Sample Practice B

Sample Primary Health Network

Lumos
General Practice Report

October 2020

Lumos

Contents

About this report

The May 2020 Lumos program data linkage included all patients that visited participating general practices since May 2015, which comprised 1.3 million patients. This report provides information on the patients who visited your practice during the calendar year of 2019 (the reporting period) and also their activity across acute care and other healthcare settings. Historical information about your patient's health status has also been reported. The following terminology and patient numbers are used throughout the report:

This Practice	**All 1,200 patients**
	who visited Sample Practice B at least once. This represents 0.2% of all Lumos participants over the reporting period.

This PHN	**All 14,510 patients**
	who visited any of the 3 participating practices in Sample PHN at least once. This represents 2.2% of all Lumos participants over the reporting period.

All PHNs	**All 660,453 patients**
	who visited any of the 156 participating practices in NSW at least once. This represents 8.1% of all people in NSW.

Information on the practices participating in Lumos in your Primary Health Network (PHN) and across New South Wales (NSW) is presented throughout the report for context, but is not designed for comparisons. There will be many points of difference between the data for patients at your practice as compared to other practices. This may reflect differences in your patient population, health profiles and in the range of services you deliver. You may find some information in this report more relevant to your practice than others. Please refer to the contents page, and the snapshots below, to navigate through the report.

Your snapshot

Of your 1,200 patients:

34.2 %

were observed only in your service records and no other linked health or mortality records

See page 8

35.2 %

of patients aged 15-64 years presented to the ED for a triage category 4 or 5 (semi- or non-urgent) reason

See page 11

34.2 %

of patients who presented to the ED attended your practice within 14 days after their ED presentation

See page 13

12.6 %

of patients aged 0-14 years were admitted to a public hospital for an unplanned hospitalisation

See page 16

8.7 %

of patients who went to hospital were admitted with cardiovascular disease as the main reason

See page 19

31.6 %

of your diabetic patients were admitted to hospital due to their diabetes

See page 21

Report Overview

Aims

The aim of this report is to deliver a view of the health system beyond your practice. It provides information on your patients' journeys across primary, acute and other healthcare settings in NSW during the calendar year of 2019, and allows you to see your important part in these journeys. People with chronic conditions are a focus in this report.

The Lumos Program

Health service utilisation is changing rapidly and understanding the patient journey across health services is more important than ever. This report provides a valuable window into the healthcare journey of your patients pre COVID-19. The next version of this report will most likely provide insight into the COVID-19 period and may help us understand how differently your patients access health services during and after system wide changes.

The purpose of this report is to provide you with a unique system view of health services accessed by your patients, such as hospital admissions and emergency department (ED) presentations. This report may be useful to inform quality improvement in your practice.

Your 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 Practitioners (GPs) that participate. It is an ethically approved program running throughout NSW to map patient journeys across all levels of the continuum of care in health. The vision is to deliver regularly updated information about what services are used by patients, where and when, that will inform the strategic directions and priorities of patient health care in all health sectors in NSW. Lumos data comprises patient records from NSW GPs linked to records from across the NSW health system. This linkage is done under strict data governance processes and in partnership with PHNs and the NSW Ministry of Health.

Reporting Period

This report focuses on those patients who visited your practice at least once from 1 January to 31 December 2019, the most recent 12 month period that linked data were available across all datasets included in this report.

Participating practices

This report pertains to 156 practices in NSW comprising:

52 practices	Hunter New England and Central Coast PHN	5 practices	South Eastern NSW PHN
32 practices	South Western Sydney PHN	4 practices	Murrumbidgee PHN
27 practices	Western Sydney PHN	4 practices	Northern Sydney PHN
12 practices	Central and Eastern Sydney PHN	4 practices	Western NSW PHN
12 practices	Nepean Blue Mountains PHN	2 practices	North Coast PHN

Linked health utilisation data assets

Your practice's data has been linked to other health data in NSW under strict data governance processes and under ethical approval. This provides an opportunity for you to understand the health services your patients access across primary, acute and other healthcare settings. The following linked health data assets are presented in this report.

Hospitalisations

All inpatient admissions (planned or unplanned) from public hospitals, public psychiatric hospitals, multi-purpose services, private hospitals, and private day procedure centres in NSW. Private hospitalisation data were only available until 30 June 2019 and therefore are included in selected charts only.

Mental Health Ambulatory Care

Each record represents mental health assessment, treatment, rehabilitation or care outside of psychiatric hospital settings. May include crisis assessments, psychiatric outpatients, liaison and outreach services. Under-reporting occurs where a patient received in-scope care but not enough details were provided to link to their GP records.

Emergency Department visits

Each record represents a presentation to a public emergency department in NSW. This includes patients who register to be seen for an ED service but did not wait for the service to be delivered.

GP patient

Mortality

All NSW deaths from the Registry of Births, Deaths and Marriages. Some deaths may be outstanding at the time of data extraction and therefore the number stated in this report may be revised in future.

Non-admitted patient services

This is outpatient community care and includes any non-admitted patient service event, which is an interaction* between a healthcare provider of NSW Health (clinical or therapeutic) and a person who is not formally admitted to a hospital or multi-purpose service. Examples include community nursing, drug and alcohol rehabilitation. It excludes mental health and oral services.
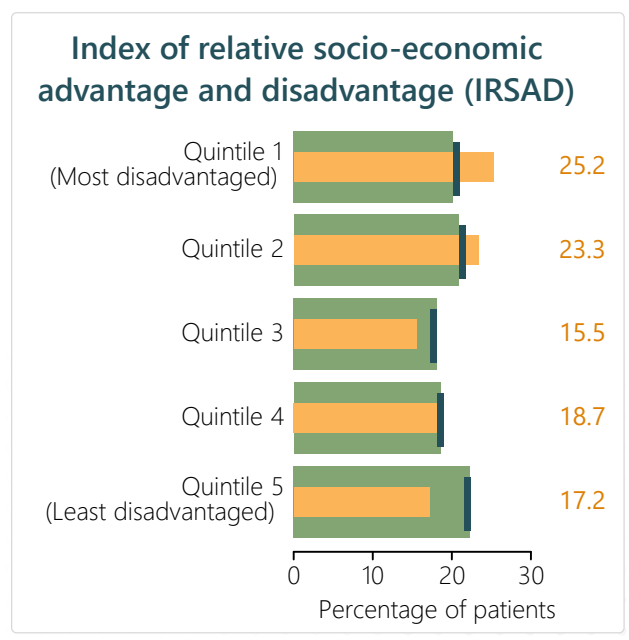
*The interaction may be for an assessment, examination, consultation, treatment and/or education.

Patient Profile

Patient population by sex, age, remoteness and socio-economic status

This page provides an overview of key demographic characteristics of your patients which will help you interpret your report. Of your patients who visited this practice in 2019, 54.4% were female, 45.6% were male and the average age was 40.3 years. Across this PHN, the values were 54.8%, 45.1% and 39.6 years, respectively.

The sex distribution by age, accessibility/remoteness index of Australia (ARIA) and index of relative socio economic advantage and disadvantage (IRSAD) quintiles are displayed below.

Five-year age groups

Male	Age	Female
3.7	85+	3.8
2.9	80-84	4.0
3.7	75-79	3.4
6.9	70-74	3.7
5.1	65-69	5.4
5.9	60-64	4.9
6.0	55-59	6.0
5.1	50-54	4.9
5.9	45-49	4.4
3.3	40-44	7.0
6.8	35-39	7.8
7.9	30-34	6.4
4.2	25-29	7.5
5.1	20-24	6.6
6.6	15-19	6.6
5.1	10-14	4.3
7.1	5-9	6.1
8.8	0-4	7.2

Percentage of male patients — Percentage of female patients

Legend: This practice | This PHN | All PHNs

Accessibility/Remoteness Index of Australia (ARIA)

Category	Percentage
Major City	67.8
Inner Regional	23.4
Outer Regional and Remote	8.8

Percentage of patients

Index of relative socio-economic advantage and disadvantage (IRSAD)

Category	Percentage
Quintile 1 (Most disadvantaged)	25.2
Quintile 2	23.3
Quintile 3	15.5
Quintile 4	18.7
Quintile 5 (Least disadvantaged)	17.2

Percentage of patients

There will be many points of difference between patients at your practice as compared to other Lumos-participating practices within this PHN and across all PHNs. This may reflect differences in your patient population (age, sex, remoteness and socio-economic status) and health profiles and in the range of services you deliver. It is important to understand these differences when considering the information presented throughout this report.

General practice visits

Your patients visited this practice an average of 5.8 times in 2019. Of your patients, 211 (18%) also visited another Lumos participating practice in NSW. Across this PHN, these values were 5.1 and 2,237 (15%), respectively. The information on *This Practice* in this report pertains to visits to your practice only.

The frequency of patients attending your general practice are displayed below. This may be helpful to reference when reviewing patients who attended an ED or hospital on pages 12 and 17.
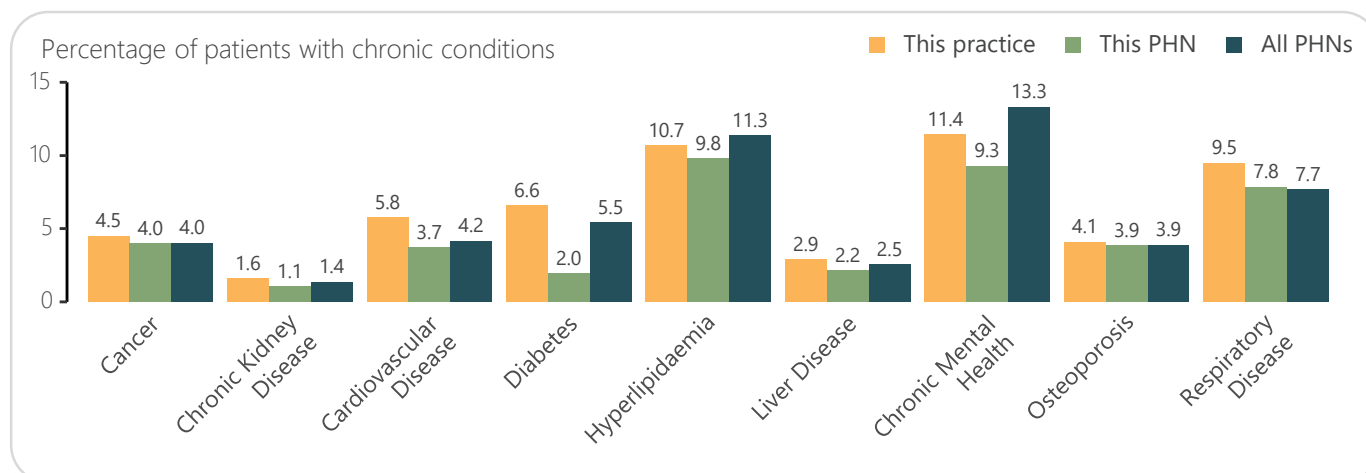
	Number of patients (percentage of patients)		
This practice	452 (37.7%)	387 (32.2%)	361 (30.1%)
This PHN	6,206 (42.8%)	4,728 (32.6%)	3,576 (24.6%)
All PHNs	275,634 (41.7%)	206,347 (31.2%)	178,472 (27.0%)
	1 to 2 visits	3 to 6 visits	7 or more visits
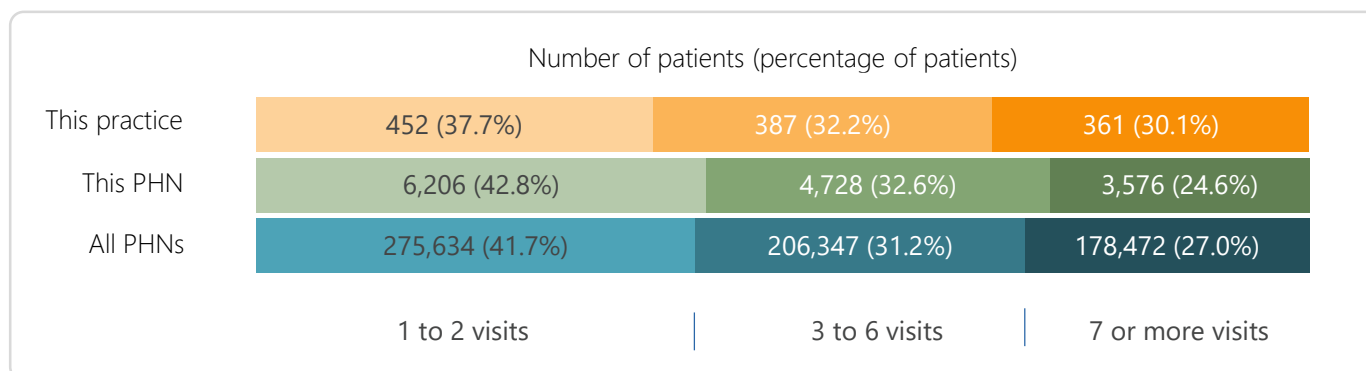
GP visits are defined as doctor or nurse encounters (i.e. not administrative).

