

# **Health care usage and costs**

**A comparison of veterans and war widows and  
widowers with the rest of the community**

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# Preface

This report presents the findings of the health care usage and costs study. The study was commissioned by the Department of Veterans' Affairs (DVA), and compares health care use and expenditure for veterans and war widows and widowers who are Gold Card holders, with that of the remainder of the community. It also looks at factors driving growth in expenditures for both groups in the period 1997-98 to 1999-00.

The study focuses on the major components of the DVA's health expenditure. These are local medical officer services (equivalent to Medicare GP services), pharmaceuticals, and private and public hospital services. A range of data sets, which measure utilisation and expenditure for each of these components for both veterans and the rest of the community, are analysed.

# Acknowledgments

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# Abbreviations, symbols and definitions

## Abbreviations

AIHW	Australian Institute of Health and Welfare
AR-DRG	Australian Refined Diagnosis Related Group
BEACH	Bettering the Evaluation and Care of Health
BLI	Blind Disability Allowance
DHA	Department of Health and Ageing
DVA	Department of Veterans' Affairs
EDA	Extreme Disablement Adjustment
GP	general practitioner
HIC	Health Insurance Commission
INT	Intermediate Disability Allowance
LMO	local medical officer
MBS	Medicare Benefits Schedule
NHTP	nursing home type patients
PBS	Pharmaceutical Benefits Scheme
RPBS	Repatriation Pharmaceutical Benefits Scheme
TAS	Treatment Account System
TPI	totally and permanently incapacitated
TTI	temporarily totally incapacitated
VEA	Veterans' Entitlement Act

## Symbols

..	not applicable
n.a.	not available

## **Definitions**

GP/LMO attendances: Unreferred attendances (Items 1 to 84, 86, 87, 89-93, 95-98, 101, 160-173, 193-195, 601-602, 697-698, 700-779, 980, 996-998 and 17600 of the Medicare Benefits Schedule)

# 1 Executive summary

## 1.1 Introduction

In managing the health care of veterans and those entitled to support under the *Veterans' Entitlement Act 1986* (VEA), it is important to understand how these health services are delivered, to whom, and at what cost. This understanding is improved if the level of services can be compared with services used by other population groups in the community.

This report brings together information on health care utilisation and costs for those entitled to a Gold Card under the VEA, and the rest of the community (RoC) in relation to three major health expenditure areas – hospital admitted patient treatment and associated medical services (estimated at \$1,200m in 1999–00), pharmaceuticals (\$280m), and local medical officers (LMOs)/general practitioners (GPs) (\$120m).

While it is recognised that the VEA also entitles some veterans and their dependants to health care under other schemes (e.g. the White and Orange Cards), for comparative purposes the Gold Card holders (of which there were 290,000 in 1999–00) were chosen due to the quality and range of data regarding their service use and cost.

It should be remembered that the delivery and costs of health services is clearly changing in the type of services, method of delivery, the level and type of entitlements, and the population age and health status distribution. While it is known that some of these elements have changed recently, this report provides a snapshot using the latest available data for the period 1997–2000.

## Comparing populations

In comparing the use of, and expenditure on health services of Gold Card holder veterans, war widows and widowers and the rest of the community, the important differences between these populations must be understood.

First, there are differences in the following characteristics of the individuals concerned:

- age
- service-related disability
- selection effects
- marital status
- other socioeconomic and cultural factors.

Second, there are differences in the health system each group has to negotiate and use, in particular the level of co-payments (or the lack of them) required for each

service. Similarly, whether the service is delivered in a public or a private setting (e.g. hospital) can impact on the nature and quantity of services provided.

Many of these factors have been allowed for in these comparisons using statistical techniques such as age-standardisation. However data on these issues are not perfect and no statistical technique can fully adjust for differences between populations. This must be kept in mind in the interpretation of these results.

## **1.2 Differences in age structure, service-related disability and marital status between Gold Card holders and the rest of the community**

The most obvious difference between the Gold Card holder population and the rest of the community is age structure. In 1999, 78% of the Gold Card population were aged 70 to 84 years compared to 6% of the rest of the Australian population.

Veterans and war widows and widowers comprise a significant proportion of the older Australian population:

- 34% of males aged 75 years or over are Department of Veterans' Affairs (DVA) Gold Card holders – these are mostly veterans but some are widowers.
- 11% of females aged 75 years and over are DVA Gold Card holders. Almost all are war widows, but some are veterans.

While DVA manages the health care of veterans across the age spectrum, it is important to note that due to the concentration of Gold Card holders in the 70 years and over age group, small changes in usage here have much greater significance than larger changes for those below 70 years of age.

It is also important to note that the significant differences in the level of disability within the DVA client population have a profound effect on this analysis. Of the total Gold Card holder population of 290,020 (December 1999), the four major groupings are:

- males with a service-related disability pension (113,874 – 39%)
- males without a service-related disability pension (66,702 – 23%)
- females with a service-related disability pension (2,998 – 1%)
- females without a service-related disability pension (106,446 – 37%) – mostly war widows.

The utilisation and expenditure on health services for each of these four groups is significantly different, and it is expected their future use and expenditure will also be different.

Males with service-related disability use more services than males without service-related disability and exhibit a lower life expectancy. This presumably is a reflection of poorer health status.

## 1.3 Summary of results

Men and women have served Australia in a number of wars and peace keeping missions over the last century. This service has placed them at greater risk of particular diseases, has exacerbated certain conditions or has resulted in newly acquired physical or mental disabilities.

The Department of Veterans' Affairs assists veterans in managing their health care through the provision of funding for services and the allocation of pensions. While some veterans enjoy good health, others have significant health problems, resulting in various forms of disability and therefore require the use of health services on a regular basis. This level of health care is provided through access to a Gold Card. It is on these Gold Card holders that this study focuses. The results of this study have shown that the patterns of health care use vary according to age, disability level, as reflected by the type of veteran disability pension, and sex. This pattern also varies according to the type of services accessed.

For example, veterans entitled to an Extreme Disablement Adjustment in their pension have a usage of local medical officers (LMO) over twice the usage of General Practitioners (GPs) by the rest of the community of similar age. In contrast, those male veterans without service-related disability have a usage of LMOs which is 9% lower than the GP usage of the rest of the community. Thus the higher use of LMO services by male veterans overall, as compared to the rest of the community of similar age, is due to the higher use by veterans with service-related disability.

Female Gold Card holders without service-related disability have somewhat higher health service usage than the rest of the community. The likely reason for this difference is that they are mostly widows. Widows are known to have poorer health status than married women, and therefore require health services more than the rest of the female population. This result is mirrored in national studies of women by marital status (AIHW: Mathers 1994).

Overall, the results of this analysis show that the patterns of health service use largely reflect the needs of the veteran community in relation to disability. After adjusting for disability and other key factors the use of health services by veterans and war widow(er)s shows similarity with the rest of the community.

### **Local medical officer (LMO) and general practitioner (GP) (out-of-hospital) medical services**

#### **Utilisation of LMO/GP (out-of-hospital) medical services 1999–00**

- Overall, utilisation per person of LMO services by Gold Card holders aged 40 and over in 1999–00 was 17% higher than utilisation by the rest of the community (Tables 1 and 2).
- However those Gold Card holders without service-related disabilities visited their LMO at a rate on average 1% lower than that of the rest of the community – 9% lower for males and 10% higher for females (Table 2).

- In this study, pension level is used as a proxy for disability status (conditions caused or aggravated by war service) as generally speaking, the more incapacitated the veteran is, the higher the amount of pension received (DVA 2002). However it should be noted that the mix of disabilities and the services required to ameliorate them would be variable within disability levels (see Section 2.2 and Appendix A for details on disability levels).
- As service-related disability pension levels increase, usage of LMO services per person increases. In comparison with the rest of the community, Gold Card holders:
  - with a low level of disability used 15% more LMO services;
  - with a medium level of disability used 42% more LMO services;
  - with special disability pensions used 59% more LMO services; and
  - in the small group receiving an Extreme Disablement Adjustment (EDA) used 111% more services (Table 2).

#### **LMO/GP costs per attendance 1999–00**

- For those aged 40 years and over, the cost per attendance was 12% higher for Gold Card holders (\$30.41) than their community cohort (\$27.13) in 1999–00 (Table 10). This difference is exactly what was expected given that the contracts between DVA and LMOs specify payment of 100% of the Medicare Schedule Fee, and the rest of the community is mostly bulk-billed – overall the average cost for a GP service for the rest of the community aged 70 and over is 88% of the Schedule Fee for the period examined.
- Whether there is a difference in the quality or type of services, e.g. average length of consultation, is a matter that requires further investigation.



### **LMO/GP expenditure per person 1999–00**

- Gold Card holders (both male and female) aged 40 years and over have expenditure on LMO services 31% higher than expenditure by the rest of the community – 17% of this difference was due to higher utilisation and 12% was due to higher cost per attendance (Table 13).
- For male Gold Card holders aged 40 years and over without service-related disability, expenditure on LMO services per person was 1% higher than expenditure by the rest of the male population – a combination of 9% lower utilisation and 11% higher cost per attendance.
- For females without service-related disability – mostly war widows – expenditure on LMO services per person was 23% higher than expenditure by the rest of the female population – a combination of 10% higher utilisation and 12% higher cost per attendance.

### **Growth in LMO/GP expenditure per person 1997–98 to 1999–00**

- The growth in expenditure on LMOs per Gold Card holder between 1997–98 and 1999–00 was 7.7%, compared to an increase of 10.1% for the rest of the community (Table 16).
- The growth in expenditure per person can be split into utilisation and price components. For Gold Card holders, utilisation per person fell by 0.4% between 1997–98 and 1999–00, compared to an increase of 2.8% for the rest of the community. The growth in cost per attendance for Gold Card holders was 8.1% compared to a 7.1% increase for the rest of the community.

**Table 1: Age-standardised LMO and GP attendances per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	7.1 *	5.9 *	6.8 *	11.1 *	..	9.9 *	4.9
60–69	7.1 *	9.2 *	13.0 *	15.2 *	22.8 *	11.5 *	7.6
70–84	10.0 *	12.2 *	16.8 *	18.7 *	27.7 *	13.2 *	11.4
85+	13.4	15.4 *	19.2 *	21.0 *	28.9 *	15.8 *	13.2
40+	9.9 *	11.9 *	16.0 *	18.1 *	25.5 *	13.1 *	10.9
<b>Females</b>							
40–59	7.8 *	3.4 *	4.1 *	9.9 *	..	8.0 *	6.7
60–69	10.5 *	9.9 *	11.8 *	7.3 *	..	10.5 *	9.1
70–84	12.8 *	14.5 *	16.3 *	18.5 *	23.5 *	12.9 *	11.6
85+	15.9 *	18.8 *	15.2 *	17.3 *	19.0 *	15.9 *	14.0
40+	12.5 *	13.8 *	15.5 *	17.1 *	20.0 *	12.6 *	11.3
<b>Persons</b>							
40–59	7.2 *	5.5 *	6.4 *	10.9 *	..	9.6 *	5.2
60–69	9.0 *	9.6 *	12.4 *	10.8 *	10.1 *	11.0 *	8.4
70–84	11.0 *	13.1 *	16.6 *	18.6 *	26.2 *	13.1 *	11.5
85+	14.6 *	17.1 *	17.2 *	19.2 *	24.1 *	15.9 *	13.6
40+	11.0	12.8 *	15.8 *	17.8 *	23.5 *	13.1 *	11.1

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Table 2: Ratio of LMO and GP attendances per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.46 *	1.21 *	1.40 *	2.27 *	..	2.03 *	1.00
60–69	0.93 *	1.20 *	1.71 *	1.99 *	2.98 *	1.50 *	1.00
70–84	0.87 *	1.07 *	1.47 *	1.64 *	2.43 *	1.16 *	1.00
85+	1.01	1.17 *	1.46 *	1.59 *	2.19 *	1.20 *	1.00
40+	0.91 *	1.09 *	1.47 *	1.67 *	2.34 *	1.21 *	1.00
<b>Females</b>							
40–59	1.17 *	0.51 *	0.62 *	1.48 *	..	1.20 *	1.00
60–69	1.16 *	1.09 *	1.31 *	0.81 *	..	1.16 *	1.00
70–84	1.10 *	1.25 *	1.40 *	1.60 *	2.03 *	1.11 *	1.00
85+	1.13 *	1.34 *	1.08 *	1.24 *	1.36 *	1.14 *	1.00
40+	1.10 *	1.22 *	1.37 *	1.52 *	1.77 *	1.11 *	1.00
<b>Persons</b>							
40–59	1.40 *	1.06 *	1.23 *	2.10 *	..	1.85 *	1.00
60–69	1.07 *	1.14 *	1.47 *	1.28 *	1.19 *	1.30 *	1.00
70–84	0.96 *	1.14 *	1.45 *	1.62 *	2.28 *	1.14 *	1.00
85+	1.08 *	1.26 *	1.27 *	1.41 *	1.77 *	1.17 *	1.00
40+	0.99	1.15 *	1.42 *	1.59 *	2.11 *	1.17 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

## Pharmaceuticals

- Male Gold Card holders have a higher usage rate of pharmaceuticals than the rest of the community, for all age groups (Table 17). These differences seem to be related to the higher number of LMO/GP consultations for Gold Card holders, whereas the propensity to prescribe pharmaceuticals in each consultation seems to be similar to the rest of the community.
- Estimates of script usage for Gold Card holders by disability group are not available at present, although may be the subject of further work. Despite this, it is expected that Gold Card holders without service-related disabilities will show lower script usage per person than the rest of the community, as a result of their lower LMO/GP consultation rates.

- In contrast to males, female Gold Card holders show lower utilisation rates of pharmaceuticals compared with their rest of community counterparts, with fewer scripts filled per LMO/GP consultation. However, this difference is not supported by the Bettering the Evaluation and Care of Health (BEACH) GP survey data (see Methodology section), which indicates no difference in scripts written per LMO/GP visit between the two groups. A possible explanation is that some female Gold Card holders may be processing their scripts through the Pharmaceutical Benefits Scheme (PBS) (with or without using a seniors concession card), rather than using the Gold Card, resulting in only a proportion of their script purchases being recorded on the DVA Repatriation Pharmaceutical Benefits Scheme (RPBS) database.

**Table 3: Age-standardised PBS script utilisation per person for Gold Card holders and the rest of the community, by age, Australia, 1999-00**

Age	PBS scripts per person per year		
	Gold Card holders	Rest of community <sup>(a)</sup>	Ratio of Gold Card holders to rest of community
<b>Males</b>			
40-69	36.4 *	17.2	2.11
70-79	45.7 *	37.0	1.24
80-89	45.4 *	38.9	1.17
90+	41.1 *	32.5	1.26
40+	44.5 *	35.1	1.27
<b>Females</b>			
40-69	27.2 *	22.6	1.20
70-79	36.5 *	39.8	0.92
80-89	38.6 *	40.1	0.96
90+	35.6 *	36.9	0.96
40+	36.0 *	37.8	0.95
<b>Persons</b>			
40-69	33.1 *	19.9	1.66
70-79	42.3 *	38.6	1.10
80-89	42.8 *	39.7	1.08
90+	37.7 *	35.8	1.05
40+	41.3 *	36.7	1.13

(a) Rest of community includes White Card holders.

Note: \* Denotes significantly different at the 5% level from the rest of community.

