

11 Summary of results

11.1 RRMA

The differences identified in Chapters 4–10 are summarised below for each RRMA category according to chapter. For more detail, refer to the relevant chapter. Each RRMA category has been compared against the Australian national average. Rates and proportions in each RRMA category that were higher or lower than the national average are reported below. Reported differences were significant ($p < 0.05$) unless otherwise stated.

Capital Cities

The participating GPs

- Capital Cities had the largest percentage of female GPs.
- A smaller proportion of GPs worked in practices that provided their own after-hours patient care.
- A smaller proportion of GPs worked in practices where computers were used for prescribing, medical records or internet/email.

The encounters

- A larger percentage of encounters were claimed as Medicare Benefits Schedule (MBS) items of service.
- Larger proportions of encounters were long surgery consultations and home visits.
- A smaller proportion of encounters were hospital consultations.

The patients

- A larger proportion of patients at encounter were aged 25–44 years and a larger proportion were from a non-English-speaking background.
- A smaller proportion of patients at encounter were aged 65–74 years, a smaller proportion held a Commonwealth concession card or a Repatriation health card and encounters were less likely to be with Indigenous persons.
- Patients described RFEs in terms of symptoms and complaints significantly more often, and presented with fever and with respiratory issues more often, particularly cough, throat complaints and upper respiratory tract infections.
- Patients presented significantly less often with RFEs associated with pregnancy/family planning.

Problems managed

- There was a higher management rate of respiratory problems (particularly URTI), and of discussion of test results.
- There was a lower management rate of pregnancy and family planning problems, solar keratosis/sunburn and malignant skin neoplasms.

Treatments

- The rate of OTC advised medications was higher.
- Clinical treatments were given more often, particularly counselling/advice about nutrition/weight.
- Problems were less likely to be managed with a procedural treatment.

Referrals

- There were no differences in referral rates.

Tests and investigations

- There were lower rates of pathology test ordering and lower percentage of problems for which at least one pathology test was ordered.
- Haematology (particularly full blood count, ESRs) and EUC were ordered at lower rates.

Other Metropolitan Centres

The participating GPs

- There was a smaller proportion of younger GPs (<35 years) and a larger proportion of GPs who have been in practice for more than 20 years.

The encounters

- No differences from the national average were found.

The patients

- Patients were more often new to the practice, and more often holders of a Commonwealth concession card.
- Patients were less often aged between 24 and 45 years, less often from a non-English-speaking background and were rarely Indigenous persons.
- Patients presented significantly less often with a RFE of throat complaints.

Problems managed

- There was a significantly higher management rate of ischaemic heart disease.
- URTI was managed significantly less often.

Treatments

- There was a higher rate of overall medications – particularly prescribed medications.
- The rate of central nervous system medications prescribed/supplied was higher.

Referrals

- There were no differences in referral rates.

Tests and investigations

- There were higher rates of ordering of multi-biochemical analysis and lower ordering of coagulation studies.
- There was a higher overall rate of imaging tests ordered.

Large Rural Centres

The participating GPs

- There was a larger proportion of GPs aged 35–44 years and a larger proportion had been practising for 11–19 years, a larger proportion worked 6–10 sessions per week, a larger proportion were Fellows of the RACGP, and a larger proportion provided their own or cooperative after-hours arrangements.
- There was a smaller proportion of GPs aged 55+ years and a smaller proportion who work 11+ sessions per week.
- There was a larger proportion of GPs in practices using the computer for all five purposes (billing, prescribing, medical records, other administrative procedures, internet and/or email).
- There was a smaller proportion in practices where computers were not used at all.

The encounters

- There was a larger proportion of indirect consultations.
- There was a smaller proportion of direct consultations and consultations that were claimable through Medicare.
- For Medicare claimable items, there was a larger proportion of encounters that were standard surgery consultations.
- There was a smaller proportion of home visits.

The patients

- There was a larger proportion of infants (aged <1 year) and a larger proportion of patients who held a Commonwealth concession card or a Repatriation health card.
- Patients were less often from a non-English-speaking background.
- RFEs were described less often in terms of symptoms and complaints, and fewer RFEs presented that were related to the respiratory system, particularly cough, throat complaints and sneeze/nasal congestion.
- Requests for check-ups and skin RFEs (particularly unspecified skin complaints) were the only RFEs that occurred at a higher rate, and the rate of skin RFEs was the highest of all RRMA categories.

