

Disclaimer

The numerical data presented in this report are for illustrative purposes only. They are entirely fictitious and should not be considered accurate for any real-world application. Any resemblance to actual data, living or deceased, or actual events is purely coincidental.

Lumos General Practice Report Sample General Practice Report

NSW Primary Health Network

Patient journeys
From 1 October 2023 to 30 September 2024

Acknowledgement of Country

NSW Health acknowledges the Traditional Custodians of the lands where we work and live. We celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW.

We pay our respects to Elders past, present and emerging.

Disclaimer

Information contained in this publication is based on knowledge and understanding at the time of writing, and is subject to change.

In partnership with the NSW Ministry of Health
and your Primary Health Network



Your Snapshot: Patient journeys 1 October 2023 to 30 September 2024

10,000 patients attended your practice at least once from **1 October 2023 to 30 September 2024**. Highlights from their health service use over this time period are shown below, including references to the pages in this report where further information on the topic is found.



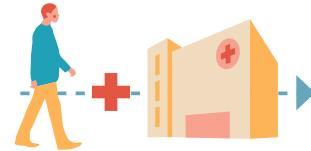
Emergency Department (ED) Presentations

Of your **10,000** patients, **2,690 (26.9%)** patients presented to the ED during the report period for care that did not result in a hospital admission (page 9).

Of all non-admitted ED episodes, **573 (12.5%)** had the patient visiting your practice within 72 hours after discharge (page 10).

Of all patients **with COPD**, there were **124 (37.3%)** patients who had presentations for non-admitted ED care (all causes) (page 11).

Of all patients who were allocated a lower triage priority when arriving to ED and were not admitted **1,165 (44.9%)** arrived outside sociable hours* (page 12).



Emergency Hospital Admissions

Of your **10,000** patients, **780 (7.8%)** patients were admitted for an emergency hospitalisation during the report period (page 9).

The most common reason for admission was **Injury, poisoning and certain other consequences of external causes (S00-T98)** (page 15).

Of all patients **with COPD**, there were **88 (26.6%)** patients who had an emergency hospitalisation (all causes, page 13).



Record of chronic condition status

Of your **10,000** patients, **600 (6%)** patients were admitted to hospital for a selected chronic condition⁺ as the main or contributing reason for their admission (page 15).

290 (48.4%) of these admitted patients have the condition recorded at your practice (page 15).

184 (30.7%) of these admitted patients were readmitted for the same condition within 28 days (page 15).



Condition in Focus – Chronic Kidney Disease

Of the **330** patients identified with chronic kidney disease that attended your practice in the report period:

65 (19.8%) had a chronic kidney disease related hospital admission during the report period (page 18).

Detailed information about the use of health care services for patients at your practice with chronic kidney disease can be found on pages 16-18.

* Sociable hours are defined as 8am to 8pm weekdays (excluding public holidays)

⁺ Conditions identified in the chart on page 7.

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Overview

About this report

This report provides a unique system-wide view of the hospital services your patients access and their outcomes. It allows you to compare the journeys of your patients with those from other practices participating in Lumos. This can help you to understand more about the experience of your patients and may present opportunities for review or action at your practice.

This report pertains to 791 practices in NSW.

By participating in Lumos, your practice's data contributes valuable information about patient journeys across the healthcare system in NSW.

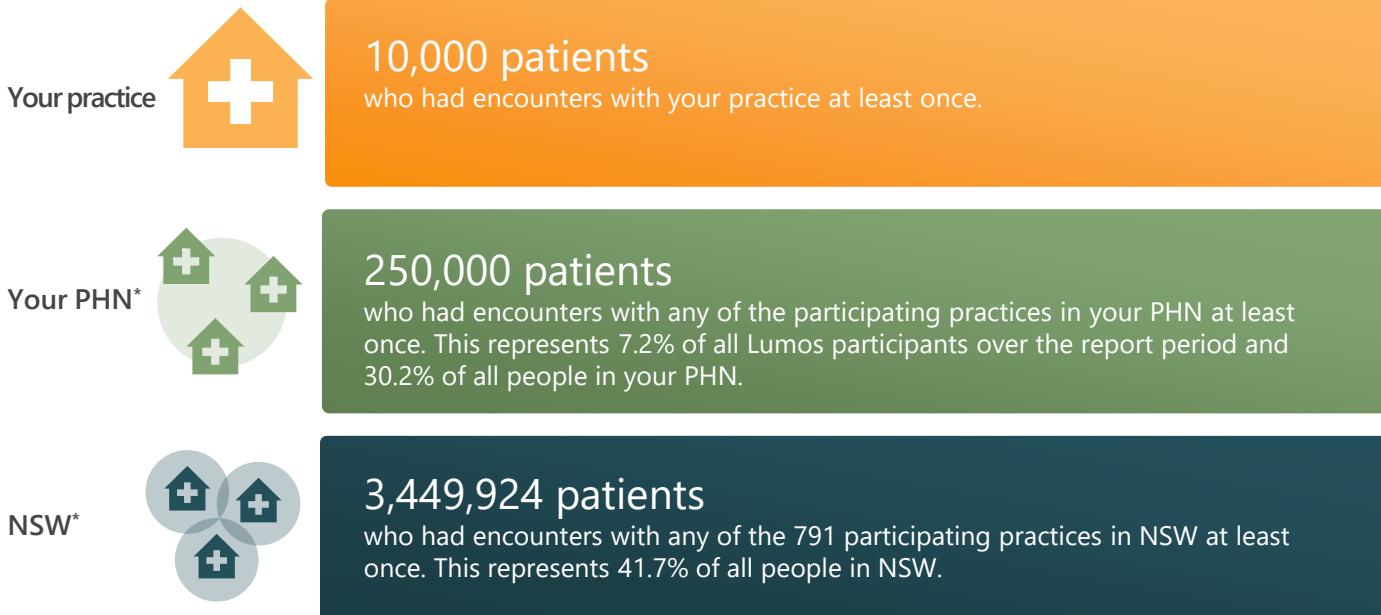
To view the findings to date, please visit <https://www.health.nsw.gov.au/lumos/Pages/insights.aspx>.

Each Lumos-participating practice receives a report in this format. Interpretation of these reports is affected by your practice's patient demographics, service offerings and other factors. Data are from Lumos-participating practices only and may not represent all patients in your PHN or NSW. While Lumos data are closely aligned to the demographic distribution of the NSW population ([lumos-evaluation-report-3.pdf \(nsw.gov.au\)](https://lumos-evaluation-report-3.pdf (nsw.gov.au))), this may affect some conclusions.

Current report period

The information provided in this report is about those patients who had encounters with your practice at least once in the period from 1 October 2023 to 30 September 2024, which corresponds to the most recent period when linked data were available across all datasets included in this report. Throughout the report, this is referred to as the **report period**. Because the source data often contains multiple encounter records arising from a single patient visit, a maximum of one encounter is counted per patient, practice and day. Where encounters are known to be for non-clinical purposes, such as a receptionist encounter, these are excluded.

The terminology and patient numbers in the boxes below are used throughout this report:



* Data are from Lumos-participating practices only and may not represent all patients in your PHN or in NSW.

The Lumos program

Lumos is an ethically approved program running throughout NSW to map patient journeys across all levels of the continuum of care in health.

Our vision is to deliver up-to-date information about what services are used by patients, where and when, that will inform the strategic directions and priorities of patient healthcare in all health sectors in NSW.

Your continued involvement helps build a data asset to support health system improvement and to deliver more cohesive health services. Lumos would not be possible without the support of the general practices (GPs) that participate.

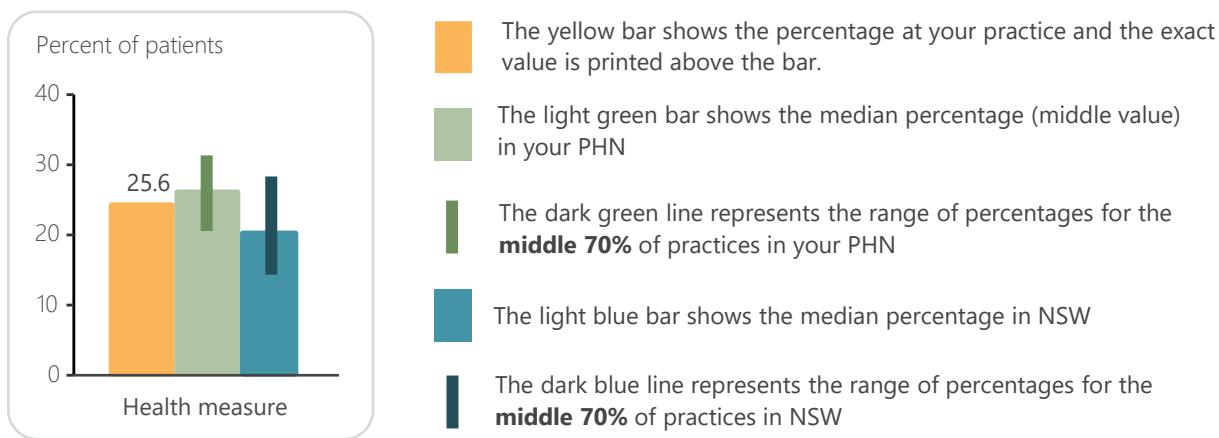
For further information on the Lumos program, please visit www.health.nsw.gov.au/lumos.