Patients with chronic conditions

34.8% of patients who visited this practice in 2019 have ever been diagnosed at this practice with any of the 9 selected chronic conditions shown in the chart below (28.9% in this PHN and 32.7% in all PHNs).

Among patients who visited this practice in 2019, the following proportion have ever been diagnosed at this practice as having the following chronic conditions or categories in your general practice.

Percentage of patients with chronic conditions — This practice, This PHN, All PHNs

Condition	This practice	This PHN	All PHNs
Cancer	4.5	4.0	4.0
Chronic Kidney Disease	1.6	1.1	1.4
Cardiovascular Disease	5.8	3.7	4.2
Diabetes	6.6	2.0	5.5
Hyperlipidaemia	10.7	9.8	11.3
Liver Disease	2.9	2.2	2.5
Chronic Mental Health	11.4	9.3	13.3
Osteoporosis	4.1	3.9	3.9
Respiratory Disease	9.5	7.8	7.7

Note that some patients have multiple chronic conditions, and therefore percentages may sum to over 100%.

Cardiovascular Disease includes any patient flagged as having an acute coronary syndrome, atrial fibrillation, carotid stenosis, heart failure, myocardial infarction or stroke. Respiratory Disease includes any patient flagged as having asthma or chronic obstructive pulmonary disease. Chronic Mental Health includes any patient flagged as having anxiety, bipolar disorder, depression or schizophrenia.

There may be additional patients with these chronic conditions who have visited your practice in 2019 where this information was not captured.

The subsequent pages of this report will present chronic condition status as 2 mutually exclusive categories.

1. **Chronic conditions:**   Patients with any (single or multiple) chronic conditions from the 9 chronic conditions listed in the chart above.

2. **No chronic conditions:**   Patients with none of the 9 conditions listed in the chart above.

Your patients in the NSW health system

Among patients who visited this practice in 2019, the following proportion used other NSW health services or died in 2019.
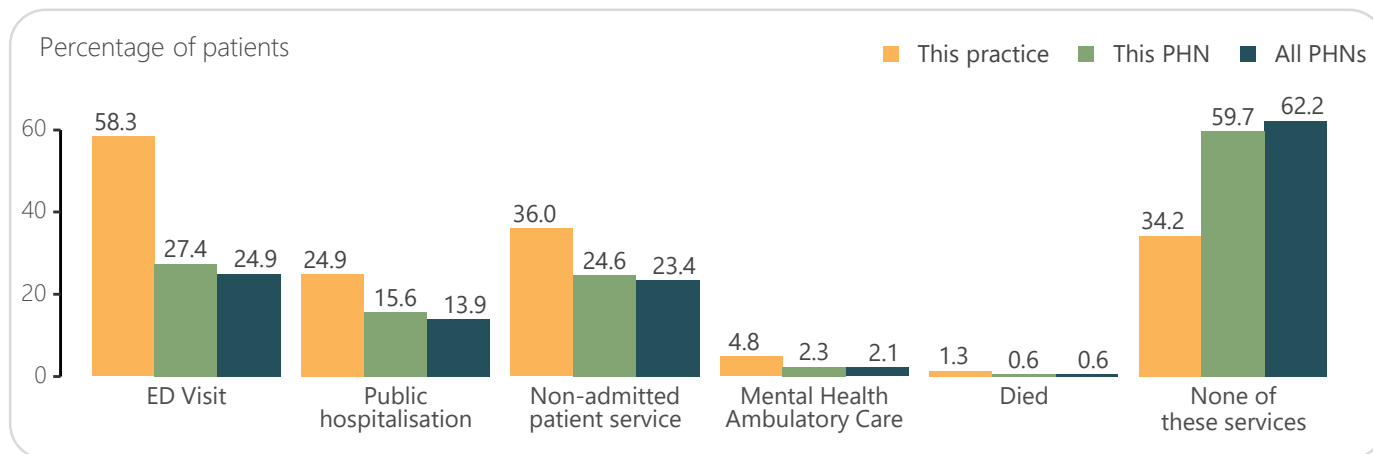
Percentage of patients

Legend: This practice ■ This PHN ■ All PHNs

Service	This practice	This PHN	All PHNs
ED Visit	58.3	27.4	24.9
Public hospitalisation	24.9	15.6	13.9
Non-admitted patient service	36.0	24.6	23.4
Mental Health Ambulatory Care	4.8	2.3	2.1
Died	1.3	0.6	0.6
None of these services	34.2	59.7	62.2

Note that some patients have used multiple health services, and therefore the percentages may sum to over 100%.

Your patients who had a non-admitted patient service

Among patients who visited this practice in 2019, the following proportion had a non-admitted patient service in 2019 by clinic class, sometimes referred to as outpatient/community care (excluding mental health and oral health services).

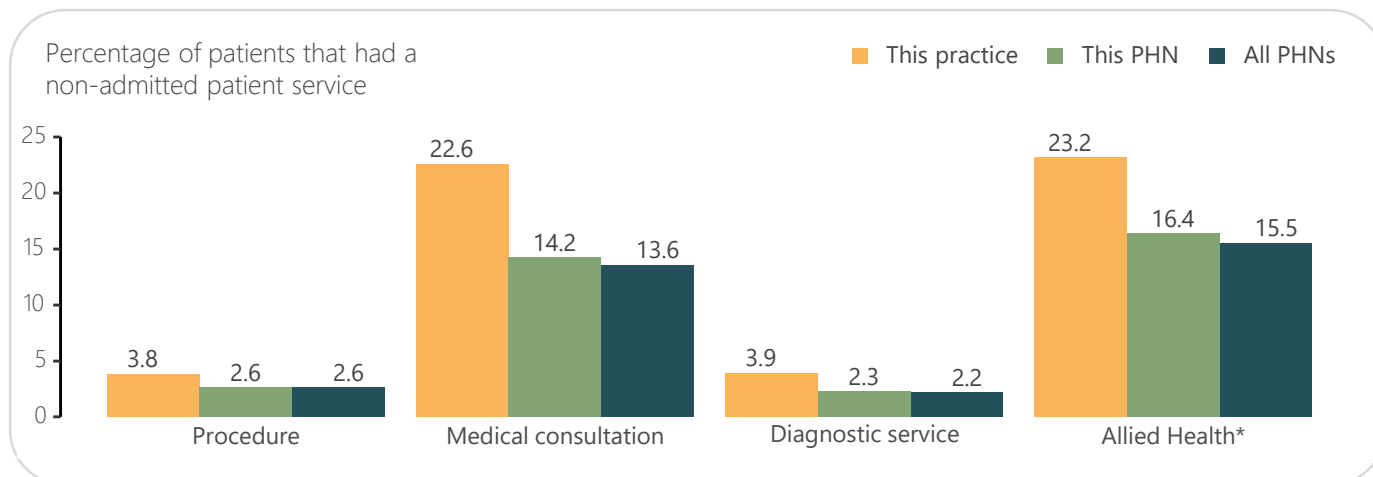Percentage of patients that had a non-admitted patient service

Legend: This practice ■ This PHN ■ All PHNs

Clinic class	This practice	This PHN	All PHNs
Procedure	3.8	2.6	2.6
Medical consultation	22.6	14.2	13.6
Diagnostic service	3.9	2.3	2.2
Allied Health*	23.2	16.4	15.5

*Allied Health represents allied health or clinical nurse specialist intervention services
Note that some patients have used multiple non-admitted patient services, and therefore the percentages may sum to over 100%.

Your patients who died

Among patients who visited this practice in 2019, the following proportion died in 2019 by age cohorts and chronic condition cohorts.

Percentage of patients that died

Legend: This practice ■ This PHN ■ All PHNs

Cohort	This practice	This PHN	All PHNs
0-14 years	0.0	0.0	0.0
15-64 years	0.6	0.2	0.1
≥ 65 years	4.7	2.4	2.5
Chronic conditions	2.4	1.2	1.2
No chronic conditions	0.8	0.3	0.2
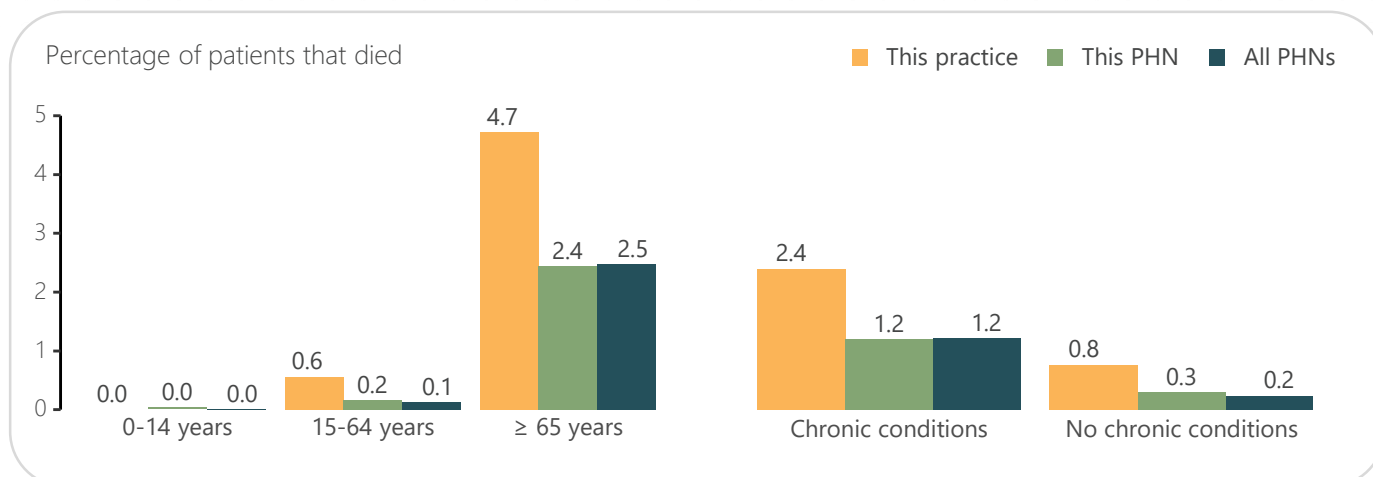
Acute and non-admitted service interactions of your patients

Among patients who visited this practice in 2019, the following charts show any combination of ED presentations, hospital admissions or non-admitted patient services (community care) in 2019.