## Hospital services

- Utilisation of acute hospital services by Gold Card holders was higher than for the rest of the community. Hospital separations per person for 1999-00 showed a 21% higher use for all Gold Card holders (Table 4).
- As with LMO/GP services, the utilisation of acute hospital services by Gold Card holders is strongly related to their level of service-related disability. In 1999-00, the hospital separation rate for Gold Card holders aged 40 years and over increased from 0.8 separations per person for those with nil or no disability to 2.4 separations per person for those with an Extreme Disablement Adjustment. The hospital separation rate for those with nil or no service-related disability was similar to the rate for the rest of the community in 1999-00, while those with low disability (5-95% disability pension) had a rate 14% higher than the rest of the community.
- There is little difference in the average length of stay spent in hospital per episode between Gold Card holders and the rest of the community for the 70 and over age group. However, in the 40-69 age group, the average length of stay for Gold Card holders is about 15% higher than for the rest of the community.
- Hospital separations can be cost weighted to reflect the relative cost of different hospital procedures undertaken for each separation. A comparison of the Diagnosis Related Group (DRG) cost weights for separations of Gold Card holders and the rest of the community indicates there is little difference in the costliness of hospital procedures undertaken for each group.

**Table 4: Ratio of hospital separations per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.21	1.22 *	1.71 *	2.70 *	..	2.37 *	1.00
60–69	0.98	1.27 *	1.74 *	2.20 *	4.65 *	1.64 *	1.00
70–84	0.88 *	1.08 *	1.55 *	1.56 *	3.02 *	1.20 *	1.00
85+	0.90 *	1.09 *	1.44 *	1.41 *	2.49 *	1.12 *	1.00
40+	0.90 *	1.09 *	1.55 *	1.59 *	2.93 *	1.24 *	1.00
<b>Females</b>							
40–59	1.19 *	0.74 *	1.16	1.68 *	..	1.24 *	1.00
60–69	1.22 *	0.45 *	1.31	0.91	..	1.22 *	1.00
70–84	1.14 *	1.27 *	1.47 *	1.90 *	2.81 *	1.16 *	1.00
85+	1.04	1.49 *	0.89	0.90	1.81	1.04	1.00
40+	1.11 *	1.17 *	1.39 *	1.74 *	2.45 *	1.13 *	1.00
<b>Persons</b>							
40–59	1.20 *	1.14 *	1.61 *	2.52 *	..	2.17 *	1.00
60–69	1.11	0.84 *	1.51 *	1.52 *	2.20 *	1.42 *	1.00
70–84	0.96 *	1.13	1.52 *	1.66 *	2.96 *	1.19 *	1.00
85+	0.95 *	1.25 *	1.21 *	1.20 *	2.21 *	1.09 *	1.00
40+	0.97 *	1.14	1.49 *	1.62 *	2.77 *	1.21 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

## Conclusion

The tale of health services usage and expenditure by veterans and war widow(er)s is a tale of difference and similarity.

For LMO/GP services, pharmaceuticals and hospital services there is substantial similarity of usage between Gold Card holders and the rest of the community once differences in age, service-related disability and marital status are accounted for.

With regard to cost per service, there are differences between Gold Card holders and the rest of the community due to policy decisions. The national health insurance scheme – Medicare – has encouraged bulk-billing of accounts at a discounted price of 85% of the Schedule Fee. In 1999–00 many GP consultations were bulk-billed, especially for the older population, but some were charged at a higher rate. The

average cost per GP consultation was 88% of the Schedule Fee for those aged 70 and over. DVA have agreed higher prices with LMOs than the bulk-billing rate, and it is probable that this policy has positive consequences with regard to patient care. Similar circumstances have applied for medical specialists but the introduction of gap insurance and reduced utilisation of bulk-billing will have diminished, and in some cases increased, differences in incentives for treatment of veterans compared to the rest of the community.

The payment regime for pharmaceuticals is similar for Gold Card holders and the rest of the community of a similar age, so this is not expected to be a factor in any differences in utilisation.

## **Further work**

In undertaking the analyses discussed in this report, it has become clear that further work is required to more fully understand the patterns of health care utilisation amongst Gold Card holders. Some of the key questions that have been raised during this analysis are:

- What are the health care utilisation patterns and costs for Gold Card holders for specialists?
- How does pharmaceutical use relate to disability status?
- Are war widows putting all of their prescriptions through the Gold Card system?
- Is DVA being inappropriately charged for safety net scripts that are for the spouses of veterans?
- How does hospital utilisation vary over time by DRG, hospital-associated medical services, public/private hospital and State?

Further work also needs to be done to address:

- effects of transition from White Card holder status to Gold Card holder status
- effects of transition to and across disability categories
- projections of utilisation and expenditure
- expenditure on health care services in the last years of life
- incorporating later years of data to address new policy circumstances
- analysing other areas of health care (e.g. allied health, aged care homes, Veterans' Home Care and Health and Community Care services, dental).

# 2 Introduction and background

## 2.1 Purpose of the project

The Department of Veterans' Affairs commissioned the Australian Institute of Health and Welfare to produce a report which identifies factors affecting health care use and expenditure for entitled veterans, and war widows and widowers, comparing these patterns with the rest of the community.

The project seeks to analyse three major components of health expenditure by veterans, and war widows and widowers, examine changes over the period 1997-98 to 1999-00, and understand the policies and issues that have influenced these changes. The three components of health expenditure examined in this report are:

- LMO and GP services
- pharmaceuticals
- public and private hospital services.

## 2.2 Scope

This report examines the utilisation of, prices for and expenditure on health services by Gold Card holders (290,000 persons in 1999), as compared with the rest of the community. Data on White Card holders are also available, but are inadequate for comparison, as only a portion of health care expenditure is paid by, and therefore recorded by, DVA. All usage and expenditure by White Card holders is therefore included with the 'rest of the community'. This situation also applies to Orange Card holders, whose entitlement extends to the subsidised purchase of pharmaceuticals. These Orange Card holders are included with the rest of community estimates.

Health service utilisation and expenditure for Gold Card holders is examined by level of service-related disability where those data are available. Service-related disability is categorised according to the level and type of disability pension/allowance received from the Department of Veterans' Affairs. In this report, disability has been analysed using the following groups:

- nil or no disability allowance
- 5-95% disability allowance (low disability)
- 100% disability allowance (medium disability)
- special disability allowances (Temporarily Totally Incapacitated (TTI), Totally and Permanently Incapacitated (TPI), Blind Disability Allowance (BLI) and Intermediate Disability Allowance (INT)
- Extreme Disablement Adjustment (EDA).

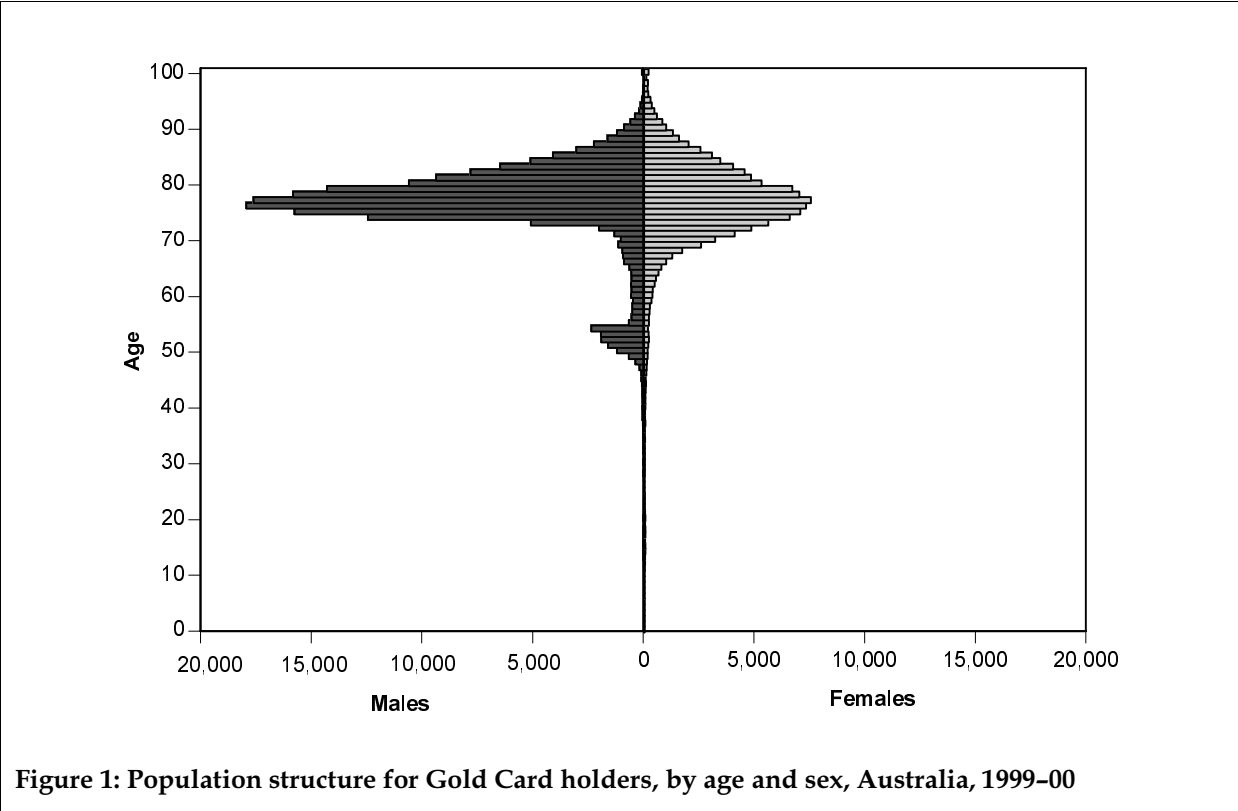


It should be recognised that Gold Card holders may have disabilities other than those that are service-related and in fact the service-related disability may not be the person’s most significant health condition. However, treatment costs for all disabilities and conditions of Gold Card holders are met by DVA under the VEA. Qualification for the DVA Gold Card is described in Appendix A.

### 2.3 Gold Card holder population and the rest of community

The Gold Card holder population is created from a series of administrative decisions regarding war service, service-related disability and dependant entitlements (see Appendix A for eligibility criteria). It reflects the range of conflicts that Australia has been engaged in over the last 90 years, and the men and women who served in them. In 1999 it was estimated that there were 290,020 Gold Card holders, 180,576 males and 109,444 females. While most of the male Gold Card holders had war-related service (62%, 179,079), only 2% (5,759) of female Gold Card holders had been involved in war service (as at December 1999).

Figure 1 shows the age distribution of Gold Card holders. The large peak for males occurring around age 75 is the cohort who were engaged in World War II and, to a smaller extent, the Korean war. There is a similar peak for women who are the widows of this cohort.



Approximately 78% of Gold Card holders were aged 70 to 84 years in December 1999 compared to 6% of the rest of the community. The smaller peak in males aged around age 53 is for those who were engaged in the Vietnam war.

In comparison, the age–sex distribution for the rest of the community (Figure 2) has a significantly different shape, with the peak age groups being in their 30s and 40s.

In examining the two groups together it is noteworthy that Veterans and war widow(er)s comprise a significant proportion of the older Australian population:

- 34% of males aged 75 years or over are DVA Gold Card holders – these are mostly veterans but some are widowers
- 11% of females aged 75 years and over are DVA Gold Card holders – almost all are war widows but some are veterans.

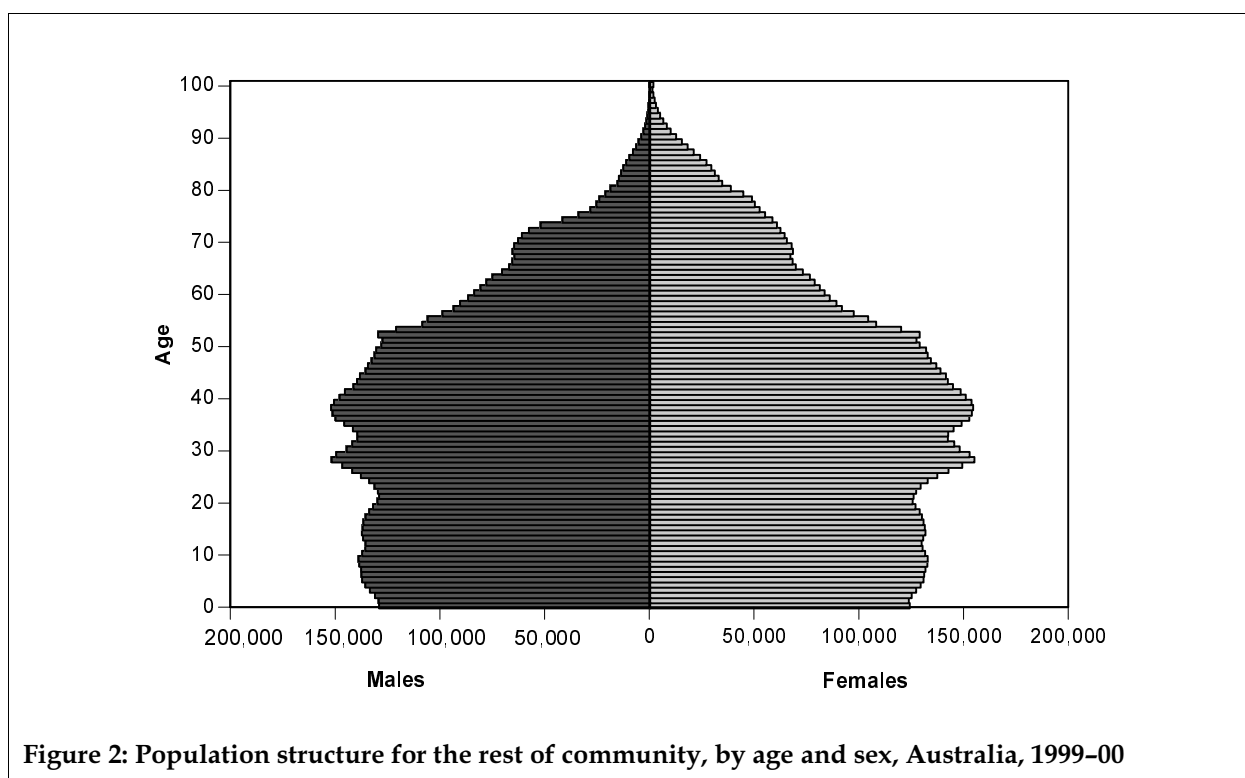


Figure 2: Population structure for the rest of community, by age and sex, Australia, 1999-00

### Treatment population by level of service-related disability

One of the characteristics of the Gold Card holder population is that it comprises a proportion of people who have a war service-related disability which has been assessed by clinical review. The results of clinical review are used by the Repatriation Medical Authority to set the disability pension levels of Gold Card holders. A disability pension is paid to compensate veterans for injuries or diseases caused or aggravated by war service or certain defence service on behalf of Australia. The amount of disability pension paid depends on the level of incapacity suffered as a result of war-caused or defence-caused injuries and diseases. Generally speaking, the more incapacitated the veteran is, the higher the amount of pension received (DVA 2002). In this study, this pension level is used as a proxy for disability status.

However it should be noted that the mix of disabilities and the services required to ameliorate them would be variable within disability levels.

Most Gold Card holders (59.7%) either have no disability or are categorised as 'nil % disability'. Nil % disability means some level of service-related disability has been assessed but it is so minor that there is no entitlement to a disability pension. Around 20% are categorised as low disability (entitling them to a 5–95% pension allowance), 8.7% are categorised as medium disability (100% allowance), 8.2% have a special disability pension such as TPI, TTI, BLI or INT, and 3.1% receive an Extreme Disablement Adjustment (Table 7).

Almost all female Gold Card holders (97%) have no service-related disability or a nil % disability, i.e. most are war widows who qualify for benefits not because of service-related disability but because they are widows of veterans (Table 6). In comparison, about 37% of male Gold Card holders have no service-related disability or nil % (Table 5).