Overview

Comparison chart used in this report

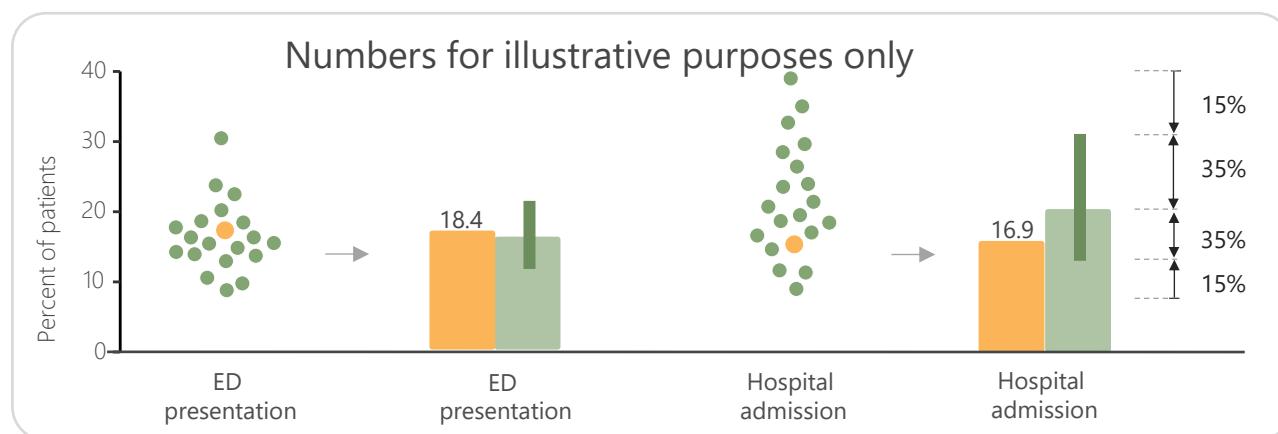
This report presents statistics showing where the values at your practice sit compared to peers in your PHN and in NSW using the chart shown below. Many points of difference between the data at your practice compared to others may reflect differences in patient populations, health profiles and in the range of services delivered.



An example and its interpretation

Assume there are 20 Lumos-participating practices in your PHN. The figure below shows the percentage of ED presentations and hospital admissions for each of these 20 hypothetical practices (green dots, with "your" practice as a yellow dot). It then shows the conversion to the comparison chart described above.

Your patients' hospital presentation rates compared to other Lumos-participating practices in your PHN



The PHN median (light green bar) is derived by ranking the percentage for each of the participating practices in your PHN from lowest to highest, and then selecting the mid-point result. The median is similar to a mean but is not skewed (i.e. not noticeably shifted) when there are outliers present. There are 10 practices above and 10 practices below the top of the light green bar, marking the middle point of the PHN data.

The dark green line shows the range for the middle 14 practices (70% of 20) in your PHN. This means there are always 3 (15%) practices in your PHN above and 3 (15%) practices below the line for each line displayed.

On the left of the chart, the dark green line for ED presentations is short, as most practices in the PHN have a similar proportion of patients who present to the ED. On the right of the chart, the dark green line for hospital admissions is long, meaning that there is a wide range in the proportion of patients per practice who are admitted to hospital from within the PHN.

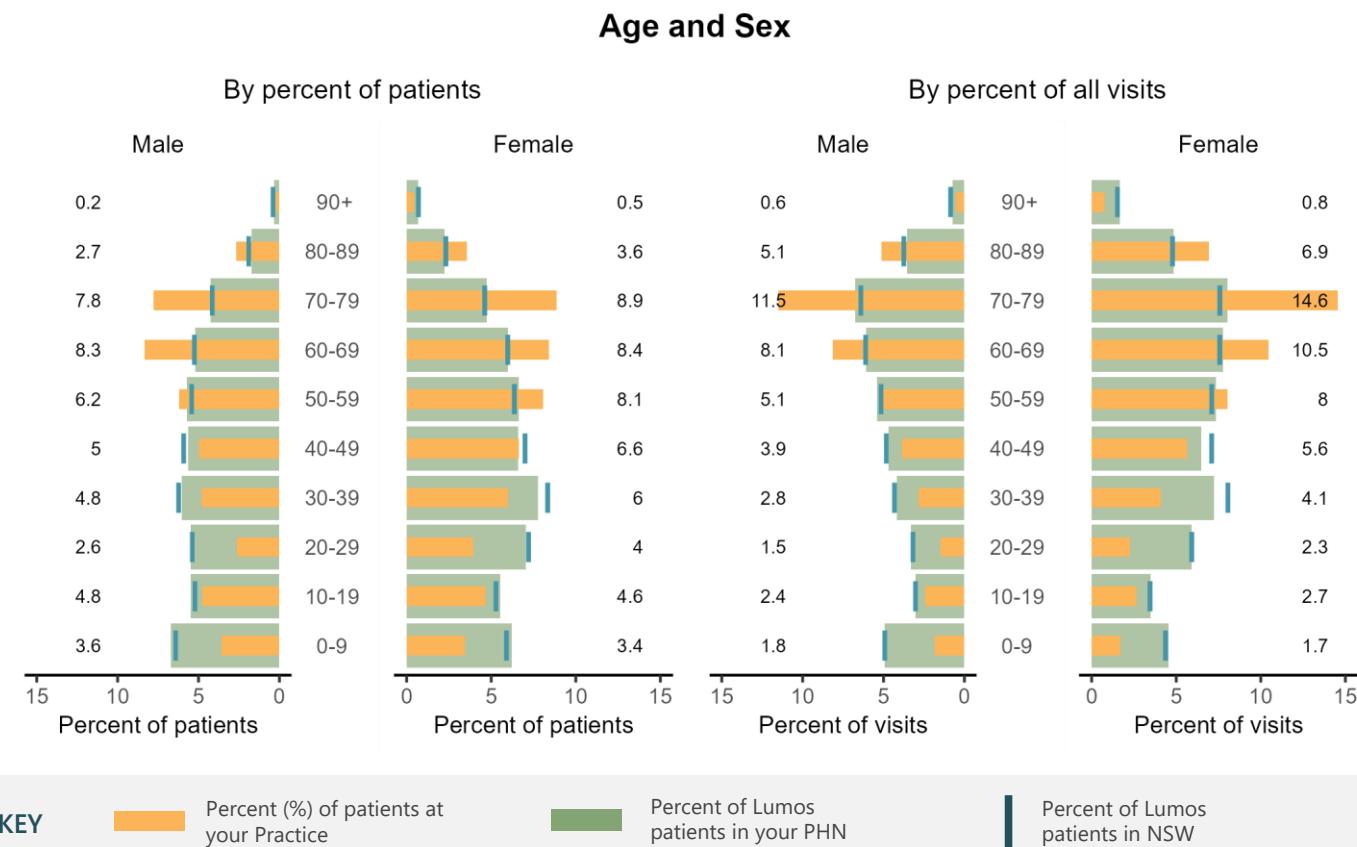
"Your" hypothetical practice is highlighted by the yellow bar and shows similar traits to other practices in your PHN, albeit below the overall median rate of admissions to hospital.

Note that for certain charts where these do not apply, the PHN and NSW range of percentiles have not been provided.

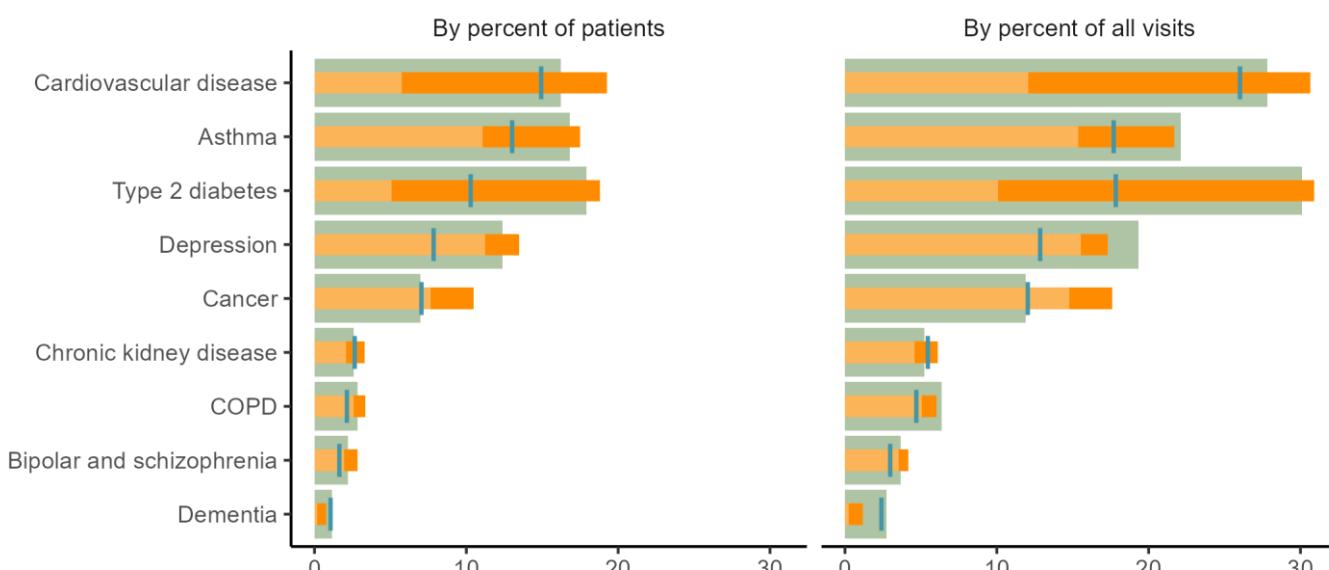
Patient Profile

Information from other Lumos-participating practices in your PHN and NSW is presented throughout this report for context. If your practice's data stands out with high or low values compared to the PHN or statewide, consider if the case-mix of your patients or the services your practice offers could explain the differences.