This practice

Selected statistics to aid chart interpretation

413 (34.4%) patients had no hospital admission, did not present to the ED and did not have a non-admitted patient service

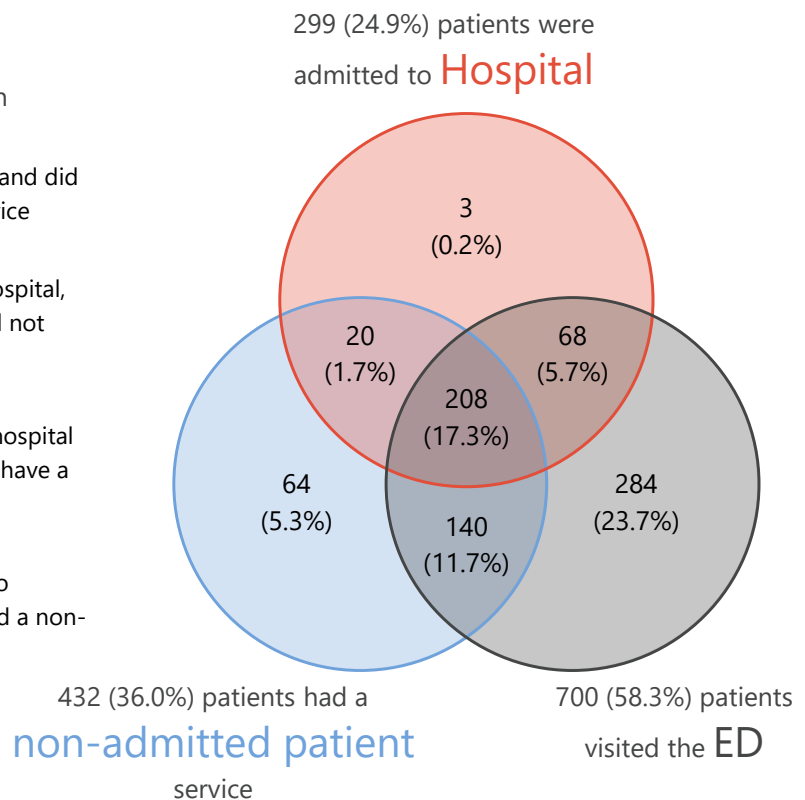**3 (0.2%)** patients were admitted to hospital, but did not present to the ED and did not have a non-admitted patient service

68 (5.7%) patients were admitted to hospital and presented to the ED, but did not have a non-admitted patient service

208 (17.3%) patients were admitted to hospital, presented to the ED, and had a non-admitted patient service

299 (24.9%) patients were admitted to **Hospital**

3 (0.2%)

20 (1.7%)

68 (5.7%)

208 (17.3%)

64 (5.3%)

284 (23.7%)

140 (11.7%)

432 (36.0%) patients had a **non-admitted patient** service

700 (58.3%) patients visited the **ED**

This PHN

Selected statistics to aid chart interpretation

8,705 (60.0%) patients had no hospital admission, did not present to the ED and did not have a non-admitted patient service
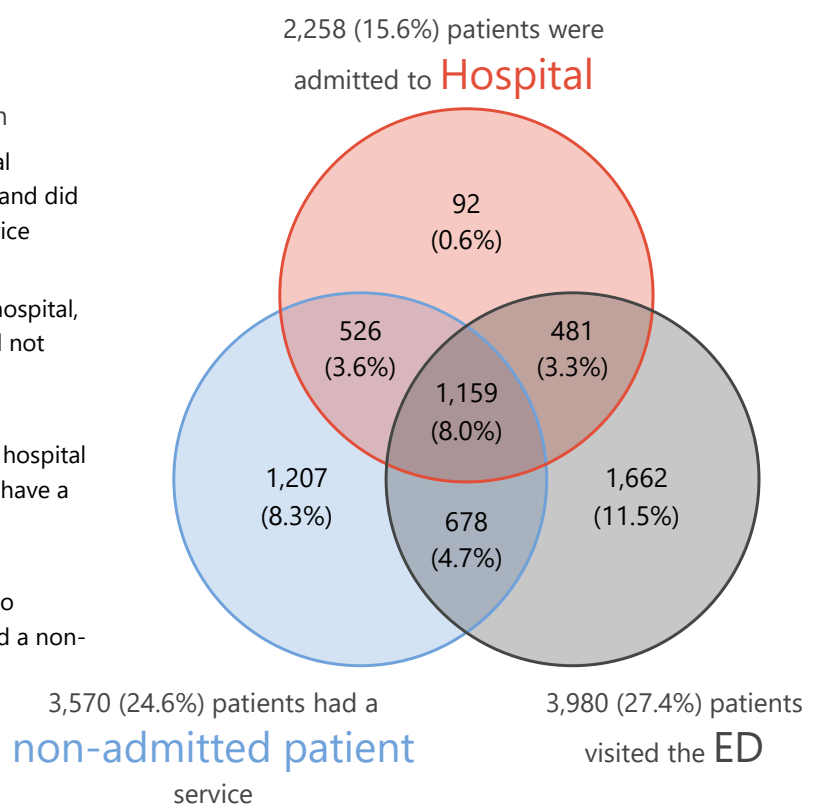
92 (0.6%) patients were admitted to hospital, but did not present to the ED and did not have a non-admitted patient service

481 (3.3%) patients were admitted to hospital and presented to the ED, but did not have a non-admitted patient service

1,159 (8.0%) patients were admitted to hospital, presented to the ED, and had a non-admitted patient service

2,258 (15.6%) patients were admitted to **Hospital**

92 (0.6%)

526 (3.6%)

481 (3.3%)

1,159 (8.0%)

1,207 (8.3%)

1,662 (11.5%)

678 (4.7%)

3,570 (24.6%) patients had a **non-admitted patient** service

3,980 (27.4%) patients visited the **ED**

The Venn diagrams above indicate if a patient used these health services, at least once, during 2019, but not whether it was in the same medical episode of care. For example, patients who have an ED visit and a hospitalisation in the same year, may have 1) first presented to the ED and then been subsequently admitted to hospital as part of the same medical journey; or 2) may have visited the ED on a separate occasion and unrelated to their hospital admission at another time throughout the year. The diagrams do not indicate how many times a patient used each health service during 2019.

Emergency Department Presentations

GP patient

Emergency Department visits

Each record represents a presentation to a public emergency department in NSW. This includes patients who register to be seen for an ED service but did not wait for the service to be delivered. Not all public EDs contribute to this data collection.
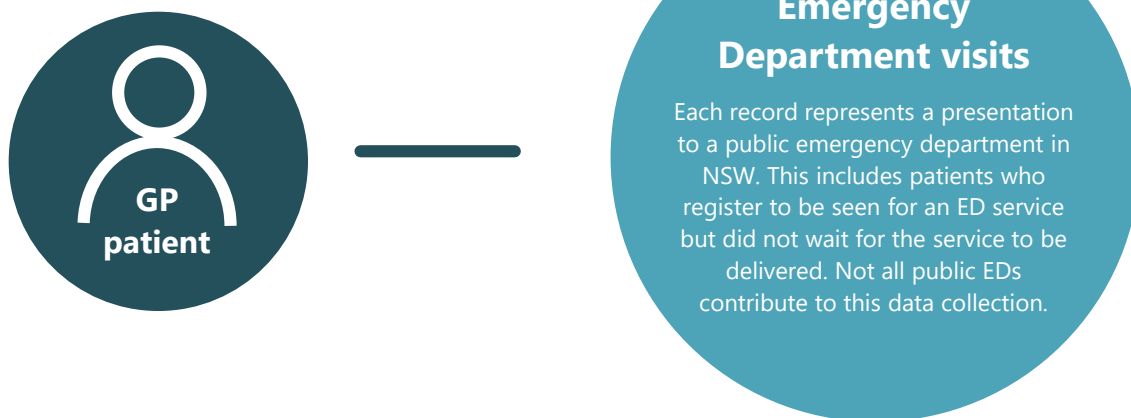
This section of the report provides more detail about your patients who presented to the ED in 2019. It highlights which patient cohorts are more likely to go to the ED, how often and when these patients visit your practice, as well as why and when these patients present to the ED.

The following insights are first presented for all public NSW ED presentations and then separated by triage category. This information is further explored for specific age and chronic disease cohorts. Key insights about the time of day of ED presentations and the type of referral to ED are also shown.

The information presented refers to public ED presentations only since private ED presentations are not available.
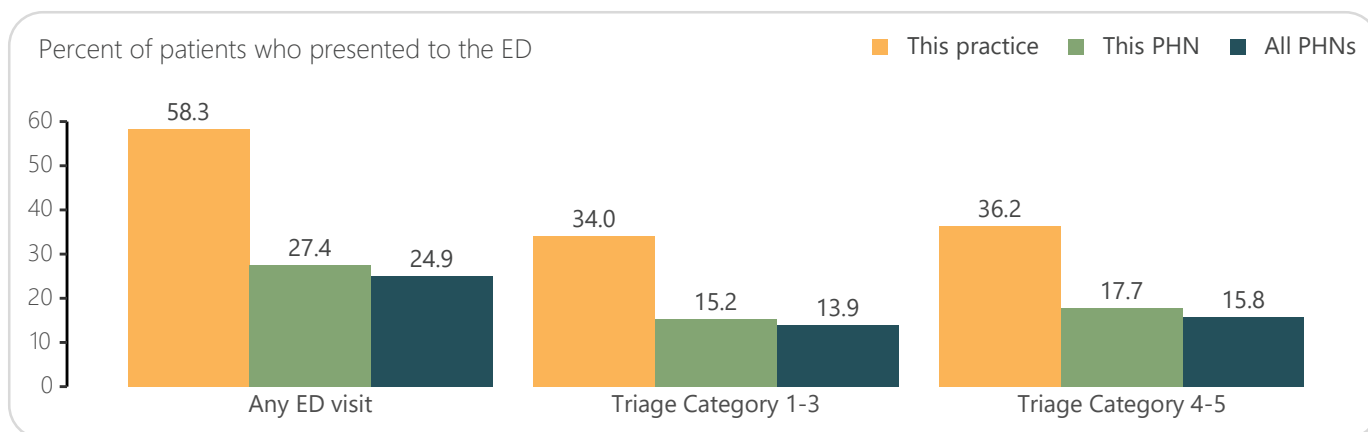
Which patients presented to the ED?

