

# 14 Changes in policy and practice: type 2 diabetes and depression

In this chapter changes in the management of type 2 diabetes and depression between 1998–99 and 2006–07 are investigated, and considered in relation to changes in policy that have occurred during the same period. Analysis of diabetes mellitus was restricted to type 2 diabetes because it forms the vast majority of all diabetes managed in general practice, and it is the diabetes type most often targeted by policy and incentive programs.

## 14.1 Background

Over the past decade there have been numerous measures taken by federal and state governments, general practice divisions and international bodies to improve health care. The importance of these influences should be taken into account when observing changes over time in BEACH. In some cases, changes can be seen to follow policy; in others, policy seems to have no discernible effect on activity. Some changes appear to occur independently and sometimes policy follows general practice trends already taking place.

### General policies and initiatives

There were two initiatives which formed the basis for much of the public health planning that subsequently took place in Australia.

- In 1994, Australian states and territories endorsed the National Health Goals and Targets, which identified cardiovascular health, cancer control, injury prevention and mental health as the four national priority areas.<sup>68</sup>
- By 1996 emphasis had moved to National Health Priority Areas and diabetes mellitus was added as the fifth priority area.<sup>69</sup>

Some of the plans and incentives that followed are noted below.

- Asthma was included among the National Health Priority Areas in 1999, and arthritis/musculoskeletal conditions were added in 2002.<sup>70</sup>
- New Medicare item incentives that became available in 1999 and 2000 aimed to improve the health of at-risk general practice patients. These included annual health checks for people aged 75 years and over (55 years and over for Aboriginal and Torres Strait Islander people), multidisciplinary care plans and case conferences.
- New Medicare items in 2004–2006 were attached to bulk-billing for Commonwealth concession card (for example health care card) holders and patients from certain areas; chronic disease management plans; health checks for Aboriginal and Torres Strait Islander patients, residential aged care facility patients and patients aged 45–49 years.

## 14.2 Type 2 diabetes

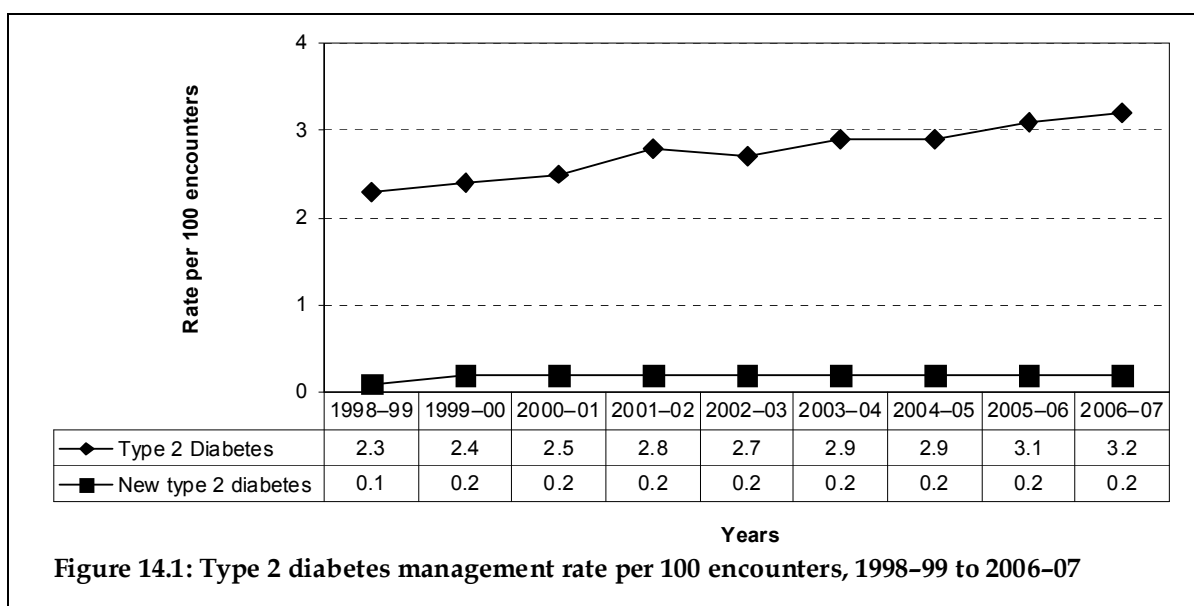
### Specific policies and initiatives

- In June, 2000 the WHO lowered the diagnostic value for fasting plasma/blood glucose concentrations, which had the effect of raising the number of patients diagnosed with diabetes.<sup>71</sup>
- An initiative by the Queensland government, 'Diabetes mellitus 2000–04', was followed by the Federal government's \$76 million program that included incentives to GPs and GP Divisions for programs aiming to improve diabetes care in general practice.<sup>72</sup> During this period, all other states and territories initiated their own diabetes strategic plans.
- In 2001, a Medicare item number for Diabetes Annual Cycle of Care, which also attracted Practice Incentive Program (PIP) points, was introduced.<sup>73</sup>
- In 2004, the multidisciplinary care plan for chronic disease management (1999) was superseded by the Allied Health and Dental Care Initiative, allowing patients with a care plan to access Medicare rebates for five allied health or dental services a year. This led to a doubling in the number of claims for care plan items from the MBS. At the same time the government launched its Action Plan on diabetes. The National Primary Care Collaboratives, a \$14.6 million, 3-year program to help GPs improve patient clinical outcomes, was also launched and the subjects of the program included diabetes.<sup>17</sup>

### Management rate in general practice

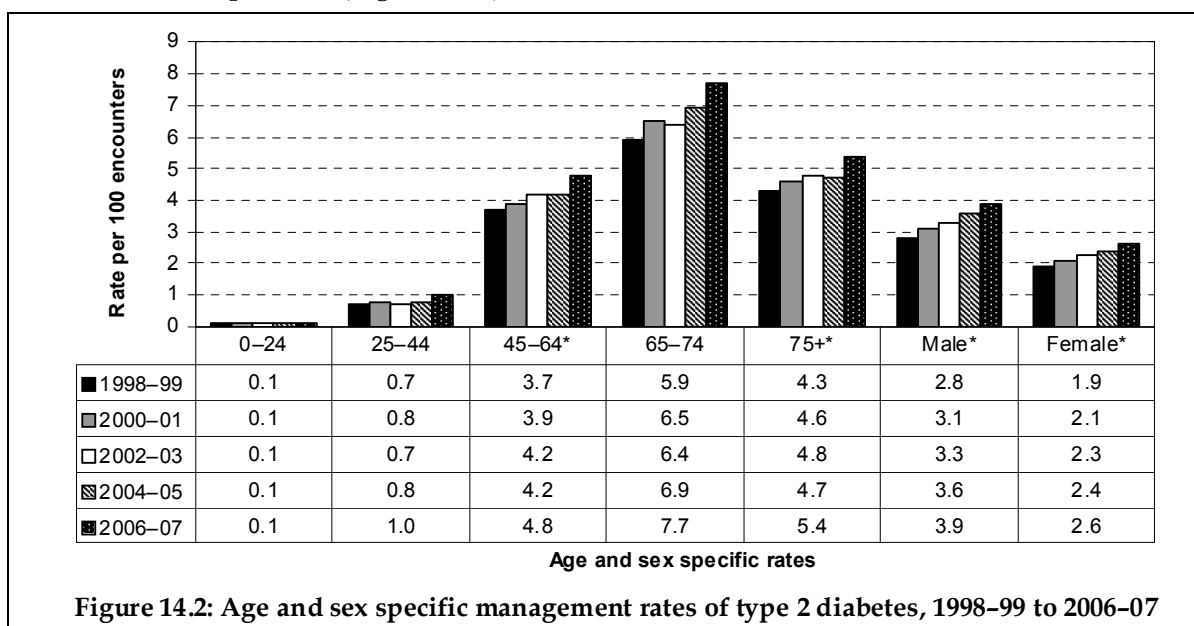
As shown in Figure 14.1, since 1998–99 there has been an almost 40% increase in the management rate of type 2 diabetes in general practice, from 2.3 per 100 encounters in 1998–99 (95% CI: 2.1–2.4) to 3.2 per 100 encounters in 2006–07 (95% CI: 3.0–3.4). There has also been a significant increase in the rate of new diagnoses of type 2 diabetes, from 0.11 per 100 encounters in 1998–99 (95% CI: 0.09–0.14) to 0.18 per 100 encounters in 2006–07 (95% CI: 0.15–0.21).