Patient population by age and sex and by chronic condition status



Chronic Conditions



* Some patients have multiple chronic conditions and are counted for each condition they have.

Key to chronic conditions charts

Percent of patients at your practice

- Condition recorded at your practice
- Condition recorded at another practice or identified by other means (see appendix)



Percent of Lumos patients in your PHN

Percent of Lumos patients in NSW

Patient Profile

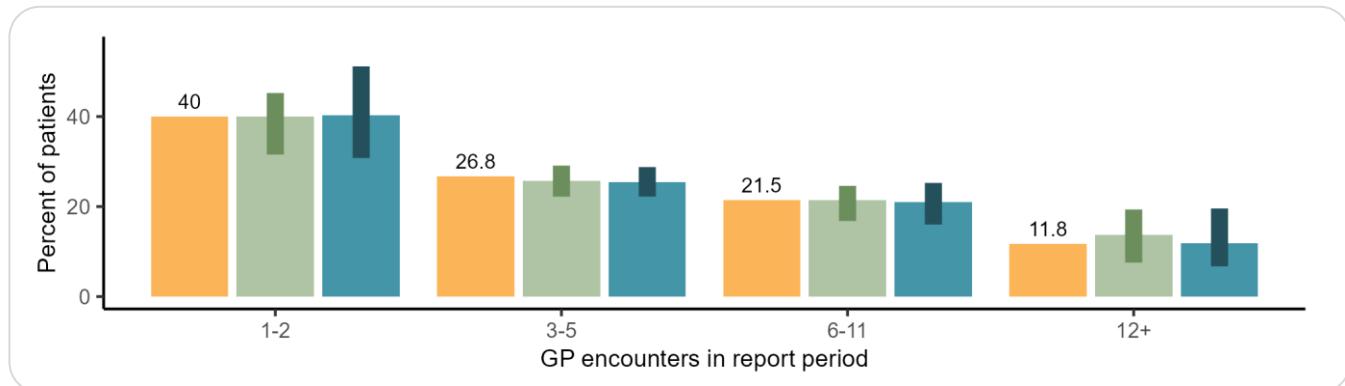
Summary patient characteristics and frequency of general practice encounters

A summary of your patient's encounter frequency, age and chronic condition status is given below. Of your patients, 632 (12.4%) also had encounters with another Lumos participating practice in NSW during the report period.

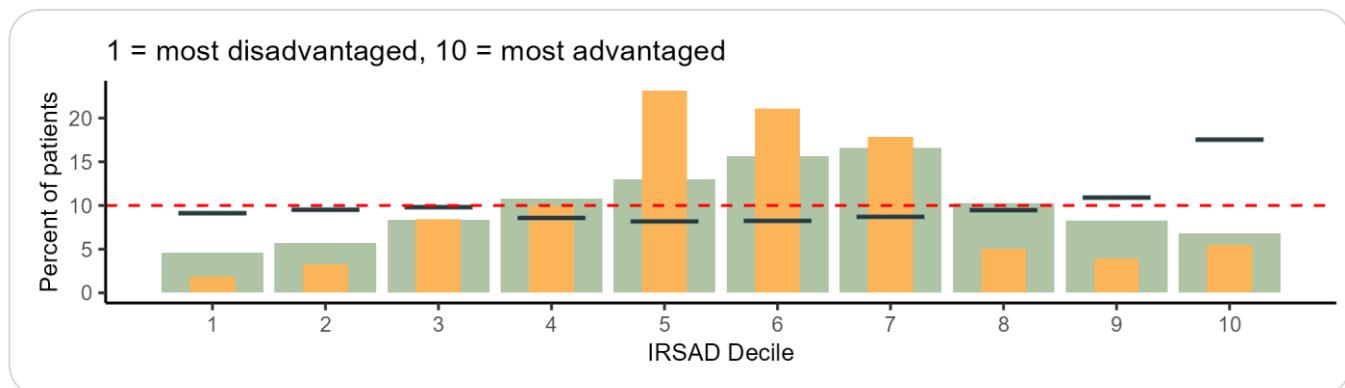
Characteristic	Your practice	Your PHN *	NSW *
Average number of GP encounters	5.4	5.6	5.3
Percent of patients who had encounters with another Lumos participating practice	12 %	27 %	27 %
Percent female	54 %	54 %	54 %
Average age	49.0	39.8	40.3
Percent of patients diagnosed at your practice with a chronic condition (page 7)	36 %	48 %	39 %

If a patient had an encounter at multiple Lumos-participating practices in the report period, they will appear in the report of each GP that they visited. Information on the encounters of your patients with other GPs is not included in your data. The PHN and NSW level data from Lumos-participating practices takes into account patients that had encounters with multiple practices, where applicable.

GP encounter frequency of your patients



Socio-economic distribution of your patients



Derived using the ABS 2021 national Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) classification of patients' place of residence (SA1). To ensure data quality only patients with available SA1 codes were included in this chart, this corresponds to 85.8% of patients at your practice. Higher decile scores indicate greater socio-economic advantage. The dashed red line indicates the national population-wide distribution.

KEY



Percentage (%) in
your Practice



Median % in
your PHN



Median %
in NSW

Range of percentages for middle 70% of practices in

Your PHN

NSW

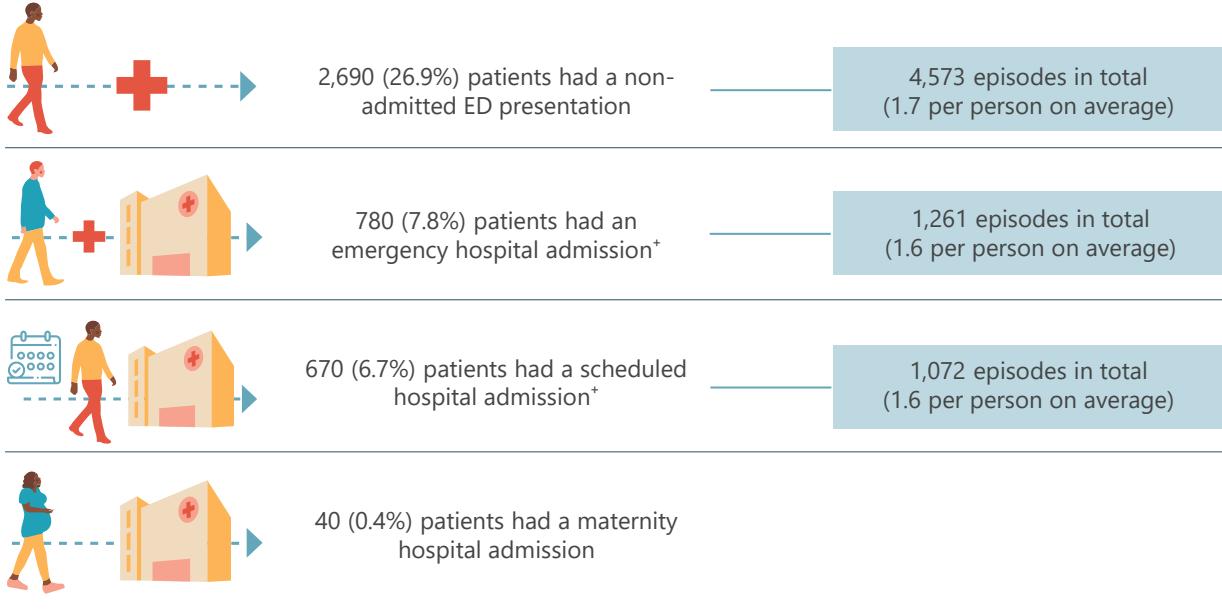
Overview of your Patients in the NSW Public Hospital System

Patients presenting to a public hospital in NSW

Among patients who had a GP encounter at your practice during the report period, there were:

3,020 (30.2%) patients who presented to a public Emergency Department (ED) in NSW*

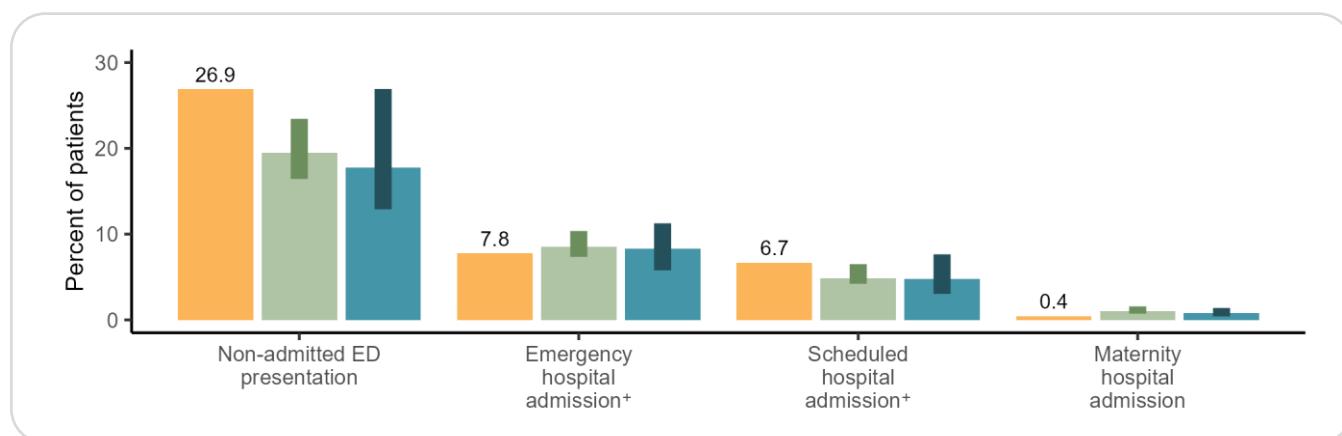
1,420 (14.2%) patients who were admitted to a public hospital in NSW



Emergency hospital admissions are defined here as ED presentations that resulted in a hospital admission (note that this definition excludes a small proportion of emergency admissions through other avenues). Scheduled admissions are planned procedures or any unplanned procedures that could wait over 24 hours for admission. Maternity admissions refer to births only. Unspecified hospital admissions did not have an emergency status recorded by the hospital.

