulmonary disease
- diabetes.

Individuals may be identified as potential participants for the Program in various ways. However, the key means of identification of participants is through DVA with the assistance of Bupa Health Dialog.

DVA/BHD identifies potential participants as follows:

- uses predictive modelling to analyse the health care data of Gold Card holders
- sends letters to the most likely participants, and their usual GP, and recommends they seek an assessment

A GP may identify one of their patients as a potential participant. Alternatively a patient or care provider may identify a potential participant as follows:

- a patient may ask to participate in the CVC Program
- their care provider, such as a carer, specialist, allied health worker, hospital discharge planner or community nurse, may recommend they arrange an appointment with their GP for an assessment for the CVC Program.

1.7.11 Expected uptake of the Program over 2011-2014

There are currently 170,000 Gold Card holders living in the community. It is expected about 10 per cent or 17,000 will participate in the Program over the next 4 years.

1.7.12 Role of CVC Primary Service Provider and Training and Resources Provider

Bupa Health Dialog offers evidence-based wellness, prevention and chronic disease management services to help meet the health needs of Australians. Its services are grounded in over 30 years of research, clinical excellence and evidence-based health care. Bupa Health Dialog will assist the Department by analysing its extensive client data to identify and contact the veterans and war widows who are DVA Gold Card holders and are most likely to benefit from taking part in the CVC Program.

The Australian General Practice Network (AGPN) is the peak national body representing 111 general practice networks and eight state based organisations around the country. The network has a membership of about 90 per cent of general practitioners (GPs) at the local level. AGPN will be supported in its delivery by Flinders University, the Australian Practice Nurses Association, and Baker IDI Heart and Diabetes Institute.

The AGPN will provide training in Chronic Disease Management to GPs and nurses implementing the program, as well as producing a range of on-line program resources such as templates and guidelines.

1.7.13 Summary of the key features of the CVC

A summary of the key features of the CVC model of care is included below.
**KEY Features of the CVC**

The Model of Care for the CVC Program is based on the core team, which includes the veteran, the veterans’ carer (if applicable), the GP and the nurse coordinator, who is a Practice Nurse (PN), Aboriginal health worker (AHW) or community nurse. The team uses care planning, coordination and review as the tool to focus on better management and self-management of the participant’s health and to incorporate the multidisciplinary team.

The sharing of health information is a key feature of the CVC Program. The future availability of electronic health records and electronic communication will greatly assist the CVC Program in the sharing of health information amongst all providers of health care for CVC participants. As these capabilities develop, DVA expects that electronic health records and communication will be a key part of the CVC Model of Care. Regular communication, empowerment and coaching are key to success of the team. The care planning cycle is continuous and most participants going on the Program will stay on the Program.

The GP and nurse coordinator have different roles in the three stages of the CVC Program. GPs play a lead role and are required to commit sufficient time and resources to the Program. The nurse coordinator (NC) can be one of the following:

- PN—this is either a registered nurse or enrolled nurse, and can include a nurse practitioner
- AHW
- community nurse from a DVA contracted community nursing provider (CN).
Part B

Overview of the monitoring and evaluation framework

1.8 Program logic

The M&E Framework is underpinned by the development of the Program logic for the CVC which covers:

- **outcomes hierarchy for the CVC**: which depicts the outcomes of the CVC for veterans, service delivery and the health system

- **program logic matrix**: which shows detailed information about the CVC based on the outcomes hierarchy, including key evaluation questions, data requirements / sources and analytical methods

1.8.5 Outcomes hierarchy for the CVC

The outcomes hierarchy was developed from a program logic workshop conducted with DVA and other key stakeholders for the CVC on 1 April 2011. It is an evaluation tool that helps to capture the key features of the Program that will be the subject of the evaluation.

The outcomes hierarchy diagram (Figure 1) and the logic matrix which follows, attempts to clarify relationships, identify the factors that could impact on the implementation of the CVC, and to guide the analytical steps required to undertake the evaluation in the most valid and robust way.

The outcomes hierarchy covers funding, resources and activities to be undertaken under the Program leading to outcomes at a service delivery, veteran and broader system level. The hierarchy is a summary overview of the key outcomes of the CVC that will be subject to monitoring and evaluation over the duration of the Program.

As mentioned above, it is important to acknowledge that the expected outcomes described in the outcomes hierarchy do not occur in isolation of the wider policy and program environment and the service delivery sector. For example, the high level outcomes for veterans may be achieved (or not achieved) as a result of numerous other policies, programs, individual circumstances and life events and the complex interactions between these. The policies and programs thought to be relevant to the CVC are described in Part A. Note the outcomes hierarchy in Figure 1 does not refer to the potential influences of these policies and programs, although they will be taken into account during the implementation of the M&E Framework, as part of methods used for monitoring and evaluating the outcomes of the CVC and influencing factors that are external to the CVC.

As one moves from the bottom of the outcomes hierarchy in Figure 1 to the top, external factors are likely to increasingly influence the outcomes, thereby making attribution specifically to the CVC increasingly difficult to determine. Notwithstanding the complexity of the broader environment and the challenge of attribution of high level outcomes to the CVC per se, the evaluation methods will be tailored to enable a judgement to be made about the achievement of outcomes to the CVC in particular. The monitoring and evaluation methods are discussed in detail in section 4.
Figure 1: Outcomes hierarchy for the CVC

Costs of hospital admissions and re-admissions for veterans on the CVC Program decrease
Hospital admission and re-admission rates for veterans on the CVC Program decrease
Patterns of care for veterans with chronic disease and on the CVC Program change

Veterans on the CVC Program have improved health status, quality of life; health literacy; are empowered to take control and self manage chronic diseases; and have greater social connectedness
Veterans on the CVC Program and receiving coordinated care reduce the number of unplanned hospital admissions and re-admissions

Veterans access all relevant services under the care plan covering health, social assistance, carer support and resources and support for self management of chronic disease

Veterans on the CVC Program receive coordinated care and are referred, where necessary, to social assistance services

GPs and nurses have improved capacity and capability to provide coordinated care / greater clarity in roles / recognition and satisfaction
GPs and nurses refer veterans to social assistance services where required
GPs and nurses implement and review care plans as part of an ongoing cycle of care
GPs and nurses provide care plans and coordinated care to veterans at risk of hospitalisation for chronic disease
GP practices are organised and structured to provide coordinated care to veterans with chronic disease
GPs and nurses undertake training and use CVC resources
GPs and nurses are funded under Medicare to provide care planning and coordinated care to veterans

DVA with the Primary Service Provider and Training and Resources Provider undertake a range of activities and develop resources to:
• raise awareness and encourage GPs and nurses to implement CVC
• provide training and resources to GPs and nurses on care coordination
• identify eligible veterans to the program and provide information and assistance to encourage access to the program and uptake of the Medicare items
• refer veterans to social assistance services, where required

$152.7 million to support roll-out of CVC program over four years through new Medicare items introduced on 1 May 2011 and extra funding for social assistance services

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Patterns of care for veterans with chronic disease and on the CVC Program change

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1.8.6 Program logic matrix for the CVC

The program logic matrix for the CVC is at Attachment A. The logic matrix provides further detail about the Program in relation to identified outcomes, key evaluation questions, data sources, methods for monitoring and evaluation, (Funnell, S 1997).

The key elements summarised within the logic matrix are explained and elaborated on in the following sections of the M&E Framework.

1.9 Key evaluation questions

The program logic provides an organisational framework for the identification of key evaluation questions, and enables the evaluation to focus on the CVC key features and overall outcomes. A number of evaluation questions were put forward by DVA, and both the outcomes hierarchy and the evaluation questions included in this framework were circulated to the participants of the program logic workshop for feedback and comment.

In developing the questions in the logic matrix, Grosvenor was guided to select and refine the questions to cover the following broad categories of questions that are recommended as useful for framing evaluation reports to ‘guide real world decision makers’ (Davidson J, 2011):

- the need for the initiative
- the processes adopted in implementation, barriers and enablers to enrolment on the Program, including quality of service delivery
- the outcomes of the initiative.

The key evaluation questions are listed in Table 1 below.

It is anticipated that additional questions, or sub questions may be developed during the Program for the purpose of the interim and the final summative evaluation reports. Further questions would relate to:

- capturing lessons learnt and the ability of service delivery in applying these
- future directions, and factors supporting the sustainability of the Program.

These further evaluation questions will be developed as part of stakeholder workshops planned prior to the interim reports due in 2012 and 2013. The timing and attendance at these workshops will be negotiated with DVA in the months prior to when the interim and final reports are due.

The implementation of the M&E Framework is depicted diagrammatically at Attachment B, including:

- the monitoring and evaluation stages
- suggested timing of stakeholder workshops
- conduct of qualitative and quantitative methods & analysis
- reporting across the entire period.
1.9.5 **List of evaluation questions for the CVC**

The following table lists the key evaluation questions for the health system, veteran and service delivery outcomes domains within the outcomes hierarchy depicted in Figure 1, page 11.