Policies that may have influenced the increase in type 2 diabetes would be the lowering of the diagnostic value for fasting plasma/blood glucose concentrations in 2000, the National Integrated Diabetes Program and the Annual Cycle of Care initiative of 2001, and two major initiatives in 2004: the government action plan on diabetes and the Australian Primary Care Collaboratives Program.



## The patients

The rate at which type 2 diabetes was managed steadily increased over the study period for patients aged 45 years and older. There was no change for patients younger than 45 years of age. The 40% measured increase in the rate of type 2 diabetes management applied to both male and female patients (Figure 14.2).



\* Indicates a statistically significant change from 1998-99 to 2006-07.

## Medications prescribed, supplied, advised

There was no significant change in total medication rates per 100 type 2 diabetes problems managed between 1998-99 (75.6, 95% CI: 70.5-80.8) and 2006-07 (76.8, 95% CI: 71.9-81.8). The majority of medications recorded for the management of patients' type 2 diabetes were oral blood glucose lowering agents. The second most frequently recorded medication group was insulin. Prescriptions for both oral blood glucose lowering medications and insulin, per

100 type 2 diabetes problems managed, remained relatively constant from 1998–99 to 2006–07. Other medications increased significantly from 7.0 (95% CI: 5.5–8.4) per 100 type 2 diabetes problems managed in 1998–99 to 13.4 (95% CI: 11.5–15.4) in 2006–07 (Figure 14.3).

A breakdown of the changes over time in the ‘other medication’ group is shown in Figure 14.4.

- Rates of anti-thrombotic agents, mainly aspirin antiplatelet therapy, rose significantly in 2004–05, fell back in 2005–06, then showed a significant increase again in 2006–07 compared with rates in the early years of the study.
- The rate of anti-hypertensive prescription/supply for type 2 diabetes increased significantly from 2004–05 onwards compared with the period from 1998–2001. In 1998–99, anti-hypertensives were prescribed at a rate of 1.2 (95% CI: 0.6–1.8) per 100 type 2 diabetes problems managed, while in 2006–07 the rate was 3 times higher, at 3.6 (95% CI 2.8–4.4).
- Lipid lowering agent prescription/supply for type 2 diabetes followed a similar pattern, with a significantly higher rate apparent from 2002–03 onwards. In 1998–99, lipid medication was prescribed at a rate of 0.4 (95% CI: 0.1–0.7) per 100 type 2 diabetes problems managed, while in 2006–07 the rate was 10 times higher, at 4.3 (95% CI 3.4–5.2).
- The miscellaneous group includes blood glucose monitoring agents and influenza vaccine, which together accounted for almost half of this group. Prescription/supply rates did not change over time.

Although the overall prescribing rate for lipid lowering and antithrombotic agents, and some types of antihypertensives, increased significantly in the total BEACH sample, they did not show such a large increase as these results for type 2 diabetes. The increase is probably due to the initiatives encouraging GPs to manage hypertension and hyperlipidaemia at a lower clinical threshold for patients with diabetes<sup>74-76</sup> and to provide antiplatelet therapy for those with added cardiovascular risk.<sup>74,77</sup>

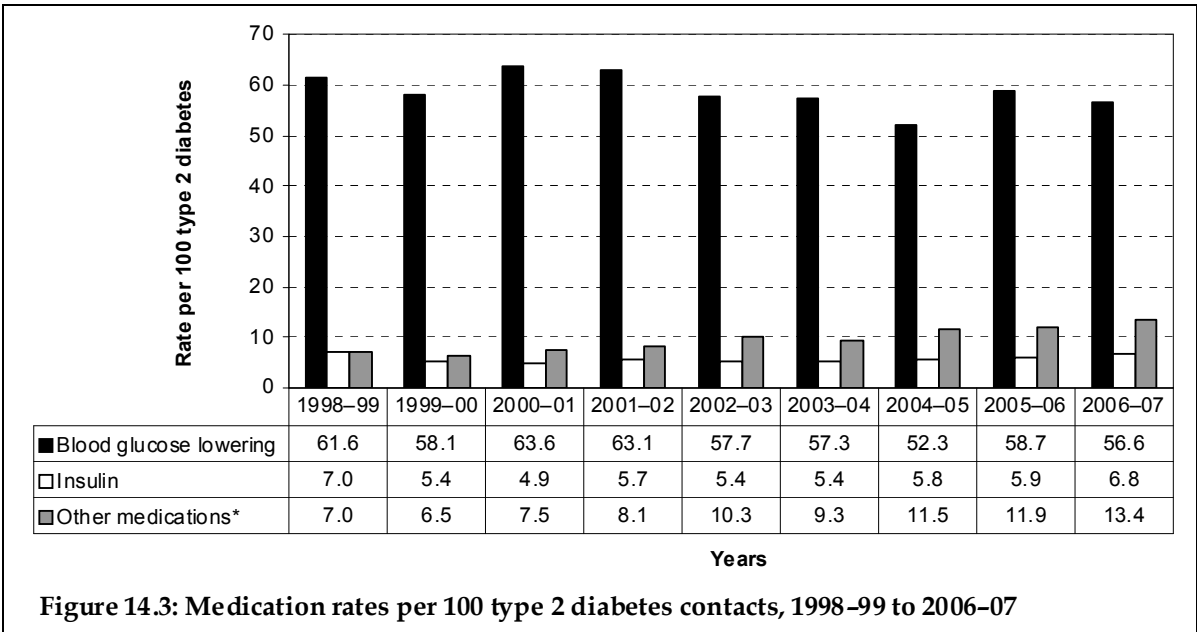
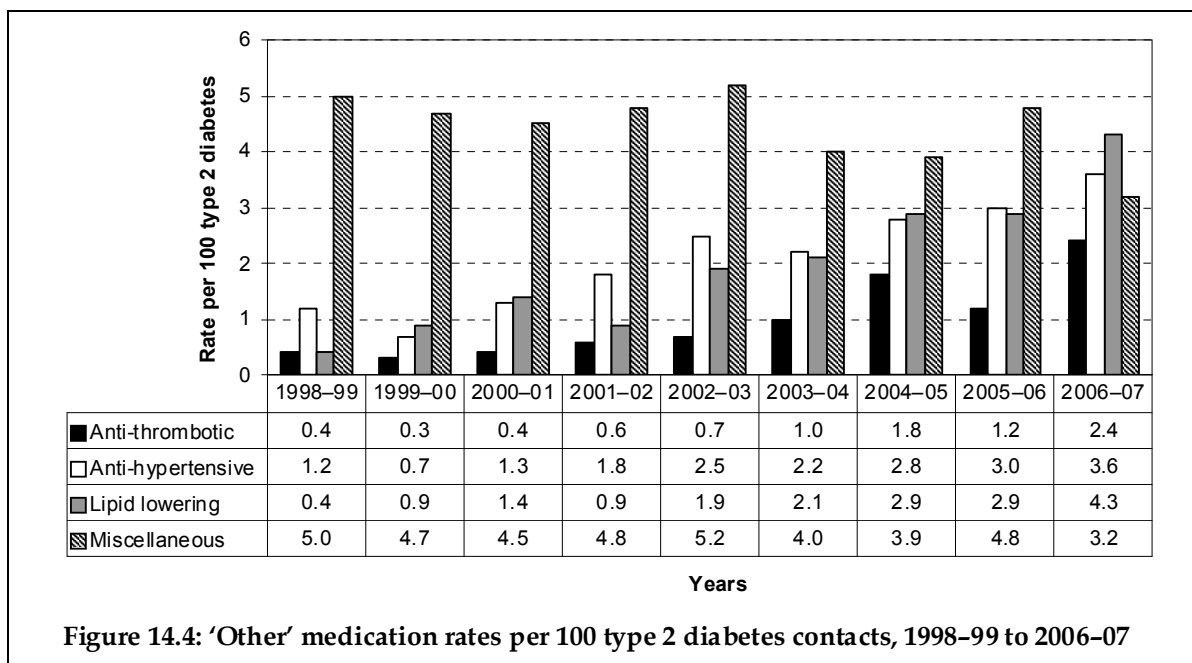