Patients who had more than one type of ED presentation or hospital admission during the report period were counted each time they used the service stated. Therefore, the overall number and percentage of patients may be less than the sum of the individual components.

Your patients' hospital presentation rates compared to other Lumos-participating practices



KEY

Percentage (%) in your Practice

Median % in your PHN

Median % in NSW

Range of percentages for middle 70% of practices in

Your PHN

NSW

* Includes ED presentations that did and did not result in hospital admission

⁺Excludes maternity hospital admissions

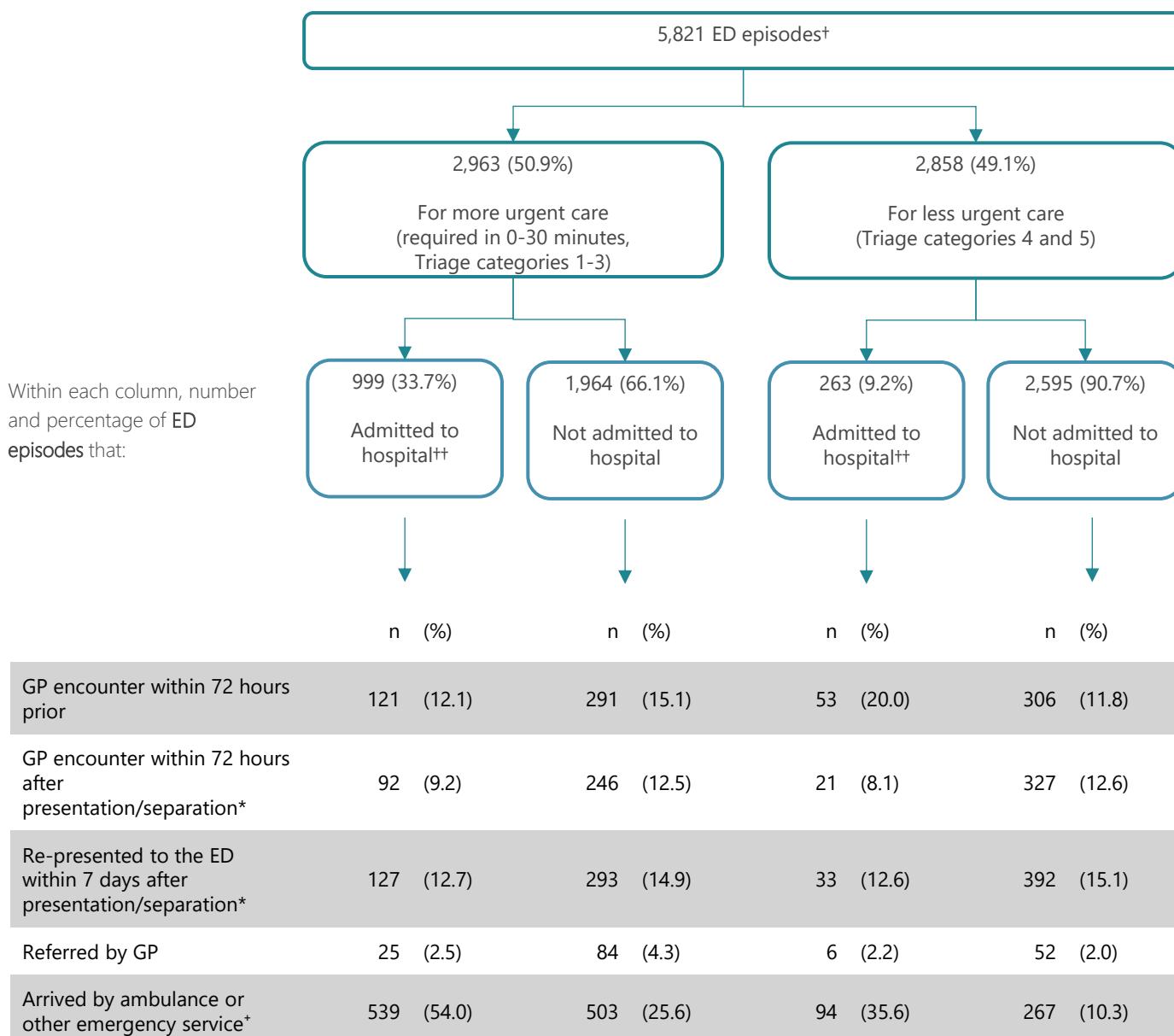
Overview of your Patients in the NSW Public Hospital System

Tracking episodes of ED presentations across health services

Lumos provides the opportunity to see patient care at the GP before and after a presentation to the ED. This page provides a breakdown of health service use when these ED presentations are separated by the urgency of the episode of ED care and whether the patient was subsequently admitted to hospital or not as part of their ED care.

Your 3,020 patients who presented to the ED during the current report period had a total of 5,821 ED episodes of care. Of these episodes there were:

- 1,261 (21.7%) episodes for patients who were admitted to a public hospital as part of this episode of care
- 774 (13.3%) episodes where the patient had a GP encounter at this practice within 72 hours beforehand
- 689 (11.8%) episodes where the patient had a GP encounter at this practice within 72 hours after discharge*
- 844 (14.5%) episodes for patients who re-presented to the ED within 7 days



[†] Includes only ED episodes where the triage of the episode is recorded

^{‡‡} Columns 1 and 3 combined are the emergency hospital admissions for your patients during the report period

^{*} 72 hours since their discharge from the ED or hospital, whichever is later

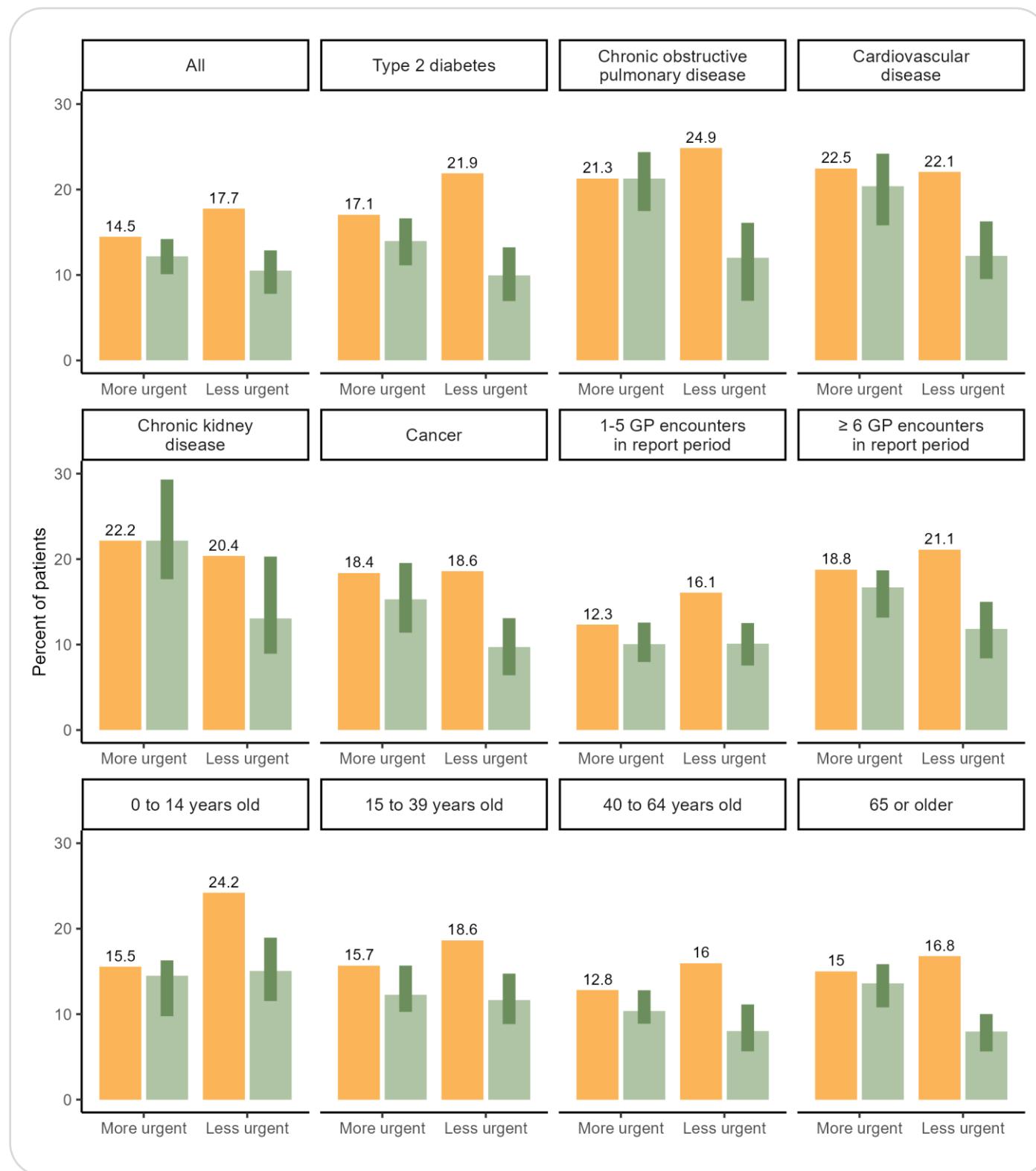
⁺ By ambulance, rescue helicopter, air ambulance, police vehicle or correctional service vehicle

Non-admitted Emergency Department Presentations

Patients with ED presentations that did not result in a hospital admission

More urgent ED presentations are where ED care is required within 30 minutes of arrival (triage categories 1 to 3).