The triage category information below groups categories 1 to 3 together (resuscitation, emergency and urgent ED presentations) and categories 4 and 5 together (semi-urgent and non-urgent ED presentations). The breakdown of chronic condition categories are detailed on page 6.
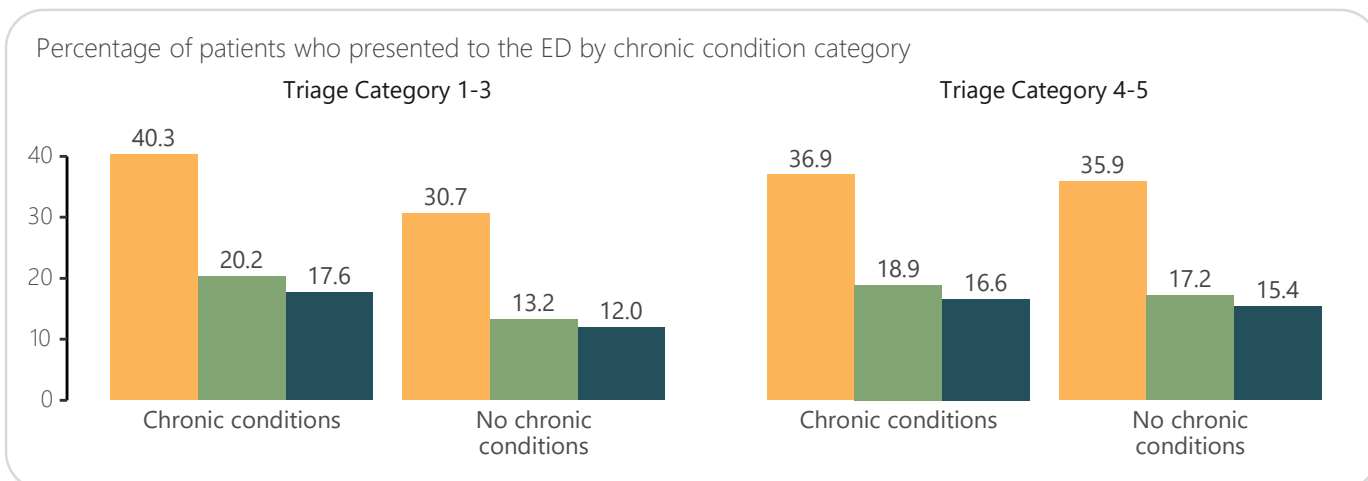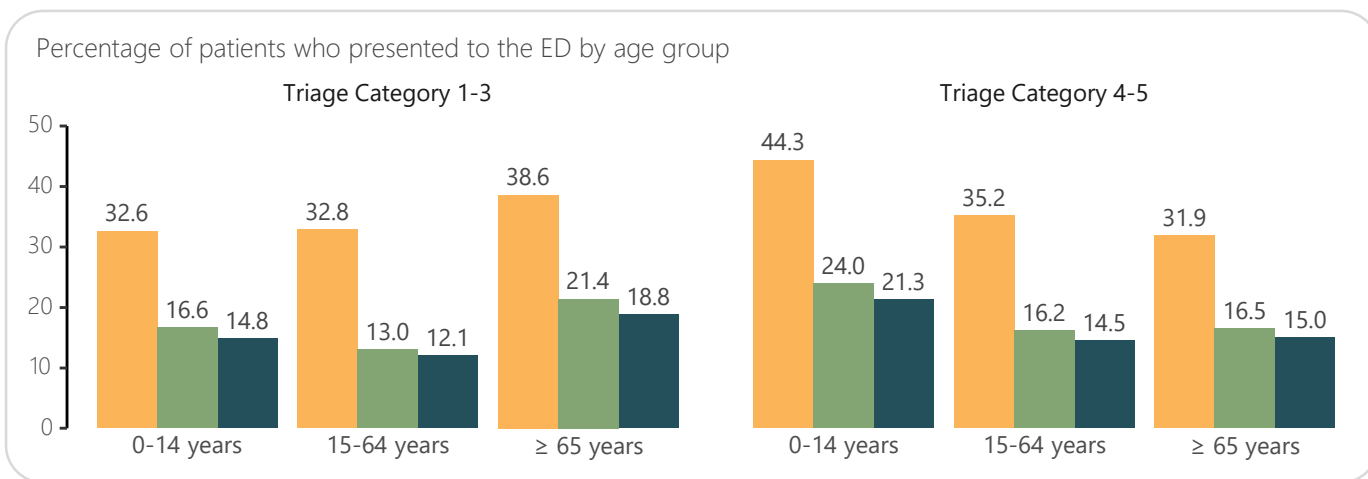
Public ED presentations

700 patients visited your practice in 2019 and also had an ED presentation in 2019. These patients presented to the ED an average of 1.8 times.

Among patients who visited this practice in 2019, the following proportion presented to a public ED, for any reason by triage category grouping in 2019.

Percent of patients who presented to the ED — This practice — This PHN — All PHNs

	This practice	This PHN	All PHNs
Any ED visit	58.3	27.4	24.9
Triage Category 1-3	34.0	15.2	13.9
Triage Category 4-5	36.2	17.7	15.8

Public ED presentations by age and chronic condition cohorts

Among patients who visited this practice in 2019, the following proportion have presented to a public ED in 2019 by age cohort or chronic condition cohort.

This practice — This PHN — All PHNs

Percentage of patients who presented to the ED by age group

Triage Category 1-3

	This practice	This PHN	All PHNs
0-14 years	32.6	16.6	14.8
15-64 years	32.8	13.0	12.1
≥ 65 years	38.6	21.4	18.8

Triage Category 4-5

	This practice	This PHN	All PHNs
0-14 years	44.3	24.0	21.3
15-64 years	35.2	16.2	14.5
≥ 65 years	31.9	16.5	15.0

Percentage of patients who presented to the ED by chronic condition category

Triage Category 1-3

	This practice	This PHN	All PHNs
Chronic conditions	40.3	20.2	17.6
No chronic conditions	30.7	13.2	12.0

Triage Category 4-5

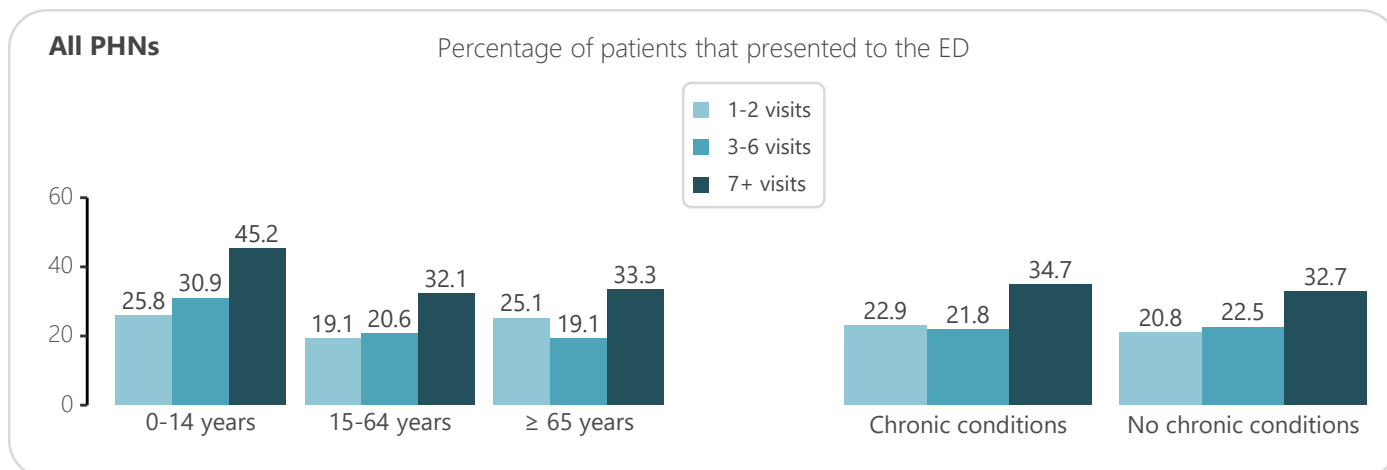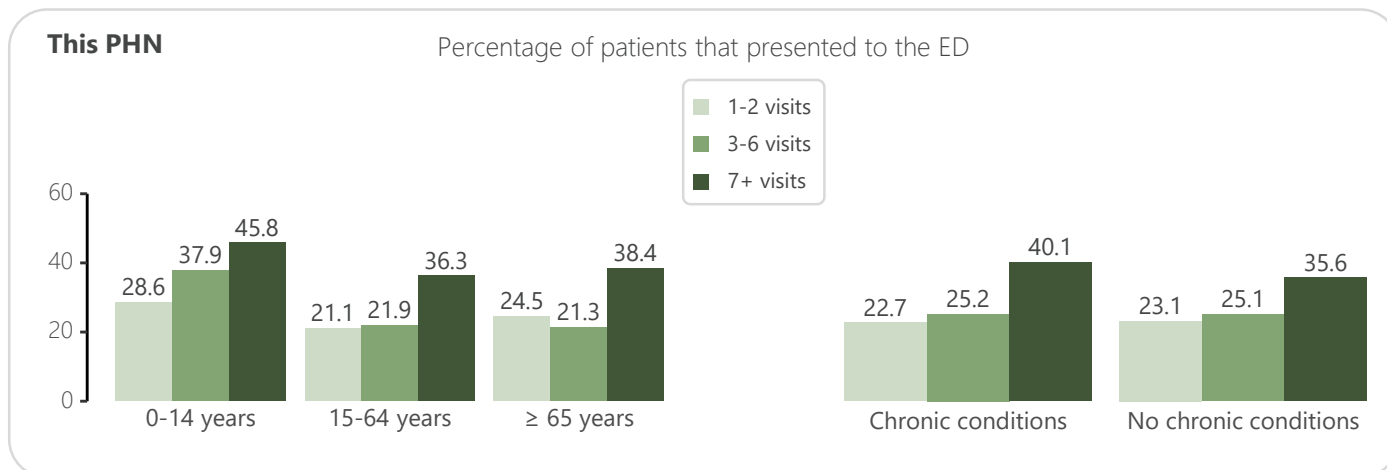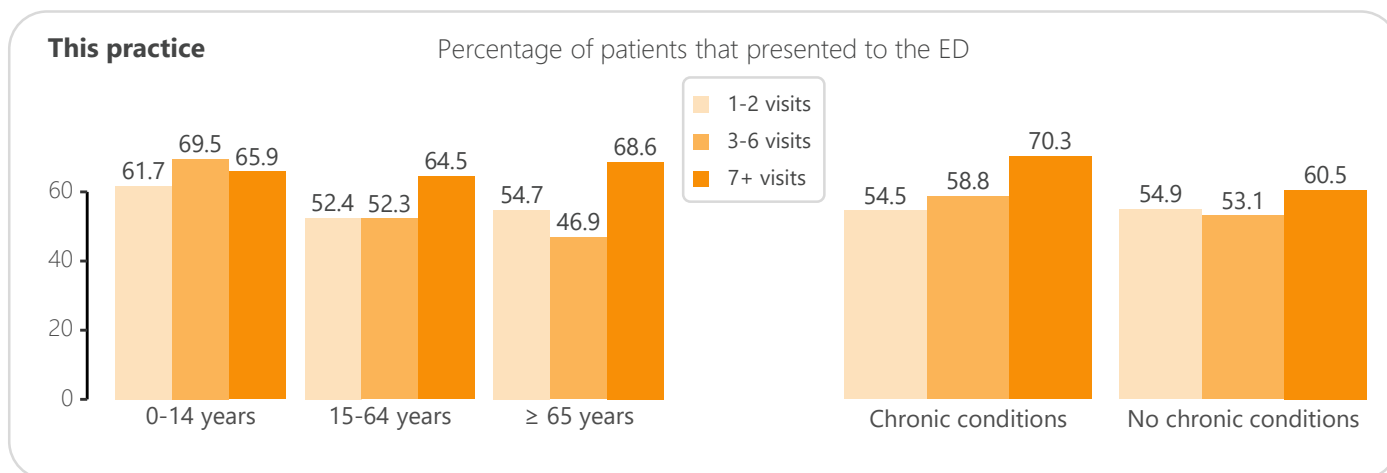|	This practice	This PHN	All PHNs
Chronic conditions	36.9	18.9	16.6
No chronic conditions	35.9	17.2	15.4

Note that some patients had multiple ED visits and may be counted in both the triage category 1-3 and triage category 4-5 percentages.