Figure 14.3: Medication rates per 100 type 2 diabetes contacts, 1998–99 to 2006–07

\* Indicates a statistically significant change from 1998–99 to 2006–07.

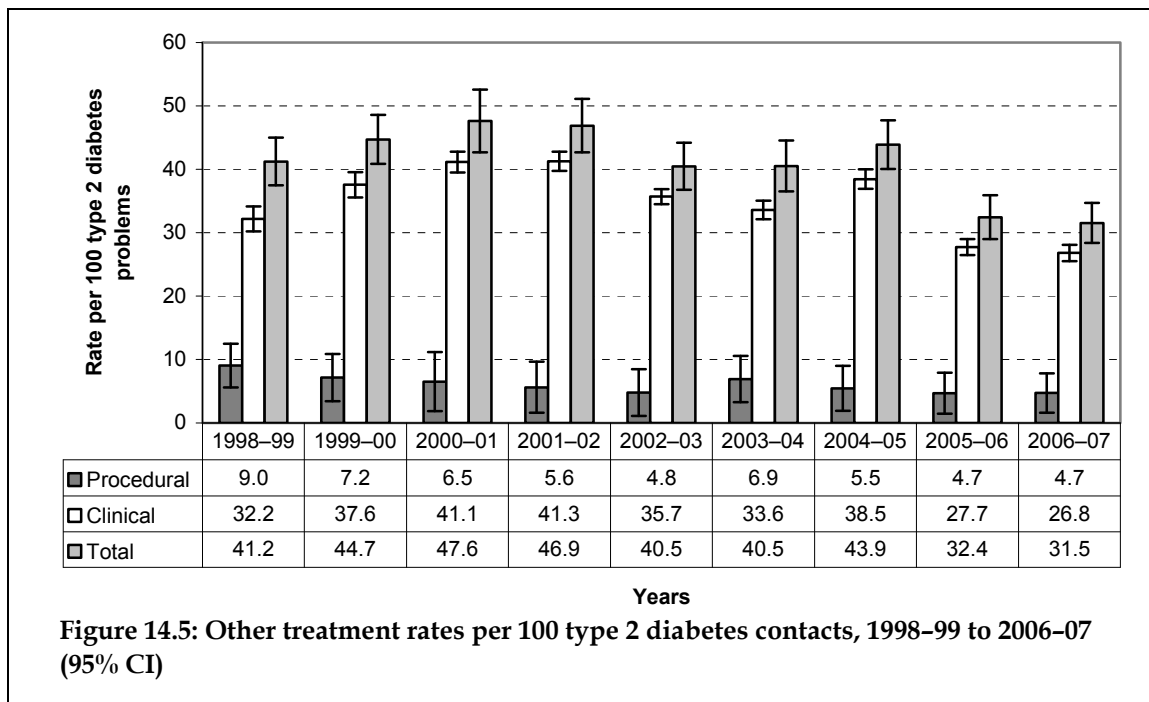


## Other treatments

The rate at which other treatments (including procedures, and clinical treatments such as advice, education and counselling) were recorded for the management of type 2 diabetes remained fairly constant from 1998-99 to 2004-05. Between 2004-05 and 2005-06 the rate dropped significantly from 43.9 (95% CI: 40.1-47.7) per 100 type 2 diabetes problems to 32.4 (95% CI: 29.0-35.9).

- Clinical treatments rose significantly from 32.2 (95% CI: 28.7-35.6) per 100 type 2 diabetes problems managed in 1998-99 to 41.1 (95% CI: 36.5-45.8) in 2000-01, then decreased to 33.6 (95% CI: 30.0-37.2) in 2003-04 and again to 27.7 (95% CI: 24.5-31.0) in 2005-06.
- The rate of procedural treatments for type 2 diabetes decreased from 9.0 in 1998-99 (95% CI: 7.1-11.0) to 4.8 (95% CI: 3.6-5.9) in 2002-03 and then stayed relatively stable (Figure 14.5).

While the sudden decrease in other treatments between 2004-05 and 2005-06 coincided with several new major diabetes initiatives, GPs overall were recording fewer other treatments. The research team believes that the decrease may reflect the increasing use of practice nurses to provide advice and education, and to undertake procedures (such as treating leg ulcers) independent of the GP-patient encounter. This issue is further discussed in Chapter 13.