Less urgent ED presentations are where ED care is categorised to occur within 2 hours of arrival (triage categories 4 and 5).



KEY



Percentage in your Practice



Median percentage in your PHN



Range of percentages for the middle 70% of practices in your PHN

Non-admitted Emergency Department Presentations

Timing of non-admitted ED presentations

Patients' ED arrival time for less urgent ED presentations that did not result in an admission

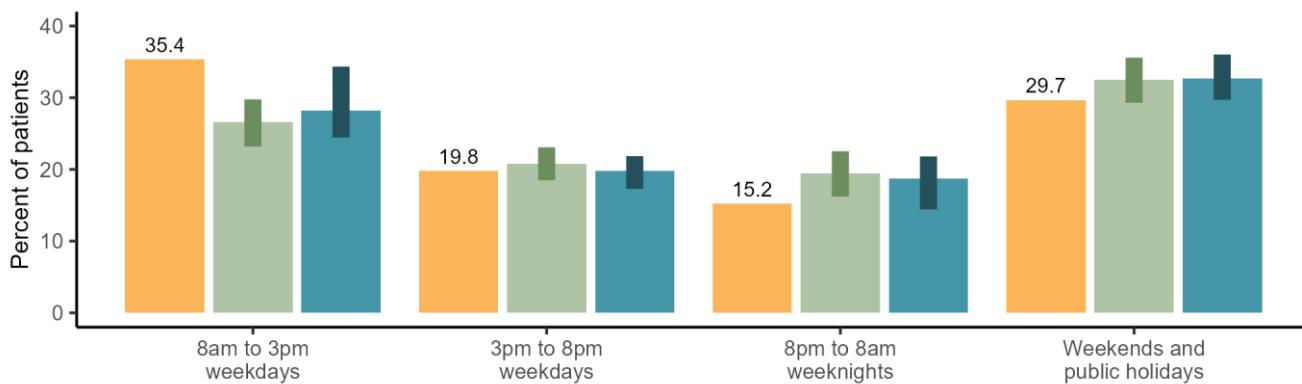
In some situations, less urgent ED care that did not result in an admission to hospital may be considered a potentially avoidable ED presentation that could have been managed at the GP. These presentations would occur in the final column presented on page 10. Lumos provides the opportunity to understand more about these ED presentations, particularly the time that patients presented.

During the report period, your 1,774 patients who had a less urgent ED presentation that did not result in a hospital admission had a total of 2,595 episodes of this type of care. Of these episodes, there were:

1,165 (44.9%) presentations where patients arrived outside sociable hours (8am-8pm weekdays, excluding public holidays)

919 (35.4%) presentations where patients arrived between 8am and 3pm on a weekday

There were 378 (6.5%) ED presentations where the patient did not wait for care. They are included in the values on this page.

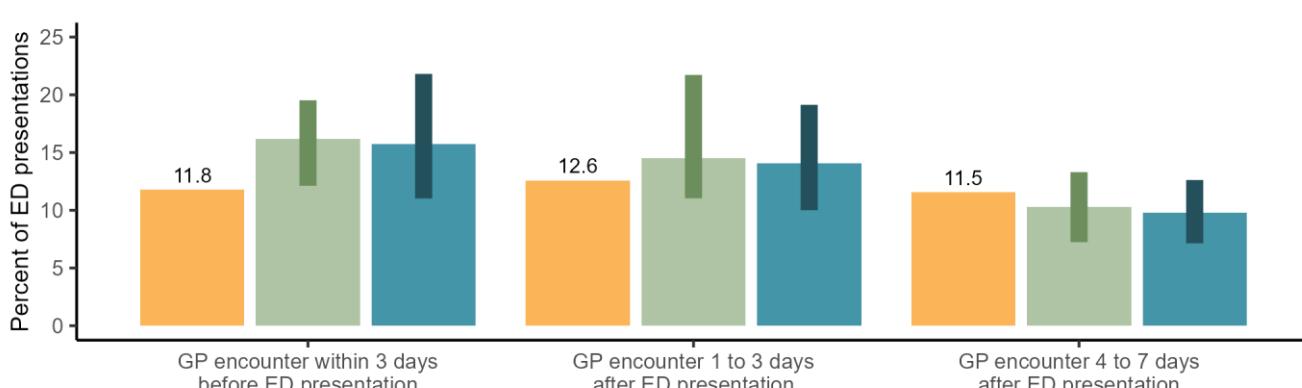


GP encounters before and after ED presentations that did not result in a hospital admission

Lumos provides the opportunity to see the visiting behaviour of your patients around their ED presentations that did not require a hospital admission. This information does not convey whether appointments were available.

During the current report period for the 10,000 patients who had a GP encounter at your practice, there were:

890 (8.9%) Patients who had a GP encounter within 7 days after a non-admitted ED presentation



Those patients who had encounters with their GP and presented to the ED on the same day are assumed to have had the encounters with their GP before presenting to the ED (i.e. within 72 hours prior to their ED presentation).

KEY



Percentage (%) in your Practice



Median % in your PHN



Median % in NSW

Range of percentages for middle 70% of practices in

Your PHN

NSW

Hospital Admissions

Patient cohorts and their hospital admissions

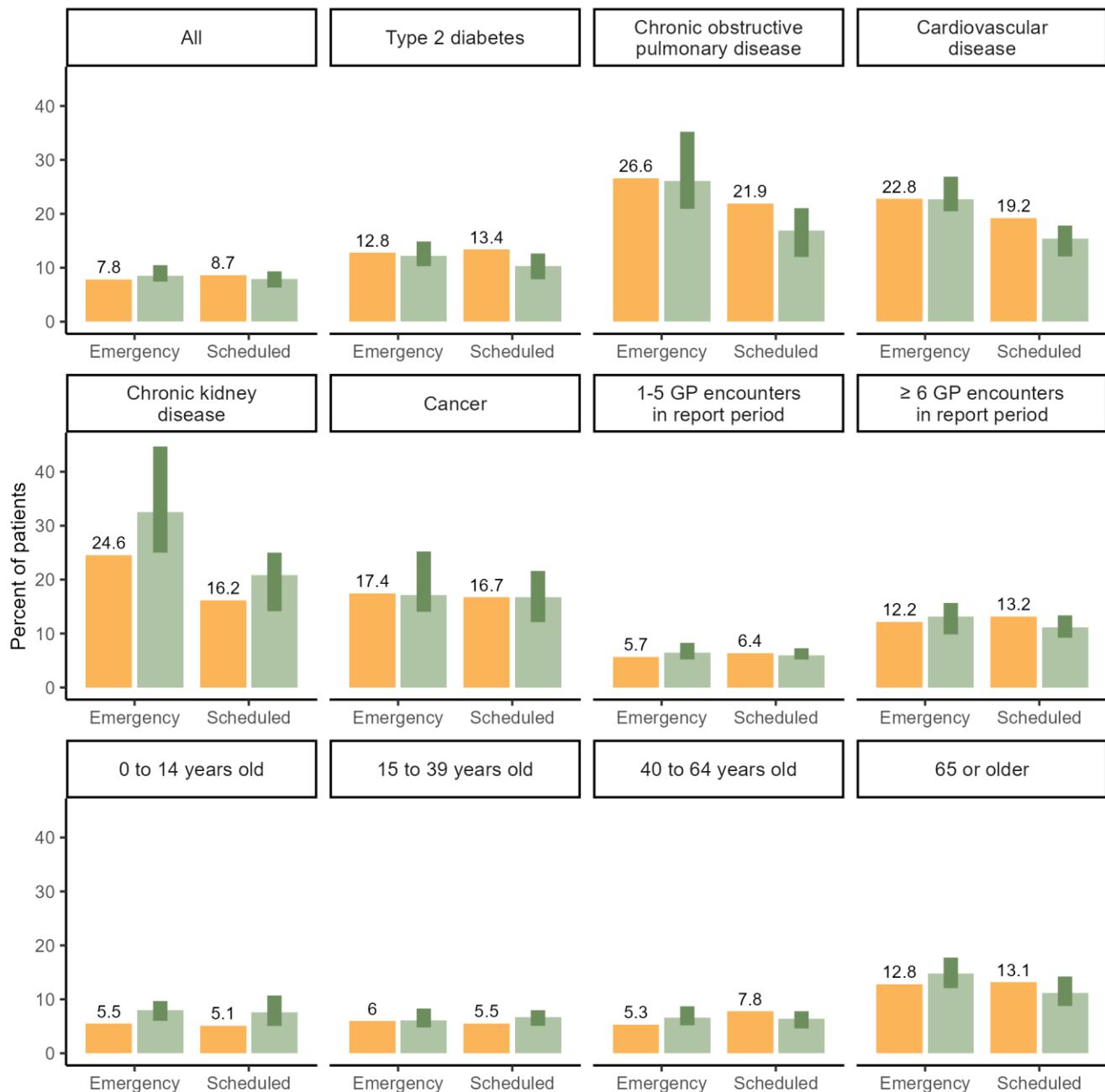
This page highlights whether any of your patient cohorts were more likely or less likely to be admitted to hospital, by the type of hospital admission.

Type of hospital admission

Emergency: unplanned hospital admission required within 24 hours or an ED presentation that required admission to hospital.

Scheduled: planned procedure or any unplanned hospitalisation that could wait over 24 hours for admission.