Problems managed

- Large Rural Centres had the highest rate of problems managed at the encounter, with fewer encounters where only one problem was managed.
- There were higher rates of management of skin problems (especially solar keratosis/sunburn and malignant skin neoplasms) and a higher management rate of depression.
- There were lower rates of management of respiratory problems (particularly URTI), lipid disorders and gastroenteritis infections.

Treatments

- The percentage of problems managed with any medication was lower.
- Advised OTC medications were less common.

- Psychological medications were prescribed/supplied more often.
- Procedural treatments were performed more frequently.
- Excision/removal tissue/biopsy/cauterisation were performed more frequently.

Referrals

- There were lower than average rates of total medical specialist referrals, in particular lower referrals to dermatologists, cardiologists and gastroenterologists.

Tests and investigations

- There was a higher overall rate of pathology ordering, a higher percentage of problems with at least one pathology test and a higher ordering rate of tissue pathology.

Small Rural Centres

The participating GPs

- There was a larger proportion of male GPs and the proportion of GPs who had been in practice 5 years or less was twice the national average. A larger proportion of GPs worked 6–10 sessions per week. GPs were more likely to provide their own or cooperative after-hours patient care.
- There was a smaller proportion of GPs aged 55+ years, and a smaller proportion who had been in practice for more than 20 years.
- The proportion of GPs currently in a GP training program was twice the average.
- There was a larger proportion of GPs in practices where computers were used for all five purposes (billing, prescribing, medical records, other administration or internet and/or email).
- A smaller proportion of GPs were in practices where a computer was not used at all.

The encounters

- A smaller proportion of encounters was claimable through a MBS item of service. There was a smaller proportion of long surgery consultations, home visits and consultations at residential aged care facilities.
- There was a larger proportion of encounters claimable as other items of Medicare.

The patients

- The patients were somewhat older – there were fewer children aged 1–4 years and adults of 25–44 years, with a larger proportion of patients aged 65 and over.
- The patients encountered more often held a Commonwealth concession card or a Repatriation health card.
- Encounters were less likely to be with patients from a non-English-speaking background
- The rate of encounters with Indigenous persons was double the national average (2.8% compared with 1.3%).
- Patients presented with fewer RFEs per encounter, more frequently describing only one RFE and less often two or three RFEs.

- RFEs were more often those related to pregnancy/family planning, requests for check-ups, skin complaints and were more often associated with a need for a referral or other service.
- RFEs were less often described in symptomatic terms.
- RFEs were less often associated with the eye, the blood/blood-forming organs, the respiratory system (particularly cough, upper respiratory tract infections, throat complaints, and sneezing/nasal congestion), neurological system (particularly headaches) or digestive system (particularly diarrhoea).

Problems managed

- New problems were managed less often.
- Chronic problems were managed more often.
- The rates of management of pregnancy and family planning (particularly pre/postnatal check-up), heart failure, solar keratosis/sunburn and malignant skin neoplasms were higher than average.
- There were lower management rates of respiratory problems (particularly URTI), and lower management rates of lipid disorders and gastroenteritis infections.

Treatments

- The percentage of problems managed with any medication was lower.
- Advised OTC medications were less common.
- The rate of skin medications prescribed or supplied was lower.
- Total other treatments were performed less frequently overall.
- Clinical treatments were provided less often, particularly advice/education on treatment of the problem and counselling/advice on nutrition/weight.
- Sickness certificates were provided less often.

Referrals

- Rates of referrals to a surgeon were higher, while referrals to a dermatologist or gastroenterologist were lower.
- There was a higher rate of total referrals to allied health professionals.

Tests and investigations

- There was a higher overall rate of pathology test ordering and higher ordering rate of EUC and haematology (particularly full blood counts).
- There was a higher overall rate of ordering of imaging tests and higher ordering of ultrasound (particularly obstetric ultrasound).

Other Rural Areas

The participating GPs

- There was a larger proportion of male GPs, the proportion of GPs in practice for less than 2 years was three times the average and there was a larger proportion of GPs who worked 6–10 sessions per week.

- A larger proportion of GPs were currently undertaking vocational training and a much larger proportion of GPs provided their own or cooperative after-hours patient care.
- A smaller percentage of GPs worked less than 6 sessions per week.
- There was a larger proportion of GPs in practices where computers were used for billing, prescribing, medical records, other administrative purposes or internet and/or email and the practices were more likely to use the computer for all five purposes than to use them for selected purposes.

The encounters

- There was a smaller proportion of direct consultations, home visits and consultations at residential aged care facilities.
- There was a larger proportion of indirect consultations, hospital consultations and consultations where other Medicare items were claimable.
- For Medicare claimable items, there was a larger proportion of short surgery consultations, and a smaller proportion of long surgery consultations.