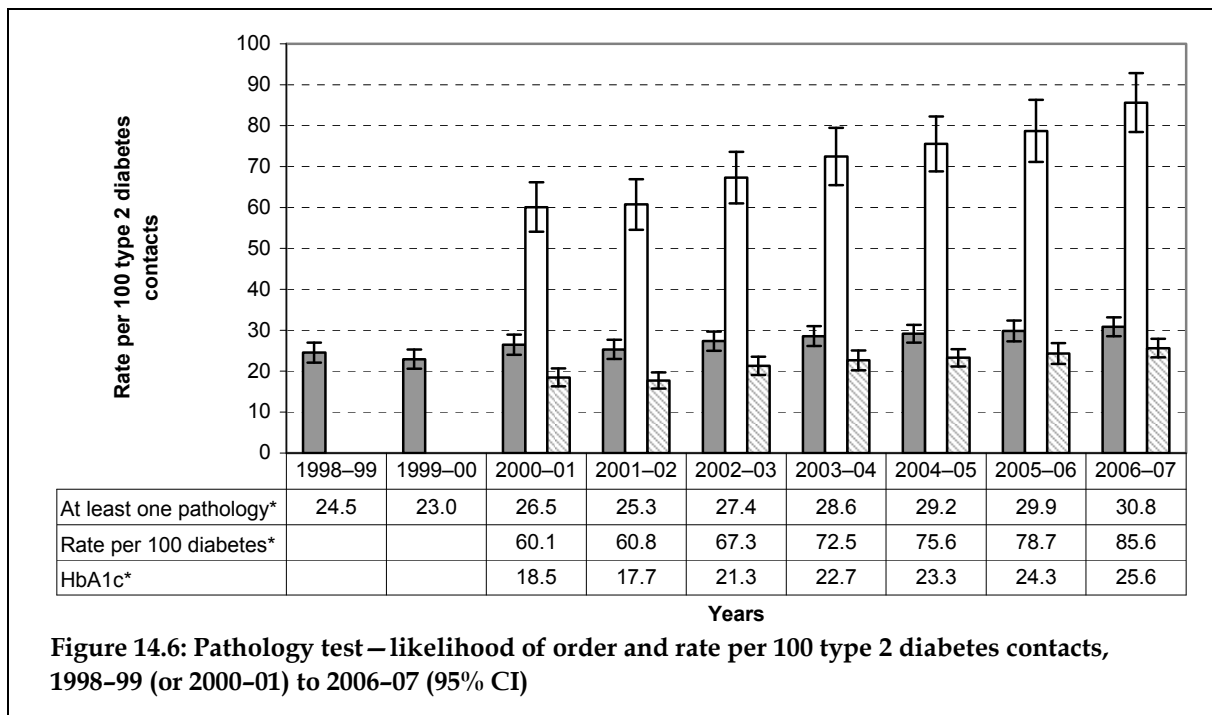


### Pathology test ordering

Between 1998-99 and 2006-07, there was a significant increase in the likelihood of the GP ordering pathology tests for type 2 diabetes. In 1998-99, 24.5% (95% CI: 22.1-27.0) of type 2 diabetes problem contacts generated at least one pathology test order compared with 30.8% (95% CI: 28.6-33.1) in 2006-07.

The number of pathology tests ordered per 100 type 2 diabetes problems managed also increased from 60.1 (95% CI: 54.0-66.1) in 2000-01 to 85.6 (95% CI: 78.4-92.8) per 100 problem contacts in 2006-07. The rate at which HbA1c tests were ordered for type 2 diabetes reflected the change in the overall test order rate, increasing by about 44%, from 17.7 (95% CI: 15.7-19.7) in 2001-02 to 25.6 (95% CI: 23.4-27.9) in 2006-07 (Figure 14.6).

The increase in the likelihood of ordering pathology tests for type 2 diabetes, and in the number of tests ordered on ordering occasions, could both be due to the introduction of the Annual Cycle of Care initiative in 2001, which required GPs to measure diabetes patients' HbA1c, cholesterol, triglycerides and HDL cholesterol levels at least once each year, to be able to claim the incentive.

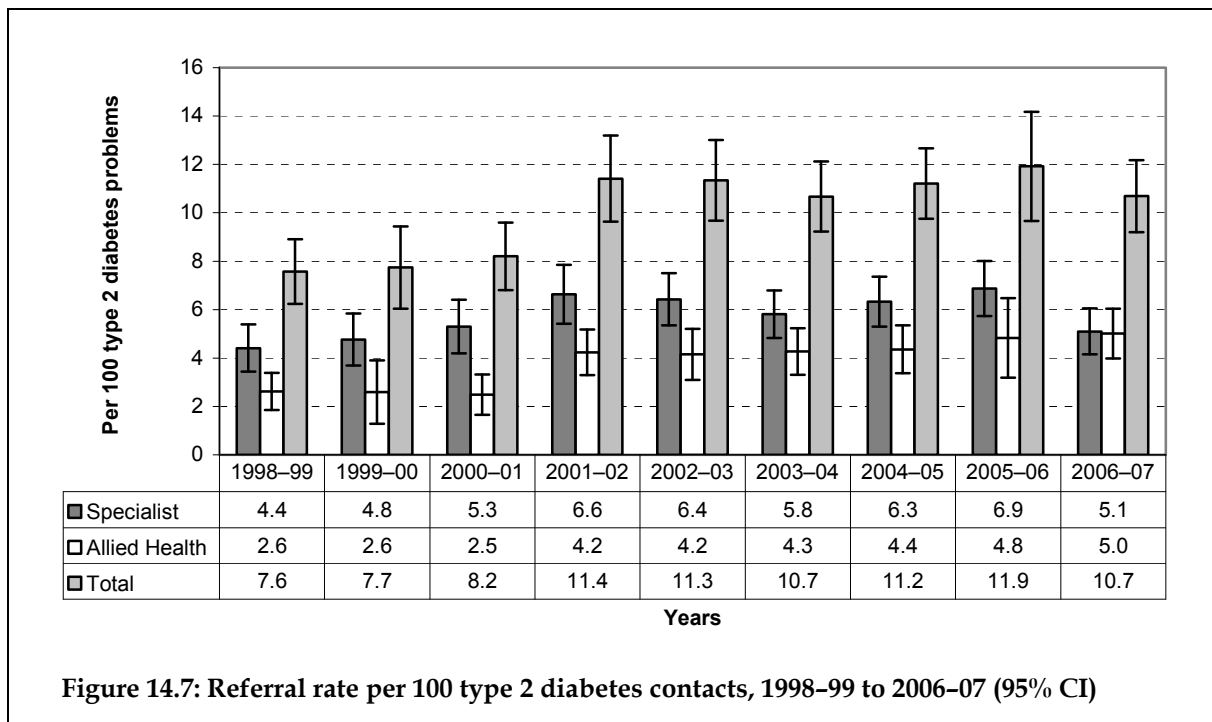


\* Indicates a statistically significant change from 1998-99 (or 2000-01) to 2006-07.

## Referrals

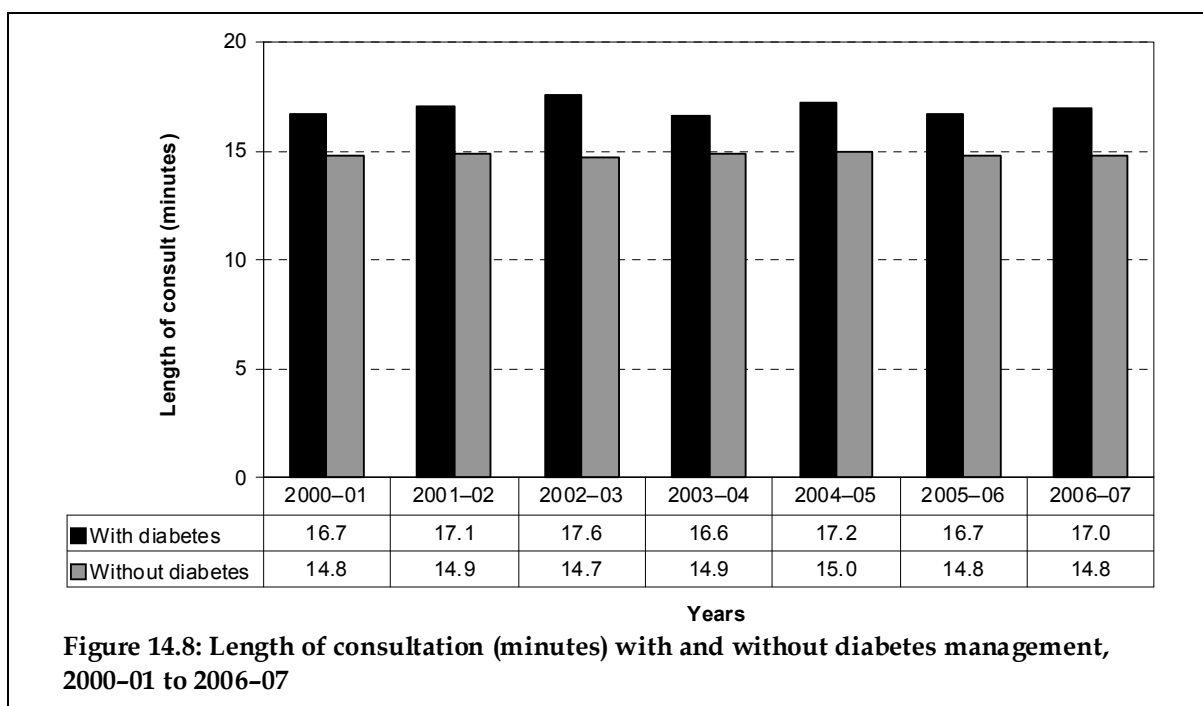
There was a significant increase in the rate at which patients were referred for type 2 diabetes, from 7.6 per 100 (95% CI: 6.2-8.9) in 1998-99 to 10.7 per 100 (95% CI: 9.2-12.2) in 2006-07. The major increase occurred between 2000-01 (8.2, 95% CI: 6.8-9.6) and 2001-02 (11.4, 95% CI: 9.6-13.2). This increase may have been due to the national integrated diabetes program (2001), which encouraged partnerships with other health care professionals and gave support for the divisions of general practice to work with GPs and other health professionals to improve access to better care for people with diabetes. The level has been maintained through subsequent years.