Hospital admissions within each patient cohort, by admission type



KEY



Percentage in
your Practice



Median percentage
in your PHN



Range of percentages for the middle
70% of practices in your PHN

Hospital Admissions

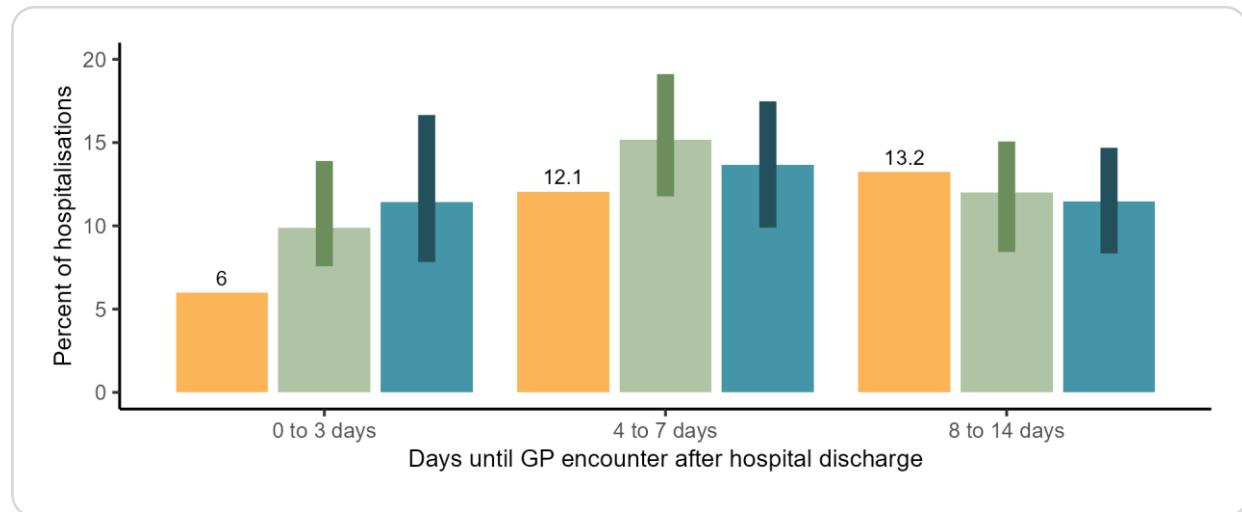
GP encounters around emergency hospitalisations

Lumos provides the opportunity to see the timing of patient care at the GP after an emergency hospital admission. Note that the data does not convey whether appointments were available.

In some areas, particularly regional localities, it may be difficult for patients to see their GP after an emergency hospital admission. This may explain differences in some practice reports.

Of the patients who attended your practice and had an emergency admission in the current report period, there were:

229 (29.3%) patients who had a GP encounter within 7 days after discharge



KEY █ Percentage (%) in your Practice █ Median % in your PHN █ Median % in NSW Range of percentages for middle 70% of practices in
 █ Your PHN █ NSW

Those patients who had encounters with their GP and left hospital on the same day are assumed to have had the encounters with their GP after leaving hospital (within "0-3" days). Emergency admissions that occurred within 28 days of the end of the study period—for which follow up data were unavailable—were excluded from this chart.

Reasons for Hospital Admission

Understanding emergency admissions and chronic diagnosis status

Main reasons for emergency admission to hospital

The chapter groupings in ICD-10-AM medical coding classify admitted patient care according to disease, injury and related health problems. During the current report period, 780 patients had one or more emergency hospital admissions. The top three groupings recorded for admission to hospital (principal diagnosis) were:

- 216 (17.1% of admissions) Injury, poisoning and certain other consequences of external causes (S00-T98)
- 159 (12.6% of admissions) Diseases of the circulatory system (I00-I99)
- 156 (12.4% of admissions) Diseases of the respiratory system (J00-J99)

In your PHN, the top three reasons recorded were 'Injury, poisoning and certain other consequences of external causes (S00-T98)' (18.5%), 'Diseases of the respiratory system (J00-J99)' (17.8%), and 'Diseases of the digestive system (K00-K93)' (11.5%).

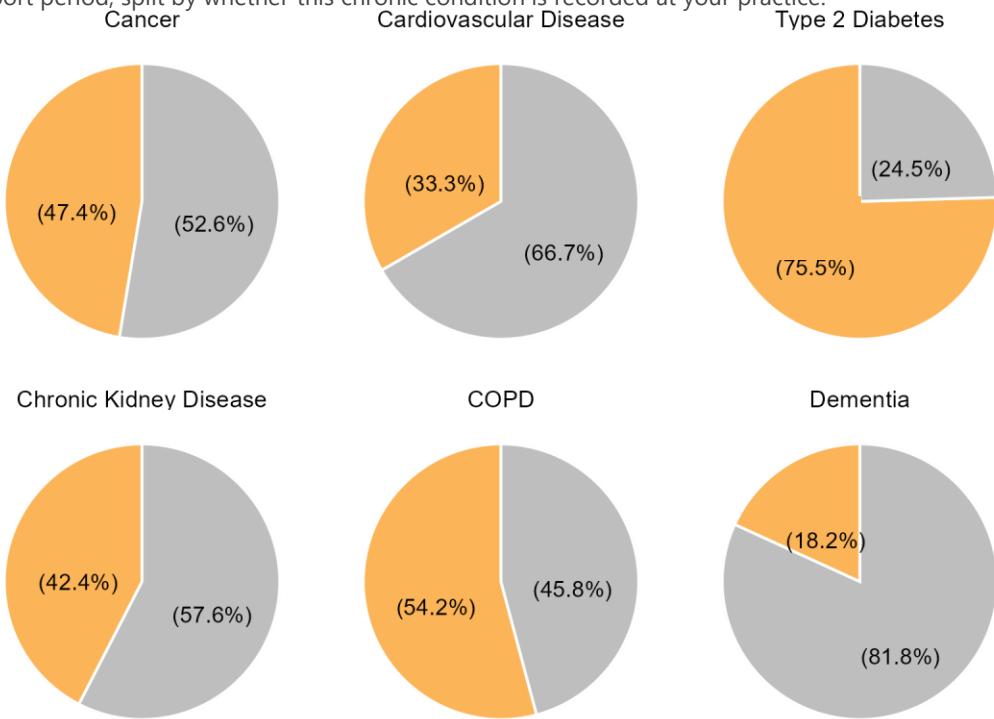
Hospital admissions for selected chronic conditions

During the current report period 600 (6%) of your patients were admitted to hospital for a selected chronic condition* as the main or contributing reason for their admission. Of these patients:

- 290 (48.4%) had the chronic condition recorded at your practice
- 184 (30.7%) were readmitted for the same condition within 28 days

Chronic disease diagnosis status at your practice

Below is the hospital admission data (emergency or scheduled) for six selected chronic conditions* for patients at your practice in the current report period, split by whether this chronic condition is recorded at your practice.



KEY



Patients admitted to hospital for condition **with no record** of condition at your practice



Patients admitted to hospital for condition **with a record** of condition at your practice

* Where this condition was noted on the medical record as related to the hospitalisation (either as the principal or a contributing reason for the admission).

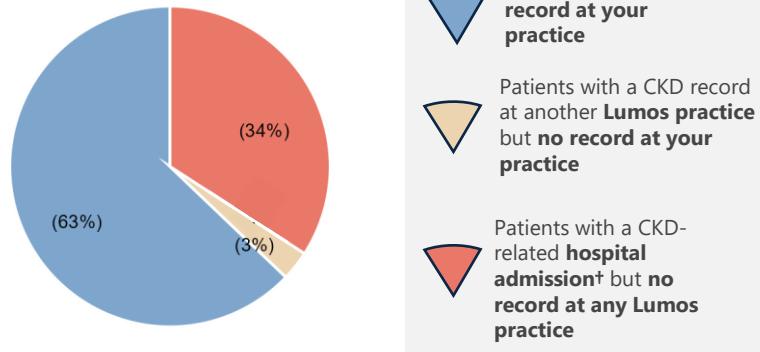
[†] See appendix for ICD-10-AM codes to identify hospital admissions.

Condition in focus: Chronic Kidney Disease

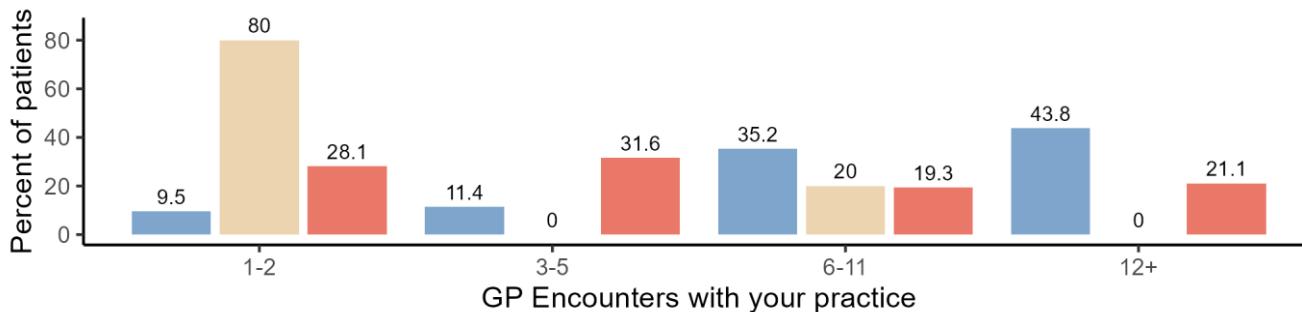
This section provides a deeper insight into your patients with chronic kidney disease (CKD), their health service usage and the completeness of pathology tests and measurements at your practice.