How often do patients who presented to the ED visit the GP?

Public ED presentations by frequency of General Practice visits

Among patients who visited this practice in 2019, the following proportion have presented to the emergency department, for any reason, by frequency of GP visits and age cohort or chronic condition cohort.
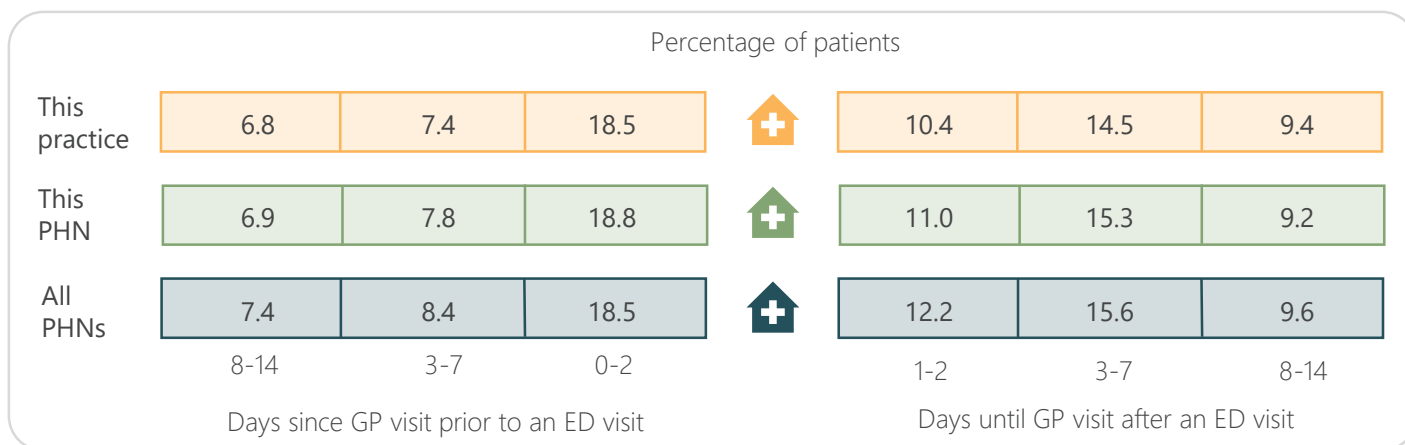
This practice — Percentage of patients that presented to the ED

Legend: 1-2 visits, 3-6 visits, 7+ visits

	1-2 visits	3-6 visits	7+ visits
0-14 years	61.7	69.5	65.9
15-64 years	52.4	52.3	64.5
≥ 65 years	54.7	46.9	68.6
Chronic conditions	54.5	58.8	70.3
No chronic conditions	54.9	53.1	60.5

This PHN — Percentage of patients that presented to the ED

Legend: 1-2 visits, 3-6 visits, 7+ visits

	1-2 visits	3-6 visits	7+ visits
0-14 years	28.6	37.9	45.8
15-64 years	21.1	21.9	36.3
≥ 65 years	24.5	21.3	38.4
Chronic conditions	22.7	25.2	40.1
No chronic conditions	23.1	25.1	35.6

All PHNs — Percentage of patients that presented to the ED

Legend: 1-2 visits, 3-6 visits, 7+ visits

	1-2 visits	3-6 visits	7+ visits
0-14 years	25.8	30.9	45.2
15-64 years	19.1	20.6	32.1
≥ 65 years	25.1	19.1	33.3
Chronic conditions	22.9	21.8	34.7
No chronic conditions	20.8	22.5	32.7

GP visits are defined as doctor or nurse encounters (i.e. not administrative).

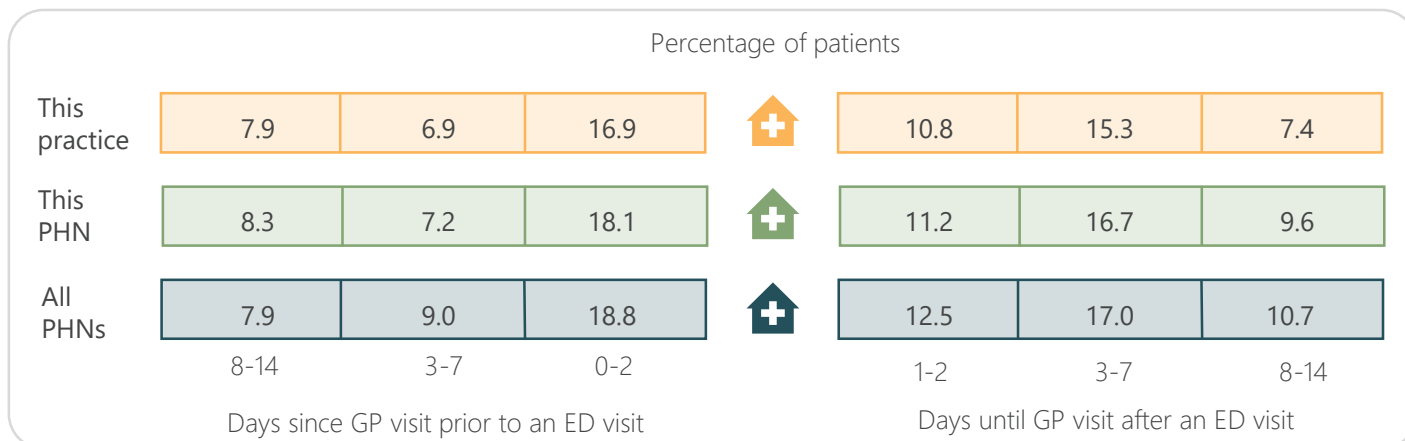| Age group (years) | GP visits at this practice in 2019 | | | | | |
| | 1-2 | | 3-6 | | 7+ | |
	Number	%	Number	%	Number	%
0-14	107	8.9	82	6.8	41	3.4
15-64	292	24.3	241	20.1	183	15.2
≥ 65	53	4.4	64	5.3	137	11.4

GP attendance before and after the most recent ED presentation

Of the 661 patients who visited this practice in 2019 and who also presented to the ED from mid-January to mid-December 2019*, 216 (32.7%) patients visited this practice within 14 days prior to their ED visit and 227 (34.3%) visited this practice within 14 days after their ED visit. 109 (16.5%) patients visited this practice both within 14 days prior to and within 14 days after their ED visit. The chart below gives the proportion for other time periods prior to and after a patient's most recent ED visit. If a patient had multiple ED presentations, the most recent ED presentation in the time period was selected.

Percentage of patients

	8-14	3-7	0-2		1-2	3-7	8-14
This practice	6.8	7.4	18.5		10.4	14.5	9.4
This PHN	6.9	7.8	18.8		11.0	15.3	9.2
All PHNs	7.4	8.4	18.5		12.2	15.6	9.6

Days since GP visit prior to an ED visit   Days until GP visit after an ED visit
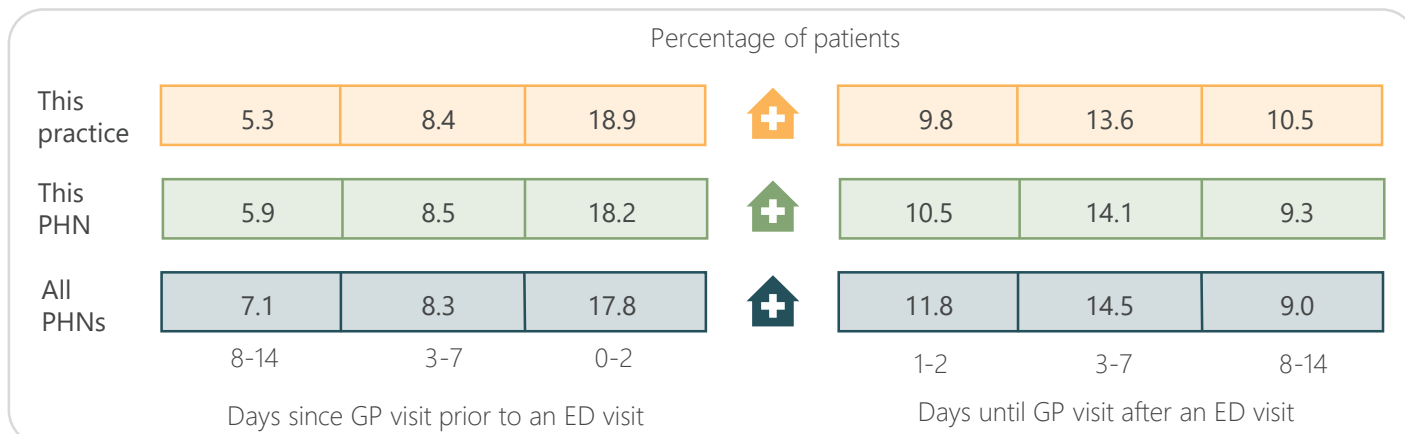
GP attendance before and after the most recent ED presentation with triage category 1-3

379 patients visited this practice in 2019 and also presented to the ED for a triage category 1-3 reason from mid-January to mid-December 2019*. The following chart shows the proportion of these patients who visited this practice within 14 days prior to and within 14 days after their ED visit.

Percentage of patients

	8-14	3-7	0-2		1-2	3-7	8-14
This practice	7.9	6.9	16.9		10.8	15.3	7.4
This PHN	8.3	7.2	18.1		11.2	16.7	9.6
All PHNs	7.9	9.0	18.8		12.5	17.0	10.7

Days since GP visit prior to an ED visit   Days until GP visit after an ED visit

GP attendance before and after the most recent ED presentation with triage category 4-5

418 patients visited this practice in 2019 and also presented to the ED for a triage category 4-5 reason from mid-January to mid-December 2019*. The following chart shows the proportion of these patients who visited this practice within 14 days prior to and within 14 days after their ED visit.

Percentage of patients

	8-14	3-7	0-2		1-2	3-7	8-14
This practice	5.3	8.4	18.9		9.8	13.6	10.5
This PHN	5.9	8.5	18.2		10.5	14.1	9.3
All PHNs	7.1	8.3	17.8		11.8	14.5	9.0

Days since GP visit prior to an ED visit   Days until GP visit after an ED visit

*See appendix for explanation of months selected. If a patient had multiple ED presentations, the most recent ED presentation in the time period was selected. If a practice had less than 12 months of data available these dates were amended for the practice numbers presented.