- This pattern of referrals was reflected in changes to referrals to specialists for type 2 diabetes, which increased from 4.4 (95% CI: 3.4-5.4) per 100 type 2 diabetes problems in 1998-99 to 6.6 (95% CI: 5.4-7.8) in 2001-02. The rate did not change significantly between 2001-02 and 2006-07.
- The rate of referrals to allied health professionals nearly doubled from 2.6 (95% CI: 1.8-3.4) per 100 type 2 diabetes problems in 1998-99 to 5.0 (95% CI: 4.0-6.0) per 100 in 2006-07. The increase began in 2001-02, again perhaps in response to the national program (Figure 14.7).



### Length of consultation

Measured length of consultation (recorded finish time minus start time in minutes) was introduced to BEACH in 2000-01 for a subsample of 40% of the GP-patient encounters. In all years (2000-01 to 2006-07) consultations where type 2 diabetes was managed were, on average, significantly longer (by 2 minutes) than encounters where type 2 diabetes was not managed. Between 2000-01 and 2006-07 there was no significant change in the average lengths of consultation for encounters with or without type 2 diabetes (Figure 14.8).





## 14.3 Mental health

### Specific policies and initiatives

- The first National Mental Health Plan was put in place in 1993 to strengthen the mental health system and improve general understanding of mental illness. This was followed by the 1998–2003 Plan. Both plans relied on bilateral funding agreements between the Commonwealth and state and territory governments.<sup>78</sup>
- The National Mental Health Plan 2003–2008 built on the earlier mental health plans and focused on prevention, responsiveness, quality and research, embodying the United Nations' resolution on the protection of rights of people with mental illness.<sup>79</sup>
- Another feature of this emphasis on mental health was the establishment in 2000 of 'beyondblue', an organisation focusing on prevention and treatment of depression. In 2006 it went into its second 5-year phase, with funding of \$36 million from the federal government and a similar contribution from state governments.<sup>80</sup>
- In 2001 government funding of \$120 million in the form of Medicare payments and Practice Incentive Program points was provided over 4 years for Better Outcomes in Mental Health Care (BOIMHC). This initiative had four components relevant to GPs: education and training; access to MBS items for focused psychological strategies; MBS items covering a three-step mental health process; funding to divisions of general practice to operate an access to allied psychological services program.<sup>81</sup>
- The three-step mental health process component was withdrawn in 2007, superseded in 2006 by the GP Mental Health Care Plan as part of the 'Better Access to Psychiatrists, Psychologists and General Practitioners through MBS' initiative, worth \$1.9 billion, to provide Medicare rebates encouraging team-based mental health care.<sup>82</sup> This followed a COAG (Council of Australian Governments) pledge of \$4 billion over 5 years for a National Action Plan on Mental Health.<sup>83</sup>

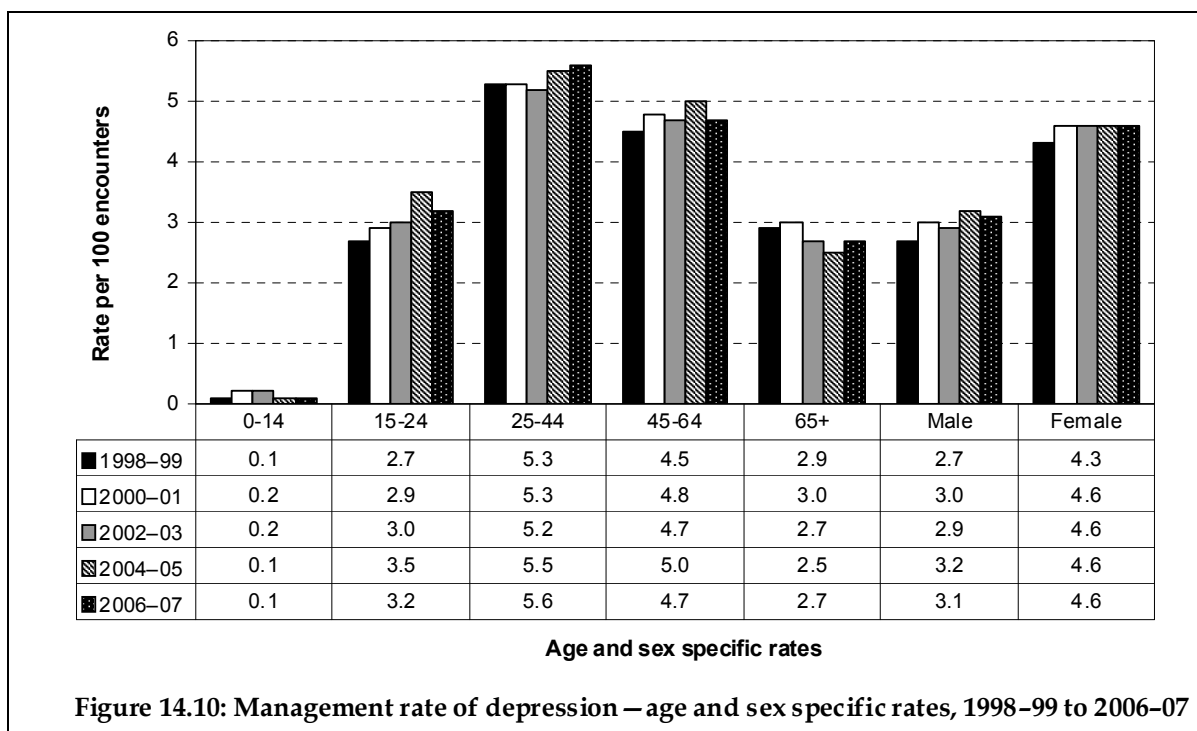
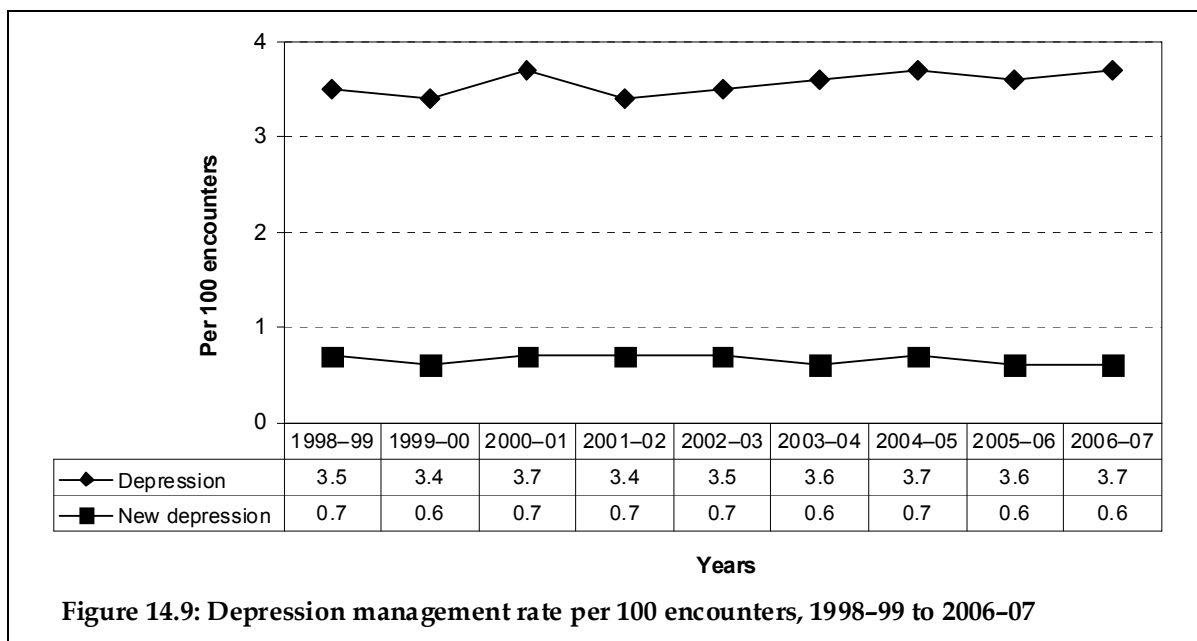
### Management rate in general practice