**Table 5: DVA treatment population by level of disability pension, Gold Card holders, males, by age, Australia, December 1999**

Age	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>	Total Gold Card holders	Percentage of Gold Card holders
<40	372	20	122	347	1	862	0.3
40–44	31	9	112	298	0	450	0.2
45–49	76	109	295	1,079	0	1,559	0.9
50–54	193	741	1,218	6,977	0	9,129	5.1
55–59	126	329	403	1,983	0	2,841	1.6
60–64	511	670	456	1,252	0	2,889	1.6
65–69	1,521	1,391	647	947	183	4,689	2.6
70–74	8,945	6,484	3,458	1,870	1,280	22,037	12.2
75–79	32,842	28,375	10,516	5,382	4,463	81,578	45.2
80–84	15,537	14,017	5,338	2,367	2,249	39,508	21.9
85–89	5,323	4,386	1,409	661	549	12,328	6.8
90–95	1,038	835	259	143	91	2,366	1.3
95+	187	86	39	23	5	340	0.2
40–69	2,458	3,249	3,131	12,536	183	21,557	11.9
70–84	57,324	48,876	19,312	9,619	7,992	143,123	79.3
85+	6,548	5,307	1,707	827	645	15,034	8.3
<b>Total</b>	<b>66,702</b>	<b>57,452</b>	<b>24,272</b>	<b>23,329</b>	<b>8,821</b>	<b>180,576</b>	<b>100.0</b>
<i>Percentage of Gold Card holders</i>	36.9	31.8	13.4	12.9	4.9	100.0	

(a) Includes war widowers, non pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

**Table 6: DVA treatment population by level of disability pension, Gold Card holders, females, by age, Australia, December 1999**

Age	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>	Total Gold Card holders	Percentage of Gold Card holders
<40	555	1	14	64	0	634	0.6
40–44	214	2	6	26	0	248	0.2
45–49	488	0	3	10	0	501	0.5
50–54	845	2	4	7	0	858	0.8
55–59	1,178	2	2	11	0	1,193	1.1
60–64	2,328	0	0	5	0	2,333	2.1
65–69	7,222	9	2	2	0	7,235	6.6
70–74	23,910	174	132	40	25	24,281	22.2
75–79	34,014	841	462	124	90	35,531	32.5
80–84	21,490	373	145	46	31	22,085	20.2
85–89	10,119	189	48	25	7	10,388	9.5
90–95	3,059	39	17	9	3	3,127	2.9
95+	1,024	2	2	2	0	1,030	0.9
40–69	12,275	15	17	61	0	12,368	11.3
70–84	79,414	1,388	739	210	146	81,897	74.8
85+	14,202	230	67	36	10	14,545	13.3
<b>Total</b>	<b>106,446</b>	<b>1,634</b>	<b>837</b>	<b>371</b>	<b>156</b>	<b>109,444</b>	<b>100.0</b>
<i>Percentage of Gold Card holders</i>	<i>97.3</i>	<i>1.5</i>	<i>0.8</i>	<i>0.3</i>	<i>0.1</i>	<i>100.0</i>	

(a) Includes war widows, non pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

**Table 7: DVA treatment population by level of disability pension, Gold Card holders, persons, by age, Australia, December 1999**

Age	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>	Total Gold Card holders	Percentage of Gold Card holders
<40	927	21	136	411	1	1,496	0.5
40–44	245	11	118	324	0	698	0.2
45–49	564	109	298	1,089	0	2,060	0.7
50–54	1,038	743	1,222	6,984	0	9,987	3.4
55–59	1,304	331	405	1,994	0	4,034	1.4
60–64	2,839	670	456	1,257	0	5,222	1.8
65–69	8,743	1,400	649	949	183	11,924	4.1
70–74	32,855	6,658	3,590	1,910	1,305	46,318	16.0
75–79	66,856	29,216	10,978	5,506	4,553	117,109	40.4
80–84	37,027	14,390	5,483	2,413	2,280	61,593	21.2
85–89	15,442	4,575	1,457	686	556	22,716	7.8
90–95	4,097	874	276	152	94	5,493	1.9
95+	1,211	88	41	25	5	1,370	0.5
40–69	14,733	3,264	3,148	12,597	183	33,925	11.7
70–84	136,738	50,264	20,051	9,829	8,138	225,020	77.6
85+	20,750	5,537	1,774	863	655	29,579	10.2
<b>Total</b>	<b>173,148</b>	<b>59,086</b>	<b>25,109</b>	<b>23,700</b>	<b>8,977</b>	<b>290,020</b>	<b>100.0</b>
<i>Percentage of Gold Card holders</i>	<i>59.7</i>	<i>20.4</i>	<i>8.7</i>	<i>8.2</i>	<i>3.1</i>	<i>100.0</i>	

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(g) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

## 2.4 Methods summary

The methods used in the analyses have been selected to bring together the best available, most comparable and latest data on Gold Card holders and the rest of the community. Appendix B provides detail on how each of the data sets were derived and managed to enable the comparisons. This section provides a summary of the key issues and assumptions in the methods.

In undertaking comparisons of service use between Gold Card holders and the rest of the community, the general approach was to compute age-standardised rates of use (i.e. numbers of services divided by the eligible population) and compare them using rate ratios. The age groupings presented in the analysis are 40–59, 60–69, 70–84, 85+ and a summary group of 40+. However, where data were available the age-standardisation was calculated by single-year ages.

Age-standardisation is a technique which allows for populations of differing age structures to be compared (see Section 2.3 and Appendix B). In this report the standard population used was that of the Gold Card holders. This has the effect of adjusting rates for the rest of the community so they no longer represent the actual utilisation or expenditure for that group, but represent the expenditure or utilisation if the age structure was like that of the Gold Card holders. Confidence intervals (95% level) were also computed for these rates.

Ratios of these age-standardised rates were then computed (i.e. the Gold Card holder rate divided by the rest of community rate). Where this ratio is greater than 1.0, Gold Card holders have a greater use of services. Conversely, where the ratio is less than 1.0, Gold Card holders have a lower level of service use.

## **Key assumptions**

This section highlights areas where key assumptions or estimates have been made to alert the reader to issues in their interpretation of the analysis. More detail on these issues is provided in Appendix B on data sources and methods.

- Pharmaceutical use by age and sex for Gold Card holders was estimated from HIC and DVA data. These data may not capture all use of pharmaceuticals by Gold Card holders. For the rest of the community, data from the BEACH survey of GPs indicated that the scripts written per LMO/GP encounter was the same as for male Gold Card holders. Therefore the pharmaceutical usage for the rest of the community was estimated by applying the male Gold Card script per encounter ratio to the data on usage of GP services by the rest of the community. Given these estimations, the comparison of pharmaceutical use must be considered approximate only, and definitive conclusions will require analysis of age-sex data from the HIC when that becomes available.
- The DRG weighted separations are the only measure of the relative costliness of hospital separations that are included in this report. The estimates of actual costs by DVA in paying for hospital separations and associated medical services have been calculated but are not included in this report, as there is no completely valid way of comparing these costs with the costs for the rest of the community.

# 3 Findings

This section sets out the findings from the analysis of Gold Card holders compared with the rest of the community. It presents the key findings followed by graphs, tables and discussion about service use, cost and expenditure for each of the areas – LMOs/GPs, pharmaceuticals and hospitals.

## 3.1 Local medical officer (LMO) and general practitioner (GP) (out-of-hospital) medical services

### Key findings

- In 1999–00, utilisation of LMO services by Gold Card holders aged 40 and over was 13.1 LMO visits per person, 17% higher than utilisation by the rest of the community of similar age (11.1 LMO/GP visits per person).
- However, Gold Card holders without service-related disabilities visited their LMO at a similar rate to that of the rest of the community. Males without service-related disabilities had a rate 9% lower and females had a rate 10% higher.
- As expected, usage of LMO services increases as disability pension levels increase. Gold Card holders in the low disability group used LMO services 15% more than the rest of the community in 1999–00, those with medium level disability used LMO services 42% more and the small group receiving Extreme Disablement Adjustment visited their LMO 111% more than the rest of the community.
- For those aged 40 years and over, the price per attendance in 1999–00 was 12% higher for Gold Card holders (\$30.41) than their community cohort (\$27.13). This difference is the result of the DVA contracts specifying 100% of the Schedule Fee for the LMO whereas most of the rest of community are bulk-billed by their GPs.
- Expenditure on LMO services per Gold Card holder aged 40 years and over was 31% higher than the rest of the community's expenditure in 1999–00 – 17% of this difference was due to higher utilisation, and 12% was due to higher cost per attendance. Expenditure on LMOs per Gold Card holder aged 40 years and over without service-related disabilities was 10% higher than for the rest of the community, which is entirely due to the higher price per attendance.
- The growth in expenditure on LMOs per Gold Card holder between 1997–98 and 1999–00 was 7.7%, compared to an increase of 10.1% for the rest of the community.
- The growth in expenditure per person can be split into utilisation and price components. For Gold Card holders, utilisation per person fell by 0.4% between 1997–98 and 1999–00, as compared to an increase of 2.8% for the rest of the

community. The growth in cost per attendance for Gold Card holders was 8.1% compared to a 7.1% increase for the rest of the community.

### **LMO and GP attendances**

In 1999–00 male Gold Card holders aged 40 years and over visited their LMO 21% more often than the rest of the community visited their GP (13.1 and 10.9 attendances respectively). For males aged 70–84 years, the rate was 16% higher among Gold Card holders (13.2 LMO visits per year) than it was for the rest of community (11.4 GP visits per year). Male LMO attendance rates for Gold Card holders aged 40 to 59 years were twice that for the rest of the community (Table 8).

For females aged 40 years and above, LMO and GP utilisation per person was 11% higher for Gold Card holders (12.6 attendances) than for the rest of the community (11.3 attendances). For females aged 70–84 years, the rate was 11% higher among Gold Card holders (12.9 LMO visits per year) than it was for the rest of the community (11.6 GP visits per year).

Utilisation of LMO services per person by all Gold Card holders aged 40 years and over was 17% higher than utilisation by the rest of the community.

Male Gold Card holders who have no service-related disabilities had 9% lower utilisation of LMOs than the rest of the community in 1999–00, whereas women in the same category had a 10% greater utilisation. In the youngest and oldest age groups (40–59 and 85 and over), these male Gold Card holders exceeded the rest of the community's utilisation by 46% and 1% respectively. In all other age groups they have less utilisation (Table 9).

Female Gold Card holders without service-related disability are also different from the rest of the community in that they are mostly widows, and widows have a somewhat higher usage of health services than the rest of the female population and married women in particular. This increased use of LMO and GPs occurs in all age groups. This increased use of services by widows was demonstrated in data from the late 1980s for Australian women, which indicated that previously married older women had 10% higher visits to doctors and 13% higher hospital episodes than married older women. Widows are also generally sicker than married women and have a lower life expectancy. Age-standardised mortality rates for widows were 41% higher than for married women.

Overall, Gold Card holders without service-related disabilities have 1% less utilisation than the general community. This varies between age groups: in the 70 to 84 years age group, Gold Card holders' utilisation was 4% lower than the rest of the community; however at younger ages (40–59 years), utilisation for Gold Card holders was 40% higher than for the rest of the community.

As disability levels increase usage also increases. Those with low disability used LMO services 15% more than the rest of the community, those with medium disability 42% more and the small group receiving Extreme Disablement Adjustment visited their LMO 111% more than the rest of the community (Figure 3).



At all ages, LMO and GP attendances per person were higher for male Gold Card holders with service-related disabilities than for the rest of the community.

**Table 8: Age-standardised LMO and GP attendances per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	7.1 *	5.9 *	6.8 *	11.1 *	..	9.9 *	4.9
60–69	7.1 *	9.2 *	13.0 *	15.2 *	22.8 *	11.5 *	7.6
70–84	10.0 *	12.2 *	16.8 *	18.7 *	27.7 *	13.2 *	11.4
85+	13.4	15.4 *	19.2 *	21.0 *	28.9 *	15.8 *	13.2
40+	9.9 *	11.9 *	16.0 *	18.1 *	25.5 *	13.1 *	10.9
<b>Females</b>							
40–59	7.8 *	3.4 *	4.1 *	9.9 *	..	8.0 *	6.7
60–69	10.5 *	9.9 *	11.8 *	7.3 *	..	10.5 *	9.1
70–84	12.8 *	14.5 *	16.3 *	18.5 *	23.5 *	12.9 *	11.6
85+	15.9 *	18.8 *	15.2 *	17.3 *	19.0 *	15.9 *	14.0
40+	12.5 *	13.8 *	15.5 *	17.1 *	20.0 *	12.6 *	11.3
<b>Persons</b>							
40–59	7.2 *	5.5 *	6.4 *	10.9 *	..	9.6 *	5.2
60–69	9.0 *	9.6 *	12.4 *	10.8 *	10.1 *	11.0 *	8.4
70–84	11.0 *	13.1 *	16.6 *	18.6 *	26.2 *	13.1 *	11.5
85+	14.6 *	17.1 *	17.2 *	19.2 *	24.1 *	15.9 *	13.6
40+	11.0	12.8 *	15.8 *	17.8 *	23.5 *	13.1 *	11.1

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Table 9: Ratio of LMO and GP attendances per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.46 *	1.21 *	1.40 *	2.27 *	..	2.03 *	1.00
60–69	0.93 *	1.20 *	1.71 *	1.99 *	2.98 *	1.50 *	1.00
70–84	0.87 *	1.07 *	1.47 *	1.64 *	2.43 *	1.16 *	1.00
85+	1.01	1.17 *	1.46 *	1.59 *	2.19 *	1.20 *	1.00
40+	0.91 *	1.09 *	1.47 *	1.67 *	2.34 *	1.21 *	1.00
<b>Females</b>							
40–59	1.17 *	0.51 *	0.62 *	1.48 *	..	1.20 *	1.00
60–69	1.16 *	1.09 *	1.31 *	0.81 *	..	1.16 *	1.00
70–84	1.10 *	1.25 *	1.40 *	1.60 *	2.03 *	1.11 *	1.00
85+	1.13 *	1.34 *	1.08 *	1.24 *	1.36 *	1.14 *	1.00
40+	1.10 *	1.22 *	1.37 *	1.52 *	1.77 *	1.11 *	1.00
<b>Persons</b>							
40–59	1.40 *	1.06 *	1.23 *	2.10 *	..	1.85 *	1.00
60–69	1.07 *	1.14 *	1.47 *	1.28 *	1.19 *	1.30 *	1.00
70–84	0.96 *	1.14 *	1.45 *	1.62 *	2.28 *	1.14 *	1.00
85+	1.08 *	1.26 *	1.27 *	1.41 *	1.77 *	1.17 *	1.00
40+	0.99	1.15 *	1.42 *	1.59 *	2.11 *	1.17 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

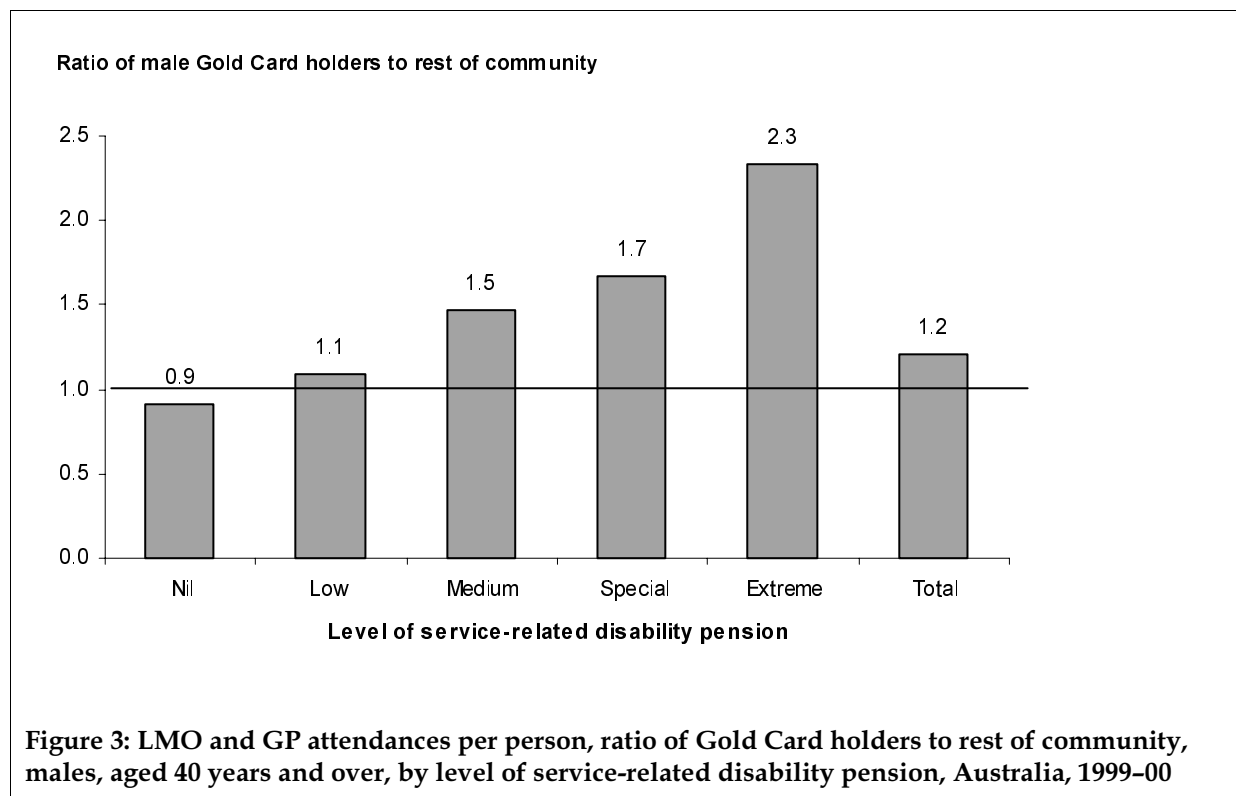
(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.