Your patients with chronic kidney disease

Among patients who visited your practice in the current report period, 330 (3.3%) were identified as having CKD. These patients were identified from your practice's diagnosis records, the diagnosis records of other Lumos participating practices that your patients have visited, as well as hospital records (including admissions prior to the current report period) that cited CKD as the main or contributing reason for admission. The adjacent pie chart details how the patients with CKD were identified at your practice.

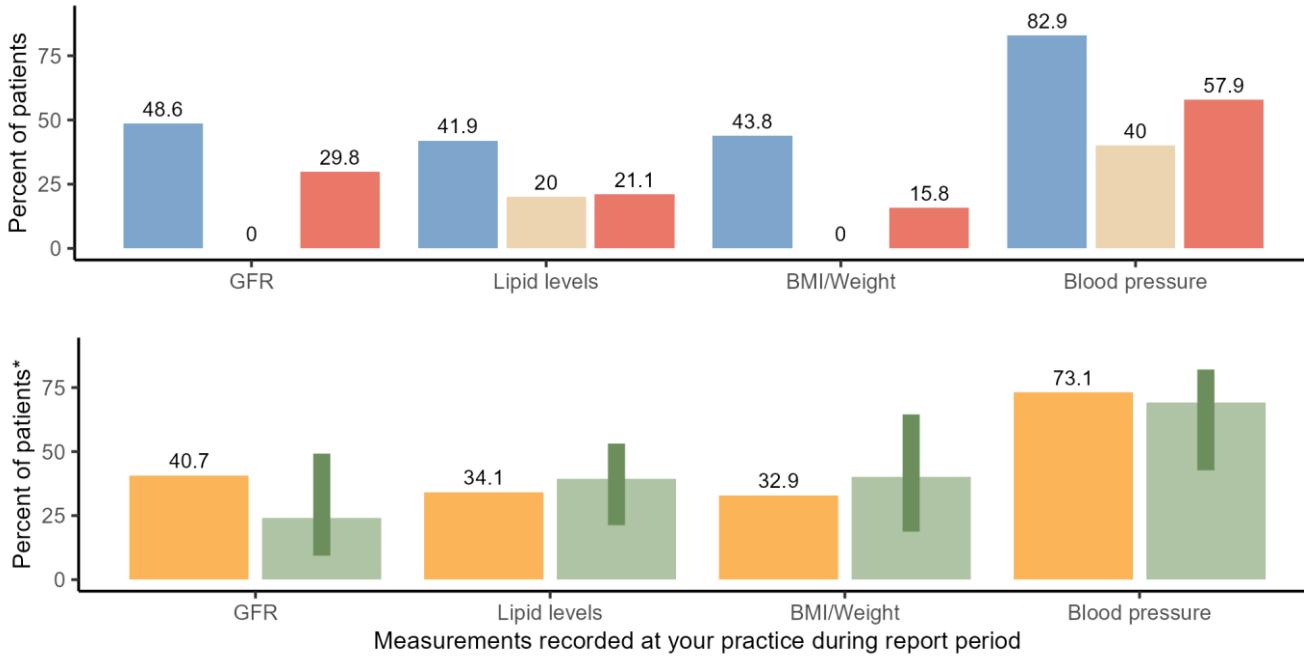


Distribution of encounters at your practice for patients with chronic kidney disease



Completeness of GP measures among patients with chronic kidney disease at your practice

The charts below show the proportion of your patients with CKD in selected cohorts that had measurements taken in the report period. The measures selected are those that would be relevant to their CKD care.



† Using all available hospital records including those prior to the current report period

* This chart and all subsequent charts in the remainder of this condition in focus includes all of your patients identified with CKD

KEY



Percentage in
your Practice



Median percentage
in your PHN



Range of percentages for the middle
70% of practices in your PHN

Information from other Lumos-participating practices in your PHN and in NSW is presented with your patient profile data for context. If you see areas where your practice's data stands out with high or low values, consider if the case mix of your patients shown above or the services your practice offers could explain the differences.

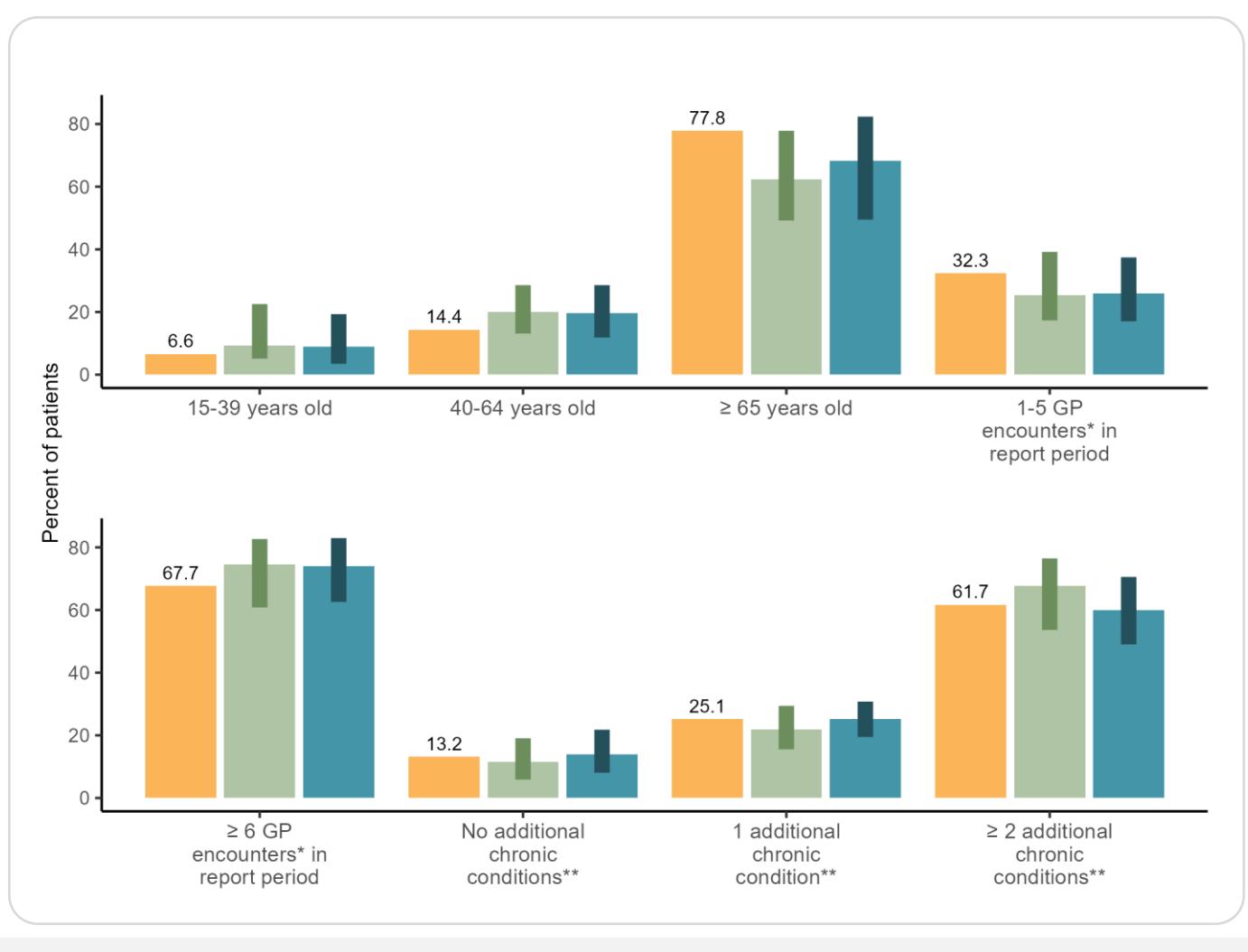
Condition in focus: Chronic Kidney Disease

Patient profile of chronic kidney disease patients

Among the 330 patients who visited your practice during the report period and were identified as having CKD (combining GP and admitted patient records), there were:

286 (86.8%) patients that had 1 or more additional chronic conditions** recorded at your practice

115 (34.7%) patients that had a chronic disease management plan during the report period



KEY █ Percentage (%) in your Practice █ Median % in your PHN █ Median % in NSW Range of percentages for middle 70% of practices inYour PHNNSW

Cases of diabetes among chronic kidney disease patients

Among the 330 patients identified as having CKD that attended your practice during the report period, 138 (41.9%) additionally have type 2 diabetes^t.

Among the 1,880 patients who attended your practice during the report period who have a recorded diagnosis of type 2 diabetes at your practice, 780 (41.5%) had an estimated glomerular filtration rate (eGFR) measure recorded at your practice.



* Encounters at any participating Lumos practice.

** Any of cancer, cardiovascular disease, type 2 diabetes, mental health conditions or COPD diagnosed at GP.

^t Identified by combining diagnosis, medications, pathology and billing records from all Lumos participating practices, as well as hospital records.