The patients

- Males accounted for a significantly larger than average proportion of patients encountered and patients were older, with a larger proportion of patients aged 45 years and above.
- Patients more often held a Commonwealth concession card or a Repatriation health card and there was almost double the average proportion of encounters with Indigenous persons.
- Patients were less often new to the practice and less often from a non-English-speaking background.
- Overall there were fewer RFEs given at the encounter, and a larger proportion of encounters for which only one RFE was given by the patient.
- RFEs related to the need for medications, treatments and therapeutics, and those associated with referrals, occurred at a significantly higher rate.
- RFEs associated with the skin and with pregnancy/family planning (except oral contraception) were presented at significantly higher rates, as were presentations for diabetes and requests for check-ups.
- RFEs described in terms of symptoms and complaints and requests for results were presented at a significantly lower rate.
- RFEs presented less often included rash, fever, headache and weakness/tiredness, and those associated with the respiratory system (particularly cough, throat complaints, sneezing/nasal congestion, upper respiratory tract infections), psychological issues (particularly sleep disturbance and anxiety), those related to the female genital system, and the digestive system (diarrhoea and vomiting).

Problems managed

- New problems and problems described in terms of symptoms were managed less often.
- Chronic problems were managed more often.
- Higher management rates occurred for musculoskeletal problems (especially fracture), circulatory problems (especially hypertension and ischaemic heart disease), pregnancy

and family planning (particularly pre/postnatal check-up), heart failure, oesophageal disease, solar keratosis/sunburn and malignant neoplasms.

- There were lower rates of respiratory problems (especially URTI), gastroenteritis infections and oral contraception.

Treatments

- Advised OTC medications were less common.
- The prescription/supply rates of cardiovascular medications, central nervous system medications, urogenital medications, hormones and musculoskeletal medications were higher.
- The prescription/supply rates of allergy/immune system medications, topical ear and nose products, skin medications and medications for nutrition/metabolism were lower.
- Total other treatments were performed less frequently overall.
- Clinical treatments were provided less often, particularly general advice and education, and advice about treatment, counselling about nutrition/weight and psychological counselling.
- Sickness certificates were provided less often.
- Procedural treatments were performed more often, in particular excision/removal tissue/biopsy/cauterisation and repair/fixation of suture/cast/prosthetic device.

Referrals

- The total rate of referral to medical specialists was lower than average, with fewer referrals to a dermatologist, gastroenterologist or psychiatrist.
- There were more referrals to a surgeon and more referrals to a dietitian/nutritionist.
- There was a higher than average rate of referral/admission to hospital, but a lower rate of referral to accident & emergency departments.

Tests and investigations

- Order rates of pathology tests were higher overall and there was a higher percentage of problems with at least one pathology test ordered.
- There were higher ordering rates of chemistry tests (particularly EUC, HbA1c) and haematology tests (particularly FBCs, ESR, coagulation studies) and tissue pathology.
- There was a higher percentage of problems for which one imaging test was ordered and higher order rates for chest X-ray and obstetric ultrasound.

Remote Centres

The participating GPs

- There was a larger proportion of younger GPs aged less than 45 years, GPs were more likely to have practised for less than 10 years, and a larger proportion were currently undertaking vocational training.
- There was a much larger proportion of GPs who provided their own or cooperative after-hours patient care, and a larger proportion of GPs who worked 6–10 sessions or 11+ sessions per week.

- All GPs were in practices that had computers available and a larger proportion were in practices where computers were used for billing or other administrative purposes.

The encounters

- There was a smaller proportion of home visits.
- There was a larger proportion of consultations claimable as other Medicare items.

The patients

- The patients were somewhat younger, with a larger proportion of encounters with infants and a larger proportion with patients in the 25–44 years age group.
- New patients were encountered at twice the average rate and Indigenous patients were encountered at 10 times the average rate.
- Patients were less likely to hold a Commonwealth concession card and patients from a non-English-speaking background were encountered at half the average rate.
- Patients described RFEs related to pregnancy/family planning at almost double the average rate, the highest rate in the country.
- Patients described RFEs related to respiratory and circulatory systems less often, and presented for immunisation or vaccination at one-third the average rate, the lowest for all RRMA categories.
- The rate of presentation for diabetes as an RFE was the highest all RRMA categories, but this was not significant, perhaps due to the smaller sample size from Remote Centres.

Problems managed

- Fewer chronic problems were managed compared with the national average.
- There were higher management rates of ear problems (particularly acute otitis media/myringitis and otitis externa), pregnancy and family planning issues, problems related to the male genital system and general check-ups.
- Management rates were lower than average for respiratory problems (especially URTI), circulatory problems (including hypertension and ischaemic heart disease), immunisation/vaccination, viral disease, lipid disorders, menopausal symptoms and female genital check-ups.