**Table 1: Key Evaluation questions and sub-question for the CVC**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
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<tbody>
<tr>
<td><strong>Health system outcomes</strong></td>
<td>What are the health system changes that have occurred as a result of the CVC?</td>
<td>Have patterns of care changed:</td>
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<tr>
<td></td>
<td></td>
<td>• Have admissions / re-admissions decreased?</td>
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<td></td>
<td></td>
<td>• Have costs of hospital admissions / re-admissions changed?</td>
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<td></td>
<td>• What types of services have been provided / changed?</td>
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<td>• Has the program delivered savings overall?</td>
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<td>• Were there any unintended consequences</td>
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<td>What are the health system needs and how have they changed?</td>
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<td>To what extent does the system support coordinated rather than episodic / acute care?:</td>
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<td></td>
<td></td>
<td>• Costs associated with unplanned admissions</td>
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<td></td>
<td></td>
<td>• Costs of coordinated care</td>
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<tr>
<td>Did the processes adopted for the CVC contribute to the health system outcomes?</td>
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<td>To what extent does the system support transitions between sectors? Did the funding mechanisms support participation and outcomes?</td>
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<td></td>
<td></td>
<td>• Timeliness</td>
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<td>• Ease of claiming</td>
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<td>• Uptake GPs / nurses</td>
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<td></td>
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<td>• Quantum of funding</td>
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<tr>
<td><strong>Veteran outcomes</strong></td>
<td>What are the changes for veterans from enrolling in the CVC?</td>
<td>Improved quality of life for veterans, their carers and families:</td>
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<tr>
<td></td>
<td></td>
<td>• understand care plans</td>
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<td>• empowerment to change</td>
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<td>• behaviour change</td>
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<td>• improved self management of chronic disease/understanding of conditions/risk factors.</td>
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<td>• improved health status/risk factor profiles</td>
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<td>• greater social engagement / participation</td>
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<td>• improved rating on Partner in Health (self management) and Kessler 10 (mental health scales)</td>
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<tr>
<td>What are the veterans’ needs and how have they changed from being enrolled in the CVC?</td>
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<td>What are the characteristics of eligible veterans?</td>
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<td>• Demographics / numbers</td>
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<td>• Health status / needs</td>
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<td></td>
<td>• Social isolation / needs</td>
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<td></td>
<td>• Types and amounts of social assistance needed?</td>
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<td>• Hospitalisations pre/post CVC</td>
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<td>Outcome</td>
<td>Key evaluation question</td>
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<tr>
<td>Did the processes adopted in the CVC contribute to the outcomes for veterans?</td>
<td>What are the characteristics of veterans enrolled to the CVC?</td>
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<td></td>
<td>- Demographics / numbers</td>
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<td>- Health status (mental and physical) / needs</td>
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<td></td>
<td>- Social isolation / needs</td>
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<td>How were veterans enrolled?</td>
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<td>- Identified by Bupa Health Dialog</td>
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<td>- Self-referred / referred by GP</td>
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<td></td>
<td>- What are the barriers to participation?</td>
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<tr>
<td>Service delivery outcomes</td>
<td>What are the service delivery changes that have resulted from the CVC?</td>
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<td></td>
<td>Has care delivery for veterans with chronic disease changed?</td>
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<td></td>
<td>- Workforce capacity changed?</td>
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<td>- Are transitions of patients between sectors better managed?</td>
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<td>- Organisational / infrastructure changed/</td>
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<td>- GP led coordinated care plans increase?</td>
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<td>- GPs and nurses coordinate MD care</td>
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<td>- Has quality and completeness of care plans increased?</td>
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<td>- SP behavioural change / MD Teams formed</td>
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<td>- Adherence to treatment principles</td>
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<td>- Clarity of roles / recognition / satisfaction</td>
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<td>- Improved relationships with veterans?</td>
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<td>- GPs knowledge of patient’s health risks improved?</td>
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<td>- Patient health risk identified earlier?</td>
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<td>- Timeliness of patient treatment improved?</td>
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<td>- Is care being provided continually and care plan reviews occurring as per guidance?</td>
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<td>- Improved management of health of socially isolated patients</td>
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<tr>
<td>What are the service delivery needs and how have these changed?</td>
<td>What is the extent of care planning / coordinated care by GPs nurses:</td>
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<td>- Medicare items; other items</td>
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<td>- Other programs</td>
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<td>- GP practices</td>
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<td></td>
<td>Are other relevant services available for referral by GPs / nurses?</td>
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<td>Are these services being used more actively for CVC?</td>
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<td>How are GP practices structured to facilitate coordinated care?</td>
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<td>What is the extent of workforce capacity and capability to provide coordinated care?</td>
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<tr>
<td>Outcome domain</td>
<td>Key evaluation question</td>
<td>Sub-questions</td>
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<td></td>
<td>Did patient registry data assist GPs in identifying need for additional health services? &lt;br&gt; Impact of training?</td>
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<td></td>
<td>What are the characteristics of the GPs/Nurses population? &lt;br&gt; • demographics &lt;br&gt; • types of GP practices &lt;br&gt; • training / resources for care coordination</td>
<td></td>
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<tr>
<td>Did the processes adopted by the CVC contribute to the service delivery outcomes?</td>
<td>Have referrals to other relevant services changed? &lt;br&gt; Has referral to social assistance services changed?</td>
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<tr>
<td></td>
<td>How have care plans been developed, adhered to, implemented and reviewed? And how has this changed? &lt;br&gt; • Medicare items uptake of care plans and related health services used in the care of the veterans participating in the CVC &lt;br&gt; • Follow-through &lt;br&gt; • Drop off &lt;br&gt; • Referrals</td>
<td></td>
</tr>
<tr>
<td>Was the targeting of veterans effective in enrolling the veterans with a high risk of hospitalisation? &lt;br&gt; Were the enrolments appropriate in light of the eligibility criteria?</td>
<td>Given the eligibility criteria for veterans to enrol in the CVC how effectively have the high risk veterans been identified?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Were the targeting communications to veterans and GPs effective? (i.e. result in enrolments).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Who enrolled on the program as a result of the targeting?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What was their risk profile?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What actions were taken to identify the right veterans to enrol on the program?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have there been any unintended consequences of the targeting methods?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What were the trends in targeting? Have the number of enrolled veterans been at the levels anticipated?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Will the way veterans are targeted impact on outcomes of the program?</td>
<td></td>
</tr>
<tr>
<td>DVA business case outcomes</td>
<td>Has funding of $152.7 million delivered a return on investment outlined in the CVC NPP?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note: this overarching question will be answered though answering all of the above questions in terms of outcomes of the program relative to cost.</td>
<td></td>
</tr>
</tbody>
</table>
It is likely these evaluation questions will need to be revisited to a future workshop to include input from both Bupa Health Dialog and Australian General Practice Network. Suggested timing for these workshops is proposed in Attachment B. Involvement in the workshops will be negotiated with DVA prior to confirming the time and venue. At this stage, workshops in Canberra are preferred, but involvement of DVA state offices through video—teleconferencing could involve more DVA and other stakeholders, as advised by DVA.

1.10 **M&E approaches and methods**

This section of the M&E Framework covers the overall approach to monitoring and evaluation, as well as specific methods and tasks that will be required over the duration of the Program.

The M&E approaches and methods proposed below will need to take into account these design and implementation features of the CVC covered in Part A.

This section of the M&E Framework has informed the ethics application which will be submitted to the DVA Human Research Ethics Committee in October.

### 1.10.5 M&E approaches

Given the approach to implementation of the program over the three year time frame, we propose the following broad approaches to monitoring and evaluation of the CVC:

- analyse DMIS data by December 2011—baseline report
- quarterly ongoing monitoring of implementation of the program over the entire program period—regular monitoring reports about program implementation
- two annual reports, one in 2012 and another 2013
- a final summative evaluation of the program by July 2014

Specific methods and associated tasks are suggested for each of the above approaches is covered in more detail below.

### 1.10.6 Ethical and privacy considerations

The M&E Framework has developed a number of methods, quantitative and qualitative to answer the key evaluation questions. Both monitoring and evaluation activities are informed by the following key ethical frameworks for the conduct of research and evaluation:

The M&E Framework proposes methods that could potentially identify individual veterans or medical practitioners and nurses involved in care coordination as part of the CVC. Both privacy and ethical considerations are of importance here, and hence the evaluation of the CVC will also work within the Privacy Act 1988: http://www.privacy.gov.au/law/act/research

The key features of the CVC and the way it will be monitored and evaluated drew attention to the following considerations in the design of the evaluation methods that are covered in relation to particular methods covered in greater detail below.

- DMIS data contains identified veteran and practitioner data. All analysis and reporting will be on de-identified aggregated data, and direct contact by Grosvenor with veterans or practitioners is not required or proposed for purpose of the analysis and reporting. The data will be appropriately handled in accordance with Grosvenor’s Information Security Framework (which will be reviewed and approved by DVA) and in accordance with the Privacy Principles. DVA. Upon completion of the project personal information will be disposed of or returned to DVA, as agreed.

- A range of qualitative methods are proposed in which either veterans or practitioners may be contacted for the purpose of evaluation. They include workshops with practitioners, surveys and case study designs. While the analysis and reporting of the results of these methods will be de-identified, the nature of these methods mean that veterans, their carers and practitioners will need to give their informed consent to be involved. Informed consent is part of a veteran being involved in the CVC, but further consent will be required if they are to be directly contacted and involved in the evaluation of the CVC. Both veterans and practitioners will need to be targeted to gain their formal consent to be involved. It is in this regard, that Grosvenor concludes that ethics clearance will be required for the qualitative evaluation methods proposed in this M&E Framework for the CVC.

- The CVC will also be monitored over the duration of the Program. The type of monitoring data that will be collected and reported on does not involve directly contacting veterans, their carers or practitioners. As with the quantitative data, monitoring data will be de-identified and aggregated prior to reporting. Given this ethical clearance will not be sought for the collection, analysis and reporting of the monitoring data proposed in this M&E Framework for the CVC.

The ethics approval form at Attachment C has been completed to seek ethics clearance from DVA to conduct the evaluation in accordance with the methods described in this M&E framework.

1.10.7 Baseline data analysis and report—by December 2011

A baseline analysis and report will provide a useful reference point for comparison of trends and changing patterns of care under the CVC over time.

Rationale:

The M&E Framework requires a number of reports that will analyse the progress with implementation of the CVC and the outcomes of the Program over time.
For trend analysis to be insightful, a number of key variables will need to be analysed and reported at baseline. The CVC officially commenced with the introduction of new Medicare Items on 1 May 2011. The DMIS data will provide claims data for these items from 1 May over the duration of the Program.

The baseline report will present an analysis of DMIS data from which trends and patterns of care and costs can be documented over time. In terms of the evaluation questions, only a limited number of questions will be answerable at baseline. However it is important to present what we know about the service patterns and usage prior to the commencement of the CVC Program and the introduction of the new CVC Medicare items.

The baseline analysis should therefore document aspects that are relevant to CVC outcomes prior to the commencement of the CVC covering:

- service utilisation, including the value of other Medicare item claims, such as Enhanced Primary Care Items, and access to social assistance services
- hospitalisation rates of veterans and associated costs.
- the number and clinical / health profile of eligible veterans at commencement.

In relation to the last of these, the baseline analysis will draw upon the work of Bupa Health Dialog in identifying eligible veterans over the first six months of the program, and the monitoring reports provided to DVA from Bupa Health Dialog up to that time.

The baseline analysis and report will comprise two parts:

- descriptive contextual data analysis of DMIS data—refer to section 4.4 for details
- early progress with the CVC in terms of enrolments for GP Practices and veterans from 1 May to December 2011.

In relation to the qualitative methods proposed for the evaluation, these will be piloted and tested prior to the baseline report. Initial findings from these methods will be reported, in line with the evaluation questions that are feasible to answer at this point in time. The qualitative methods will also be used to validate what is being analysed in the quantitative methods. Both of these aspects will be reported on in the baseline report.

**1.10.8 Monitoring the CVC—from July 2011 to December 2014**

**Rationale:**

Ongoing monitoring of the CVC against the program logic for the service delivery aspect of care coordination is an essential requirement for assessing how the implementation of the Program is progressing. Monitoring data is also an essential requirement for the evaluation (for interim reports and at the completion of the Program) to test the effectiveness, efficiency and sustainability of the CVC Program.

It will be important to capture short term and longer term outcomes and understand the underlying factors that could lead to positive and negative outcomes of the program over time. The program logic / outcomes hierarchy presented in section 3.1 above and the policy and program implementation environment, covered in Part A,
have identified what some of these broader influences, including those that are outside of the control of the program itself.

Monitoring information collected over this period will measure progress with the way the program is implemented over time. We anticipate a range of data sources will need to be accessed, including data collected by the Bupa Health Dialog and the AGPN.

The data collected at baseline should be collected and reported on an ongoing basis for the purpose of monitoring the implementation of the CVC. The key data collected in DMIS is an obvious source of monitoring data, but other data should also be collected for the purpose of:

- measuring the number of veterans enrolling in the Program over time, how this relates to targeting through Bupa Health Dialog and self enrolled veterans
- monitoring enrolments of veterans by GPs with and without a Practice Nurse
- monitoring and reporting in the chronic disease profile of the veterans enrolled in the program
- monitoring dropout rates, deaths, and other changes in the veteran population that will impact on numbers enrolling over time and completing the cycle of care under the plan
- measuring the number of care plans initiated, and completed across a cycle of care
- monitoring the changing profile (type and extent) of services at a local level to which veterans will be referred under their care plans
- monitoring the costs of care coordination and use of social assistance services over time
- documenting the level of access to the training and resources by practitioners developed for the CVC by AGPN, including on-line and face-to-face.

The monitoring requirements broadly relate to outcomes in the outcomes hierarchy in section 4.1.1. However, monitoring is less suitable for measuring intermediate and longer term outcomes of the CVC which will be undertaken through the evaluation methods used to answer key evaluation questions.

The areas of interest for ongoing monitoring and reporting are useful for demonstrating progress with the CVC over time and are drawn primarily, although not exclusively from the DMIS data. The monitoring data are not intended to replace the analysis of DMIS data being used for the purpose of evaluation nor is it intended to replace the supplementary qualitative evaluation methods described in section 4.5.

The monitoring data provides a different role to evaluation of the CVC. It is anticipated that the monitoring data outlined below will be reported by Grosvenor to DVA quarterly.