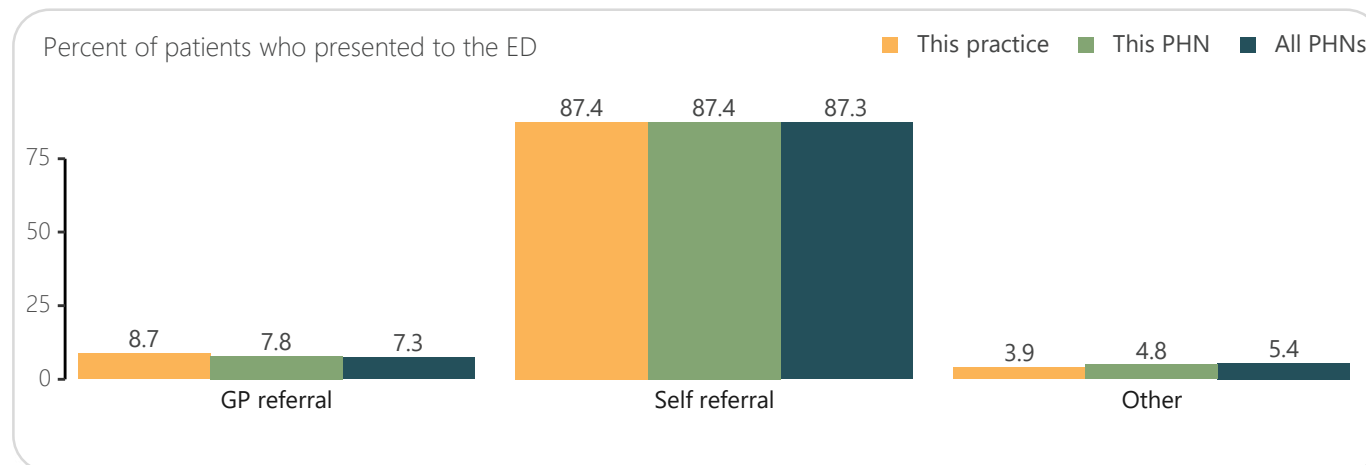# When did patients present to the ED?

Public ED presentations by time of day and triage category groupings

700 patients visited this practice during 2019 and also presented to the ED in 2019. The following chart shows how many presentations were triage category 1-3 (resuscitation, emergency and urgent), triage category 4 and 5 (semi-urgent and non-urgent) ED presentations, and at what time of day these presentations occurred, as compared to all ED presentations from this practice.
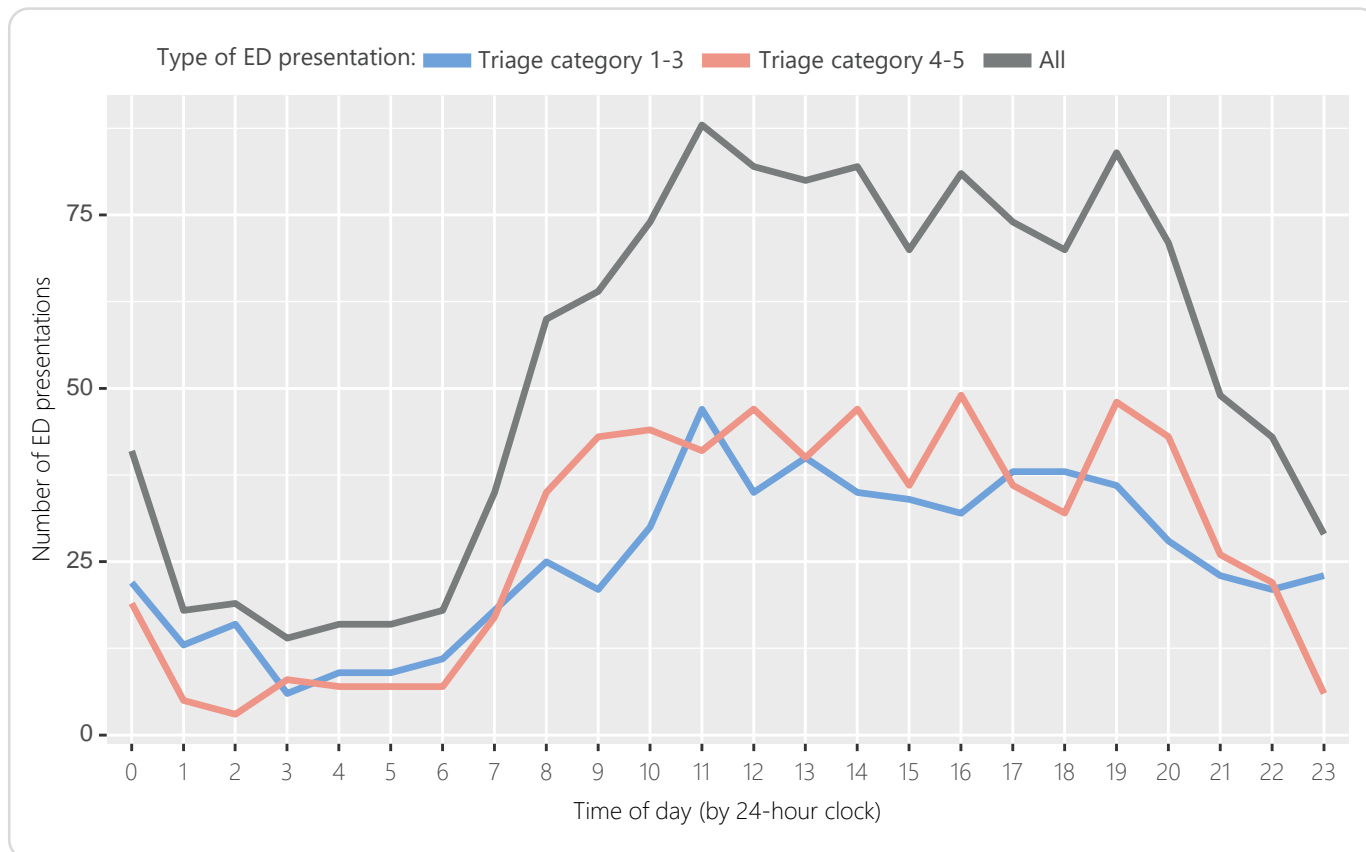
Public ED presentations by referral type

Among patients who visited this practice in 2019 and who also presented to the ED in the same 12 month period, the following chart shows the distribution by referral type. If a patient had multiple ED presentations, the most recent ED presentation in the time period was selected.

Hospitalisations

GP patient — **Hospitalisations**

All inpatient admissions (discharge, transfer or death) from public hospitals, public psychiatric hospitals, multi-purpose services, private hospitals, and private day procedure centres in NSW.

The following section of this report provides more detail about your patients who were admitted to hospital in 2019. It highlights which patient cohorts are more likely to go to the hospital, how often and when these patients visit your practice, as well as some key reasons for their hospital admission.

Data are first presented for all NSW hospitalisations and then for unplanned and planned hospitalisations. These data are further explored for specific age and chronic disease cohorts. Key insights about the proportion of hospitalisations for selected chronic conditions are also shown.
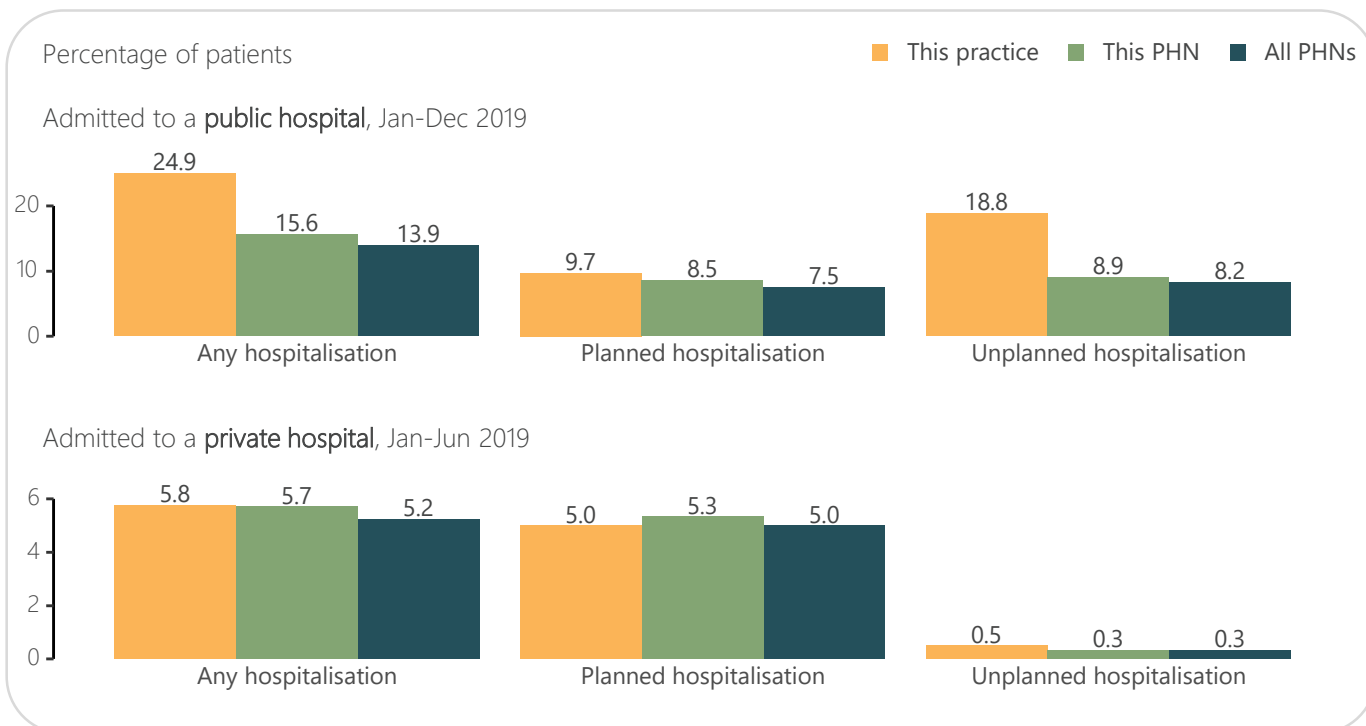
Private hospitalisation data were only available until 30 June 2019 and therefore are only included in one chart (on page 16).