The research team chose depression as an example of mental health problems for two reasons: it is the most common psychological problem managed, and a number of the initiatives, such as beyondblue, are aimed mainly at depression.

From 1998–99 to 2006–07, the management rate of depression per 100 encounters remained steady. The rate at which new cases of depression were diagnosed also remained stable (Figure 14.9).

### The patients

There was no significant change in the management rate of depression in Australian general practice across all age groups and both sexes between 1998–99 and 2006–07. Patients aged 25–44 and 45–64 were managed for depression at a significantly higher rate than other age groups in all years of the study. Female patients were managed for depression more often than were male patients across all years (Figure 14.10).



### Medications prescribed, supplied, advised

There was no significant change in total medication rates per 100 depression problems managed between 1998-99 and 2006-07. The majority of medications were antidepressants and their rate stayed relatively constant between 1998-99 and 2006-07. The rates of all other medications for depression also remained constant across this period (Figure 14.11).

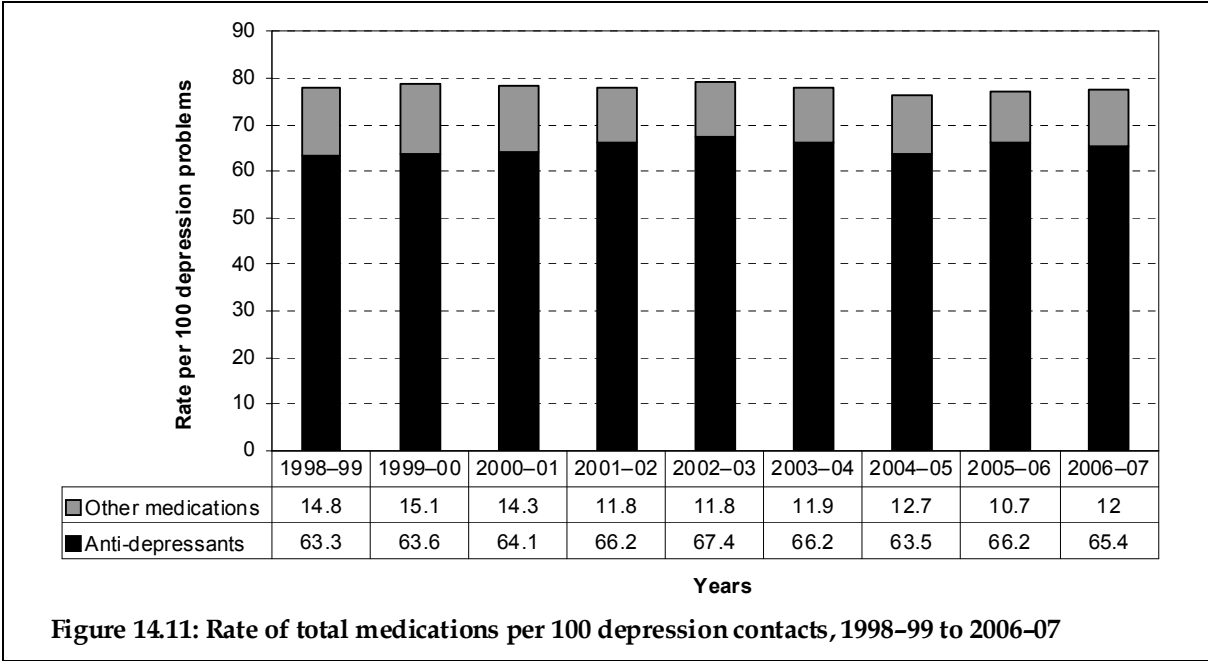


Figure 14.11: Rate of total medications per 100 depression contacts, 1998-99 to 2006-07

It was reported earlier (Chapter 9) that the prescribing rate of psychoanaleptic drugs had increased significantly over time. The majority of psychoanaleptics are antidepressants so it is not surprising that the rate of antidepressant prescriptions increased from 2.1 per 100 problems in 1998-99 (95% CI: 2.0-2.3) to 2.4 per 100 problems in 2006-07 (95% CI: 2.3-2.6). However, the rate of antidepressants prescribed per 100 depression problems during this period remained constant (at about 2 per 100 depression problems). The increase in total antidepressant prescriptions was due to an increase in the rate at which they were prescribed for problems other than depression, from 0.6 per 100 total problems managed (95% CI: 0.6-0.7) to 0.8 per 100 total problems managed (95% CI: 0.7-0.9) (Figure 14.12).