The table below outlines the monitoring requirements for the CVC which:

- provides details of the area of interest for monitoring progress with the CVC
- suggests main source of data from which the area of interest will be sourced
- indicates where the data sources have been created either by Bupa Health Dialog or AGPN or where care in the interpretation of the data is required.
### Table 2: Monitoring data for the CVC

<table>
<thead>
<tr>
<th>Monitoring area</th>
<th>Data source</th>
<th>It will be important to track this over time. Early signs are that non-targeted veterans self-enrolling at a high rate than targeted veterans. The reasons for not participating in the CVC when targeted will be important to understand.</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of targeted veterans who did not participate in the CVC Program</td>
<td>Bupa Health Dialog records, DMIS</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse. Bupa Health Dialogu is contacting veterans and GPs to target for enrolment in the CVC. Some veterans or GPs could self identify. Case load of veterans for the care coordinator should be monitored. Heavy case load per coordinator may impact on achievement of outcomes for the veteran.</td>
</tr>
<tr>
<td>Measuring the number of veterans enrolling in the Program over time, including numbers targeted by Bupa Health Dialog, and self enrolled veterans</td>
<td>Bupa Health Dialog records, DMIS</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse. Bupa Health Dialogue through their analysis of DMIS is targeting veterans at risk of hospitalisation for enrolment on the Program.</td>
</tr>
<tr>
<td>Chronic disease profile of the veterans enrolled in the Program including mental health.</td>
<td>DMIS</td>
<td>Diagnosis is based on recent hospitalisation in DMIS. Monitoring hospitalisations rates of veterans over time, including enrolled veterans and those identified at risk of hospitalisation.</td>
</tr>
<tr>
<td>Monitoring hospitalisations rates of veterans over time, including enrolled veterans and those identified at risk of hospitalisation</td>
<td>DMIS, Bupa Health Dialog records</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse. Bupa Health Dialogue through their analysis of DMIS is targeting veterans at risk of hospitalisation for enrolment on the Program.</td>
</tr>
<tr>
<td>Monitoring dropout rates, deaths, and other changes in the veteran population that will impact on numbers enrolling over time and completing the cycle of care under the plan</td>
<td>DMIS, Bupa Health Dialog records</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse and costs. Some veterans will drop out of the program due to not completing the cycle of care / others due to dying / other reasons. Should track whether care plans are being reviewed and updated—note also being measured for evaluation.</td>
</tr>
<tr>
<td>Measuring the number of care plans initiated, and completed a cycle of care</td>
<td>DMIS</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse. The uptake of the MBS items, and frequency of follow up consultations will be a measure of this.</td>
</tr>
<tr>
<td>Monitoring area</td>
<td>Data source</td>
<td>Comment</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Monitoring the changing profile (type, extent) of services at a local level to</td>
<td>DMIS</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse.</td>
</tr>
<tr>
<td>which veterans will be referred under their care plans</td>
<td>DMIS</td>
<td>Use of social assistance services provided by DVA and captured in DMIS will be reported here.</td>
</tr>
<tr>
<td>Monitoring the costs of care coordination and use of social assistance services</td>
<td>DMIS</td>
<td>Number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse.</td>
</tr>
<tr>
<td>over time</td>
<td>DMIS</td>
<td>Cost of the MBS items and social assistance services will be reported here.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will need to have hard evidence available on how savings have been measured and achieved.—note, this will be better answered through evaluation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May need to consider how social support services, in particular social isolation and mental health are included in the measurements—note, this will be better answered through evaluation</td>
</tr>
<tr>
<td>Documenting the level of access to the training and resources by practitioners,</td>
<td>AGPN records</td>
<td>AGPN is monitoring and reporting these data.</td>
</tr>
<tr>
<td>PNs and CNs developed for the CVC by AGPN, including on-line and face-to-face</td>
<td></td>
<td>AGPN are evaluating their training programs.</td>
</tr>
<tr>
<td>modes of delivery and level completed.</td>
<td></td>
<td>Will want to track whether the training provided by AGPN has contributed to the outcomes of the CVC.</td>
</tr>
<tr>
<td>Tracking the number and type of inquiries / complaints about the implementation</td>
<td>DVA Helpline records</td>
<td>These data can provide quantitative data about inquiries / complaints, but also the nature of the inquiries provide qualitative information about issues arising at different stages of the CVC.</td>
</tr>
<tr>
<td>of the CVC</td>
<td>Bupa Health Dialog</td>
<td></td>
</tr>
<tr>
<td>Helpline records</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Grosvenor will ensure consistency in the approach to monitoring between Bupa Health Dialog, AGPN and DVA so as not to have too many sources of “the truth”. There is some .e. crossover between Bupa Health Dialog and Grosvenor as outlined in the above table. Duplication of effort for monitoring will be minimised based on an agreement with DVA about collection, analysis and reporting of monitoring data / measures.

The form of the reporting template for quarterly reporting of the above will be developed and agreed with DVA before the first monitoring reporting period in December 2011.
1.10.9 Annual progress reports in 2012 and 2013

Rationale:

Two annual reports will be written the first in May 2012 and the second in May 2013. Both will report on the analysis of outcomes against the outcomes hierarchy to answer the evaluation questions listed in Table 2 above.

While monitoring data will have been collected over the period and monitoring reports provided quarterly, these two annual reports, will bring together the results of the quantitative and qualitative analyses, proposed in sections 4.4 and 4.5 below.

By using a formative approach to evaluation, that includes feedback as part of a continuous improvement cycle, the annual reports will report on the analysis of the DMIS data and through gaining an in-depth understanding of the factors that affect program outcomes through the use of the qualitative evaluation methods proposed.

The annual reports in 2012 and 2013 will therefore include collecting and reporting on more in-depth information about the services from the GP practices and veterans enrolled on the program. In relation to the social support services being provided under the program special attention could be paid to veterans considered to be most at risk of social isolation.

Annual progress reports in 2012 and 2013 will:

- update the policy and program evidence supporting the CVC
- assess the barriers and enablers to implementation of the program
- assess the effectiveness, efficiency, appropriateness and cost implications of the CVC to date
- assess patterns of care and service utilisation under care plans
- assess changes in hospitalisation rates for enrolled veterans
- identify improvements required to service delivery, training and support
- report on emerging outcomes for veterans enrolling in the CVC
- report on any unintended consequences of the CVC
- discuss any lessons learned to date.

The majority of the key evaluation questions in Table 1 will be able to be answered at these stages in the implementation of the M&E Framework for CVC. Other evaluation questions will be developed in relation to lessons learned and the future and sustainability of the program prior to the analysis that will be undertaken to inform the annual reports.

The types of analytical approaches to be adopted for the interim reports include:

- quantitative data analysis of DMIS data—refer to section 4.4 below
- qualitative analysis of GPs / nurses, veterans and carers—refer to section 4.5 below.

Similar analysis of the DMIS data will be undertaken for both annual reports, which will include reference back to the baseline report; and in the case of the 2013 report the results of the analysis in the previous annual report in 2012.

In relation to the qualitative methods, it is anticipated that the methods for which ethics approval was given will be undertaken for both reports, although the evaluation questions that will be pursued in each report, may be different to reflect progress with implementing the program.

As mentioned previously, further evaluation questions may be developed for each of these reports, based on the themes and trends coming from the monitoring data and reports over the preceding 12 month period.

Further evaluation workshops are proposed with DVA staff involved in the delivery of the CVC, and with the Bupa Health Dialog and AGPN. These will be held to confirm the program logic / outcomes hierarchy is still valid; to test whether other factors need to be measured; to test our understanding of any unintended consequences of the program; as well as develop more refined evaluation questions, as required. Planning for the workshops will be negotiated with DVA in the months prior to the evaluation methods that will be employed in these stages of the project.

A writing plan for each of the annual reports in 2012 and 2013 will be drafted for clearance by DVA at designated times according to the suggested timeframes for these activities at Attachment B.

1.10.10 Final evaluation of the CVC to assess outcomes and impacts

Rationale:

5. The final stage of the evaluation will evaluate the outcomes and impacts of the program in line with reporting on the achievements of the program in relation to its aims, goals, and objectives.

A final evaluation will document the overall outcomes and achievements of the CVC since the introduction of the Medicare items for care coordination on 1 May 2011. A three year time frame will enable the evaluation to analyse trends over time, including changes in the number of enrolments, changes in patterns of care, cost implications and the final outcomes for service delivery, veterans and the health system as provided in the outcomes hierarchy in Figure 1.

6. The summative evaluation stage will draw together all previous analyses, modelling and findings from the evaluation to assess whether and to what extent the program has been successful overall and the factors that have led to positive, negative, or unintended consequences. The evaluation should be able to provide answers to key evaluation questions, through the adoption of data analysis methods proposed in the M&E Framework.

7. The DMIS modelling should provide an analysis of changes in patterns of care attributable to the program, both immediate and longer term where possible. With service costs, this would enable projected costs or savings to be estimated. This
information will be combined with quality of life information to assess the financial and broader outcomes of the program.

The type of analyses that will be undertaken in the final evaluation report are covered in section 4.4 and 4.5, but will necessarily include more data than will be available at earlier stages of program implementation.

The final evaluation will:

- update and analyse the policy and program evidence for care coordination (academic and grey literature), including new evidence arising over the period of the evaluation
- use data collected for monitoring over the implementation of the program
- draw upon the findings of the annual reports
- assess the benefits of the care coordination including the cost implications, and any unintended consequences of the program
- assess the outcomes and impacts of care coordination
- evaluate the outcomes of the program against the agreed evaluation questions
- use quantitative and qualitative methods to answer key evaluation questions.

Based on the quantitative and qualitative methods used throughout the evaluation the final evaluation will report on:

- whether the targeting of the eligible DVA client base was effective
- number of GP enrolments with a Practice Nurse vs GP enrolments without a Practice Nurse
- changes in program service utilisation over time
- whether the program has improved care of eligible DVA veterans compared to eligible veterans who did not access the Program
- impacts, including cost consequences of providing community care in terms of hospital utilisation
- the benefits of the program relative to the costs, including cost savings from lowered numbers of hospital admissions and re-admissions
- whether the program has improved health outcomes for DVA clients with the target chronic conditions
- whether veterans with complex care needs have been managed well, including in relation to risk of social isolation, through the provision of social assistance services
- positive and negative consequences of the program
- the key success factors in the implementation of the program
• whether areas for improvement identified during Stage 2 have been effectively addressed

• areas where improvement is still required to fully meet the goals and objectives of the Program.

The final report is required on the evaluation by May 2014. Given this, we will seek DVA agreement on the content and structure of the final evaluation report by February 2014.

The methods proposed throughout the evaluation, including for the final report are covered in the following section of the M&E Framework.

7.3 **Quantitative methods**

Quantitative methods are an important part of the evaluation of the outcomes and impacts of the CVC. These methods have been designed largely for the DMIS data, but other quantitative data collected using surveys will also need to be analysed. The logic matrix at Attachment A summarises the key outcomes and evaluation questions for which the DMIS data and other quantitative data will be used.

Note: A document prepared about the IT infrastructure set in place by Grosvenor, and the security framework documentation for the DMIS data is a separate document for which clearance will be sought prior to receipt of the DMIS data.

**7.3.5 Analysis of DMIS**

The principle method expected to be used for DMIS analysis is regression. For some analysis, the regression may need to be supplemented with case comparison. Details about the implementation of these methods are provided below. In addition, specific analyses about data quality and other issues will be undertaken to ensure the interpretation of DMIS data is appropriate.

**7.3.6 Data Processing**

The DMIS data will be provided monthly by DVA in accordance with the data specifications document (version 1.0 at time of writing). As well as information and ad hoc datasets, there are 12 datasets in three groups as summarised in the Table 2.

**Table 3: Data sets for DMIS analysis**

<table>
<thead>
<tr>
<th>Group</th>
<th>Data sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current status (at relevant month)</td>
<td>Dataset 3.5—Client</td>
</tr>
<tr>
<td></td>
<td>Dataset 3.5.1—Address</td>
</tr>
<tr>
<td></td>
<td>dataset 3.5.2—Disability</td>
</tr>
<tr>
<td></td>
<td>Dataset 3.6—Provider</td>
</tr>
<tr>
<td>Longitudinal status (multiple year history)</td>
<td>Dataset 3.5.3—Card</td>
</tr>
<tr>
<td></td>
<td>Dataset 3.6.1—Speciality</td>
</tr>
<tr>
<td>Services information</td>
<td>Dataset 3.7—Episode (hospital)</td>
</tr>
</tbody>
</table>
The current status and longitudinal status information will be summarised into a longitudinal client details dataset. This dataset will include demographic information such as birth and death dates (if applicable) and geographic information. It will also include information relevant to the CVC Program, such as start and end dates of Gold Card eligibility. An SPSS program will be developed that processes the status information each month, updating death (if necessary) and eligibility details with the most current data.