### LMO and GP expenditure

For persons aged 40 years or more, cost per LMO or GP attendance was 12% higher for Gold Card holders (\$30.41) than for the rest of the community (\$27.13). For those aged 70-84 years, the cost per attendance was 12% higher for Gold Card holders (\$30.10) than their community cohort (\$26.82).

These differences are expected given the prices specified in the contracts between the DVA and the LMOs. For Medicare-funded GP services, most of the rest of community attendances are bulk-billed and the cost for these attendances is 85% of the Schedule Fee. Accumulated with the non-bulk-billed attendances, the average fee charged for the rest of the community aged over 70 is 88% of the Schedule Fee (1999-00)<sup>1</sup>. For Gold Card holders who attend LMOs, the average fee specified by the contracts is 100% of the Medicare Schedule Fee.

Whether this price differential corresponds with a difference in the quality of the services, e.g. average length of consultation, is a matter that requires further investigation.

<sup>1</sup> The average fee for GP attendances covered by Medicare for the community as a whole is 93% of the Schedule Fee. This is higher than the 88% of the Schedule Fee charged for those over 70, as GPs less frequently bulk bill those under age 70.

**Table 10: Age-standardised LMO and GP cost per attendance for Gold Card holders and the rest of the community, by age, Australia, 1999–00 (\$)**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	29.04 *	29.91 *	29.31 *	29.42 *	..	29.42 *	26.87
60–69	27.91 *	28.11 *	28.52 *	28.79 *	30.07 *	28.49 *	25.67
70–84	29.42 *	29.39 *	29.87 *	30.89 *	31.62 *	29.88 *	26.59
85+	32.09 *	32.25 *	32.82 *	34.48 *	34.31 *	32.58 *	29.12
40+	29.66 *	29.68 *	30.10 *	31.09 *	31.82 *	30.07 *	26.83
<b>Females</b>							
40–59	28.72 *	27.70 *	28.60 *	33.50 *	..	28.76 *	27.51
60–69	28.89 *	30.34 *	26.99 *	34.74 *	..	28.90 *	25.86
70–84	30.42 *	31.06 *	32.24 *	34.89 *	34.91 *	30.49 *	27.21
85+	34.22 *	33.50 *	35.34 *	34.08 *	37.51 *	34.22 *	30.07
40+	30.36 *	31.01 *	31.85 *	34.82 *	34.80 *	30.42 *	27.19
<b>Persons</b>							
40–59	28.98 *	29.68 *	29.23 *	30.04 *	..	29.33 *	27.01
60–69	28.55 *	29.39 *	27.70 *	31.04 *	30.07 *	28.71 *	25.78
70–84	29.85 *	30.07 *	30.72 *	32.34 *	32.70 *	30.10 *	26.82
85+	33.23 *	32.93 *	33.91 *	34.30 *	35.55 *	33.39 *	29.60
40+	30.21 *	30.42 *	30.90 *	32.42 *	32.93 *	30.41 *	27.13

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Table 11: Ratio of LMO and GP cost per attendance for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.08 *	1.11 *	1.09 *	1.10 *	..	1.10 *	1.00
60–69	1.09 *	1.10 *	1.11 *	1.12 *	1.17 *	1.11 *	1.00
70–84	1.11 *	1.11 *	1.12 *	1.16 *	1.19 *	1.12 *	1.00
85+	1.10 *	1.11 *	1.13 *	1.18 *	1.18 *	1.12 *	1.00
40+	1.11 *	1.11 *	1.12 *	1.16 *	1.19 *	1.12 *	1.00
<b>Females</b>							
40–59	1.04 *	1.01 *	1.04 *	1.22 *	..	1.05 *	1.00
60–69	1.12 *	1.17 *	1.04 *	1.34 *	..	1.12 *	1.00
70–84	1.12 *	1.14 *	1.19 *	1.28 *	1.28 *	1.12 *	1.00
85+	1.14 *	1.11 *	1.18 *	1.13 *	1.25 *	1.14 *	1.00
40+	1.12 *	1.14 *	1.17 *	1.28 *	1.28 *	1.12 *	1.00
<b>Persons</b>							
40–59	1.07 *	1.10 *	1.08 *	1.11 *	..	1.09 *	1.00
60–69	1.11 *	1.14 *	1.07 *	1.20 *	1.17 *	1.11 *	1.00
70–84	1.11 *	1.12 *	1.15 *	1.21 *	1.22 *	1.12 *	1.00
85+	1.12 *	1.11 *	1.15 *	1.16 *	1.20 *	1.13 *	1.00
40+	1.11 *	1.12 *	1.14 *	1.20 *	1.21 *	1.12 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

Ratio of male Gold Card holders to rest of community

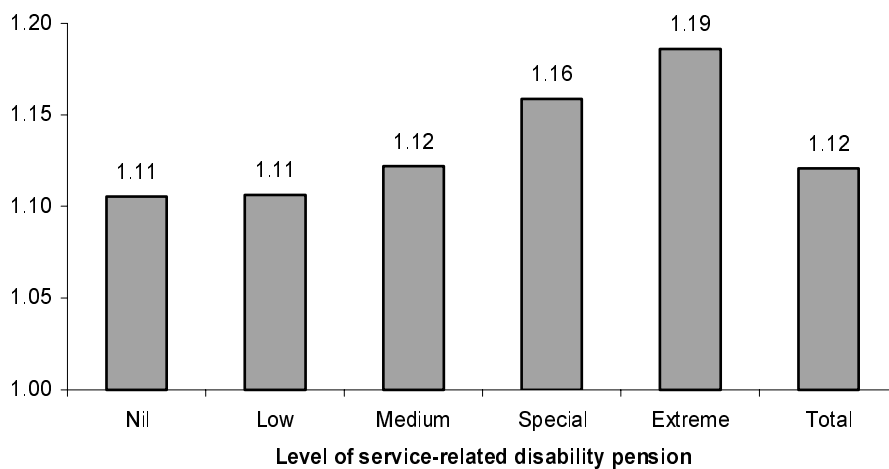


Figure 4: Cost per LMO and GP attendance, ratio of Gold Card holders to rest of community, males, aged 40 years and over, by level of service-related disability pension, Australia, 1999-00

Ratio of male Gold Card holders to rest of community

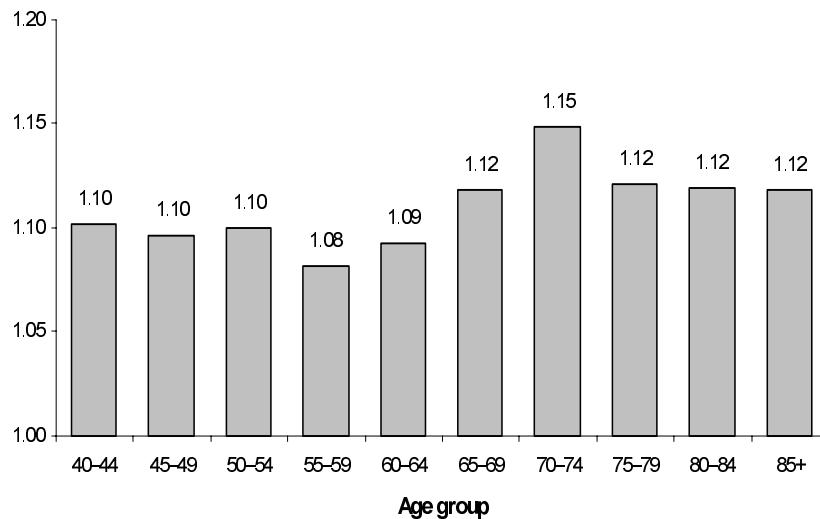
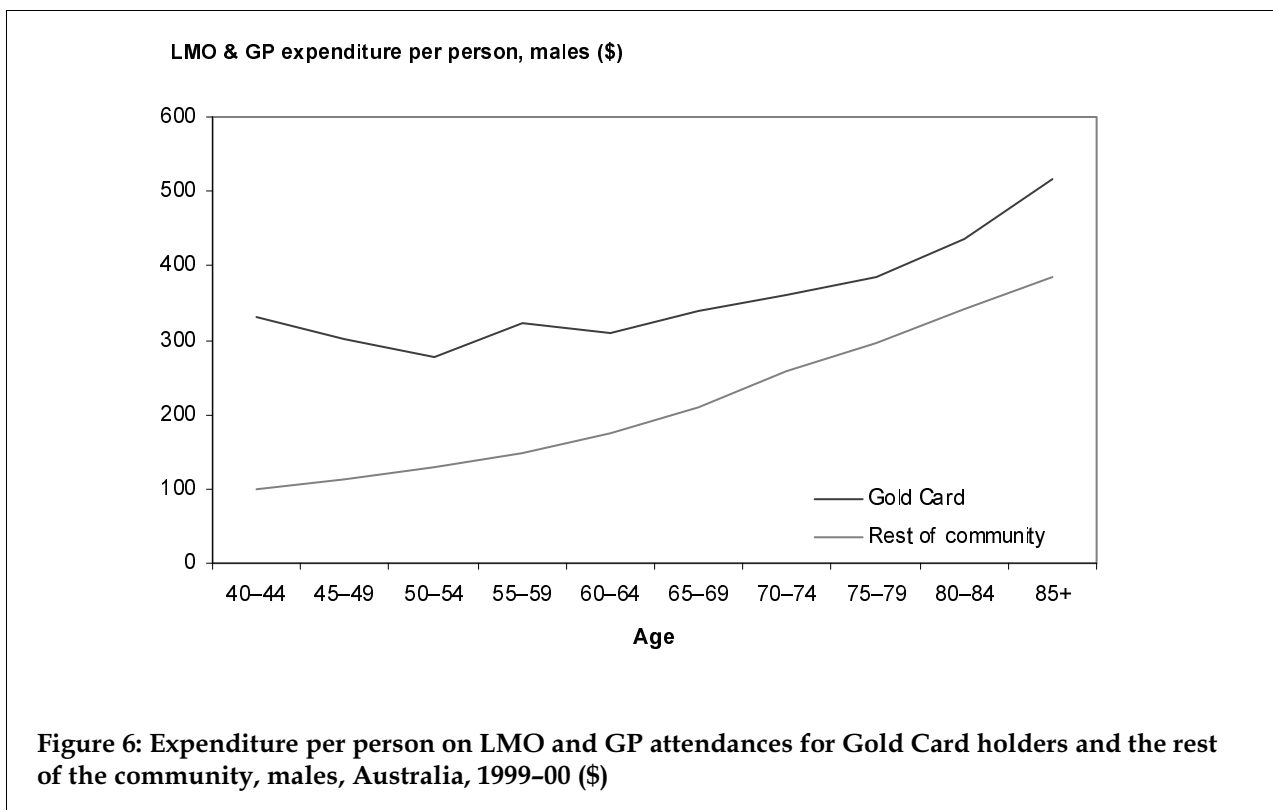


Figure 5: Cost per LMO and GP attendance, ratio of Gold Card holders to rest of community, males, by age group, Australia, 1999-00

## LMO and GP expenditure per person

LMO and GP expenditure per person is the product of attendance rates (attendances per person) multiplied by unit costs (cost per attendance).

For males, at every age, expenditure per person on LMO and GP services in 1999–00 was greater for Gold Card holders than for the rest of the community (Figure 6). For those aged 40 years or more, expenditure per person in the year was 35% higher for Gold Card holders (\$394.36) when compared to the rest of the community (\$291.92) (Table 12). For those aged 70–84 years, Gold Card holders (\$395.27) cost 30% more than their community cohort (\$303.00). This is due to utilisation per person being 16% higher, and cost per attendance being 12% higher ( $1.16 \times 1.12 = 1.30$ ).



For females aged 40 years and over, expenditure on LMO and GP services was 25% higher for Gold Card holders (\$383.04) than for the rest of the community (\$307.27). Female Gold Card holders aged 70–84 years cost \$393.19 per year, 24% more than for women of similar age in the rest of the community which cost on average \$316.00 per year (Table 12).

At every age, female Gold Card holders cost more per person than their community cohort (Figure 7). The overall 25% higher expenditure per person was due to utilisation being 11% higher (as most female Gold Card holders are widows), and cost per attendance being 12% higher.