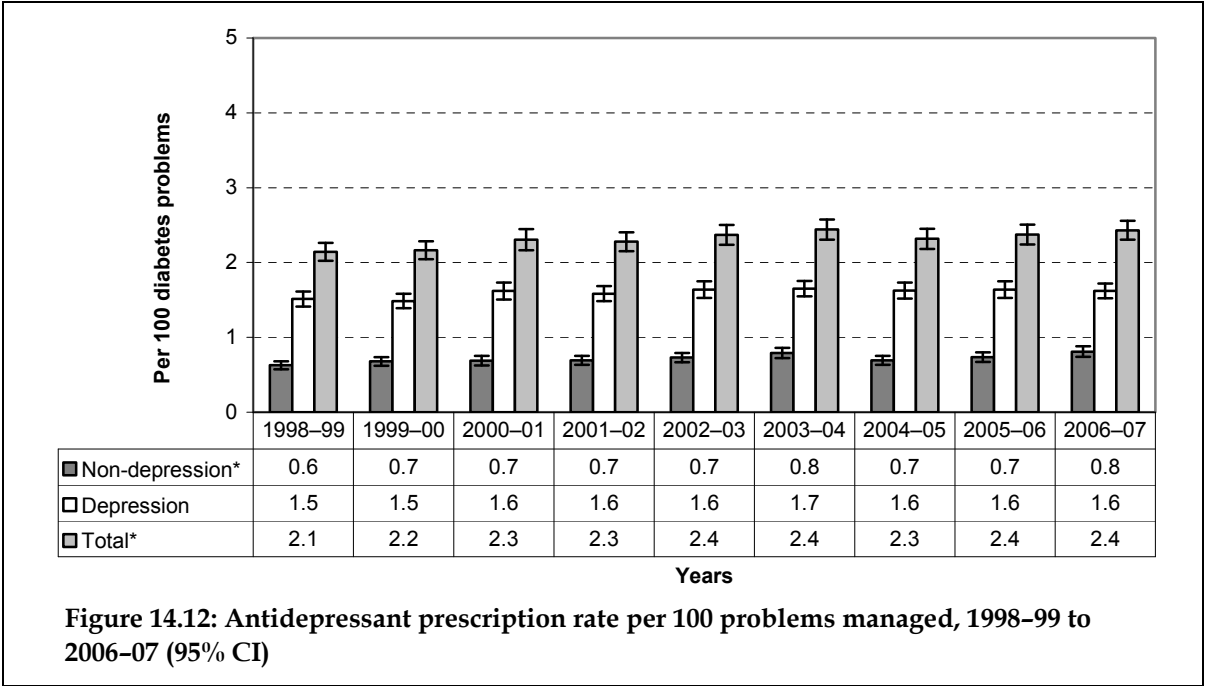


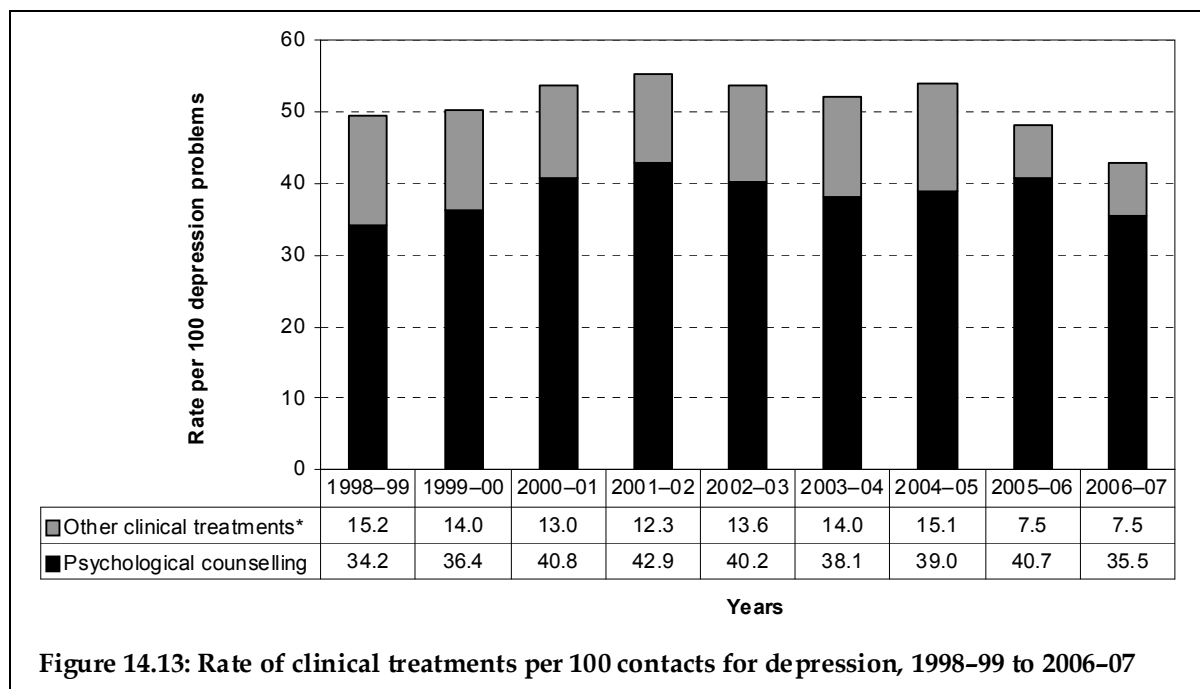
Figure 14.12: Antidepressant prescription rate per 100 problems managed, 1998-99 to 2006-07 (95% CI)

\* Indicates a significant change from 1998-99 to 2006-07.

## Other treatments

Between 1998 and 2007, clinical treatments (such as counselling and advice) accounted for 97.3% to 99.7% of all other treatments for depression. The rates at which clinical treatments were used in the management of depression remained steady between 1998–99 and 2004–05. Rates then decreased significantly from 54.1 per 100 depression contacts (95% CI: 51.1–57.2) in 2004–05 to 43.0 per 100 (95% CI: 40.1–45.9) in 2006–07 (Figure 14.13).

- The majority of clinical treatments were psychological counselling, accounting for 69% to 84% of all clinical treatments provided for depression across the study period. The rate of psychological counselling for depression increased significantly from 34.2 (95% CI: 31.4–37.0) per 100 depression contacts in 1998–99 to 40.8 (95% CI: 37.7–43.9) per 100 in 2000–01, and remained at this level until 2006–07. It then decreased to 35.5 per 100 (95% CI: 32.9–38.2), a change that has not yet reached statistical significance. The significant increase was sustained by the introduction in 2001 of the BOIMHC training for GPs and the three-step mental plan. The sharp decrease coincided with the advent of the Better Access program which encouraged more team-based mental health care (see Referrals below).
- The rate of all other clinical treatments for depression, such as advice and education, stayed relatively constant between 1998–99 and 2004–05 but halved between 2004–05 and 2005–06. This decrease was seen across general practice as a whole and the research team believes that it may be a result of reliance on practice nurses for provision of such advice and education, outside the confines of the GP-patient encounter.



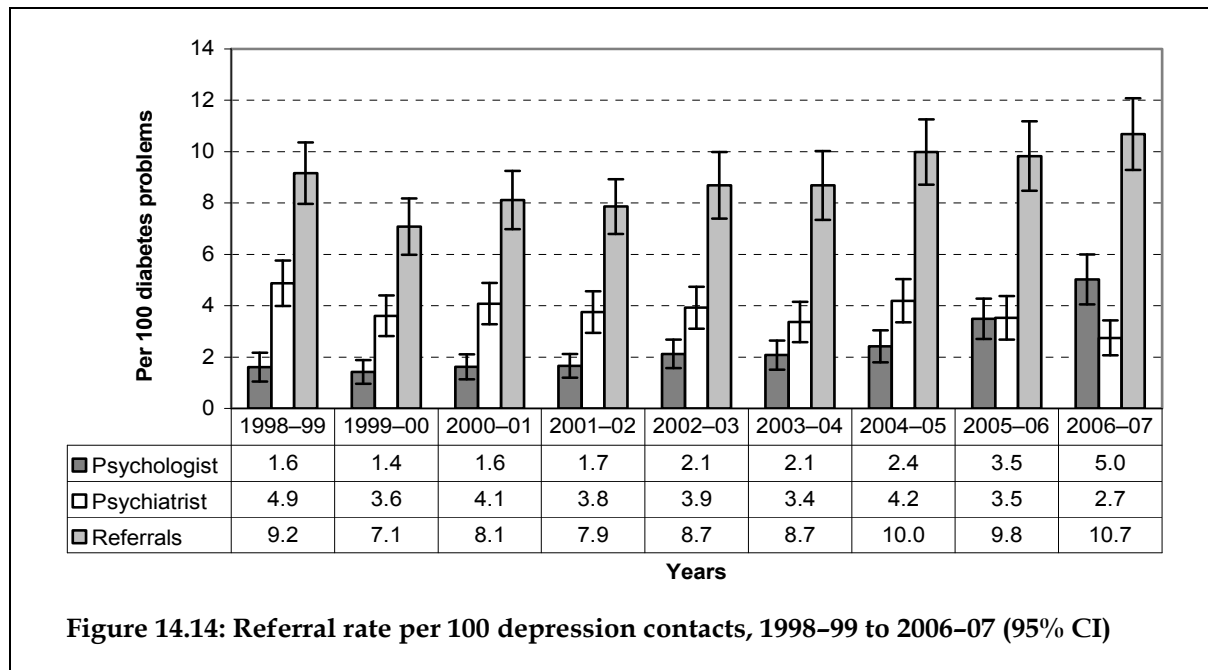
\* Indicates a statistically significant change from 1998–99 to 2006–07.