In contrast, the services datasets will be processed so as to maintain a time lag. Each month, the dataset contains three years worth of claims (or 5 years for the initial dataset). All information will be retained from the initial dataset except for the most recent 5 months. That is, the basis of the claims dataset will be all available data up to and including 6 months prior. For ongoing months, one month of data will be extracted from the three years of claims. The extracted data will be all claims with a date of service (or end of episode) that is six months old.

This process is depicted in Figure 2 where grey shaded is deleted and only black shaded information is retained. The reason for the lag is to allow claims to reach DVA. For hospital episodes in particular, information about the service may not be available until well after the service is provided. A fixed lag period is intended to limit
the bias that would arise if all information was included, as earlier episodes would be more likely to be included in the DMIS data.

**Figure 2: Selection of cross selection data**

An SPSS program will be developed by Grosvenor to automate the process of extracting the relevant month’s information from the DMIS data feed and append it to the Grosvenor maintained claims dataset. The information to be extracted includes date of service, cost to DVA and code that identifies the type of service.

In summary, two datasets will be created from the DVA provided DMIS information. The client dataset will be completely up to date and include information relevant to CVC eligibility including gold card status. This will be supplemented by Bupa Health Dialog provided information about CVC participation and / or CVC participation defined by claims for CVC relevant MBS items. The claims dataset will include claims information for episodes or services that were provided at least six months earlier than real time and that were included in the DMIS data within six months of the service provision. It will also include a client identifier to enable linking between the client and claims data.

### 7.3.7 Contextual Data Analysis

To provide background and context, various tables and charts will be used to display key characteristics of the CVC eligible veteran population. This will include demographic information (such as age profile) and patterns of care. The patterns of care will describe variation and distribution of cost profiles, average number of services per year of different service categories and summaries of hospitalisations.

As the focus of the CVC Program is high cost veterans; the contextual analysis will also describe different types of high cost veterans and how those costs arise. For example, it will examine the breakdown of high cost veterans between those that are regularly high cost through chronic disease and those arising from intermittent costs such as a hip replacement. It will also compare the average costs of health services for veterans in each of the target diagnosis groups.

### 7.3.8 Statistical Analysis Methods

The principle method expected to be used for statistical analysis is regression. Regression is a standard statistical method used to construct a model of the relationship between a single dependent variable of interest and one or more
explanatory (or independent) variables. If the CVC Program has an effect on costs or hospitalisations, such an effect should be detectable with participation in the Program as a statistically significant explanatory variable for the dependent variable of costs or hospitalisations.

Three separate regression models will be constructed, one to address the impact of CVC participation on each of three outcomes:

- annual cost of health services per veteran
- rate of hospitalisation
- risk of readmission.

To explain the regression modelling process, consider the example of annual cost of health services per veteran. The first step is to construct the dependent variable. A veteran can change CVC participation status at any time, so they cannot simply be assigned to ‘participant’ and ‘nonparticipant’ status. In addition, veterans may only be eligible for CVC participation for part of a year because they become eligible for a Gold Card after the year starts, or enter residential aged care or die during a year.

To accommodate these complications, costs must be converted to cost per eligible year. Only that part of the year where a veteran is eligible for CVC participation is considered and the costs accrued during that time are totalled separately for the time the veteran is participating or not participating in the Program. These costs are then grossed up to reflect the total cost that would have accrued over a full year at the relevant rate.

Apart from CVC participation, other explanatory variables to be included in the regression model will include age, gender and some health status information (such as whether diagnosed with one or more of the target health conditions). The regression model will be constructed separately for each financial year. A single year model will limit the impact of the ageing of the veteran population and general health utilisation changes that reduce the validity of comparisons between health service usage over time. Using the full financial year rather than some shorter period will average out seasonal effects.

The model for costs per eligible year will use linear regression, as the dependent variable is continuous (that is, can take any numerical value). The model for number of hospital episodes per eligible year will use Poisson or negative binomial regression, as the dependent variable is a rate (that is, number of events per period). The model for probability that a hospital episode is a readmission will use logistic regression, as the dependent variable is binomial (that is, either yes or no).

It may be that regression is not able to produce reasonable models. For example, variability in costs and hospitalisation may be so high as to obscure any CVC impact, or there may be confounding factors that are not included in the DMIS dataset. The fallback analysis method is to match cases, where a CVC participant is paired with a similar veteran who is not a CVC participant. Similarity would be assessed on features such as age, gender and historical health costs prior to CVC participation. A paired t-test would be used to assess whether the participant and non-participant group had significantly different costs and hospitalisation rates. This method is less preferred than regression because of difficulties in identifying suitable matches and also the temporary nature of CVC participation makes classification into one group or the other problematic.
7.3.9 CVC Impact Presentation

The regression will be supplemented with various charts and tables to describe the impact of the CVC Program. Most simply, various tables will compare the patterns of care per person (including numbers of services, types of services and costs) of CVC participants and eligible Gold Card veterans who are not CVC participants. Charts of the most important results will supplement these tables and provide a visual comparison.

In addition, a longitudinal high cost analysis chart will be presented. This analysis will display the cost profile for several months following a high cost month. High cost will be defined in several ways such as hospitalisation or highest cost 10 per cent of veterans for the month. In the months after a high cost month, a veteran could have another high cost month, a normal cost month, enter residential aged care or could die. The chart will display the pattern for at least 12 months and compare CVC participants to other gold card veterans.

7.3.10 Specific Purpose Analyses

Various analyses will be undertaken to test the appropriateness of proposed regression methods, assess the completeness of the DMIS data and otherwise support the principle analyses.

As the DMIS is extracted from a data warehouse, quality is expected to be high. Nevertheless, standard data quality checks will be conducted during the processing, including checking for missing data items, duplicate records, inconsistent dates (such as separation earlier than admission) and other potential errors.

Hospital episodes are a key item of interest to DVA and are also potentially the least complete part of the dataset with public hospitals in particular providing data as late as many months after the episode is completed. One way to deal with this issue is to run the regressions and other analyses as late as possible to maximise the time in which information can be submitted to DVA. However, this would introduce a bias as hospital episodes occurring early in the Program would be more likely to be included in the dataset. To overcome this bias, the evaluation will be based on a fixed time lag dataset, using the data that is provided within six months of the episode. This will be supplemented with a completeness check which examines data for the same month taken from datasets provided at different times during the Program. By examining the number of services in the data for the given month at various times, an estimate can be developed of the completeness of the data and whether there are particular types of services (for example, public hospital episodes in particular States) where the fixed time lag dataset should be supplemented with later data to provide a representative dataset for the regression.

Even if a representative dataset is available and the CVC has an impact on patterns of care, statistical tests such as regression may not be able to detect it. This occurs if there is insufficient statistical power in the tests because the data is inherently highly variable and the average impact is relatively small compared to the average data variability. When this combination occurs, the statistical test is unable to distinguish between differences in data induced by the effect to be detected and differences arising from inherent variability. Two approaches will be undertaken to assess and minimise this problem.

First, an end of life analysis will be used to assess the appropriateness of excluding end of life costs so as to reduce the inherent variability in the data. That is, very high
health costs may arise near death due to heroic life saving attempts. As the CVC is intended to better manage ongoing health care rather than reduce the costs of end of life health care, these data can be excluded as irrelevant to CVC assessment. The end of life analysis will examine the monthly care costs of veterans who have died with at least two years of data in the DMIS extract. Based on this analysis, a cut-off point will be (somewhat arbitrarily) determined after which health care costs are more closely associated with nearing death rather than ongoing care. This cut-off will be applied to the data for all veterans included in the DMIS dataset who die during the evaluation period, excluding the last few months of data.

Second, a power analysis will be used to assess the capacity of the regression to detect changes of different sizes. This analysis will run regressions on simulated data where a proportion of veterans are assigned reduced health costs. The proportion of veterans and the size of the reduction will be systematically varied and a set of regressions run for each combination. The analysis will identify the minimum impact of the CVC that is statistically detectable for different potential levels of CVC participation.

Another potential difficulty with the regression analysis is biased participation in the CVC Program. That is, the Program is targeted to veterans with higher health care needs. If only high health cost veterans participate in the Program, then CVC participation will be associated with higher (rather than lower) health costs compared to nonparticipation. The potential impact of this problem will not be apparent until the Program is established. At that time, a bias analysis will be undertaken that compares the health costs of participants prior to their participation against nonparticipants over the same period. While the results of this bias analysis cannot be directly included in the regression, the analysis will be used to inform post assessment correction of CVC impact estimates.

7.4 **Qualitative methods**

A number of qualitative methods are proposed for analysing service delivery and veteran outcomes under the CVC. While the analysis of DMIS data is central to answering a number of evaluation questions, it was always anticipated that supplementary data, largely qualitative, would need to be collected and analysed for the purpose of answering many of the key evaluation questions for the CVC.

Qualitative methods will be used to explore, identify and understand the underlying factors affecting program performance and participant and provider experience and satisfaction. The qualitative methods could also explore reasons for non-participation. For example, focus groups or interviews with otherwise eligible non-participants could explore barriers to participation. The feasibility of recruiting non-participants however will need to be carefully thought through in the piloting phase for all the qualitative methods.

Qualitative methods will include surveys, interviews and focus groups with participants, carers, service providers and DVA staff. The scheduling of the qualitative methods will be undertaken at a time that best suits the implementation of the program and recruitment of participants.

Consultation and liaison with DVA and Bupa Health Dialog and AGPN will be undertaken to ensure the qualitative methods do not interfere with the way the services are being provided; and data are collected to ensure confidentiality, privacy and ethical considerations are fully taken into account.
The qualitative methods will also explore issues where we need to understand underlying factors in terms of access and retention on the program. Examples of the latter might include attitudes towards participation in the program, perceptions about the effectiveness of the care plans and/or the nature and quality of the doctor-patient relationship.

Further rounds of qualitative research could then be used to explore new evaluation questions that may arise from the analysis of DMIS administrative and previously collected survey and interview data. Some of the qualitative techniques employed for the evaluation could use projective stimuli. These techniques have also been applied in social and market research (Hurworth et al 2005; Patton 2002).

The qualitative methods proposed below are summarised in the program logic matrix at Attachment A, to show which methods will be employed for particular outcomes of the CVC and in relation to GP Practices, veterans and their carers.

The M&E Framework proposes a number of different qualitative methods to capture the views and outcomes of GPs, nurses, veterans and their carers. All the tools, such as on-line surveys; interview question templates; case study interview tools will be developed and approval sought from DVA for the use of the tool prior to pilot testing of these methods later in 2011, and prior to the baseline report. Attachment B outlines this proposed timing of the qualitative methods proposed in the M&E Framework.

Each of the suggested qualitative methods is described below.

7.4.5 Qualitative methods for general practitioners and nurses

These approaches include:

- Small Group Learning (SGL)
- online survey of GPs and nurses
- discussions and interviews of GPs and nurses

Nurses will include PNs and DVA community nurses where these arrangements have been put in place under the CVC. It is intended that the methods will apply to diverse groups of GP Practices to capture the range of views and experiences of care coordination under the CVC as possible.

**SGL of GPs and nurses**

**Rationale:**

As part of the evaluation of the CVC, discussion with focus groups of GPs and their practice administration is considered an essential part of assessing the Program’s utility and application in the ‘real world’. However, traditionally GPs are reluctant to spend time on activities such as focus groups as their extra-curricular time is very limited.

SGL is one avenue for the evaluation to capture the views and experience of GPs and nurses about the CVC.
SGL is part of the Quality Improvement and Continuing Professional Development (QI&CDP) Program run by the Royal Australian College of General Practitioners (RACGP). In order to maintain Vocational Registration GPs are required to attain 130 points over a triennium SGL is one of the so called “Category 1” activities which attracts 40 points. GPs are thus attracted to Category 1 Activities such as these to achieve the required points. Further details about SGL are available from the RACGP website at:


A SGL approach would provide an incentive for GPs to be involved, provide feedback for the evaluation process and inform the GPs how best to utilise the new Medicare Items for the CVC efficiently and effectively for their patients and their practices.

The SGL take-up rate will need to be monitored to ensure there is sufficient incentive for practice or community nurses to participate. Previously DVA has provided a financial incentive. Given the crucial role of nurses in care coordination, peak nursing colleges will be contacted about nurses’ involvement in the SGL and incentives to participate assessed. The cost implications of providing financial incentives to nurses will be discussed with DVA.