LMO and GP expenditure per person, females (\$)

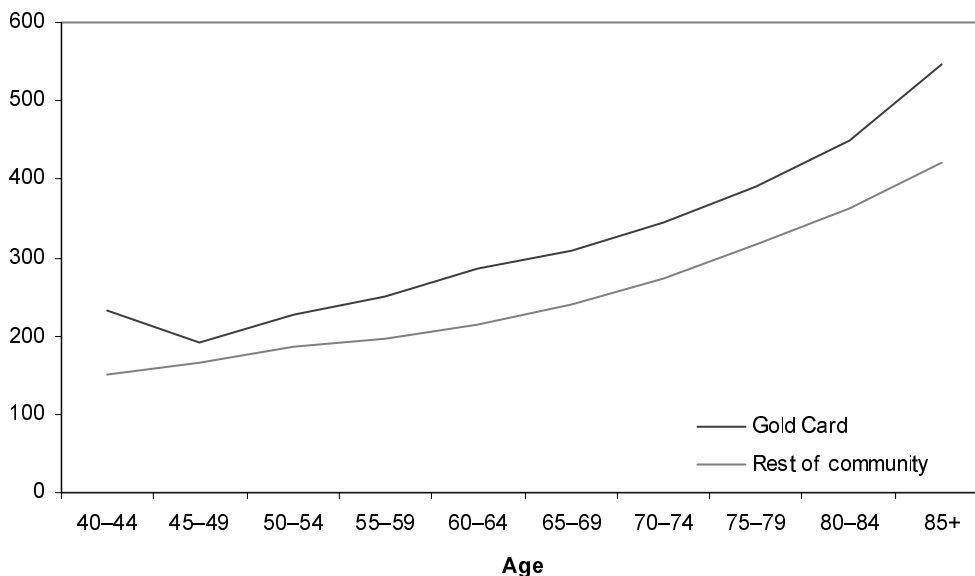


Figure 7: Expenditure per person on LMO and GP attendances for Gold Card holders and the rest of the community, females, Australia, 1999-00 (\$)

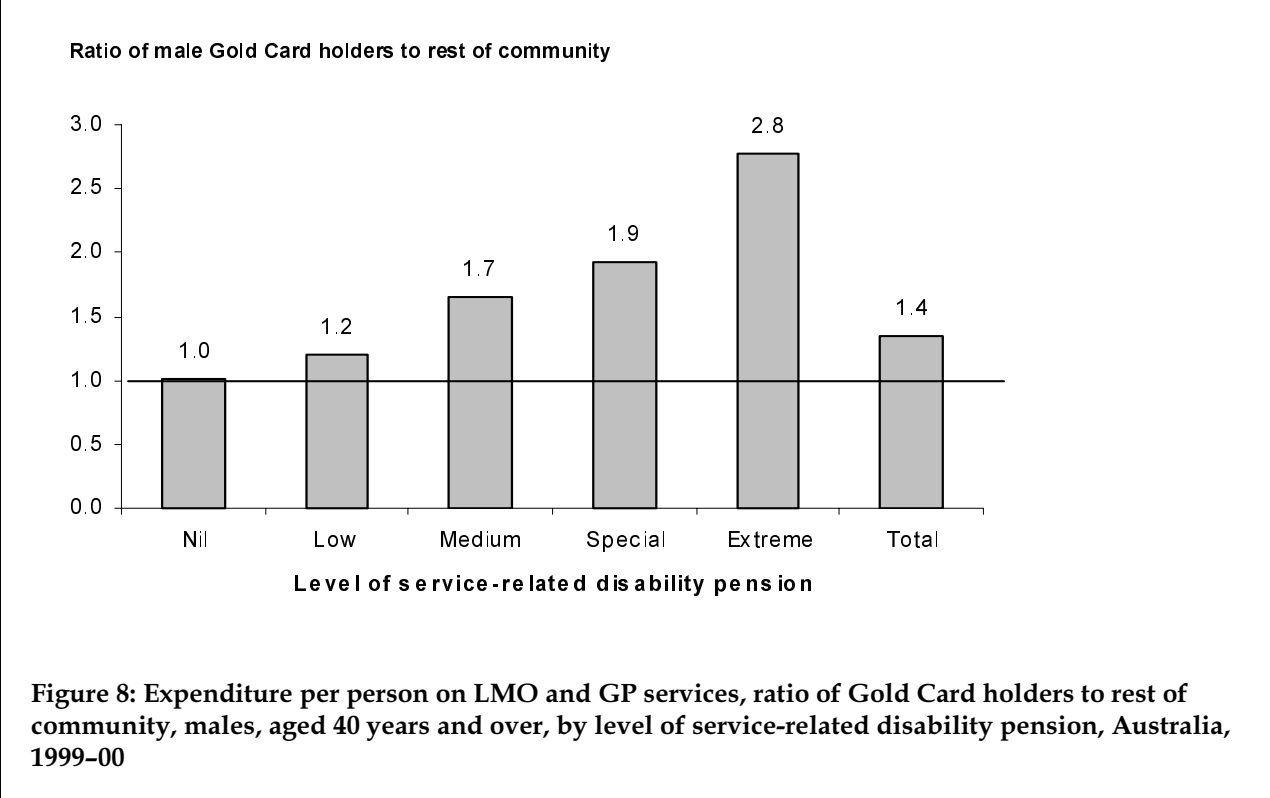
Overall expenditure in 1999-00 on LMO and GP services for all Gold Card holders was largely for males and especially for those aged 70-84 years. At each age, expenditure per person for Gold Card holders exceeded that for the rest of the community. Gold Card holders aged 70-84 years cost on average \$394.51 per year, 28% higher than the \$307.73 for the rest of the community. LMO expenditure per person for Gold Card holders aged 40 years and over was 31% higher than the rest of the community (\$397.04 versus \$302.29) – 17% of this was due to higher utilisation, and 12% due to higher cost per attendance.

The higher expenditure per person for Gold Card holders reflects higher utilisation per person and higher cost per attendance than the rest of the community of similar age. The higher utilisation is due to the Gold Card holders with service-related disabilities, and the higher cost per attendance is due to the prices specified in the DVA contracts with LMOs.

For males without service-related disability, expenditure on LMO services per person was 1% higher than expenditure by the rest of the community, due to 9% lower utilisation and 11% higher cost per attendance. As disability increases in severity, expenditure per person increases. It is 21% higher than the rest of the male community for the low disability group, 65% higher for the medium disability group, and 93% higher for the special disability group.



For females without service-related disability – mostly war widows – expenditure on LMO services per person was 23% higher than expenditure by women of the same age in the community – 10% due to higher utilisation and 12% due to higher cost per attendance.



**Figure 8: Expenditure per person on LMO and GP services, ratio of Gold Card holders to rest of community, males, aged 40 years and over, by level of service-related disability pension, Australia, 1999-00**

**Table 12: Age-standardised LMO and GP expenditure per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00 (\$)**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	206.36 *	176.38 *	200.29 *	325.66 *	..	291.23 *	131.07
60–69	198.07	259.02 *	372.11 *	437.35 *	684.73 *	327.57 *	196.32
70–84	293.17	359.62 *	500.77 *	576.58 *	876.45 *	395.27 *	303.00
85+	429.19 *	496.75 *	630.32 *	723.71 *	992.73 *	515.28 *	384.12
40+	293.78	352.60 *	482.81 *	563.50 *	809.92 *	394.36 *	291.92
<b>Females</b>							
40–59	224.67 *	94.47 *	117.85 *	332.50 *	..	230.62 *	183.97
60–69	303.66 *	299.16 *	319.17 *	254.36 *	..	304.14 *	234.28
70–84	388.66 *	449.84 *	525.46 *	646.98 *	821.21 *	393.19 *	316.00
85+	543.48 *	628.88 *	536.08 *	589.63 *	713.63 *	544.92 *	420.84
40+	378.98 *	427.67 *	492.25 *	596.12 *	696.61 *	383.04 *	307.27
<b>Persons</b>							
40–59	209.41 *	162.71 *	186.53 *	326.80 *	..	281.11 *	139.89
60–69	257.00 *	281.42 *	342.57 *	335.24 *	302.63 *	314.50 *	217.50
70–84	327.92 *	392.46 *	509.76 *	602.20 *	856.35 *	394.51 *	307.73
85+	485.39 *	561.72 *	583.98 *	657.78 *	855.49 *	529.85 *	402.18
40+	332.96 *	389.85 *	488.63 *	576.02 *	773.55 *	397.04 *	302.29

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Table 13: Ratio of LMO and GP expenditure per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.57 *	1.35 *	1.53 *	2.48 *	..	2.22 *	1.00
60–69	1.01	1.32 *	1.90 *	2.23 *	3.49 *	1.67 *	1.00
70–84	0.97	1.19 *	1.65 *	1.90 *	2.89 *	1.30 *	1.00
85+	1.12 *	1.29 *	1.64 *	1.88 *	2.58 *	1.34 *	1.00
40+	1.01	1.21 *	1.65 *	1.93 *	2.77 *	1.35 *	1.00
<b>Females</b>							
40–59	1.22 *	0.51 *	0.64 *	1.81 *	..	1.25 *	1.00
60–69	1.30 *	1.28 *	1.36 *	1.09 *	..	1.30 *	1.00
70–84	1.23 *	1.42 *	1.66 *	2.05 *	2.60 *	1.24 *	1.00
85+	1.29 *	1.49 *	1.27 *	1.40 *	1.70 *	1.29 *	1.00
40+	1.23 *	1.39 *	1.60 *	1.94 *	2.27 *	1.25 *	1.00
<b>Persons</b>							
40–59	1.50 *	1.16 *	1.33 *	2.34 *	..	2.01 *	1.00
60–69	1.18 *	1.29 *	1.57 *	1.54 *	1.39 *	1.45 *	1.00
70–84	1.07 *	1.28 *	1.66 *	1.96 *	2.78 *	1.28 *	1.00
85+	1.21 *	1.40 *	1.45 *	1.64 *	2.13 *	1.32 *	1.00
40+	1.10 *	1.29 *	1.62 *	1.91 *	2.56 *	1.31 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Trends over the period 1997–98 to 1999–00**

For Gold Card holders aged 40 years or more, utilisation per person of LMO and GP services has fallen 0.4% over the period 1997–98 to 1999–00. This is due to large falls in the rate of service use by those in the medium, special and extreme disability groups which have counterbalanced increases in the rate of service use by those in the nil and low disability groups. For the rest of the community, utilisation per person has increased by 2.8% from 10.8 attendances per person per year to 11.1 attendances per person per year (Table 14).

Utilisation per person growth for male Gold Card holders aged 40 years and over was lower than that for female Gold Card holders. The utilisation rate for males fell from 13.4 attendances per person in 1997–98 to 13.1 attendances per person in

1999–00. This is a drop in attendances per person of 2.2% compared to an increase in the rest of the community of 4.3%. The drop in attendances per person in the extreme disability group of 29% was a major factor in this. Although the extreme disability group is a relatively small group (8,821 males in 1999–00 or 5% of male Gold Card holders), the extent of the decrease was enough to bring the overall attendances per person down. Less dramatic falls in the utilisation rate for the medium and special disability groups also contributed, and the falls for the three highest disability groups were higher than the increases that occurred in the nil and low disability groups. It may have been expected that the influx of relatively healthy WWII Gold Card holders in 1998 would have led to a fall in the rate of use of LMOs by the nil disability group, but in fact there was a substantial increase of 11.6% over the two years.

**Table 14: Attendances per person on LMO and GP services, Gold Card holders, aged 40 years and over, Australia, 1997–98 to 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
1997–98	8.9	11.5	17.2	18.3	35.9	13.4	10.4
1998–99	9.3	11.7	16.6	18.2	30.9	13.2	10.6
1999–00	9.9	11.9	16.0	18.1	25.5	13.1	10.9
% change 1997–98 to 1999–00	11.6%	3.4%	–6.9%	–1.2%	–29.2%	–2.2%	4.3%
<b>Females</b>							
1997–98	12.2	13.2	15.2	18.4	24.6	12.3	11.2
1998–99	12.3	13.1	15.3	18.4	24.1	12.4	11.2
1999–00	12.5	13.8	15.5	17.1	20.0	12.6	11.3
% change 1997–98 to 1999–00	2.5%	4.6%	1.6%	–6.9%	–18.7%	2.4%	1.1%
<b>Persons</b>							
1997–98	10.3	12.2	16.4	18.4	31.4	13.1	10.8
1998–99	10.6	12.4	16.1	18.4	28.4	13.0	10.9
1999–00	11.0	12.8	15.8	17.8	23.5	13.1	11.1
% change 1997–98 to 1999–00	6.7%	5.3%	–3.4%	–3.4%	–25.1%	–0.4%	2.8%

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disability allowance (EDA).

Notes

1. \* Denotes significantly different at the 5% level from the rest of community.

For female Gold Card holders, utilisation per person increased by 2.4% over the period 1997–98 to 1999–00 which was similar to the increase of 1.1% in the rest of the community.

For Gold Card holders aged 40 years and over, expenditure per person on LMO services increased by 7.7% from \$368.61 in 1997–98 to \$397.04 in 1999–00 (Table 15). For the rest of the community aged 40 years and over, expenditure per person on LMO and GP services increased by 10.1% from \$274.63 in 1997–98 to \$302.29 in 1999–00.

Over the same period, expenditure per person for male Gold Card holders increased by 5.8%, compared to 11.7% for the rest of the community. For females, expenditure per person increased by 10.5% for Gold Card holders, compared to 8.5% for the rest of the community.

**Table 15: Expenditure per person on LMO and GP services, Gold Card holders, aged 40 years and over, Australia, 1997–98 to 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
1997–98	\$243.35	\$313.95	\$478.92	\$524.25	\$1,042.89	\$372.60	\$261.28
1998–99	\$261.08	\$328.34	\$473.70	\$535.64	\$924.85	\$377.04	\$270.24
1999–00	\$293.78	\$352.60	\$482.81	\$563.50	\$809.92	\$394.36	\$291.92
% change 1997–98 to 1999–00	20.7%	12.3%	0.8%	7.5%	-22.3%	5.8%	11.7%
<b>Females</b>							
1997–98	\$342.35	\$377.28	\$450.25	\$587.01 *	\$780.32	\$346.50	\$283.09
1998–99	\$355.43	\$385.60	\$464.42	\$594.91 *	\$808.11	\$359.11	\$290.35
1999–00	\$378.98	\$427.67	\$492.25	\$596.12 *	\$696.61	\$383.04	\$307.27
% change 1997–98 to 1999–00	10.7%	13.4%	9.3%	1.6% *	-10.7%	10.5%	8.5%
<b>Persons</b>							
1997–98	\$289.24	\$340.16	\$466.94	\$551.58	\$941.96	\$368.61	\$274.63
1998–99	\$303.90	\$356.93	\$471.59	\$566.24	\$887.38	\$376.42	\$282.45
1999–00	\$332.96	\$389.85	\$488.63	\$576.02	\$773.55	\$397.04	\$302.29
% change 1997–98 to 1999–00	15.1%	14.6%	4.6%	4.4%	-17.9%	7.7%	10.1%

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disability allowance (EDA).

Notes

1. \* Denotes significantly different at the 5% level from the rest of community.

LMO & GP expenditure per person (\$)

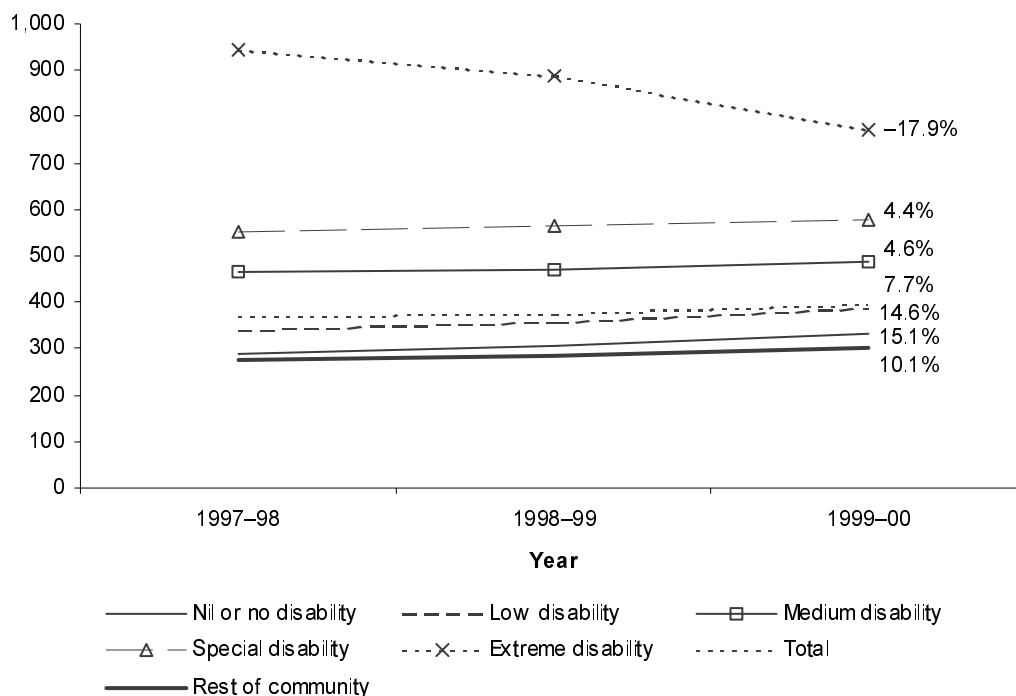


Figure 9: Expenditure per person on LMO and GP services, Gold Card holders, persons, aged 40 years or more, by level of service-related disability pension, Australia, 1997-98 to 1999-00

Expenditure per person growth can be split into utilisation and price components. The utilisation growth has been discussed above and is the main driver of the differences in expenditure per person growth.

The price component – the growth in cost per attendance – was 8.1% for Gold Card holders, compared to a 7.1% growth for the rest of the community (Table 16). General inflation for the period 1997-98 to 1999-00 was 2.1%. Thus the excess health price inflation for Gold Card holders was 5.8% compared to an excess health price inflation for the rest of the community of 4.8%. (Note: some of this excess health price inflation may have been compositional shift, i.e. movement to a more costly mix of services, but there is unlikely to have been much compositional shift for LMO/GP services).