Treatments

- Advised OTC medications were less common.
- Antibiotics were prescribed/supplied at a significantly higher rate.
- Rates of prescription/supply of cardiovascular and allergy/immune system medications were lower.
- The recording of observe/wait as a clinical treatment was lower.
- Physical medicine/rehabilitation was less common.
- Other (unspecified) therapeutic procedures and surgery were performed less often.

Referrals

- The rates of referrals to a dermatologist, gastroenterologist or urologist were lower.
- There was a higher than average rate of referral to allied health professionals.

Tests and investigations

- The rate of pathology ordering was the highest of all RRMA categories, including a higher percentage of problems with at least one pathology order.
- The order rates of chemistry tests, haematology (especially full blood count) and microbiology were all higher than average.
- The overall order rate of imaging tests was higher and there was a higher percentage of problems with at least one imaging order.
- There were higher order rates of chest X-rays and ultrasound tests (particularly obstetric ultrasound).

Other Remote Areas

The participating GPs

- There was a larger proportion of GPs who were aged <35 years, a larger proportion of those aged 55+ years and a larger proportion of GPs who had practised for 5 years or less.
- There was a smaller proportion of GPs who worked less than 6 sessions per week.
- There was a much larger proportion of GPs who provided their own or cooperative after-hours patient care.
- The proportion of GPs who were in a vocational training program was three times the average and a larger proportion of GPs held Fellowship of the RACGP.
- There was a much smaller proportion of GPs in practices where computers were used for billing purposes.
- These GPs were in practices that were less likely to use computers for all purposes.

The encounters

- There was a larger proportion of consultations that resulted in no charge, and a larger proportion that were claimable as other Medicare items.
- There was a smaller proportion of consultations that took place at a residential aged care facility.

The patients

- There was a higher than average percentage of encounters with male patients.
- The patients were younger, with a larger proportion of children aged 1–14 years, and a larger proportion of encounters with patients aged 25–44 years.
- The patients encountered less often held a Repatriation health card.
- Encounters with Indigenous patients occurred at 14 times the national average.
- Overall there were fewer RFEs given at the encounter.
- RFEs related to pregnancy/family planning were described at higher rates, and contraception (other than oral) was described as an RFE at twice the average rate.
- Undifferentiated chest pain presented at almost twice the national average, and at the highest rate of all RRMA categories.
- RFEs of a psychological nature (particularly depression), those associated with the female genital system and the respiratory system (particularly throat complaints, upper

respiratory tract infections and sneeze/nasal congestion), requests for immunisation/vaccination and for tests results each occurred at the lowest rate of all RRMA categories.

- Patients presented about their diabetes at a rate which was the highest of all RRMA categories, but this did not prove significant, possibly due to the smaller sample of encounters from Other Remote Areas.

Problems managed

- The percentage encounters involving only one problem managed was higher than average.
- There were higher management rates of skin problems, pregnancy and family planning issues, eye problems, diabetes, general check-up and fracture.
- There were lower management rates of respiratory problems (especially URTI), problems of a general or unspecified nature (especially non-specified viral disease), psychological problems (especially anxiety), problems related to the female genital system (especially Pap smear and menopausal complaints), test results, immunisation/vaccination and contact/allergic dermatitis.

Treatments

- Advised OTC medications were less common.
- The rate of medications supplied by the GP was higher.
- The prescription/supply rates of antibiotics, musculoskeletal medications, hormones and eye medications were higher.
- The prescription/supply rates of psychological medications and allergy/immune system medications were lower.
- Sickness certificates were provided less often.
- Procedural treatments were performed more often, particularly repair/fixation of suture/cast/prosthetic device.

Referrals

- Total allied health referrals did not differ from the national average; however, referrals to a dentist were higher than average.
- There was a higher than average rate of referral to hospital.

Tests and investigations

- The overall rate of pathology ordering was higher, including a higher percentage of problems with at least one pathology order.
- Order rates of HbA1c and microbiology were higher.
- The order rate for chest X-rays was higher.

11.2 ASGC Remoteness

Further differences across the ASGC Remoteness Structure are reported below, summarised according to chapter headings. ASGC categories form an ordinal scale of remoteness, therefore, the summary emphasises trends with increasing remoteness rather than describing each category alone.

The participating GPs

- Major cities had a much smaller proportion of GPs who provide their own after-hours arrangement, or in cooperation with other practices, compared with the rest of Australia.
- Outer Regional Australia had the smallest proportion of female GPs.