**Sampling:**

The sampling method would consider the following factors:

- the geographic distribution of veterans
- the number of veterans enrolled on the program with a particular GP
- the presence or otherwise of a practice nurse dedicated to implementing the care plans
- involvement of DVA contracted community nurses
- the difference between urban and rural practices
- the differences between the States (and Territories).

The approach to sampling is not intended to be representative of the entire GP practice population, but to capture the diversity of practices involved in the CVC. Bupa Health Dialog’s approach to targeting of GP Practices and veterans at different stages of the CVC implementation will inform the sampling approach adopted.

**Suggested approach:**

Individual practices would be approached and invited to be part of a “Cycle” of SGL Activity. Letters to GP Practices who have veterans enrolled on the program will be identified from the DMIS data set. Assuming a small sample of GP Practices is likely to respond to the first invitation to participate in a SGL, letters will be sent to 100 GP practices involved in the program in February 2012, 2013 and 2014 so as to conduct SGL prior to May in each year of the program. The letter will be followed up with a phone call to gauge level of interest at a practice level. Grosvenor will draft and send out the letters in consultation with DVA,
The evaluation team will aim to engage 10 GP Practices in SGL in each year.

A SGL Cycle involves a planning meeting a total of 6 hours of meetings and a review meeting. The completed cycle is worth 40 Category 1 QI&CPD points. A minimum of 2 GPs is required in the SGL. The group contact would be responsible for the set up and administration for the group and would be an evaluation team member of Grosvenor.

It is intended that practice or community nurses be invited to these meetings. The time frame / location and frequency of these meetings would need to be negotiated at the planning meeting. Learning objectives would be established at the planning meeting.

These will be in keeping with the RACGPs guidelines which will cover what the participants want to know, change, understand better, or develop in skills or confidence. The models recommended by the RACGP of BASK (behaviours, attitude, skills, knowledge systems) and SMART (specific, measurable, achievable, realistic, timely). These models will be used as a guide to developing learning objectives. The learning objectives will also address a systems based approach to patient safety and quality improvement.

It is anticipated the discussions in these SGLs will cover the five domains of general practice as defined by the RACGP:

- communication skills and the doctor patient relationship
- applied professional knowledge and skills
- population health and the context of general practice
- professional and ethical role
- organisational and legal dimensions.

By following these guidelines for learning objectives and domains, the suggested approach will comply with the RACGP’s requirements for SGL activities.

A suggested approach to maintain interest and relevance would be that each participant consider a particular DVA client and follow their journey over the period of the meetings. An update could be provided at each meeting and problems that have occurred in the intervening period discussed and final outcomes would be evaluated on reflection at the final review meeting.

**Patient confidentiality:** During the SGL sessions, as much as possible the patients discussed would be identified only by their initials. Any participant who has not already done so (in particular the representative from Grosvenor Management Consulting) would sign a standard confidentiality agreement. Individual GPs and nurses will not be identified in the reports of the sessions, or in the evaluation reports which will present the findings from the sessions.

**Conflict of interest:** It would be made clear at the planning meeting that there are two separate purposes behind the establishment of the SGLs:

- evaluation of the CVC by Grosvenor Management Consulting
- learning process for practices and GPs to improve outcomes for their patients and themselves.

It is considered that the SGL would be mutually beneficial, but that all participants be aware of these two separate agendas.
On-line survey of GPs and nurses

Rationale:
A short on-line survey of GP Practices will help to address some of the questions in the evaluation questions matrix under “Needs-service provider”, “Processes” and “Service Delivery Changes”. A survey approach provides a potential mechanism to seek information across a range of GP Practice types which enrol veterans on the program to assess some changes over time. The responses to the survey would not identify individual GP practices, or individual GPs and nurses.

Sampling:
To enable the largest possible sample size for the survey, all GP Practices which enrol veterans on the CVC Program will be sent the survey to complete.

An invitation to participate in the survey will be sent to all GPs and nurses (practice and community) in practices which have enrolled patients in the program. Contact details for GPs and nurses will be obtained through data on GP practices in DMIS. The potential for Bupa Health Dialog’s approach to targeting of GP Practices and veterans at different stages of the CVC implementation to be used to inform the sampling approach adopted for the on-line survey will be discussed with DVA.

An invitation to complete a follow-up survey will be sent to those GP Practices who responded to the first invitation, 12 months after the initial survey is completed and 12 months after that.

The sample size for the survey will depend upon the number of GP Practices involved in the program in each year. As the aim is to obtain as large a response rate as possible, all enrolled GPs will be sent the survey. The survey will include an introductory letter about the purpose of the survey and how responses will be used to inform the evaluation of the CVC. Grosvenor will draft the survey email letter in consultation with DVA.

Suggested approach:
The on-line tool Survey Monkey will be used for this survey. A URL will be sent by email to GP Practices in two stages:

- the first stage will identify changes in practice and any initial issues in the first year of the CVC at a practice level between May 2011 and May 2012
- the second stage will focus on the impact of the CVC program on service delivery structures and processes, over 2013 and 2014.

Individual patient or carer data will not be sought within the Survey Monkey tool.

Different survey questions will be asked of GPs and nurses. The questions will cover areas such as how the patients were enrolled, the development and use of care plans, access to resources, services and funding. Questions for the survey tool will be developed with DVA and tested before being implemented.

No identifying information about individual GPs or nurses will be obtained from conducting the online survey. Only demographic information about the location of the practice, number of veterans enrolled in the CVC within the practice, and practice
characteristics will be sought to enable analysis of the survey to be undertaken and to measure or interpret the findings. While open ended questions are possible in the survey to collect personal opinions or perceptions about care coordination under the CVC, no identifying information about individual veterans attending the GP Practices will be sought or reported on in the survey analysis, and attribution of particular views to individual GPs or nurses will not be reported in evaluation reports.

**Discussions and interviews with GPs and nurses**

**Rationale:**

Discussions and interviews with GPs and nurses will be conducted to address some of the questions in the Evaluation Questions Matrix under “Needs-service provider”, “Processes” and “Service Delivery Changes”. The aim is to gain some in-depth qualitative data about the strengths and weaknesses of the Program from the perspectives of general practitioners and nurses to inform the evaluation. It is intended to complement the information obtained through SGL and the on-line survey methods described above.

As mentioned in the SGL approach described above, discussion with focus groups of GPs and their practice administration is considered an essential part of assessing the program's utility and application in the 'real world'. However, traditionally GPs are reluctant to spend time on activities such as focus groups as their extra-curricular time is very limited.

**Sampling:**

Targeting from a number of different types of GP practices will be undertaken for the purpose to identifying practices in which individual GPs or nurses may be identified for follow up interviews:

- engaging with Medicare Locals, as part of their regular meeting agenda to discuss the CVC with GPs attending Medicare Local meetings
- engaging with GPs and nurses involved in the face-to-face AGPN training sessions to identify GPs and nurses who may be interested to be interviewed for the evaluation of the CVC, as opposed to the training per se
- sending invitations to GP Practices to be involved in individual interviews, arranged with each GP or nurse on a case by case basis

For the latter, GP Practices targeted by Bupa Health Dialog for enrolling on the CVC could be used invite GPs and nurses to be interviewed. Grosvenor will confirm whether it will be possible to attend any face-to-face training sessions with GPs and nurses for the purpose of the evaluation and seeking interested GPs and nurses to be involved in interviews.

As with SGL, the sample for interviews is not intended to be representative of the GP and nursing population or types of practices. As with the SGL, the sampling method would consider the following factors:

- the geographic distribution of veterans
- the number of veterans enrolled on the program within a practice
- the practice type (corporate, large group practices, small 1-3 doctor practices)
- the presence or otherwise of a practice nurse dedicated to implement the plans
- involvement of DVA community nurses
- the difference between urban and rural practices
- the differences between the States (and Territories).

Up to 10 GP Practices interviews / or groups of interviews will be undertaken in each year of the evaluation, 2012, 2013, and 2014

**Suggested approach:**

Discussions and / or interviews will be conducted in three waves and timed so the data can contribute to the reports in 2012, 2013 and 2014.

Letters (or emails) from DVA inviting GP Practices to be involved in interviews for the evaluation will be sent to a select number of potential GP practices. Letters will invite GPs and nurses within practices to either one-off or on-going involvement in follow-up interviews in subsequent waves. Grosvenor will draft the letters in consultation with DVA. Follow up phone calls will be conducted to secure the 10 GP Practices for each wave.

Upon acceptance of the invitation, arrangements for the interviews will be made on a case by case basis, to encourage active participation within the time-constraints and day-to-day activities of busy GP Practices. The aims and objectives of the interviews will be made clear, and a semi-structured interview or focus group discussion approach will be undertaken.

Outcomes of the interviews will be written up to draw out the main observations and themes arising in relation to the evaluation questions of interest. Reports drawing upon the interviews will be totally de-identified, so that GP Practices, individual GPs or nurses will not be able to be identified from the reports. The interviews will not identify or seek information on individual veterans or their carers within the discussion or interview processes that are arranged through these various processes.

**Informed consent:** All interviews with GPs and nurses will involve gaining their informed consent to be involved in the interview for the purpose of the evaluation. Prospective discussants and interviewees will be provided with clear information about the purpose of the discussion or interview, how information recorded from the sessions will be used, and that strict confidentiality will be maintained throughout the interview process.

**Patient confidentiality:** As with the SGL sessions, as much as possible the patients discussed during interviews or discussion groups would be identified only by their initials. Any participant who has not already done so (in particular the representative from Grosvenor) would sign a standard confidentiality agreement. Individual GPs and nurses will not be identified in the reports of the sessions, or in the evaluation reports which will present the findings from the sessions.

**7.4.6 Qualitative methods for veterans and carers**

The evaluation will also analyse the outcomes of the CVC for veterans and their carers. These methods will need to answer the range of evaluation questions in Attachment B that relate to veteran outcomes.
The two approaches include:

- case studies of veterans
- a survey of carers.

The rationale, sampling and suggested approach for each of these is provided below.

**Case studies of veterans**

**Rationale:**

The outcomes for veterans under the Program require qualitative approaches to answer the range of evaluation questions pertinent to veterans who enrol in the CVC. A case study approach has a number of advantages over experimental or quasi experimental approaches that can raise significant ethical issues. While the latter approaches can research the issues relevant to a large number of veterans, there would still be problems in ensuring representativeness to the whole veteran population and / or generalisability.

The problem of a control group, whether for experimental or quasi experimental approaches to researching outcomes for veterans, is not relevant when using a case study approach to assessing outcomes for veterans enrolled in the CVC. At the same time a case study approach to a select number of veterans, including those who have not enrolled, provides a mechanism for reporting on veterans’ experience of the CVC compared to those who elect to enrol in the Program.

While the case study approach proposed for veterans is not able to be representative, nor generalisable to the whole veteran population, it will enable the evaluation to:

- assess the reasons for enrolling on the Program, or deciding not to enrol
- investigate matters that impact on an individual in terms of the development and implementation of the care plan for care coordination under the CVC
- understanding the influences in completing the cycle of care once enrolled on the Program, or factors leading to non-completion
- consider possible difference in the experiences of veterans with different chronic disease conditions, or multiple chronic conditions
- follow an individual veteran’s care pathway, and their experience of being on the Program in terms of improved health outcomes and social and emotional well being
- assess the role of carers and family in the CVC and the success of care coordination.

**Sampling:**

The sampled of veterans will be drawn from DMIS. Bupa Health Dialog’s approach to targeting of veterans to enrol on to the CVC implementation will inform the sampling approach adopted. Lessons from the targeting strategy used to enrol veterans on the program will guide the approach Grosvenor will take to contacting veterans to be a case study for the evaluation. The letters and follow up phone calls by Grosvenor
staff will be undertaken in consultation with DVA, to ensure the letters, and style of communication is appropriate to veterans who are eligible for the CVC.

Ideally veterans enrolled on the CVC, as well as veterans who were targeted but decided not to enrol, would be targeted to be involved in the evaluation as an individual case study. The sample should include veterans with different chronic diseases, levels of severity, experience of hospitalisation, domestic circumstances, and geographical location of residence. While the aim of sampling is not to achieve representativeness or generalisability, the sample should involve as diverse range of circumstances for the veterans as possible.