**Table 16: Growth in expenditure per person, attendances per person and cost per attendance on LMO and GP services for Gold Card holders and the rest of the community aged 40 years and over, Australia, 1997–98 to 1999–00 (per cent)**

	Gold Card holders			Rest of community <sup>(a)</sup>		
	Males	Females	Persons	Males	Females	Persons
Growth in expenditure per person <sup>(b)</sup>	5.8	10.5	7.7	11.7	8.5	10.1
Growth in attendances per person	-2.2	2.4	-0.4	4.3	1.1	2.8
Growth in cost of LMO/GP services <sup>(c)</sup>	8.2	8.0	8.1	7.1	7.3	7.1
General inflation <sup>(d)</sup>	2.1	2.1	2.1	2.1	2.1	2.1
Excess health inflation and compositional drift	5.9	5.7	5.8	4.8	5.1	4.8

(a) Rest of community includes White Card holders.

(b) Growth in expenditure per person is a product of growth in 'attendance per person' and growth in 'cost per LMO/GP attendance'.

(c) Growth in 'cost per attendance' is a product of 'general inflation' and 'excess health inflation'. 'Excess health inflation' is the growth in health prices over and above 'general inflation'.

(d) General inflation refers to the Gross Domestic Product deflator.

## 3.2 Pharmaceuticals

### Key findings

- Male Gold Card holders have a higher usage rate of pharmaceuticals than the rest of the community, for all age groups (Table 17). These differences are related to the higher number of LMO/GP consultations for Gold Card holders, whereas the propensity to prescribe pharmaceuticals in each consultation seems to be similar to the rest of the community.
- Estimates of script usage for Gold Card holders by disability group have not been analysed at present, but could be the subject of further work. However even without this data, it is our expectation that Gold Card holders without service-related disabilities will show lower script usage per person than the rest of the community, as a consequence of their lower LMO/GP consultation rates.
- In contrast to males, on the DVA database, female Gold Card holders show lower pharmaceutical utilisation rates compared with their rest of community counterparts, with fewer scripts filled per LMO/GP consultation. However, this difference is not supported by the BEACH GP survey data (see Appendix B p56), which indicated no difference in scripts written per LMO/GP visit between the two groups. A possible explanation is that some female Gold Card holders may be processing their scripts through the PBS (with or without using a seniors concession card), rather than using the Gold Card, resulting in only a proportion of their script purchases being recorded on the DVA Repatriation Pharmaceutical Benefits Scheme (RPBS) database.

## PBS script usage per person

In comparing pharmaceutical usage between the community (via PBS data) and Gold Card holders (via RPBS data), only pharmaceuticals available on both schemes were used. There are some pharmaceuticals provided under the RPBS not available under the PBS, and these items are excluded from the analysis. To reflect this approach, all tables and graphs in this section only refer to PBS prescriptions.

For males, all age groups show higher script usage per person for Gold Card holders as compared with the rest of community (Table 17 and Figure 10). The largest difference occurs in the 40–69 years age group, where Gold Card holders use more than twice the number of scripts per person than the rest of the community. For other age groups, Gold Card holders show utilisation rates between 17% and 26% higher than the rest of the community.

**Table 17: Age-standardised PBS script utilisation per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	PBS scripts per person per year				Ratio of Gold Card holders to rest of community
	Gold Card holders	95% confidence interval	Rest of community <sup>(a)</sup>	95% confidence interval	
<b>Males</b>					
40–69	36.4	36.4 – 36.5	17.2	17.2 – 17.2	2.11
70–79	45.7	45.7 – 45.8	37.0	36.9 – 37.0	1.24
80–89	45.4	45.4 – 45.5	38.9	38.9 – 39.0	1.17
90+	41.1	40.9 – 41.3	32.5	32.4 – 32.6	1.26
40+	44.5	44.4 – 44.5	35.1	35.1 – 35.1	1.27
<b>Females</b>					
40–69	27.2	27.2 – 27.3	22.6	22.6 – 22.6	1.20
70–79	36.5	36.4 – 36.5	39.8	39.7 – 39.8	0.92
80–89	38.6	38.5 – 38.7	40.1	40.1 – 40.1	0.96
90+	35.6	35.4 – 35.7	36.9	36.9 – 37.0	0.96
40+	36.0	36.0 – 36.1	37.8	37.8 – 37.8	0.95
<b>Persons</b>					
40–69	33.1	33.0 – 33.1	19.9	19.9 – 19.9	1.66
70–79	42.3	42.3 – 42.4	38.6	38.6 – 38.6	1.10
80–89	42.8	42.8 – 42.9	39.7	39.7 – 39.7	1.08
90+	37.7	37.6 – 37.9	35.8	35.8 – 35.9	1.05
40+	41.3	41.3 – 41.3	36.7	36.6 – 36.7	1.13

(a) Rest of community includes White Card and Orange Card holders.

In contrast to the male population, the utilisation of PBS scripts per female Gold Card holder is lower than for the rest of the community for those over age 70 (Table 17). The 40–69 age group has 20% higher utilisation per person among Gold Card holders, whereas the older Gold Card holders have 4% to 8% lower utilisation than



the rest of the community. Despite females having 10–20% higher LMO/GP attendances per Gold Card holder, lower utilisation rates are the result of substantially fewer scripts filled per LMO/GP visit for Gold Card holders (as reported by the DVA RPBS data), when compared to the corresponding rates for the rest of the community.

The lower numbers of scripts filled per LMO/GP visit for female Gold Card holders may be explained by female Gold Card holders processing their scripts through the PBS, rather than the Gold Card scheme (RPBS).

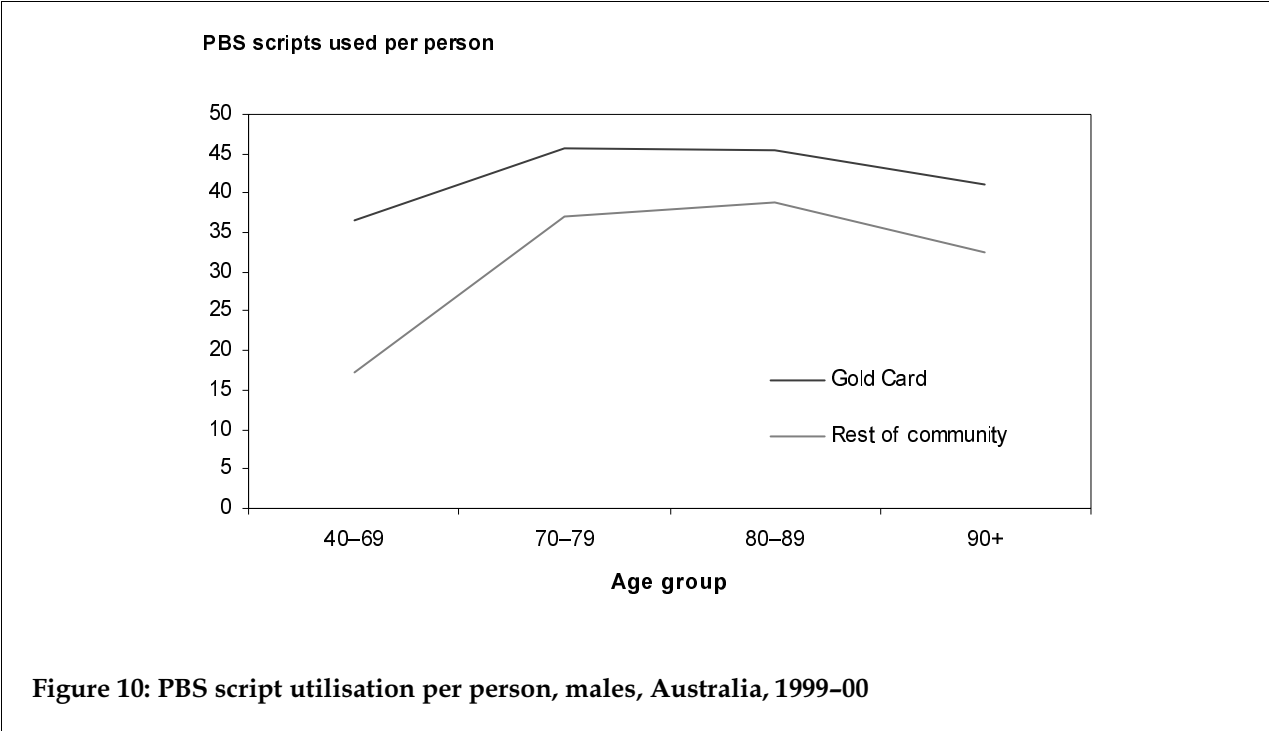


Figure 10: PBS script utilisation per person, males, Australia, 1999-00

**Cost per PBS script**

The cost of each script in Table 18 is the overall retail cost of the pharmaceutical. It therefore includes both the Government subsidy and the patient co-payment.

There is very little difference in the cost per script for male Gold Card holders and the rest of the community. This indicates there is very little compositional cost difference (mix of high- and low-cost drugs) between pharmaceuticals used by male Gold Card holders and those used by the rest of the community.

In contrast to male Gold Card holders, the cost per script is significantly lower (16%) for female Gold Card holders as compared to the rest of the community (Table 18). This difference is hard to explain, beyond that female Gold Card holders are systematically using a much higher proportion of low-cost drugs than the rest of the community. This is a simplistic understanding and requires further analysis beyond the scope of this report.

**Table 18: Age-standardised cost per PBS script for Gold Card holders and the rest of the community, by age, Australia, 1999–00 (\$)**

Age	Cost per PBS script				Ratio of Gold Card holders to rest of community
	Gold Card holders	95% confidence interval	Rest of community <sup>(a)</sup>	95% confidence interval	
<b>Males</b>					
40–69	30.74	30.67 – 30.81	29.24	29.23 – 29.25	1.05
70–79	27.39	27.37 – 27.42	28.18	28.17 – 28.20	0.97
80–89	26.21	26.18 – 26.24	26.50	26.47 – 26.52	0.99
90+	23.29	23.15 – 23.42	23.31	23.25 – 23.37	1.00
40+	27.32	27.30 – 27.33	27.75	27.74 – 27.76	0.98
<b>Females</b>					
40–69	24.60	24.52 – 24.69	27.02	27.02 – 27.03	0.91
70–79	23.78	23.75 – 23.81	28.15	28.14 – 28.16	0.84
80–89	21.48	21.45 – 21.52	26.45	26.44 – 26.47	0.81
90+	18.88	18.79 – 18.98	24.98	24.94 – 25.01	0.76
40+	22.93	22.91 – 22.96	27.39	27.39 – 27.40	0.84
<b>Persons</b>					
40–69	28.90	28.84 – 28.95	28.13	28.13 – 28.14	1.03
70–79	26.25	26.23 – 26.27	28.17	28.16 – 28.17	0.93
80–89	24.57	24.54 – 24.59	26.47	26.45 – 26.48	0.93
90+	20.77	20.69 – 20.85	24.56	24.53 – 24.59	0.85
40+	25.87	25.86 – 25.89	27.57	27.56 – 27.57	0.94

(a) Rest of community includes White Card and Orange Card holders.

### Pharmaceutical script expenditure per person

The average cost per script is practically the same for male Gold Card holders and the rest of the community. Therefore differences in expenditure on PBS scripts per person (the product of script usage per person and cost per script), reflects differences in script usage. These differences seem to be related to the higher number of LMO/GP consultations for Gold Card holders. For male Gold Card holders aged 70–79, expenditure per person is 20% higher than for the rest of the community (Table 19).

This is in contrast to females whose expenditure on PBS scripts per person is substantially lower (around 20%) among Gold Card holders for age groups above 70 (Table 19) than the rest of the community. As with the PBS script usage per person, the recorded DVA cost of scripts for female Gold Card holders may understate the full utilisation of PBS scripts by female Gold Card holders, if they are processing some of their script purchases through the PBS scheme, rather than the Gold Card scheme.

In the 40–69 years age group, overall expenditure per person is 71% higher for Gold Card holders, reflecting a greater number of scripts per LMO/GP visit and the higher rates of LMO/GP visits among Gold Card holders compared with the rest of the community. This is especially the case for males aged 40–69, whose expenditure per person is more than double that for the rest of the community. While the analysis at this stage cannot distinguish the conditions for which these drugs are being used, the high prevalence of mental health conditions in this age group is likely to lead to higher use of pharmaceuticals and therefore higher expenditure.

**Table 19: Age-standardised PBS script cost per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00 (\$)**

Age	PBS script cost per person				Ratio of Gold Card holders to rest of community
	Gold Card holders	95% confidence interval	Rest of community <sup>(a)</sup>	95% confidence interval	
<b>Males</b>					
40–69	1,119.92	1,117.45 – 1,122.40	504.14	504.01 – 504.27	2.22
70–79	1,252.38	1,251.25 – 1,253.51	1,041.43	1,040.90 – 1,041.95	1.20
80–89	1,191.09	1,189.57 – 1,192.61	1,031.46	1,030.51 – 1,032.40	1.15
90+	957.07	951.45 – 962.70	757.72	755.73 – 759.72	1.26
40+	1,214.37	1,213.53 – 1,215.21	969.83	969.61 – 970.05	1.25
<b>Females</b>					
40–69	670.35	668.09 – 672.62	611.44	611.29 – 611.58	1.10
70–79	867.06	865.91 – 868.21	1,119.16	1,118.69 – 1,119.63	0.77
80–89	829.28	827.83 – 830.73	1,060.29	1,059.65 – 1,060.93	0.78
90+	671.53	668.11 – 674.95	922.53	921.21 – 923.85	0.73
40+	825.96	825.14 – 826.77	1,036.37	1,036.17 – 1,036.56	0.80
<b>Persons</b>					
40–69	956.03	954.26 – 957.79	560.69	560.59 – 560.79	1.71
70–79	1,111.36	1,110.53 – 1,112.19	1,086.44	1,086.09 – 1,086.79	1.02
80–89	1,051.74	1,050.65 – 1,052.82	1,051.39	1,050.86 – 1,051.92	1.00
90+	784.12	781.10 – 787.14	879.75	878.65 – 880.86	0.89
40+	1,067.89	1,067.28 – 1,068.49	1,009.46	1,009.32 – 1,009.61	1.06

(a) Rest of community includes White Card and Orange Card holders.

### 3.3 Hospital services

#### Key findings

- Utilisation of acute hospital services by Gold Card holders is higher than for the rest of the community. Hospital separations per person for 1999–00 show 21% higher use for all Gold Card holders.

- As with LMO and GP services, the utilisation of acute hospital services by Gold Card holders is strongly related to their level of service-related disability. In 1999–00, the hospital separation rate for Gold Card holders aged 40 years and over increased from 0.8 separations per person for those with nil or no disability to 2.4 separations per person for those with an Extreme Disablement Adjustment. The hospital separation rate for those with nil or no service-related disability was similar to the rate for the rest of the community in 1999–00. Those with low disability (5–95% disability pension) had a rate 14% higher. Those with special disability pensions had a rate 62% higher.
- There was generally little difference in the average length of stay spent in hospital per person between Gold Card holders and the rest of the community for the 70 and over age group. However, the average length of stay for Gold Card holders with special disability pensions in 1999–00 was 26% higher than for the rest of the community and for those with extreme adjustment allowance 30% higher.
- Hospital separations can be cost weighted to reflect the relative cost of different hospital procedures undertaken for each separation. A comparison of the resulting DRG cost-weighted separations between Gold Card holders and the rest of the community indicates that there is little difference in the costliness of hospital procedures undertaken for each group although, as for length of stay, as disability levels increase there is some increase in relative complexity and cost.
- The methodology used here aims to estimate the resources required to meet the costs of hospital episodes and associated medical services of veterans and war widow(er)s assuming that the cost per DRG-weighted episode is the same as for the rest of the community, i.e. these methods do not estimate the actual amount paid out for hospital episodes by DVA. There is data to investigate the amount paid out by DRG and age group for veterans and war widow(er)s using private hospitals, and to compare this to other users of private hospitals, but this is an analysis for a later stage.