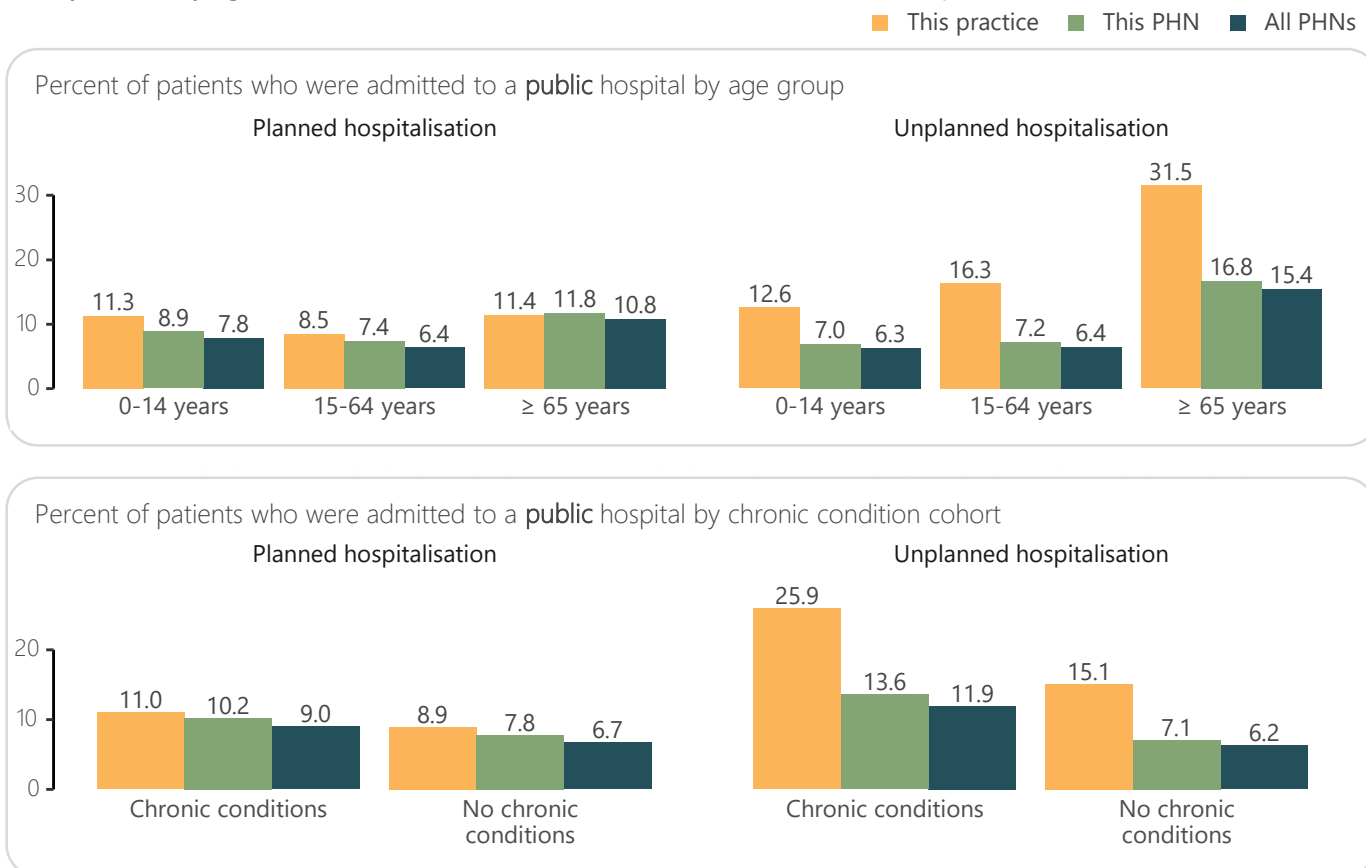# Which patients were admitted to hospital?

Hospital admissions

299 patients visited your practice in 2019 and were also admitted to hospital in the same 12 month period. These patients were admitted to hospital an average of 2.1 times.

The chart shows the proportion of your patients who have been admitted to hospital, for any reason, and for a planned or unplanned hospitalisation, in the same time period.

Percentage of patients — This practice / This PHN / All PHNs

Admitted to a **public hospital**, Jan-Dec 2019

	This practice	This PHN	All PHNs
Any hospitalisation	24.9	15.6	13.9
Planned hospitalisation	9.7	8.5	7.5
Unplanned hospitalisation	18.8	8.9	8.2

Admitted to a **private hospital**, Jan-Jun 2019

	This practice	This PHN	All PHNs
Any hospitalisation	5.8	5.7	5.2
Planned hospitalisation	5.0	5.3	5.0
Unplanned hospitalisation	0.5	0.3	0.3

Public hospital admissions by age and chronic condition cohorts

Among patients who visited this practice in 2019, the following proportion have been admitted to a public hospital for any reason by age cohort or chronic condition cohort in the same 12 month period.
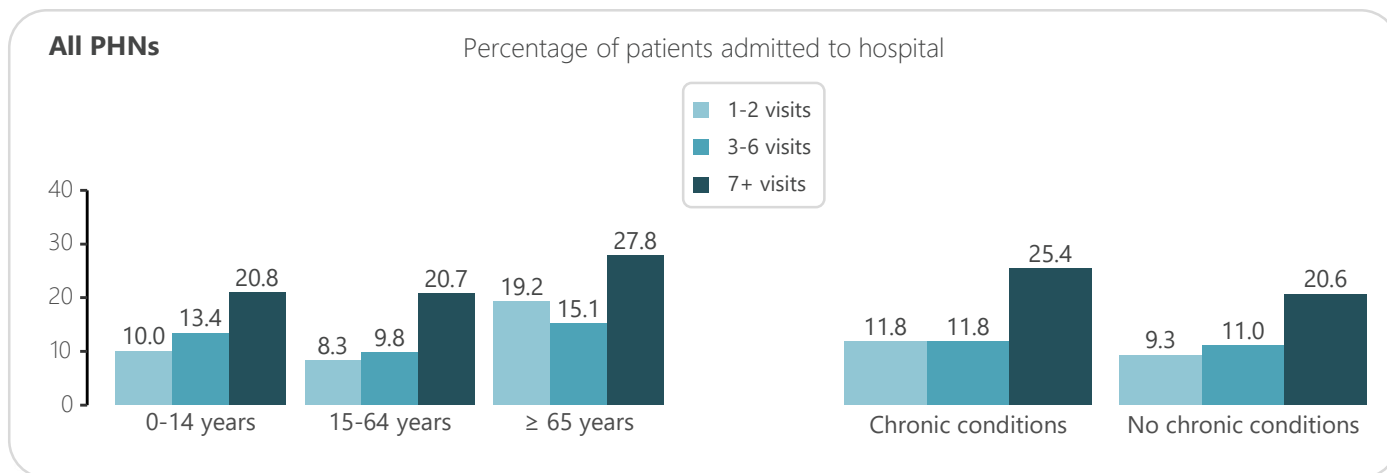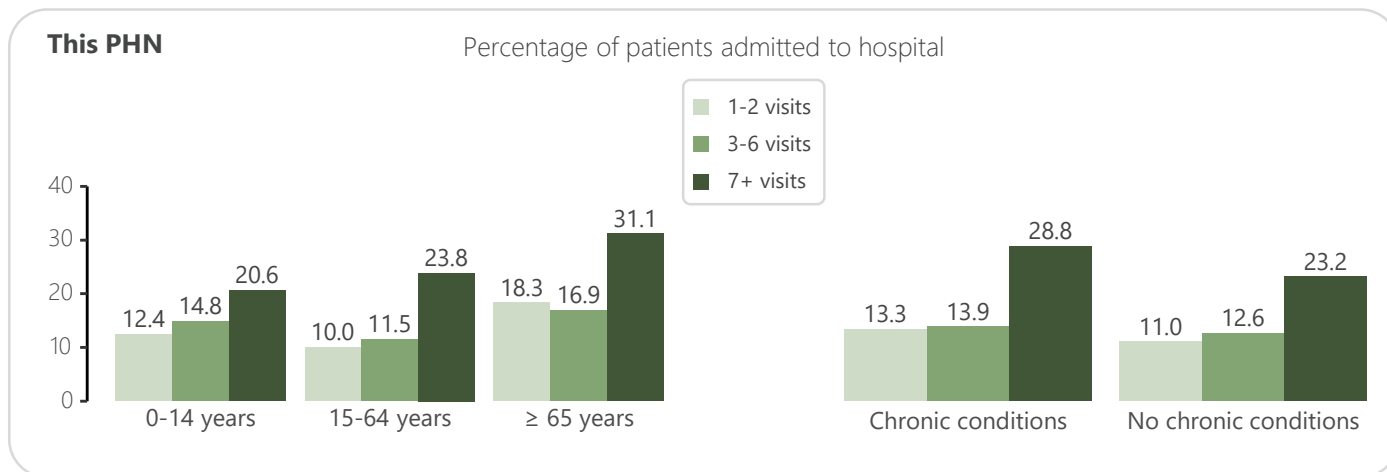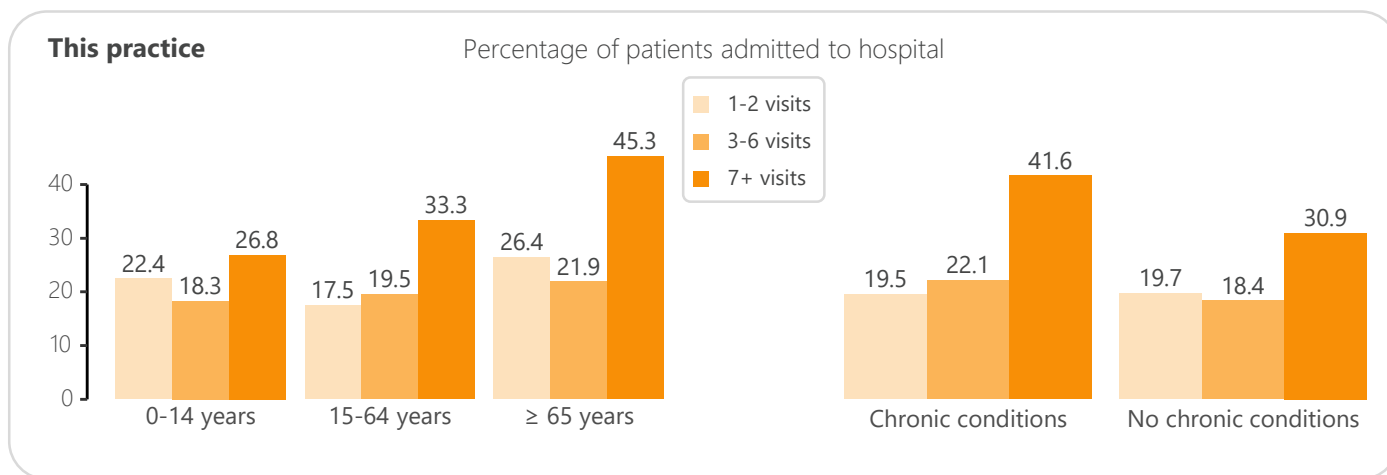
This practice / This PHN / All PHNs

Percent of patients who were admitted to a **public** hospital by age group

Planned hospitalisation	This practice	This PHN	All PHNs
0-14 years	11.3	8.9	7.8
15-64 years	8.5	7.4	6.4
≥ 65 years	11.4	11.8	10.8

Unplanned hospitalisation	This practice	This PHN	All PHNs
0-14 years	12.6	7.0	6.3
15-64 years	16.3	7.2	6.4
≥ 65 years	31.5	16.8	15.4

Percent of patients who were admitted to a **public** hospital by chronic condition cohort

Planned hospitalisation	This practice	This PHN	All PHNs
Chronic conditions	11.0	10.2	9.0
No chronic conditions	8.9	7.8	6.7

Unplanned hospitalisation	This practice	This PHN	All PHNs
Chronic conditions	25.9	13.6	11.9
No chronic conditions	15.1	7.1	6.2

Note that some patients had multiple hospitalisations and may be counted in both the planned and unplanned percentages.