Up to 10 veterans will be interviewed for case studies each year of the evaluation to cover possible differences in relation to the above factors to illustrate the impacts of the program at an individual veteran level,

**Suggested approach:**

Case studies of veterans will be conducted in three waves and timed so the data can contribute to the reports in 2012, 2013 and 2014.

All interviews will be conducted in or close to the location of the veterans’ place of residence. Two members of the evaluation team from Grosvenor Management Consulting will conduct the interview of veterans. Carers may also be involved in the interview or accompany the veteran at the time of the interview, especially if the veteran is frail aged or currently not well.

The interviews of veterans will be sensitive to the health, mental health and social circumstances of the individual veteran, including risk of social isolation. Where possible, DMIS data on the health profiles of the veterans will be reviewed to be fully prepared for each interview process.

The case studies will be conducted by Grosvenor staff with experience in interviewing people with complex health and social needs, to minimise the risk of emotional stress for veterans. Given the age profile of the veterans likely to be enrolled on the CVC, their risk profile, and other personal circumstances, every effort will be made to minimise the potential of a negative effect of interviewing the veteran. For example, veterans with post-traumatic stress (PTS) and/or the frail aged with physical and mental health needs will be interviewed in familiar and supportive surroundings. The timing of all interviews will be provided to DVA staff, so in the event of a veteran needing medical attention during the interview, a process will have been put in place to be able to respond effectively and sensitively to an emergency situation.

**Informed consent:** All veterans and their carers will be invited to give informed consent to be involved in the case study. The consent form will outline how the case study and interview process will be conducted; the purpose of the case study; how information provided or the views expressed will be used or reported on for the purpose of the evaluation. Involvement is the case study will be voluntary and the veteran will be advised that they can withdraw at any time, including at the time or during the interview. The draft consent form for the ethics approval form is an opt-out type of informed consent. The content of the form will be read out to the veteran at the time of the interview to reinforce the voluntary nature of the interview.
**Patient confidentiality:** For the purpose of conducting the case study veterans will be identified only by their initials. The interviews of veterans for each case study will be sensitive to the veteran’s personal circumstances, health status and medical/clinical outcomes. The information provided and/or views expressed by veterans will be treated with the strictest confidentiality, and the reports of each case study completely de-identified.

The evaluation reports may create vignettes about veterans involved in the case study, but individual veterans will not be able to be identified in the vignettes or the report, either in name or personal circumstance, or any other potentially identifiable attribute.
Survey of carers

Rationale:

The role of carers / family members is likely to be important in the uptake and implementation of care coordination under the CVC.

The case studies of veterans described above, will be complemented with a survey of veterans’ carers. The survey will be conducted face-to-face, although data will be entered on to an on-line survey developed specifically for carers involved in the CVC. The rationale for this is that many of the veterans and their carers may not be Internet connected, or may find an on-line survey impersonal or unattractive to complete.

It is envisaged that the questions covered in the survey will be focussed on the role of the carer of the veteran enrolled on the CVC; how well care coordination is being managed; barriers to completing the cycle of care; impacts on the veteran; and benefits to the carer of care coordination.

It is not proposed that carers of veterans involved in the case studies above, will be necessarily involved in the survey / interview process, but it does not mean that these carers will necessarily be precluded from being involved either.

Sampling:

Grosvenor will attempt to identify carers of veterans through veterans targeted to enrol in the CVC by Bupa Health Dialog. Where a veteran has the support of a carer, letters of invitation will be sent to the carer to engage in the evaluation. As with the case studies of veterans, it is not intended to survey a large number of carers to obtain representativeness and generalisability in the analysis.

The survey will collect largely qualitative information from carers through open ended questions in the survey instrument. As with the sampling for veterans for the case study approach described above, the sample should include carers of veterans with different chronic diseases, levels of severity, experience of hospitalisation, domestic circumstance and geographical location of residence. While the aim of sampling is not to achieve representativeness or generalisability, the sample should involve as diverse range of circumstances for the veterans and their carers, as possible.

As with the case studies of veterans, the survey / interviews of carers will be conducted by Grosvenor staff with experience in interviewing people with complex health and social needs, to minimise the risk of emotional stress for the carers of the veterans enrolled in the CVC.

Up to 10 carers will be surveyed / interviewed in each year of the evaluation, in line with the number of veteran case studies, as outlined above.

Suggested approach:

The survey of carers will be conducted in three waves and timed so the data can contribute to the evaluation reports in 2012, 2013 and 2014.

All survey / interviews will be conducted in or close to the location of the carer’s place of residence. Two members of the evaluation team from Grosvenor Management Consulting will attend the survey / interview.
**Informed consent:** All carers of veterans will be invited to give informed consent to be involved in the survey / interview. The consent form will outline how the survey / interview process will be conducted; the purpose of the survey / interview; how information provided or the views expressed will be used or reported on for the purpose of the evaluation.

**Patient confidentiality:** For the purpose of conducting the survey / interview carers will be identified only by their initials. The survey / interviews of carers will be sensitive to the carer’s personal circumstances, and their experience of caring for a veteran with a care plan for chronic disease. The information provided and / or views expressed by carers including personal information about the veteran who the carer supports will be treated with the strictest confidentiality, and the reports of each case survey / interview will be completely de-identified.
### Attachment A: Program Logic Matrix

<table>
<thead>
<tr>
<th>Outcomes hierarchy domains</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
<th>Data sources</th>
<th>Pretesting of data</th>
<th>Methods</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Health system outcomes    | What are the health system changes that have occurred as a result of the CVC? | Have patterns of care changed:  
  - Have admissions / re-admissions decreased?  
  - Have costs of hospital admissions / re-admissions changed?  
  - What types of services have been provided / changed?  
  - Has the Program delivered savings overall?  
  - Were there any unintended consequences | DMIS  
  DMIS | Power / validity of proposed analyses | Logistic regression  
  High cost longitudinal pattern analysis  
  Matched case comparisons | Admissions / re-admissions per life year  
  Re-admissions within 28 days  
  Services / veteran / life year  
  Cost / veteran / life year |
| Health system outcomes    | What are the health system needs and how have they changed? | To what extent does the system support coordinated rather than episodic / acute care?:  
  - Costs associated with unplanned admissions  
  - Costs of coordinated care | DMIS  
  Policy and program evidence review to inform | Power / validity of proposed analyses | Logistic regression  
  High cost longitudinal pattern analysis  
  Matched case comparisons | Costs of hospital admissions / re-admissions and coordinated care |

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*Case coordination M&E framework*
<table>
<thead>
<tr>
<th>Outcomes hierarchy domains</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
<th>Data sources</th>
<th>Pretesting of data</th>
<th>Methods</th>
<th>Measures</th>
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<tbody>
<tr>
<td>Health system outcomes</td>
<td>Did the processes adopted for the CVC contribute to the health system outcomes?</td>
<td>To what extent does the system support transitions between sectors?</td>
<td>Qualitative methods with GPs</td>
<td>stakeholders and method type</td>
<td>Discussion / interviews with GP nurses</td>
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<td>Pre-testing of data</td>
<td>Methods</td>
<td>Measures</td>
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<tr>
<td>Health system outcomes</td>
<td>Did the processes adopted for the CVC contribute to the health system outcomes?</td>
<td>Did the funding mechanisms support participation and outcomes?</td>
<td>Policy and program evidence review to inform Qualitative methods with GP practices</td>
<td>Pre-test on-line survey Tailor and test questions for different stakeholders and method type</td>
<td>On-line survey of GP and nurses Discussion / interviews with GP nurses Explore questions that relate to transitions between sectors</td>
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<tr>
<td>Veteran outcomes</td>
<td>What are the changes for veterans from enrolling in the CVC?</td>
<td>Improved quality of life for veterans, their carers and families:</td>
<td>DMIS Qualitative methods</td>
<td>Pre-test on-line survey Tailor and test questions for different stakeholders and method type</td>
<td>Descriptive statistics Interviews of GP practices / SGL / on-line survey Medicare item funding Explore barriers of participation by GPs &amp; nurses Claiming patterns</td>
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<td>understand care plans?</td>
<td>Qualitative methods</td>
<td>Individual veteran information as part of a case study Individual carer information as part of survey / interview</td>
<td>Pilot test qualitative methods</td>
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<td>empower to change</td>
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<td></td>
<td></td>
<td>behaviour change</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>improved self management of chronic disease/ understanding of conditions/ risk factors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>improved health status/risk factor profiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>greater social engagement / participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>improved health literacy</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>improved ratings on Partner in Health (self)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outcomes hierarchy domains</td>
<td>Key evaluation question</td>
<td>Sub-questions</td>
<td>Data sources</td>
<td>Pretesting of data</td>
<td>Methods</td>
<td>Measures</td>
</tr>
<tr>
<td>----------------------------</td>
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<td>---------------</td>
<td>--------------</td>
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<td>---------</td>
<td>----------</td>
</tr>
</tbody>
</table>
| **Veteran outcomes**       | What are the veterans’ needs and how have they changed from being enrolled in the CVC? | **What are the characteristics of eligible veterans?**  
  - Demographics / numbers  
  - Health status / needs  
  - Social isolation / needs  
  - Types and amount of social assistance needed?  
  - Hospitalisations pre/post CVC | DMIS | Power / validity of proposed analyses  
  Pilot test qualitative methods | Descriptive statistics  
  Small Group Learning / Interviews of GP practices / on-line survey  
  Case studies of veterans enrolled in the CVC  
  Survey / interview of carers | Veteran numbers / disease state / service use / cost / use of social assistance services  
  Questions about veteran characteristics / need for coordinated care |
| **Veteran outcomes**       | What are the veterans’ needs and how have they changed from being enrolled in the CVC? | **What are the unmet service needs?**  
  - Level of MDC  
  - coordinated by GPs/nurses  
  - Why are they not met? | DMIS  
  Policy and program evidence review | Power / validity of proposed analyses  
  Pilot test qualitative methods | Descriptive statistics  
  Small Group Learning  
  Case studies of veterans enrolled in the CVC  
  Survey / interview of carers | Disease state / service use / cost |
| **Veteran outcomes**       | Did the processes adopted in the CVC contribute to the outcomes for veterans? | **What are the characteristics of veterans enrolled to the CVC?**  
  - Demographics / numbers  
  - Health status / needs  
  - Social isolation / needs | DMIS data on enrolled veterans.  
  Qualitative methods on veterans and carers | Power / validity of proposed analyses | Descriptive statistics  
  Interviews of GP practices / on-line survey  
  Case studies of veterans enrolled in the CVC |  |
<table>
<thead>
<tr>
<th>Outcomes hierarchy domains</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
<th>Data sources</th>
<th>Pretesting of data</th>
<th>Methods</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veteran outcomes</td>
<td>Did the processes adopted in the CVC contribute to the outcomes for veterans?</td>
<td>How were veterans enrolled? • Identified by Bupa Health Dialog • Self-referred / referred by GP • What are the barriers to participation?</td>
<td>Bupa Health Dialog / DMIS Data on enrolled veterans</td>
<td>Power / validity of proposed analyses Pilot test all qualitative methods</td>
<td>Descriptive statistics Case studies of veterans Survey of carers</td>
<td>Enrolment route / targeted or self enrolled Explore reasons for non-participation</td>
</tr>
<tr>
<td>Service delivery outcomes</td>
<td>What are the service delivery changes that have resulted from the CVC?</td>
<td>Has care delivery for veterans with chronic disease changed? • Workforce capacity changed? • Are transitions of patients between sectors better managed? • Organisational / infrastructure changed/ • GP led coordinated care plans increase • GPs and nurses coordinate MD care • Has quality and completeness of care plans increased? • Is care ongoing, reviews occurring? • SP behavioural change / MD Teams formed • Adherence to treatment principles • Clarity of roles / recognition / satisfaction • Improved relationships with veterans</td>
<td>Qualitative methods with GP practices: • Pre-test on-line survey • Tailor and test questions for different stakeholders</td>
<td>Interviews / Small Group Learning / on-line surveys • GPs • Nurses • Regional • Metro</td>
<td>Questions relate to service delivery changes, and areas listed under the sub questions in 2nd column</td>
<td></td>
</tr>
<tr>
<td>Outcomes hierarchy domains</td>
<td>Key evaluation question</td>
<td>Sub-questions</td>
<td>Data sources</td>
<td>Pretesting of data</td>
<td>Methods</td>
<td>Measures</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------</td>
<td>--------------</td>
<td>-------------</td>
<td>-------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| Service delivery outcomes | What are the service delivery needs and how have these changed? | What is the extent of care planning / coordinated care by GPs nurses: 
  - Medicare items; other items 
  - Other programs 
  - GP practices | DMIS 
  Policy / program review 
  Qualitative methods with GP practices | Regression 
  SGL 
  On-line GP/nurse survey / interviews | Use of other MBS items, prior to CVC items introduced? Questions about need for care coordination |
| Service delivery outcomes | What are the service delivery needs and how have these changed? | Are other relevant services available for referral by GPs / nurses? 
  Are these services being used more actively for CVC? 
  How are GP practices structured to facilitate coordinated care? | Qualitative methods with GP practices | On-line GP/nurse survey / interviews / SGL | Questions that relate to services; practice structure workforce capacity |
<table>
<thead>
<tr>
<th>Outcomes hierarchy domains</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
<th>Data sources</th>
<th>Pretesting of data</th>
<th>Methods</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Service delivery outcomes | What are the service delivery needs and how have these changed? | What are the characteristics of the GPs/Nurses population?  
- demographics  
- types of GP practices  
- training / resources for care coordination | DMIS / Bupa Health Dialog of enrolled GPs / nurses  
AGPN data on training and resources / access / on-line training | Descriptive statistics | GP Practice characteristics | Explore reasons for non-participation |
| Service delivery outcomes | Did the processes adopted by the CVC contribute to the service delivery outcomes? | Have referrals to other relevant services changed?  
Has referral to social assistance services changed? | DMIS | Power / validity of proposed analyses  
Pre-test on-line survey  
Tailor and test questions for different stakeholders | Descriptive statistics | Questions about referral and use of other services |
| Service delivery outcomes | Did the processes adopted by the CVC contribute to the service delivery outcomes? | How have care plans been developed, adhered to, implemented and reviewed?  
And how has this changed?  
- Medicare items uptake of care plans and related health services used in the care of veterans | DMIS | Power / validity of proposed analyses  
Pilot test qualitative methods | Descriptive statistics | Number of care plans / drop offs / no longer eligible / deaths /
<table>
<thead>
<tr>
<th>Outcomes hierarchy domains</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
<th>Data sources</th>
<th>Pretesting of data</th>
<th>Methods</th>
<th>Measures</th>
</tr>
</thead>
</table>
| Service delivery outcomes | Was the targeting of veterans effective in enrolling the veterans with high risk of hospitalisation? Were the enrolments appropriate in light of the eligibility criteria? | participating in the CVC Program  
- Follow-through  
- Drop off  
- Referrals |  |  |  |  |
|  | Given the eligibility criteria for veterans to enrol in the CVC how effectively have the high risk veterans been identified?  
Were the targeting communications to veterans and GPs effective? (i.e. result in enrolments).  
Who enrolled on the program as a result of the targeting?  
What was their risk profile?  
What actions were taken to identify the right veterans to enrol on the program?  
Have there been any unintended consequences of the targeting methods?  
What were the trends in targeting? Have the number of enrolled veterans been at the levels anticipated? | DMIS  
Bupa Health Dialog targeting reports  
DVA reports in response to monitoring trends | As undertaken by Bupa Health Dialog  
Tracking uptake and trends in enrolling in the CVC over time | Critical success factor analysis |  |