## Referrals

The rate at which patients were referred for depression steadily increased from 1999–00 to 2006–07, and the pattern of referrals changed markedly (Figure 14.14).

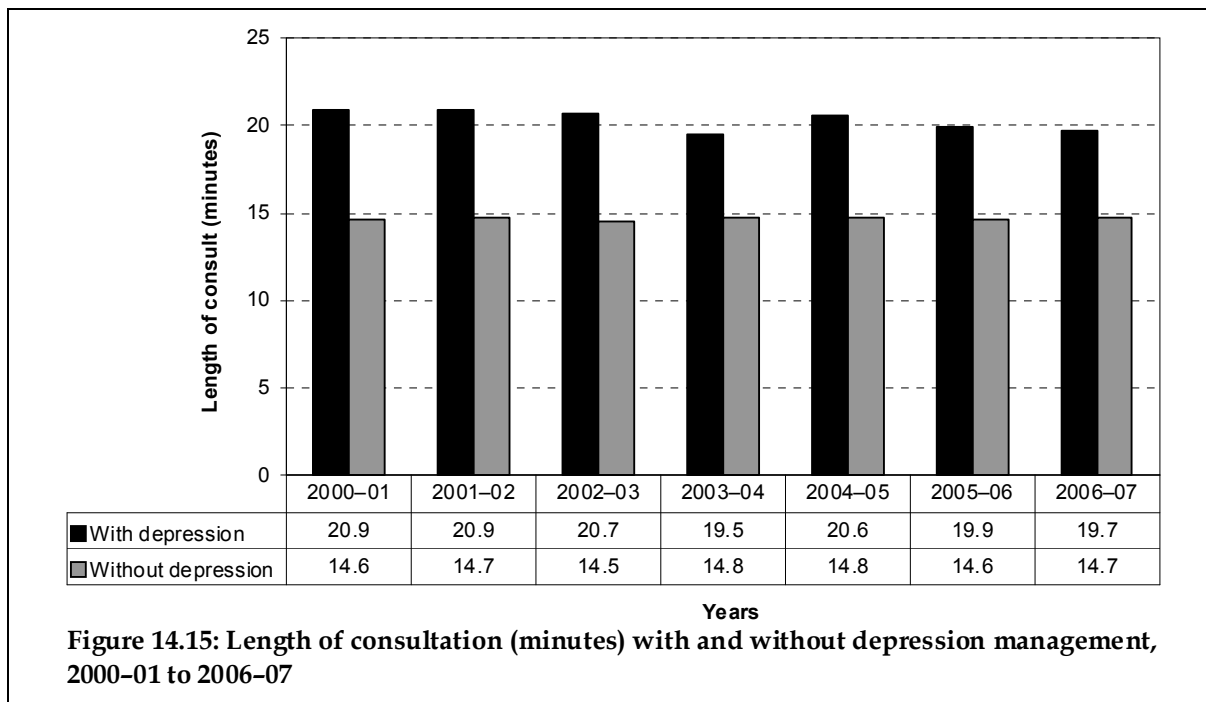
- Referrals for depression to psychiatrists almost halved from 4.9 per 100 depression problems (95% CI: 4.0–5.8) in 1998–99 to 2.7 (95% CI: 2.1–3.4) in 2006–07.
- In contrast, the referral rate for depression to psychologists doubled between 2004–05 (2.4 per 100 depression problems, 95% CI: 1.8–3.0) and 2006–07 (5.0, 95% CI: 4.1–6.0) (Figure 14.14).

The early increase in the rates of referrals to psychologists may be due to the introduction of the access to allied psychological services initiative as part of BOIMHC in 2001. The later increase, probably due to the Better Access initiative of November 2006, is all the more remarkable when one considers that the study period ends in March 2007 and therefore shows only 6 months of data since the initiative was launched.



## Depression—length of consultation

Across all the years of the study, consultations where depression was managed were significantly longer, by 5–6 minutes on average, than those where depression was not managed. Between 2000–01 and 2006–07 there was no significant change in the lengths of consultation where depression was managed or where it was not managed (Figure 14.15).



## 14.4 Discussion

By examining the BEACH data in conjunction with policy changes and the introduction of initiatives, one can see interesting associations between them. Looking at the changes in the rates and management of type 2 diabetes it appears that the initiatives introduced have been associated with desired effects:

- increased identification rate of new cases
- increased management rates in patients aged 45 and over of both sexes
- increased management rates of blood pressure and lipids as part of diabetes management
- increased number of pathology tests
- higher referral rates, suggesting improved patient access to other health professionals, particularly allied health.

The rate of provision of advice and education to patients with diabetes has significantly decreased, perhaps reflecting a greater role for practice nurses in the provision of education on occasions separate from the GP-patient encounter. The higher management rate of diabetes in recent years could also suggest more regular visits to the GP for its management, and this would lead to a decrease in the rate of provision of advice and education relative to the number of visits as it is unlikely to be given at every visit for diabetes.

The programs promoting better management of depression in Australian general practice have not been associated with significant change in either management or treatment, with the exception of a change in referral patterns. Major initiatives introduced between 1998 and 2007 were the beyondblue foundation in 2000, further GP training for the BOIMHC initiative in 2001, the subsequent introduction of the three-step mental care plans and the focused psychological strategies Medicare items in 2002, the implementation of the National Mental Health Plan in 2003, the establishment of the COAG Mental Health Group in each state and

territory in 2006, as well the 'Better Access' initiative in the same year with its new mental health care plan Medicare items.

The 2001 initiatives were designed to create a core of GPs specialising in the management of psychological problems. However, the MBS data show, from the uptake rates of the item numbers, that while MBS items for diabetes management had a high uptake, the item numbers for the BOIMHC were used relatively less often. It can also be seen from this study that the 2001 initiatives were implemented after a significant increase in psychological counselling had already taken place.

In 2005-06 there were 67,204 item numbers claimed under BOIMHC and in 2006-07 there were 59,950. However, as part of the Better Access initiative, there have been claims for 301,076 GP Mental Health Care Plan item numbers in the first 5 months since they were introduced (November 2006 to March 2007). It will be interesting to see if this increase has an association with GP management of depression in the coming years.<sup>26</sup>

Another major difference found over time in the management of depression was the increase in the rate that depressed patients were referred, with a significant shift in referral patterns from psychiatrists to psychologists associated with the introduction of the MBS items for psychologist services. This results shows that patients are getting greater access to psychologists, a focus of the BOIMHC initiative and the continuing focus of the Better Access initiative. The results in this report demonstrate that encounters involving the management of depression are, on average, 5-6 minutes longer than those where it is not managed. The increased referral rate to psychologists may therefore also reflect GP acknowledgement that counselling and therapy are important in the management of depression, but are too time-consuming in the current general practice setting.

It should also be noted that the marked decrease in psychological counselling by GPs in 2006-07, which coincided with the significant increase in referral rates to psychologists, is also derived from only 6 months of data, until March 2007 when this data period ended. The effects of this transfer of care of patients with depression to psychologists could be expected to be far greater in a full year's data.