### **Separations and DRG cost-weighted separations per person, 1999–00**

Only acute hospital separations were analysed in this report so as to make the results more comparable. If we had included non-acute separations such as nursing home type patients (NHTPs) (maintenance patients), and rehabilitative and palliative patients there would have been comparability problems particularly with NHTPs, as it is expected that veterans would have a different pattern of NHTP care use compared to non-veterans. Only if residential aged care was examined in association with NHTP use would it be possible to make a valid comparison.

Gold Card holders at ages 40 and over were admitted to hospitals for acute care at a rate 21% higher than for the rest of the community in 1999–00 (Tables 20 and 21). Male Gold Card holders showed 24% higher rates than the rest of the community for males, with female Gold Card holders only 13% higher than the rest of their community counterparts.

As with LMO and GP services, the utilisation of hospital services by Gold Card holders is strongly related to their level of disability. In 1999-00, the hospital separation rate for Gold Card holders aged 40 years and over increased from 0.8 separations per person for those with nil or no disability to 2.4 separations per person for those with an Extreme Disablement Adjustment. The hospital separation rate for those with nil % or no disability was similar to the rate for the rest of the community in 1999-00, while those with low disability (5-95% disability allowances) had a 14% higher rate than the rest of the community.

The age pattern of hospital separations per person is substantially different between Gold Card holders and the rest of the community for males but not for females (Table 20). The number of hospital separations per male Gold Card holder aged 40 years and over was about one in 1999-00, no matter what their age. In contrast, the number of hospital separations per person for the rest of the community males was only 0.3 visits per person at ages 40-59. This rate increased steadily at each age group but did not reach a rate of one separation per person until the 70-84 years age group.

The number of hospital separations per person for male Gold Card holders aged 40-59 was more than double that of the rest of the community. It should be noted that the hospital separations for male Gold Card holders aged 40-59 is only 5% of total male Gold Card holder separations, and that 80% of these separations are for those with special or extreme disability.

**Table 20: Age-standardised acute hospital separations per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	0.38	0.39 *	0.54 *	0.85 *	..	0.75 *	0.32
60–69	0.61	0.78 *	1.07 *	1.36 *	2.87 *	1.01 *	0.62
70–84	0.87 *	1.07 *	1.53 *	1.54 *	2.99 *	1.19 *	0.99
85+	1.01 *	1.22 *	1.61 *	1.58 *	2.79 *	1.25 *	1.12
40+	0.84 *	1.01 *	1.44 *	1.49 *	2.73 *	1.16 *	0.93
<b>Females</b>							
40–59	0.40 *	0.25	0.40	0.57 *	..	0.42 *	0.34
60–69	0.66 *	0.25 *	0.71	0.50	..	0.66 *	0.54
70–84	0.82 *	0.91 *	1.05 *	1.36 *	2.01 *	0.83 *	0.72
85+	0.85	1.21 *	0.73	0.73	1.48	0.85	0.82
40+	0.79 *	0.84 *	0.99 *	1.24 *	1.75 *	0.80 *	0.71
<b>Persons</b>							
40–59	0.39 *	0.36 *	0.52 *	0.81 *	..	0.69 *	0.32
60–69	0.64	0.48 *	0.87 *	0.88 *	1.27 *	0.82 *	0.58
70–84	0.85 *	1.01	1.36 *	1.48 *	2.63 *	1.06 *	0.89
85+	0.93 *	1.22 *	1.18 *	1.16 *	2.15 *	1.06	0.97
40+	0.82 *	0.96	1.26 *	1.37 *	2.35 *	1.02 *	0.85

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Table 21: Ratio of acute hospital separations per person for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.21	1.22 *	1.71 *	2.70 *	..	2.37 *	1.00
60–69	0.98	1.27 *	1.74 *	2.20 *	4.65 *	1.64 *	1.00
70–84	0.88 *	1.08 *	1.55 *	1.56 *	3.02 *	1.20 *	1.00
85+	0.90 *	1.09 *	1.44 *	1.41 *	2.49 *	1.12 *	1.00
40+	0.90 *	1.09 *	1.55 *	1.59 *	2.93 *	1.24 *	1.00
<b>Females</b>							
40–59	1.19 *	0.74	1.16	1.68 *	..	1.24 *	1.00
60–69	1.22 *	0.45 *	1.31	0.91	..	1.22 *	1.00
70–84	1.14 *	1.27 *	1.47 *	1.90 *	2.81 *	1.16 *	1.00
85+	1.04	1.49 *	0.89	0.90	1.81	1.04	1.00
40+	1.11 *	1.17 *	1.39 *	1.74 *	2.45 *	1.13 *	1.00
<b>Persons</b>							
40–59	1.20 *	1.14 *	1.61 *	2.52 *	..	2.17 *	1.00
60–69	1.11	0.84 *	1.51 *	1.52 *	2.20 *	1.42 *	1.00
70–84	0.96 *	1.13	1.52 *	1.66 *	2.96 *	1.19 *	1.00
85+	0.95 *	1.25 *	1.21 *	1.20 *	2.21 *	1.09 *	1.00
40+	0.97 *	1.14	1.49 *	1.62 *	2.77 *	1.21 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

### Average length of stay in hospital, 1999–00

Gold Card holders on average spend the same time in hospital per admission as the rest of the community of the same age (Tables 22 and 23). Gold Card holders spent an average of 4.6 days in hospital per admission in 1999–00, compared with an average of 4.7 days per admission for the rest of the community. Only the younger age groups showed any difference in average length of stay, with Gold Card holders experiencing 11% (ages 40–59) and 21% (ages 60–69) higher lengths of stay than for the rest of the community.

As expected, the average length of stay increases with increasing disability, though only markedly so for the special disability group (TPI, TTI, BLI and INT recipients), and those with an Extreme Disablement Adjustment. The special disability group

experienced an average length of stay in 1990–00 of 5.9 days per hospital separation (26% higher than the rest of the community), while veterans with an Extreme Disablement Adjustment stayed an average of 6.1 days in hospital per separation (30% higher than the rest of the community).

**Table 22: Age-standardised average length of hospital stay for Gold Card holders and the rest of the community, acute hospital episodes, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	6.1 *	3.4 *	3.0 *	2.9 *	..	3.0 *	2.7
60–69	3.5 *	3.5 *	3.9 *	4.2 *	7.7 *	4.0 *	3.2
70–84	4.1 *	4.0 *	4.3 *	5.2 *	5.3 *	4.4 *	4.4
85+	6.0 *	6.3	6.9 *	7.4 *	7.3 *	6.4	6.5
40+	4.4 *	4.2 *	4.5 *	5.2 *	5.6 *	4.5 *	4.6
<b>Females</b>							
40–59	3.1 *	2.3	1.0	7.4 *	..	3.1 *	2.7
60–69	3.8 *	1.1 *	..	9.0 *	..	3.8 *	3.2
70–84	4.8	5.0	5.2 *	7.2 *	7.7 *	4.8	4.8
85+	7.5	7.7	7.2	9.0	7.3	7.5	7.5
40+	4.8	4.9	5.2 *	7.6 *	7.5 *	4.8	4.8
<b>Persons</b>							
40–59	5.6 *	3.2 *	2.7	3.4 *	..	3.0 *	2.7
60–69	3.6 *	2.8 *	4.3 *	5.7 *	7.7 *	3.9 *	3.2
70–84	4.4 *	4.3 *	4.6	5.8 *	6.0 *	4.5	4.5
85+	6.6 *	7.0	7.0	7.9 *	7.3	6.9	6.9
40+	4.6 *	4.6 *	4.7	5.9 *	6.1 *	4.6 *	4.7

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.



**Table 23: Ratio of average length of hospital stay for Gold Card holders and the rest of the community, acute hospital episodes, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	2.24 *	1.24 *	1.10 *	1.07 *	..	1.10 *	1.00
60–69	1.07 *	1.10 *	1.20 *	1.31 *	2.37 *	1.24 *	1.00
70–84	0.93 *	0.89 *	0.97 *	1.16 *	1.20 *	0.98 *	1.00
85+	0.92 *	0.97	1.06 *	1.13 *	1.12 *	0.99	1.00
40+	0.95 *	0.91 *	0.98 *	1.14 *	1.22 *	0.98 *	1.00
<b>Females</b>							
40–59	1.15 *	0.85	0.38	2.79 *	..	1.17 *	1.00
60–69	1.18 *	0.34 *	.. *	2.83 *	..	1.18 *	1.00
70–84	1.00	1.03	1.09 *	1.50 *	1.61 *	1.00	1.00
85+	1.00	1.03	0.96	1.20	0.97	1.00	1.00
40+	0.99	1.02	1.09 *	1.57 *	1.55 *	0.99	1.00
<b>Persons</b>							
40–59	2.05 *	1.20 *	1.01	1.27 *	..	1.11 *	1.00
60–69	1.13 *	0.89 *	1.35	1.79 *	2.39 *	1.21 *	1.00
70–84	0.96 *	0.94 *	1.01	1.29 *	1.31 *	0.99	1.00
85+	0.96 *	1.01	1.01	1.14 *	1.05	0.99	1.00
40+	0.98 *	0.97 *	1.00	1.26 *	1.30 *	0.98 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

The number of separations tells us about the use of hospitals, but does not tell us about the resource intensity of these separations. Adjusting for complexity using the DRG casemix system tells us about the cost intensity of the use of hospitals by Gold Card holders as compared to the rest of the community.

The average DRG cost weights for Gold Card holders and the rest of the community are very similar (Table 24). This indicates that veterans on average do not experience more or less costly procedures than do the rest of the community. However there is a tendency for the younger veterans and for the higher disability groups to have a more costly mix of hospital services relative to the rest of the community.

The methodology used here aims to estimate the resources required to meet the costs of hospital episodes and associated medical services of veterans and war widow(er)s assuming that the cost per DRG weighted episode is the same as for the rest of the

community, i.e. these methods do not estimate the actual amount paid out for hospital episodes by DVA. While there are data to investigate the amount paid out by DRG and age group for veterans and war widow(er)s using private hospitals, and to compare them with other users of private hospitals, this has been held over to a later stage of analysis.

**Table 24: Age-standardised hospital DRG weights for Gold Card holders and the rest of the community, acute hospital episodes, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.13 *	1.04 *	0.97 *	0.90	..	0.92	0.90
60–69	1.19 *	1.14 *	1.22 *	1.11 *	1.39 *	1.16 *	1.05
70–84	1.22	1.20	1.22	1.34 *	1.27	1.23	1.24
85+	0.72 *	1.44 *	1.44	1.48	1.54	1.42 *	1.53
40+	1.23	1.21	1.23	1.32 *	1.30 *	1.23 *	1.25
<b>Females</b>							
40–59	0.93 *	0.98	0.34 *	1.26 *	..	0.93 *	0.81
60–69	1.10 *	0.80	..	0.80	..	1.10 *	0.95
70–84	1.25	1.24	1.36	1.28	1.38	1.25	1.27
85+	1.55 *	1.44 *	1.84	1.67	1.37	1.56 *	1.65
40+	1.24	1.23	1.37	1.25	1.36	1.24	1.26
<b>Persons</b>							
40–59	1.10 *	1.03 *	0.89	0.94 *	..	0.92 *	0.88
60–69	1.14 *	1.04	1.20 *	1.01	1.39 *	1.13 *	1.00
70–84	1.23	1.21 *	1.26	1.32 *	1.30 *	1.24	1.25
85+	1.45 *	1.44 *	1.56	1.54	1.48 *	1.48 *	1.58
40+	1.25 *	1.23 *	1.28	1.31 *	1.32 *	1.24 *	1.27

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

**Table 25: Ratio of age-standardised hospital DRG weights for Gold Card holders and the rest of the community, by age, Australia, 1999–00**

Age	Gold Card holders					Total	Rest of community <sup>(f)</sup>
	Nil or no disability <sup>(a)</sup>	Low disability <sup>(b)</sup>	Medium disability <sup>(c)</sup>	Special disability <sup>(d)</sup>	Extreme disability <sup>(e)</sup>		
<b>Males</b>							
40–59	1.26 *	1.16 *	1.08 *	1.01	..	1.02	1.00
60–69	1.13 *	1.09 *	1.16 *	1.06 *	1.33 *	1.10 *	1.00
70–84	0.99	0.97	0.99	1.08 *	1.03	0.99	1.00
85+	0.47 *	0.94 *	0.94	0.97	1.01	0.93 *	1.00
40+	0.98	0.97	0.99	1.06 *	1.04 *	0.98 *	1.00
<b>Females</b>							
40–59	1.15 *	1.21	0.42 *	1.57 *	..	1.15 *	1.00
60–69	1.16 *	0.84	..	0.84	..	1.16 *	1.00
70–84	0.98	0.97	1.07	1.00	1.08	0.98	1.00
85+	0.94 *	0.87 *	1.12	1.01	0.83	0.94 *	1.00
40+	0.98	0.98	1.09	0.99	1.07	0.98	1.00
<b>Persons</b>							
40–59	1.25 *	1.17 *	1.01	1.07 *	..	1.04 *	1.00
60–69	1.14 *	1.05	1.21 *	1.01	1.40 *	1.13 *	1.00
70–84	0.99	0.97 *	1.01	1.06 *	1.04 *	0.99	1.00
85+	0.92 *	0.91 *	0.99	0.97	0.94 *	0.93 *	1.00
40+	0.98 *	0.97 *	1.01	1.04 *	1.04 *	0.98 *	1.00

(a) Includes war widow(er)s, non-pensionable incapacity veterans and other Gold Card holders without service-related disability.

(b) Low disability are 5–95% disability pensioners.

(c) Medium disability are 100% disability pensioners.

(d) Special disability include special and intermediate rate disability pensioners—TTI, TPI, BLI and INT.

(e) Extreme disability are pensioners receiving extreme disablement adjustment (EDA).

(f) Rest of community includes White Card holders.

**Notes**

1. .. Denotes not applicable, as there are no veterans or war widow(er)s with these disability allowances in these age groups.

2. \* Denotes significantly different at the 5% level from the rest of community.

## 4 Conclusion

DVA clients are concentrated in the age groups 70 to 84 years. Thus, while DVA manages the health care of veterans across the age spectrum, it is important to note that due to this concentration of Gold Card holders in the 70 years and over age group, small changes here have much greater significance than larger changes in usage for those below age 70.

The health service use of veterans and war widows and widowers is what would be expected of an older population, in that there is much greater use of hospital acute admitted patient services, medical services and pharmaceuticals than by the younger population.

When the health service use of veterans and war widow(er)s is compared to the rest of the community of a similar age, the use by veterans and widow(er)s is higher. Further analysis shows this difference is basically due to service-related disabilities of veterans, and the higher use of health services that is typical of widows.

This conclusion is in line with other studies such as Marshall et al. 1998 which found that: 'Veterans do not demonstrate an excess consumption of health care relative to their community peers when their worse health is taken into account'.

This analysis has only been done for the three areas where comparable data can be obtained at this stage, i.e. hospital acute admitted patient services, GP/LMO attendances and PBS listed pharmaceuticals. Expenditure in these areas is about two-thirds of total DVA health expenditure. The result of no major difference in health service use once allowances are made for service-related disability and widowhood will not necessarily apply for other health services such as aged care homes, allied health professionals, dental services, home care, ambulance services, out-of-hospital specialist services, outpatient services, and accident and emergency services. Analysis in these areas depends on data from other sources such as the ABS National Health Survey.

The cost per LMO service is 12% higher than the cost of GP services provided to the rest of the community. This is due to the prices in the DVA contracts with LMOs being higher than the costs of the GP services used by older patients under Medicare (DVA contracts pay 100% of the Schedule Fee, and the average cost for Medicare GP services received by older patients was 88% of the Schedule Fee in 1999-00). Further research is required to investigate whether the higher price results in higher quality services.