DMIS  
Bupa Health Dialog targeting reports  
DVA reports in response to monitoring trends  
Tracking uptake and trends in enrolling in the CVC over time  
Number of veterans enrolled over time (targeted and not targeted)  
Risk profile of enrolled veterans over time  
Hospital admissions / readmissions in relation to risk profile
<table>
<thead>
<tr>
<th>Outcomes hierarchy domains</th>
<th>Key evaluation question</th>
<th>Sub-questions</th>
<th>Data sources</th>
<th>Pretesting of data</th>
<th>Methods</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Will the way veterans are targeted impact on outcomes of the program?</td>
<td>Has there been a return on investment from the CVC?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DVA business case outcomes</td>
<td>Has funding of $152.7 million delivered a return on investment outlined in the CVC NPP?</td>
<td>Note: this overarching question will be answered though answering all of the above questions in terms of outcomes of the program relative to cost.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Attachment B: Implementation of the M&E Framework 2011-2014

### Stage 1: Planning & design

<table>
<thead>
<tr>
<th>Month</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar</td>
<td>Establish project</td>
</tr>
<tr>
<td>April - July</td>
<td>Prepare M&amp;E Framework</td>
</tr>
<tr>
<td>Aug</td>
<td>M&amp;E Framework</td>
</tr>
<tr>
<td>Sept - Nov</td>
<td>Other clearance, security clearance, data testing, piloting and analysis</td>
</tr>
<tr>
<td>Dec</td>
<td>Baseline report</td>
</tr>
</tbody>
</table>

### Stage 2: Monitoring CVC & formative evaluation

<table>
<thead>
<tr>
<th>Month</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan - Mar</td>
<td>Data collection and analysis Formative evaluation workshops</td>
</tr>
<tr>
<td>Mar</td>
<td>Monitoring report - Q1 Monitoring report - Q1</td>
</tr>
<tr>
<td>April</td>
<td>Data collection and analysis</td>
</tr>
<tr>
<td>May</td>
<td>Annual formative evaluation report Annual formative evaluation report</td>
</tr>
<tr>
<td>June</td>
<td>Monitoring report - Q2 Monitoring report - Q2</td>
</tr>
<tr>
<td>July - Aug</td>
<td>Data collection and analysis</td>
</tr>
<tr>
<td>Sept</td>
<td>Monitoring report - Q3 Monitoring report - Q3</td>
</tr>
<tr>
<td>Oct - Nov</td>
<td>Data collection and analysis</td>
</tr>
<tr>
<td>December</td>
<td>Monitoring report - Q4 Monitoring report - Q4</td>
</tr>
</tbody>
</table>

### Stage 3: Final evaluation of outcomes and impacts of the CVC

<table>
<thead>
<tr>
<th>Month</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan - April</td>
<td>Data collection and analysis</td>
</tr>
<tr>
<td>Mar - Q1</td>
<td>Monitoring report</td>
</tr>
<tr>
<td>May</td>
<td>Final report</td>
</tr>
<tr>
<td>June - Q2</td>
<td>Final project status report / sign off of project</td>
</tr>
</tbody>
</table>

**KEY**
- DMIS and qualitative data collection / analysis methods undertaken
- Major milestone due
- Monitoring reports due - quarterly
- Evaluation stakeholder workshops proposed

---

Case coordination M&E framework
Attachment C: DVA Human Research Ethics Committee

Please refer to the separate document ‘Grosvenor ethics submission’.
11.2 Attachment B—CVC Outcomes Hierarchy

The outcomes hierarchy was developed from a program logic workshop conducted with DVA and other key stakeholders for the CVC on 1 April 2011. It is an evaluation tool that helps to capture the key features of the Program that are the subject of the evaluation.

The outcomes hierarchy diagram has been used to guide the analytical steps of the evaluation. This supports the production of valid and robust analysis.

The outcomes hierarchy covers funding, resources and activities to be undertaken under the Program leading to outcomes at a service delivery, veteran and broader system level. The hierarchy is a summary overview of the key outcomes of the CVC that will be subject to monitoring and evaluation over the duration of the CVC Program.
Veterans access all relevant services under the care plan covering health, social assistance, carer support and resources and support for self-management of chronic disease.

Costs of hospital admissions and re-admissions for veterans on the CVC Program decrease. Hospital admission and re-admission rates for veterans on the CVC Program decrease. Patterns of care for veterans with chronic disease and on the CVC Program change.

Veterans on the CVC Program have improved health status, quality of life; health literacy; are empowered to take control and self-manage chronic diseases; and have greater social connectedness. Veterans on the CVC Program and receiving coordinated care reduce the number of unplanned hospital admissions and re-admissions.

Veterans on the CVC Program receive coordinated care and are referred, where necessary, to social assistance services.

GP practicess are organised and structured to provide coordinated care to veterans with chronic disease.

DVA with the Primary Service Provider and Training and Resource Provider undertake a range of activities and develop resources to:

- raise awareness and encourage GPs and nurses to implement CVC
- provide training and resources to GPs and nurses on care coordination
- identify eligible veterans to the program and provide information and assistance to encourage access to the program and uptake of the Medicare items
- refer veterans to social assistance services, where required

$152.7 million to support roll-out of CVC program over four years through new Medicare items introduced on 1 May 2011 and extra funding for social assistance services.

GPs and nurses have improved capacity and capability to provide coordinated care / greater clarity in roles / recognition and satisfaction.

GPs and nurses refer veterans to social assistance services where required.

GPs and nurses implement and review care plans as part of an ongoing cycle of care.

GPs and nurses provide care plans and coordinated care to veterans at risk of hospitalisation for chronic disease.

GP practices are organised and structured to provide coordinated care to veterans with chronic disease.

GPs and nurses undertake training and use CVC resources.

GPs and nurses are funded under Medicare to provide care planning and coordinated care to veterans.

$152.7 million to support roll-out of CVC program over four years through new Medicare items introduced on 1 May 2011 and extra funding for social assistance services.

DVA with the Primary Service Provider and Training and Resource Provider undertake a range of activities and develop resources to:

- raise awareness and encourage GPs and nurses to implement CVC
- provide training and resources to GPs and nurses on care coordination
- identify eligible veterans to the program and provide information and assistance to encourage access to the program and uptake of the Medicare items
- refer veterans to social assistance services, where required

$152.7 million to support roll-out of CVC program over four years through new Medicare items introduced on 1 May 2011 and extra funding for social assistance services.
11.3 Attachment C—Evaluation participants

This attachment expands upon the details in section 4.2 of the report and includes high level details of the participants in each aspect of the evaluation.

11.3.1 General practice survey

A total of 255 individuals, from a potential respondent pool of 1,420\textsuperscript{44} practices, participated in the 2014 final interim evaluation survey. Of those, 251 respondents provided their informed consent to participate in the survey.\textsuperscript{45} Respondents who did not provide informed consent were disqualified from completing the survey. Of the 251 consenting respondents, 220 (87.6\%) completed the survey. Both complete and incomplete responses were included in the analysis.

The survey was open for a four week period from 29 October to 24 October 2014. The survey was conducted online, encompassing a mix of 49 multiple choice, close-ended with ordered choice and dichotomous questions.

The demographics of survey respondents are summarised below:

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Respondent type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation</td>
<td>GPs—39 respondents</td>
</tr>
<tr>
<td></td>
<td>Practice Nurse (registered)—145 respondents</td>
</tr>
<tr>
<td></td>
<td>Practice Nurse (enrolled)—27 respondents</td>
</tr>
<tr>
<td></td>
<td>DVA contracted Community Nurse—2 respondents</td>
</tr>
<tr>
<td></td>
<td>Aboriginal Health Worker—0 respondents</td>
</tr>
<tr>
<td></td>
<td>Practice Manager—32 respondents</td>
</tr>
<tr>
<td></td>
<td>Other—5 respondents</td>
</tr>
<tr>
<td>Location</td>
<td>ACT—1 respondents</td>
</tr>
<tr>
<td></td>
<td>NSW—70 respondents</td>
</tr>
<tr>
<td></td>
<td>NT—0 respondents</td>
</tr>
<tr>
<td></td>
<td>QLD—70 respondents</td>
</tr>
<tr>
<td></td>
<td>SA—16 respondents</td>
</tr>
<tr>
<td></td>
<td>TAS—16 respondents</td>
</tr>
<tr>
<td></td>
<td>VIC—50 respondents</td>
</tr>
<tr>
<td></td>
<td>WA—17 respondents</td>
</tr>
<tr>
<td>Practice size—number of GPs</td>
<td>Solo practice—14 respondents</td>
</tr>
<tr>
<td></td>
<td>2-4 GPs—57 respondents</td>
</tr>
<tr>
<td></td>
<td>5-9 GPs—104 respondents</td>
</tr>
</tbody>
</table>

\textsuperscript{44} 1,420 practices were listed on DVA’s DMIS with one or more enrolled patients as at 9 October 2013, which was the last date this spreadsheet was updated.