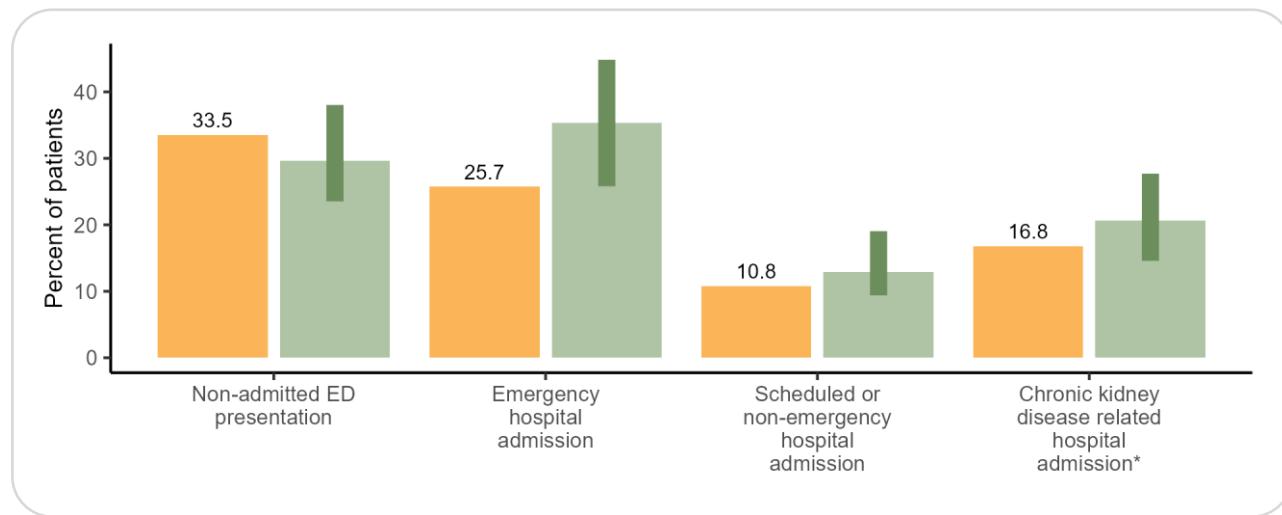
Condition in focus: Chronic Kidney Disease

Health service usage among patients with chronic kidney disease

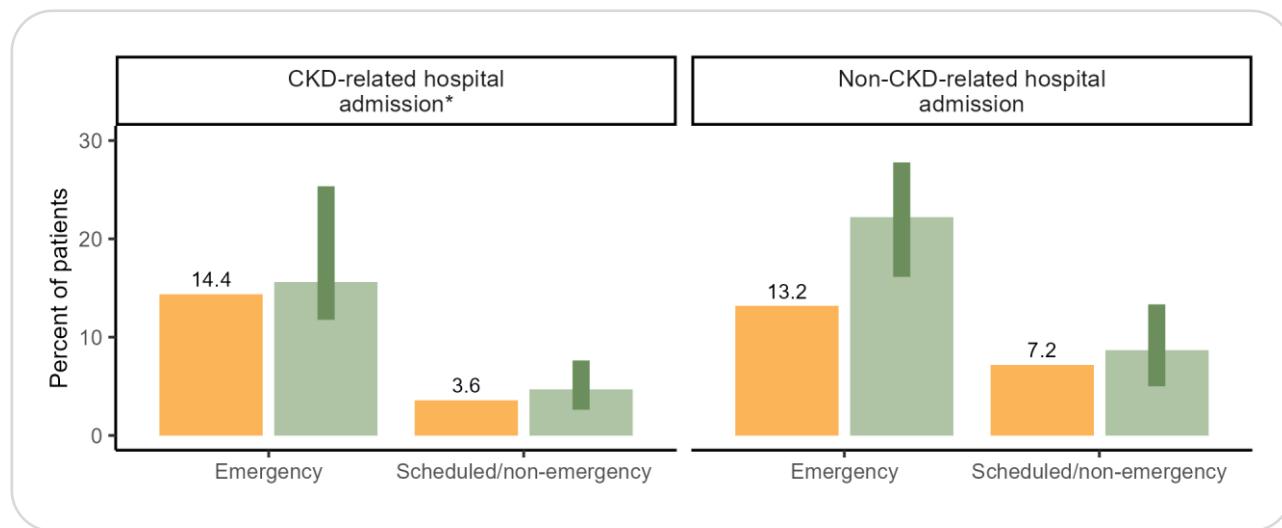
Among patients who visited your practice in the current report period and were identified as having CKD (combining GP and hospital records), the following proportion used other health services in NSW in the same report period.

- 111 (33.5%) patients presented to the ED and were not admitted to hospital as part of their care
- 107 (32.3%) patients were admitted to hospital (emergency or scheduled)
- 198 (59.9%) patients used NSW outpatient services
- 10 (3%) patients visited their GP within 3 days after a CKD-related hospital admission*

Rates of ED presentations and hospital admissions among chronic kidney disease patients



Rates of public hospital presentations among chronic kidney disease patients



KEY



Percentage in
your Practice



Median percentage
in your PHN



Range of percentages for the middle
70% of practices in your PHN

* Chronic kidney disease related hospital diagnosis as the main or contributing reason for hospitalisation.
Patients who used multiple health services will appear multiple times in the charts on this page.



Appendix

Definitions

Emergency hospital admission

Emergency hospital admissions are ED presentations that result in a hospital admission to a public hospital in NSW as part of their ED care. This includes all inpatient admissions (discharge, transfer or death) from public hospitals, public psychiatric hospitals and multi-purpose services in NSW.

Scheduled hospital admission

Scheduled hospital admissions are planned procedures or any unplanned procedures that could wait over 24 hours for admission at a public hospital in NSW. This includes all inpatient admissions (discharge, transfer or death) from public hospitals, public psychiatric hospitals and multi-purpose services in NSW.

Chronic conditions

Patients with chronic conditions are identified from their recorded conditions at your practice, at other practices, in admitted patient data and from other information sources as specified below.

Chronic condition	Hospital diagnosis codes (ICD-10AM)	Additional sources of identification
Cancer	C chapter (excluding C44, C91.0, C91.2, C92.0, C92.2, C92.4-C92.6, C92.8, C93.0, C93.2, C94.0, C94.2, C94.4, C94.5, C95.0, C95.2), D45, D46, D47.1, D47.3-D47.5	NSW Cancer Registry
Cardiovascular disease	I chapter (excluding I01, I21, I23, I24, I26.0, I30, I33, I40, I62.0, I84), Q20-Q28	
Chronic kidney disease	E10.2, E11.2, E13.2, E14.2, I12-I13, I15.0, I15.1, N00–N08, N11-N12, N14-N16, N18-N19, N25-N28, N39.1, N39.2, Q60–Q63, T82.4, T86.1, Z49.0, Z94.0, Z99.2	
Depression	F33	
Bipolar and schizophrenia	F20, F23, F31, F06.2, F06.32, U79.2	
Dementia	F00 – F03, F05.1, U79.1	
Asthma	J45, J46, U83.3 + Emergency Department SNOMED-CT codes 195967001, 281239006, 708038006, 304527002, 370218001, 708090002	Emergency Department records, based on ED presenting problem diagnosis code (ICD-10AM or SNOMED-CT)
Type 2 diabetes	E11, O24.0	HbA1c > 6.5 % Prescription of glucose lowering drugs (excl. insulins, biguanides (metformin) and GLP-1 receptor agonists which may be used for pre-diabetes or other conditions) Diabetes-specific MBS items Excludes patients known to have type 1 or gestational diabetes or who could possibly have gestational diabetes. Further information available on request.

Acknowledgements

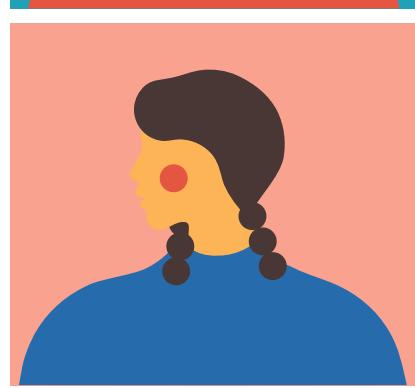
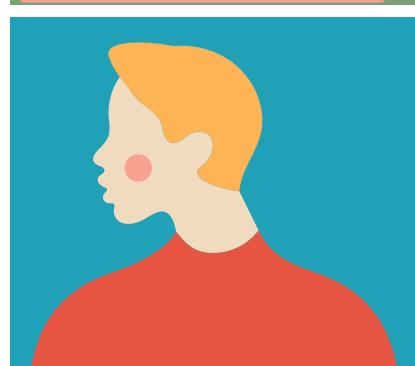
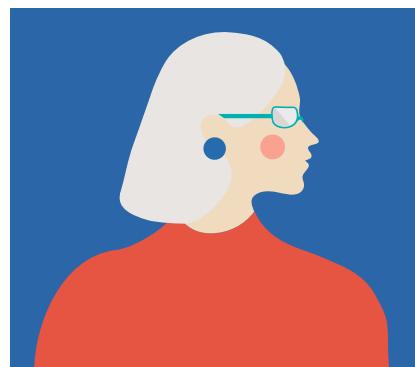
Lumos would not be possible without the support of participating General Practices and Primary Health Networks.

These reports continue to improve with GP and PHN feedback. Please continue to provide feedback to the Lumos team through your PHN.

The Lumos program has been funded by the Commonwealth Government under the Health Innovation Fund.

It has been approved by the NSW Population and Health Services Research Ethics Committee.

Lumos links encoded data from GPs to other health data in NSW, including hospital, ED, mortality, and others. This is done under strict data governance processes and in partnership with the NSW Centre for Health Record Linkage (CHeReL) using innovative privacy preserving technology from Curtin University.



Have your say

Your feedback is invaluable in ensuring the Lumos program and this practice report continues to meet the needs of general practices in NSW. We therefore seek your feedback to understand your experience in the program and opportunities for improvement.

Please complete the below survey within 2 weeks of receiving your practice report. Your feedback is anonymous and will be used by the Lumos team and your PHN to continue improving the program.

The survey will take less than 5 minutes to complete and can be accessed through the link or QR code below. If you cannot complete the survey electronically, please request a hard copy from your PHN.

Thank you for your time taken to provide feedback on the Lumos program.