The costs for pharmaceuticals are the same for veterans and war widow(er)s as for the rest of the community.

It is not possible to ascertain at this stage whether the actual cost of hospital services and associated medical services is higher for DVA Gold Card holders than for the rest of the community. There is no significant difference in the case-complexity of the admitted patient services used by the two groups, so there is no reason to expect a cost difference, but given the greater use by veterans and war widow(er)s of private hospitals, there may be a difference.

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# Appendix A Gold Card eligibility

## Criteria

Under the current legislation, the *Veterans' Entitlements Act 1986* (VEA), the following are entitled to a Gold Card.

Veterans of Australia's Defence Force who:

- served in Australia's Defence Force after World War II, who are aged 70 or over and have qualifying service under section 7A of the VEA;
- are World War II veterans who served in Australia's Defence Forces and mariners who served in Australia's merchant navy, between 3 September 1939 and 29 October 1945, who are aged 70 years or over, and have **qualifying service** from that conflict;
- are returned ex-servicewomen of World War II, that is, who served in Australia's Defence Force between 3 September 1939 and 29 October 1945 and who have **qualifying service** from that conflict;
- are ex-prisoners of war;
- receive a disability pension at or above 100% of the general rate;
- receive a disability pension at or above 50% of the general rate plus any amount of service pension;
- receive a disability pension including an additional amount under section 27 of the VEA for specific service-related amputations or blindness in one eye;
- receive a service pension and satisfy the treatment benefits eligibility income and assets test;
- receive a service pension and are permanently blind in both eyes;
- receive a disability pension for pulmonary tuberculosis before 2 November 1978;  
or
- served in World War I;

Certain dependants of veterans of Australia's Defence Forces:

- A war widow or widower in receipt of the war widow(er)'s pension.
- A dependent child of a deceased veteran whose death has been accepted as war-caused, who is under 16 or between the ages of 16 and 25 and undergoing full-time education.
- A child of a deceased veteran whose death was not war-caused and who had operational service, if the child is not being cared for by the remaining parent.

Some veterans of Commonwealth or Allied forces are eligible for a Gold Card if they are:

- a veteran who served with a Commonwealth or allied force during World War II and who was domiciled in Australia immediately prior to enlistment in the Commonwealth or allied force; or
- a mariner who served on a Commonwealth or allied ship during World War II, if they or their dependants were residing in Australia for a least 12 months prior to the commencement of their service on that ship; and
- meet the eligibility criteria for a Gold Card.

## **Qualifying service**

For the first and second world wars, qualifying service is service rendered during the specified period of hostilities for the wars at sea, in the field, or in the air, in naval, military or aerial operations against the enemy in an area or on an aircraft or ship of war, at a time when the person incurred danger from hostile forces of the enemy in that area or on that aircraft or ship.

For post-World War II service, qualifying service has the meaning given under section 7A of the *Veterans' Entitlements Act 1986*. In general terms the person has to have been allotted for duty and served in a specified operational area or have rendered warlike service as part of a specific operation. This includes service in Korea, the Malayan Emergency, the Malay/Thai Border, Vietnam, the Indonesian Confrontation, Ubon, Namibia, the Gulf War, Cambodia, Yugoslavia, Somalia, East Timor or the War on Terrorism.

Declarations of warlike service and allotment are formal processes administered by the Department of Defence and involve the issue of Ministerial Instruments.



# Appendix B Data sources and methods of estimation

This section identifies the data sources and methods of estimation used to calculate utilisation and expenditure for each of the health services examined in this report.

## Population data

Australian population estimates at 31 December have been used to represent the population during each financial year, 1997-98, 1998-99 and 1999-00.

DVA treatment populations of Gold Card and White Card holders at December 1997 and December 1999 were used to represent the average populations of these groups of veterans during 1997-98 and 1999-00. To represent the average populations for 1998-99, the Gold Card and White Card populations were calculated as the average of their respective June 1998 and June 1999 populations. This average was used to allow for the large increase in the Gold Card population in late 1998, due to the extension of the Gold Repatriation Health Card benefits to include all World War II veterans aged 70 years and over with qualifying service regardless of their health care needs.

## Age-standardisation

The standard populations used were the 31 December Gold Card population in each year, 1997-98, 1998-99, 1999-00, for males, females and all persons. The choice of each Gold Card population as the standard allows the actual Gold Card utilisation and expenditure rates to be reported. The rest of community rates are age-standardised to the Gold Card population so that valid comparisons can be made between Gold Card and rest of community estimates.

## Local medical officer and general practitioner (out-of-hospital) medical services

The data on utilisation of, and expenditure on LMO/GP (out-of-hospital) medical services was derived from two main sources.

Data for Gold Card and White Card holders comes from the Department of Veterans' Affairs' Treatment Account System (TAS) for the period 1997-98 to 1999-00. The number of LMO attendances and the fees charged (equal to benefits paid) have been extracted by single-year of age (<40, 40, 41, ..., 94, 95+) and sex.

Data on out-of-hospital GP services for the rest of community were compiled from the Department of Health and Ageing's Medicare 10% patient sample file for the period 1997-98 to 1999-00. Medicare statistics are based on claims processed by the Health Insurance Commission. The statistics have been extrapolated to the full population (estimates multiplied by 10). The Medicare statistics only relate to services rendered on a 'fee-for-service' basis for which Medicare benefits were paid. Excluded are details of services to public patients in hospital, to Department of Veterans' Affairs patients and compensation cases.

Because data on utilisation of, and expenditure on LMO/GP services in Medicare statistics do not include veterans' utilisation and expenditure, White Card holders' utilisation and expenditure was added to Medicare out-of-hospital statistics to derive measures of utilisation and expenditure for the rest of the community. These calculations were done by single year of age and sex. This enabled the comparison of utilisation and expenditure between Gold Card holders and the rest of the community.

Per person utilisation and expenditure rates were calculated by dividing the number of LMO/GP attendances and the expenditure on those attendances by 31 December population at each age for each year, 1997-98, 1998-99, 1999-00. Expenditure per attendance was calculated for each age by dividing expenditure by the number of LMO/GP attendances.

Age-standardised rates for 5 year age groups (<40, 40-44, ..., 80-84, 85+) were calculated using the 31 December Gold Card population for males, females and all persons as the standard population.

95% confidence intervals by 5 year age groups were calculated using the following formula.

$$\text{CI approximation} = \text{age-standardised rate} \pm 1.96 \times \frac{\text{age-standardised rate}}{\sqrt{\text{Number of cases}}}$$

Age-standardised rates were calculated for attendances per person (quantity), expenditure per attendance (price), and expenditure per person.

## Pharmaceuticals

Utilisation and expenditure data for Gold Card holders for 1997-98, 1998-99 and 1999-00 were obtained from records of claims for prescribed medications, held by the Department of Veterans' Affairs under their Repatriation Pharmaceutical Benefits Scheme (RPBS).

For the rest of community, it was hoped that PBS data from the Health Insurance Commission could be used. However, these data are not currently available by age and sex, which are required for comparison with the DVA RPBS data. The only comparable data available by age and sex were those collected from the annual

BEACH (Bettering the Evaluation and Care of Health) surveys of general practice activity in Australia.

These surveys commenced in 1998, and collect a range of data on GP-patient encounters across Australia, including detailed information on prescribed medications. A detailed veteran identifier was collected in the BEACH surveys from April 1998 to March 2000 which enables data to be separately analysed for Gold Card holders and the rest of community.

Comparisons of pharmaceutical usage were restricted to PBS prescribed medications, as expenditure per script data needed to calculate the rest of community expenditure was only available for PBS medications.

Data on Gold Card holder PBS scripts per person and expenditure per person on PBS scripts were directly available from the DVA RPBS database. For the rest of community, however, comparable estimates were derived from BEACH data.

The procedure and rationale used for the derivation of rest of community estimates from BEACH data are as follows:

- A comparison of the number of scripts per LMO/GP consultation between Gold Card holders and the rest of community was obtained from BEACH data for each of the three years available, 1998-99, 1999-00 and 2000-01. It should be noted that scripts refer to scripts written rather than filled, and only relate to scripts written by LMO/GPs. PBS data show that scripts written by specialists make up around 10% of all scripts filled.

The BEACH data reported no significant difference in scripts written for each LMO/GP visit between Gold Card holders and the rest of community, or between males and females. There were differences in these rates between age groups, but these differences were similar among Gold Card holders, and the rest of community, and for males and females (Table B1).

- The BEACH data was adjusted for specialist scripts by increasing the number of scripts per GP/LMO encounter by 10%. The resulting BEACH-derived script per LMO/GP visit rates differed substantially from those calculated from the DVA RPBS data. For male Gold Card holders, the BEACH rates were 10-20% higher than the DVA rates, but around 40-50% higher for female Gold Card holders. Given that the BEACH data refers to written scripts rather than filled scripts, the 10% higher BEACH rates for males is expected. However, the much larger difference among female Gold Card holders is difficult to explain, but consistent with previous reports showing much lower pharmaceutical usage among female Gold Card holders, compared with their male counterparts.

**Table B1: PBS scripts written for Gold Card holders and the rest of the community, Australia, April 1999–March 2000**

PBS scripts per LMO/GP visit					
Age	Gold Card holders	95% confidence interval	Rest of community <sup>(a)</sup>	95% confidence interval	Ratio of Gold Card holders to rest of community
<b>Males</b>					
40–49	2.7	1.6 – 4.0	2.8	2.6 – 3.0	0.97
50–59	3.2	2.2 – 4.2	3.2	2.9 – 3.5	0.99
60–69	3.4	2.7 – 4.3	3.5	3.2 – 3.8	0.99
70–74	3.0	2.5 – 3.6	3.4	3.1 – 3.7	0.88
75–79	3.2	2.9 – 3.7	3.4	3.1 – 3.8	0.95
80–84	3.3	2.8 – 3.8	3.4	3.0 – 3.8	0.97
85–89	3.0	2.4 – 3.8	3.0	2.7 – 3.5	1.00
90+	3.2	1.9 – 4.6	3.0	2.5 – 3.6	1.07
<b>Females</b>					
40–49	3.1	0.0 – 9.5	2.7	2.6 – 2.9	1.13
50–59	2.6	1.3 – 4.0	3.2	2.9 – 3.4	0.81
60–69	3.5	2.7 – 4.5	3.3	3.0 – 3.6	1.06
70–74	3.2	2.7 – 3.9	3.3	3.0 – 3.6	0.97
75–79	3.2	2.8 – 3.8	3.3	3.0 – 3.6	0.98
80–84	3.4	2.8 – 4.1	3.1	2.9 – 3.5	1.08
85–89	2.9	2.2 – 3.7	3.0	2.7 – 3.3	0.97
90+	2.8	1.5 – 4.3	2.8	2.5 – 3.2	1.00

Source: 1999 BEACH survey.

- Based on this analysis, it was assumed that the age pattern of scripts filled per LMO/GP/specialist visit for the rest of the community males was no different to that of male Gold Card holders, as recorded by the DVA RPBS database. It was also assumed that there was no sex difference in the rest of community rates.
- Estimates of scripts per person for the rest of community for 1999–00 were then derived by age group and sex, by multiplying the scripts per LMO/GP/specialist visit by the number of LMO/GP consultations in 1999–00, and dividing by the estimated rest of community population as at 31 December 1999.
- The estimated cost per script for BEACH data for each of the three years 1998–99, 1999–00 and 2000–01, by age group and sex, was derived by attaching a cost to each script written, using data from the Pharmaceutical Benefits Pricing Authority on the average financial year cost for each PBS medication, coded according to the Anatomical Therapeutic Chemical 7-digit classification.
- The resulting annual estimates of cost per script in each age group fluctuated from year to year, largely as a result of variations from year to year in the proportion of high-cost drugs over \$200 per script in the BEACH sample. The

over-\$200 per script drugs were only 0.8% of total scripts but contributed 9.6% of all script expenditure. It was therefore decided to spread the impact of the over-\$200 drugs equally over all age groups. This was done by first calculating for the total rest of community population, the average cost of the over-\$200 drugs in the BEACH sample each year, and the proportion of all scripts in the BEACH sample that were over \$200 in each year. The average cost was then applied to the cost per script excluding over-\$200 scripts for each age group for both sexes, using the proportion calculated for the total population. The effect of this adjustment was to spread the impact of the high-cost drugs equally over all age groups, rather than have one or two age groups distorted by the effect of high-cost prescriptions.

- The estimated expenditure per person on PBS scripts for the rest of community in 1999–00 was then calculated by applying the estimated number of scripts per person in 1999–00 by the estimated cost per script.

## Hospital services

For Gold Card holders, data on hospital utilisation and expenditure for 1999–00 were obtained from two sources:

- records from the Department of Veterans' Affairs of claims by veterans for services provided in private hospitals, separately identified for Gold and White Card holders. These records include number of separations (hospital attendances), number of bed days spent in hospital, and expenditure on hospital services and medical services. DRG (diagnostic related group) cost-weighted separations were also provided. These weighted separations are calculated using the relative cost of each separation, with a higher cost weighting allocated to visits requiring more complex procedures or services.
- data for veterans using public hospitals were obtained from the National Hospital Morbidity Database, maintained at the Australian Institute of Health and Welfare. These data provided number of separations, number of DRG cost-weighted separations and number of bed days spent in hospital. These data were only available for Gold Card and White Card holders combined and did not include expenditure data on hospital and medical services.

Hospital utilisation data for the rest of community for 1999–00 (number of separations, number of bed days and number of DRG cost weighted separations) were derived from the National Hospital Morbidity Database. These data were available for both public and private hospitals.

Three indicators of hospital utilisation and expenditure were derived:

- the number of separations or hospital episodes per person;
- the number of Diagnostic Related Group (DRG) cost-weighted separations per person; and
- the number of patient days spent in hospital per person;

## **Separations per person**

For Gold Card holders, the number of separations was derived from two sources. The DVA claims database provided the number of separations in private hospitals. Gold Card holder separations in public hospitals are not routinely separated by DVA, and so the number of Gold Card holder separations was derived from the National Hospital Morbidity Database. This database contains a DVA client identifier, but does not separately identify Gold Card holders from White Card holders. To estimate Gold Card separations in public hospitals, it was assumed that the ratio of Gold Card separations to White Card separations for public hospital separations was the same as the ratio for private hospital separations (derived from DVA data).

To calculate the number of separations for the rest of the community, the number of separations for Gold Card holders was subtracted from the total number of separations from the National Hospital Morbidity Database.

## **DRG cost weighted separations per person**

DRG cost-weighted separations provide an alternative measure of hospital utilisation, by applying a cost weight to each separation according to its costliness relative to other separations. DRGs are a set of 661 codes applied to patient episodes under the Australian Refined Diagnosis Related Groups (AR-DRGs) classification. Cost weights represent the costliness of each DRG relative to other DRGs. For example, a separation with a cost weight of 3.0 is three times more costly, on average, than a separation with a cost weight of 1.0. Separate cost weights are available for private and public hospitals, to reflect the differences in the range of costs recorded in public and private hospitals.

DRG cost-weighted separations for both Gold Card holders and the rest of the community were calculated by multiplying each separation by the DRG cost-weight, according to the DRG code allocated to each separation. AR-DRG Version 4.1 national cost weights for private hospitals were used to calculate DRG cost-weighted separations for both the Gold Card holders and the rest of the community, for both private and public hospitals, to ensure comparability between these two groups

## **Patient days spent in hospital per person**

Patient days spent in hospital were derived using the same method as for separations. As with separations, patient days spent in hospital are collected on the DVA claims database and the National Hospital Morbidity Database.

# **Appendix C Detailed health care usage and cost tables**

Accompanying tables for this report are published on the Internet at [www.aihw.gov.au](http://www.aihw.gov.au). These tables list the confidence intervals for the data presented in this report and include extra tables for the years 1997-98 and 1998-99.