Trends with increasing remoteness included:

- an increase in the proportion of GPs who were aged less than 35 years
- an increase in the proportion of GPs who had worked in general practice for less than 6 years
- an increase in the proportion of GPs who were in a vocational training program or who were RACGP Fellows.

The encounters

- Inner and Outer Regional Australia had more short surgery consultations, fewer long surgery consultations and fewer home visits compared with the rest of Australia.
- Inner Regional Australia had more indirect consultations, more problems managed but fewer medications prescribed/supplied or advised at the encounter compared with the rest of Australia.

Trends with increasing remoteness included:

- an increase in hospital visits across Inner Regional, Outer Regional and Remote Australia, but no hospital visits were recorded for Very Remote Australia
- a decrease in encounters at aged care facilities
- a general increase in consultations with no charge or paid by methods other than MBS item claims.

The patients

- The patients encountered in Inner Regional Australia were older than average, less often new to the practice, more often holding a Commonwealth health card or Repatriation health card, and were much less often from a non-English-speaking background than average.
- Very Remote Australia had the highest proportion of patients who spoke a language other than English (although not statistically significant due perhaps to the sample size).

Trends with increasing remoteness included:

- an increase in the proportion of encounters with males across Outer Regional, Remote and Very Remote Australia
- a decrease in the age of patients at encounter across Outer Regional, Remote and Very Remote Australia
- a marked increase in the proportion of encounters with Indigenous patients
- a decrease in the proportion of patients who held a Repatriation health card

- an increase in the proportion of encounters with only one RFE
- a decreasing trend in test results given as RFEs
- an increasing trend in diabetes RFEs
- a decreasing trend in neurological RFEs
- a marked increase in the rate of RFEs for pregnancy and family planning (but a slight decrease in Very Remote Australia relative to Remote Australia)
- RFEs related to the eye were lowest in Inner Regional Australia but increased with increasing remoteness across Outer Regional, Remote and Very Remote Australia.

Problems managed

- The management rate of eye problems, diabetes and general check-up increased linearly with increasing remoteness.
- The management of total psychological problems decreased with increasing remoteness.
- The management of respiratory problems decreased across Inner Regional, Outer Regional and Remote Australia, with a slight increase in Very Remote Australia.
- Skin problems were managed at significantly higher rates than the national average in Inner Regional, Outer Regional and Remote Australia, but not in Very Remote Australia.
- Inner Regional Australia was distinct from either Major Cities or Outer Regional Australia in terms of the higher management rates of chronic conditions, including depression, back complaint, all arthritis, oesophageal disease, and circulatory problems.
- Urological problems were managed significantly more often than average in Very Remote Australia.

Treatments

- Inner Regional Australia was distinct from the rest of Australia with lower rates of antibiotics, respiratory, skin and topical ear/nose medications prescribed or supplied. Inner Regional Australia had the highest rate of psychological medications prescribed or supplied.
- There was a decreasing trend in psychological medications prescribed or supplied with increasing remoteness across Outer Regional, Remote and Very Remote Australia.
- The prescribing or supply of musculoskeletal and hormonal medications increased with increasing remoteness. Forty per cent of hormone medications were hypoglycaemics, reflecting the increased management of diabetes with increasing remoteness reported in Chapter 7.
- Allergy/immune system medications (including childhood vaccinations and influenza vaccinations) decreased with remoteness.
- GP-supplied medication rates were higher in Remote and Very Remote Australia.
- Antibiotics and eye medication prescribing was highest in Very Remote Australia.
- There was a trend towards more procedural treatments with increasing remoteness.
- There was a decreasing trend in the provision of sickness certificates with increasing remoteness.
- There was an increasing trend in smoking advice with increasing remoteness.
- Excision procedures were undertaken at a higher than average rate in Inner Regional, Outer Regional and Remote Australia.

- Psychological counselling was lowest in Outer Regional Australia.
- Advice about medication was lowest in Very Remote Australia.

Referrals

- Total referral rates increased with increasing remoteness.
- Referral rates to hospital increased with increasing remoteness.
- Referral rates to surgeons were higher outside the Major Cities.

Tests and investigations

- Total pathology test order rates increased with increasing remoteness.
- There was an increase in order rates for chemistry tests with increasing remoteness, particularly EUC, liver function and HbA1c tests.
- Order rates for haematology were generally higher outside the Major Cities.
- Order rates for microbiology tests increased with increasing remoteness.
- Order rates for obstetric ultrasound increased with increasing remoteness.