\textsuperscript{45} The 2013 survey had 228 respondents, of which 98.7\% (n=225) consented to participating in the evaluation. The 2012 survey had 177 respondents, of which 98.3\% (n=174) consented to participating in the evaluation.
11.3.2 Consultations

The consultations were designed to be complementary to one another and included two streams:

- **Stream 1**: consultations with healthcare professionals, including:
  - individual GPs
  - individual Nurse Coordinators
  - focus groups of GPs and nurses

- **Stream 2**: consultations with the veteran community, which were separated into individual Gold Card holder and individual carer interviews.

The following numbers of interviews were conducted in this year of the evaluation:

- twenty Gold Card holders
- four carers
- ten individual healthcare professionals (ie. three with a GP, six with a Practice Nurse and one with a Practice Manager)
- eight focus groups of healthcare professionals (ie. six with one GP and one nurse; one with two Practice Nurses; and one with one Practice Nurse and one Practice Manager).

**Demographics of Gold Card holder respondents**
Sampling was based on postcodes within both contracted and non-contracted Medicare Locals, which offered clusters of patients. Once postcodes were selected, a sample of 200 enrolled Gold Card holders was drawn from the available data for the purpose of recruiting enrolled Gold Card holders. All enrolled Gold Card holders, except those with a mental health flag in DMIS, were eligible to partake in the evaluation.

Twenty Gold Card holder case studies were undertaken, and four carer case studies. Of the 20 Gold Card holders interviewed, only four of those had carers. Two of the four carers interviewed were the Gold Card holder’s wives, while one was the Gold Card holder’s daughter and one was the Gold Card holder’s son. The table below shows the demographics of the Gold Card holders interviewed for the case study from the DMIS data.

<table>
<thead>
<tr>
<th>#</th>
<th>Enrolment</th>
<th>Targeted by DVA/BHD</th>
<th>Conditions indicated by BHD analysis</th>
<th>BHD risk percentile</th>
<th>Age</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1+</td>
<td>Old</td>
<td>No</td>
<td>None</td>
<td>38</td>
<td>89</td>
<td>VIC</td>
</tr>
<tr>
<td>2</td>
<td>Mid</td>
<td>No</td>
<td>Diabetes, pneumonia</td>
<td>83</td>
<td>91</td>
<td>VIC</td>
</tr>
<tr>
<td>5</td>
<td>Old</td>
<td>Yes</td>
<td>CAD</td>
<td>75</td>
<td>97</td>
<td>VIC</td>
</tr>
<tr>
<td>6</td>
<td>Old</td>
<td>No</td>
<td>CAD, CHF</td>
<td>63</td>
<td>88</td>
<td>VIC</td>
</tr>
<tr>
<td>7+</td>
<td>Old</td>
<td>No</td>
<td>CAD</td>
<td>75</td>
<td>90</td>
<td>VIC</td>
</tr>
<tr>
<td>11</td>
<td>Old</td>
<td>No</td>
<td>CAD</td>
<td>49</td>
<td>91</td>
<td>NSW</td>
</tr>
<tr>
<td>14</td>
<td>Old</td>
<td>No</td>
<td>CAD, CHF, Pneumonia</td>
<td>96</td>
<td>85</td>
<td>NSW</td>
</tr>
<tr>
<td>15</td>
<td>Mid</td>
<td>No</td>
<td>None</td>
<td>71</td>
<td>92</td>
<td>NSW</td>
</tr>
<tr>
<td>17</td>
<td>Old</td>
<td>No</td>
<td>Diabetes</td>
<td>62</td>
<td>76</td>
<td>QLD</td>
</tr>
<tr>
<td>18</td>
<td>Old</td>
<td>Yes</td>
<td>CAD, COPD, CHF, Diabetes</td>
<td>96</td>
<td>90</td>
<td>QLD</td>
</tr>
<tr>
<td>19</td>
<td>Mid</td>
<td>Yes</td>
<td>CAD, CHF, Diabetes</td>
<td>82</td>
<td>91</td>
<td>QLD</td>
</tr>
<tr>
<td>21</td>
<td>Old</td>
<td>No</td>
<td>Diabetes</td>
<td>40</td>
<td>84</td>
<td>QLD</td>
</tr>
<tr>
<td>24</td>
<td>Old</td>
<td>Yes</td>
<td>CAD</td>
<td>76</td>
<td>91</td>
<td>QLD</td>
</tr>
<tr>
<td>27</td>
<td>Old</td>
<td>No</td>
<td>CAD, COPD, CHF, Diabetes, Pneumonia</td>
<td>99</td>
<td>89</td>
<td>QLD</td>
</tr>
<tr>
<td>28</td>
<td>Mid</td>
<td>No</td>
<td>Diabetes</td>
<td>39</td>
<td>92</td>
<td>SA</td>
</tr>
<tr>
<td>29+</td>
<td>Old</td>
<td>Yes</td>
<td>COPD, CHF</td>
<td>86</td>
<td>95</td>
<td>SA</td>
</tr>
<tr>
<td>30</td>
<td>Old</td>
<td>No</td>
<td>None</td>
<td>23</td>
<td>77</td>
<td>SA</td>
</tr>
<tr>
<td>33</td>
<td>Old</td>
<td>No</td>
<td>None</td>
<td>21</td>
<td>84</td>
<td>SA</td>
</tr>
<tr>
<td>34</td>
<td>Old</td>
<td>Yes</td>
<td>CAD, CHF, Diabetes</td>
<td>92</td>
<td>77</td>
<td>ACT</td>
</tr>
</tbody>
</table>
Health care professional interviews

The healthcare professionals that were interviewed came from a wide range of practice sizes and had varying numbers of patients targeted and enrolled.

The table below shows that ten individual healthcare professional interviews were conducted, including three which were with a GP, six which were with Practice Nurses and one which was with a Practice Manager. In addition, there were eight focus group interviews. Of this total, six were with one GP and one nurse, one was with two Practice Nurses and one was with one Practice Nurse and one Practice Manager.

<table>
<thead>
<tr>
<th>Interview # and type</th>
<th># GPs in practice</th>
<th># nurses in practice</th>
<th>Location</th>
<th>Patients targeted (DMIS)</th>
<th>Patients enrolled (DMIS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3—nurse only</td>
<td>2</td>
<td>1</td>
<td>VIC</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4+—FG—1 x GP, 1 x PN</td>
<td>1</td>
<td>1</td>
<td>VIC</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>8+—FG—2 x PN</td>
<td>10</td>
<td>6</td>
<td>VIC</td>
<td>14</td>
<td>40</td>
</tr>
<tr>
<td>9+—FG—1 x GP, 1 x PN</td>
<td>7</td>
<td>2</td>
<td>VIC</td>
<td>11</td>
<td>64</td>
</tr>
<tr>
<td>10+—GP only</td>
<td>8</td>
<td>6</td>
<td>VIC</td>
<td>12</td>
<td>56</td>
</tr>
<tr>
<td>12+—FG—1 x PN, 1 x PM</td>
<td>3</td>
<td>1</td>
<td>NSW</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>13+—PM only</td>
<td>1</td>
<td>2</td>
<td>NSW</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>16+—GP only</td>
<td>7</td>
<td>No data</td>
<td>NSW</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>20—FG—1 x GP, 1 x PN</td>
<td>8</td>
<td>1</td>
<td>QLD</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>22—1 x PN</td>
<td>10</td>
<td>2</td>
<td>QLD</td>
<td>8</td>
<td>47</td>
</tr>
<tr>
<td>23+—1 x PN</td>
<td>14</td>
<td>5</td>
<td>QLD</td>
<td>25</td>
<td>115</td>
</tr>
</tbody>
</table>

*Previously interviewed in 2012 evaluation.
+Previously interviewed in 2013 evaluation.

Note1: Enrolment (old, mid, new) refers to the period which the Gold Card holder has been enrolled on the CVC Program. These identifiers refer to the following periods:
- old—Gold Card holder enrolled on the CVC Program more than a year ago (ie, prior to September 2013)
- mid—Gold Card holder enrolled on the CVC Program less than a year ago but more than six months ago (ie, between November 2013 and February 2014)
- new—Gold Card holder enrolled on the CVC Program within the last six months (ie, between March 2014 and September 2014).

From the Medical Practices by Medicare Locals spreadsheet, last updated October 2013. DVA ceased updating this spreadsheet in October 2013.
### 11.3.3 Enquiries of healthcare professionals

Throughout the course of the interviews, a number of healthcare professionals raised queries in the interviews. Grosvenor maintained a record of these questions, outlined in the table below:

<table>
<thead>
<tr>
<th>Question</th>
<th>Number of queries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can I have information about PTRs and how to delegate PTR access?</td>
<td>7</td>
</tr>
<tr>
<td>What is CVC Social Assistance?</td>
<td>6</td>
</tr>
<tr>
<td>What training is available to me?</td>
<td>1</td>
</tr>
</tbody>
</table>

### 11.3.4 Enquiries of Gold Card holders

One Gold Card holder interviewed commented that he had recently changed practices and was unsure whether his new practice delivered the CVC Program or not. This Gold Card holder requested information he could show to his GP to find out whether he was enrolled on the program or not.
11.4 Attachment D—General practice survey report 2014

The 2014 survey report is provided as a separate document.
11.5 Attachment E—Identified better practices

This section combines examples of better practices identified through the 2012, 2013 and 2014 evaluations.

Examples identified in 2012:

- establishment of communication procedures within the practice to effectively share information between the Nurse Coordinator and GP (eg. ICT facilitated solutions, monthly meetings)
- Nurse Coordinator has dedicated space e.g. own desk, computer and book shelf space, access to consult room or other private space
- Nurse Coordinator has systems, tools and templates to keep CVC Program records
- use of Flinders or other tailored care plan to ensure all CVC requirements are systematically addressed
- procedures in place to support the Nurse Coordinator in receiving calls and queries from enrolled Gold Card holders, with all enrolled Gold Card holders encouraged to make contact in the event that they have any queries, medical, or care requirements
- arrangements in place allowing the Nurse Coordinator to book priority appointments for enrolled Gold Card holders, if required
- ad-hoc home visits conducted, where required
- follow-up conducted with enrolled Gold Card holders and other service providers to ensure planned care has been delivered, and results obtained and appropriately acted upon.

Additional examples identified in 2013:

- relationship established by Nurse Coordinator with DVA funded positions in nearby hospitals, to enable coordinated communication in the event of a hospital admission
- respite actions plans developed for CVC Program patients, in the event that their carer is admitted to hospital
- structured and standardised enrolment process applied consistently for all enrolments
- practice wide process and support for assisted enrolment in PCEHRs
- where Nurse Coordinator role is shared, patients are allocated to an individual, to maximise consistency and effectiveness
- comprehensive review of all patient records used to compile first draft of care plan, prior to home visit. This allows key details to be confirmed, updated information to be collected, and all gaps to be filled
during the visit, and a very robust and accurate care plan to be finalised post home visit

- patient-friendly care plan developed, with features such as: increased font size, replacement of acronyms with full text, replacement of medical jargon with plain English descriptions and explanatory notes

- monthly ‘To do’ list of tasks provided to patient which both assist with care plan compliance and working towards care plan goals. These are discussed in monthly contact to gauge completion and new or repeat actions assigned

- review of PTRs used to confirm services patient is currently receiving and inform any adjustments. Noted that this is particularly useful if new patients transfer to the general practice.

Only one additional better practice was identified in 2014. This example was of a practice which had developed an arrangement with the local pharmacy to coordinate the delivery of medication to patients in their home, within two hours if the medication is urgently required. This is an excellent example of a practice which has collaborated with an external healthcare provider to enhance outcomes for enrolled Gold Card holders.