How often do patients who were admitted to hospital visit the GP?

Public hospitalisations by frequency of General Practice visits

Among patients who visited this practice in 2019, the following proportion have been admitted to a public hospital, for any reason, by frequency of GP visits in the same 12 month period and age cohort or chronic condition cohort.
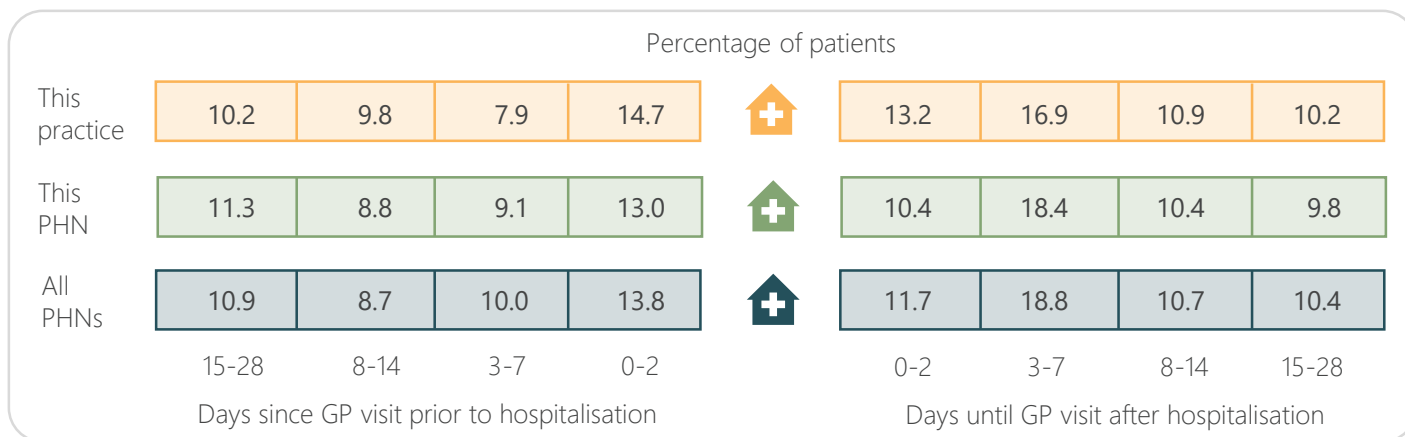
This practice — Percentage of patients admitted to hospital

Legend: 1-2 visits, 3-6 visits, 7+ visits

	1-2 visits	3-6 visits	7+ visits
0-14 years	22.4	18.3	26.8
15-64 years	17.5	19.5	33.3
≥ 65 years	26.4	21.9	45.3
Chronic conditions	19.5	22.1	41.6
No chronic conditions	19.7	18.4	30.9

This PHN — Percentage of patients admitted to hospital

Legend: 1-2 visits, 3-6 visits, 7+ visits

	1-2 visits	3-6 visits	7+ visits
0-14 years	12.4	14.8	20.6
15-64 years	10.0	11.5	23.8
≥ 65 years	18.3	16.9	31.1
Chronic conditions	13.3	13.9	28.8
No chronic conditions	11.0	12.6	23.2

All PHNs — Percentage of patients admitted to hospital

Legend: 1-2 visits, 3-6 visits, 7+ visits

	1-2 visits	3-6 visits	7+ visits
0-14 years	10.0	13.4	20.8
15-64 years	8.3	9.8	20.7
≥ 65 years	19.2	15.1	27.8
Chronic conditions	11.8	11.8	25.4
No chronic conditions	9.3	11.0	20.6

GP visits are defined as doctor or nurse encounters (i.e. not administrative).

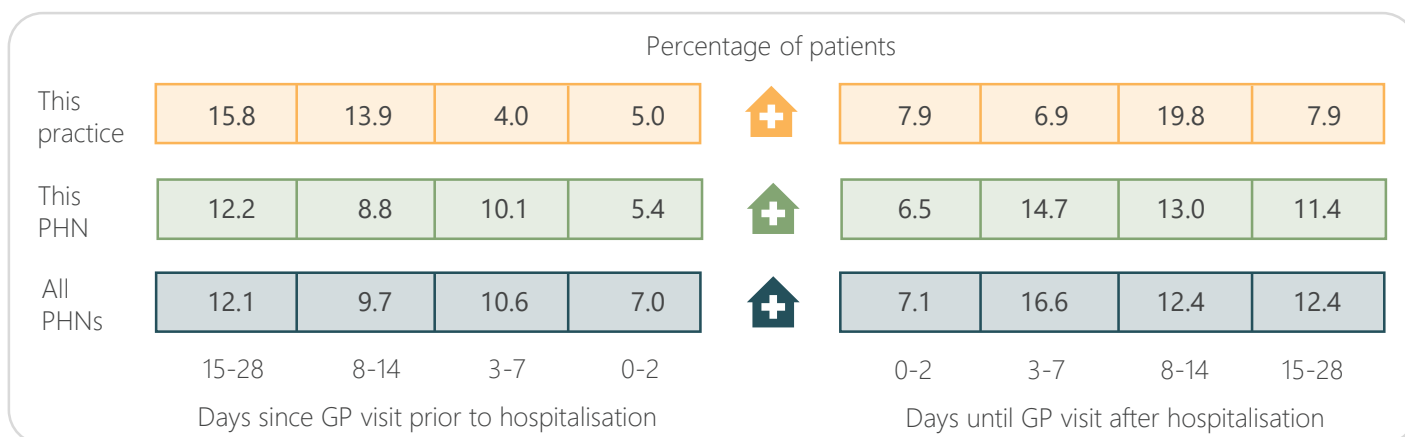| Age group (years)	GP visits at this practice in 2019					
	1-2		3-6		7+	
	Number	%	Number	%	Number	%
0-14	107	8.9	82	6.8	41	3.4
15-64	292	24.3	241	20.1	183	15.2
≥ 65	53	4.4	64	5.3	137	11.4

GP attendance before and after the most recent hospitalisation

Of the 266 patients who visited this practice in 2019 and were also admitted to hospital from February to November 2019*, 113 (42.5%) patients visited this practice within 28 days prior to their hospitalisation and 136 (51.1%) visited this practice within 28 days after their hospitalisation. 78 (29.3%) patients visited this practice both within 28 days prior to and within 28 days after their hospitalisation. The chart below gives the proportions for other time periods prior to and after a hospitalisation. If a patient had multiple hospitalisations, the most recent hospitalisation in the time period was selected.

Percentage of patients

	15-28	8-14	3-7	0-2		0-2	3-7	8-14	15-28
This practice	10.2	9.8	7.9	14.7		13.2	16.9	10.9	10.2
This PHN	11.3	8.8	9.1	13.0		10.4	18.4	10.4	9.8
All PHNs	10.9	8.7	10.0	13.8		11.7	18.8	10.7	10.4

Days since GP visit prior to hospitalisation · Days until GP visit after hospitalisation

GP attendance before and after the most recent planned hospitalisation

101 patients visited this practice in 2019 and also had a planned hospitalisation from February to November 2019*. The following proportion of these patients visited this practice within 28 days before and 28 days after their planned hospitalisation.

Percentage of patients

	15-28	8-14	3-7	0-2		0-2	3-7	8-14	15-28
This practice	15.8	13.9	4.0	5.0		7.9	6.9	19.8	7.9
This PHN	12.2	8.8	10.1	5.4		6.5	14.7	13.0	11.4
All PHNs	12.1	9.7	10.6	7.0		7.1	16.6	12.4	12.4

Days since GP visit prior to hospitalisation · Days until GP visit after hospitalisation

GP attendance before and after the most recent unplanned hospitalisation

200 patients visited this practice in 2019 and also had an unplanned hospitalisation from February to November 2019*. The following proportion of these patients visited this practice within 28 days before and after their unplanned hospitalisation.
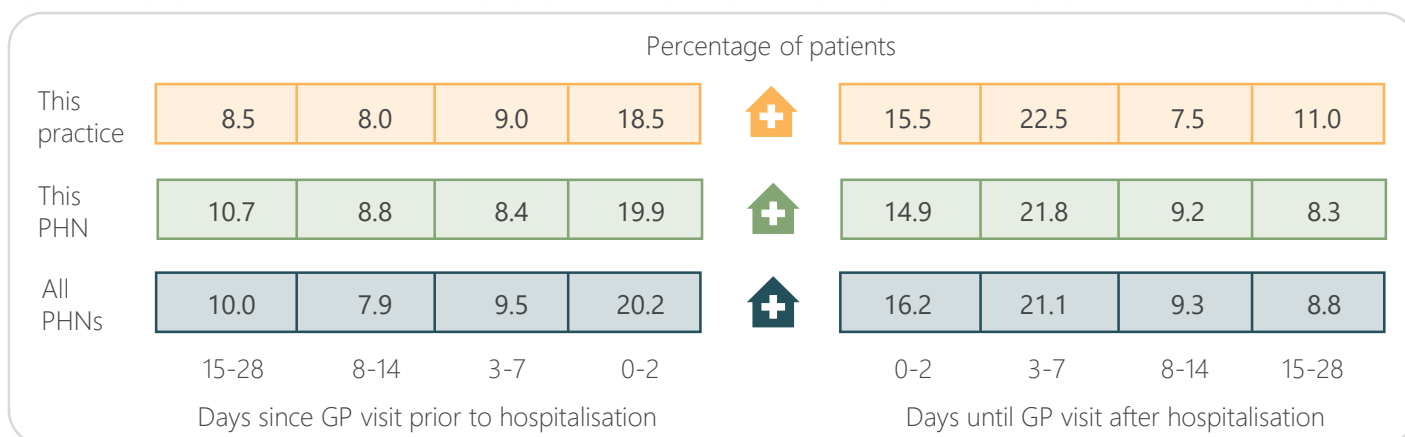
Percentage of patients

	15-28	8-14	3-7	0-2		0-2	3-7	8-14	15-28
This practice	8.5	8.0	9.0	18.5		15.5	22.5	7.5	11.0
This PHN	10.7	8.8	8.4	19.9		14.9	21.8	9.2	8.3
All PHNs	10.0	7.9	9.5	20.2		16.2	21.1	9.3	8.8

Days since GP visit prior to hospitalisation · Days until GP visit after hospitalisation

*See appendix for explanation of months selected. If a patient had multiple hospitalisations, the most recent hospitalisation in the time period was selected. If a practice had less than 12 months of data available these dates were amended for the practice numbers presented.

Why were your patients admitted to hospital?

When a patient is admitted to hospital, they are given a main diagnosis and up to 50 additional diagnoses. These diagnoses are coded by trained clinical information managers who choose diagnoses from the Australian clinical version of the International Classification of Diseases (ICD). The main reason for being hospitalised is shown in the first chart. The second chart shows the additional reasons that patients were hospitalised if different to their main reason for hospitalisation. Both charts are based only on diagnoses coded in hospital and do not take into consideration any diagnoses for chronic conditions identified at the General Practice. There are many reasons that patients are admitted to hospital. The charts below highlight those hospitalisations for 9 select chronic conditions.

Reason for public hospital admission

299 patients visited this practice in 2019 and were also admitted to a public hospital in the same 12 month period. The following proportion of these patients were admitted for the selected chronic conditions as either the main or additional diagnosis at hospital.
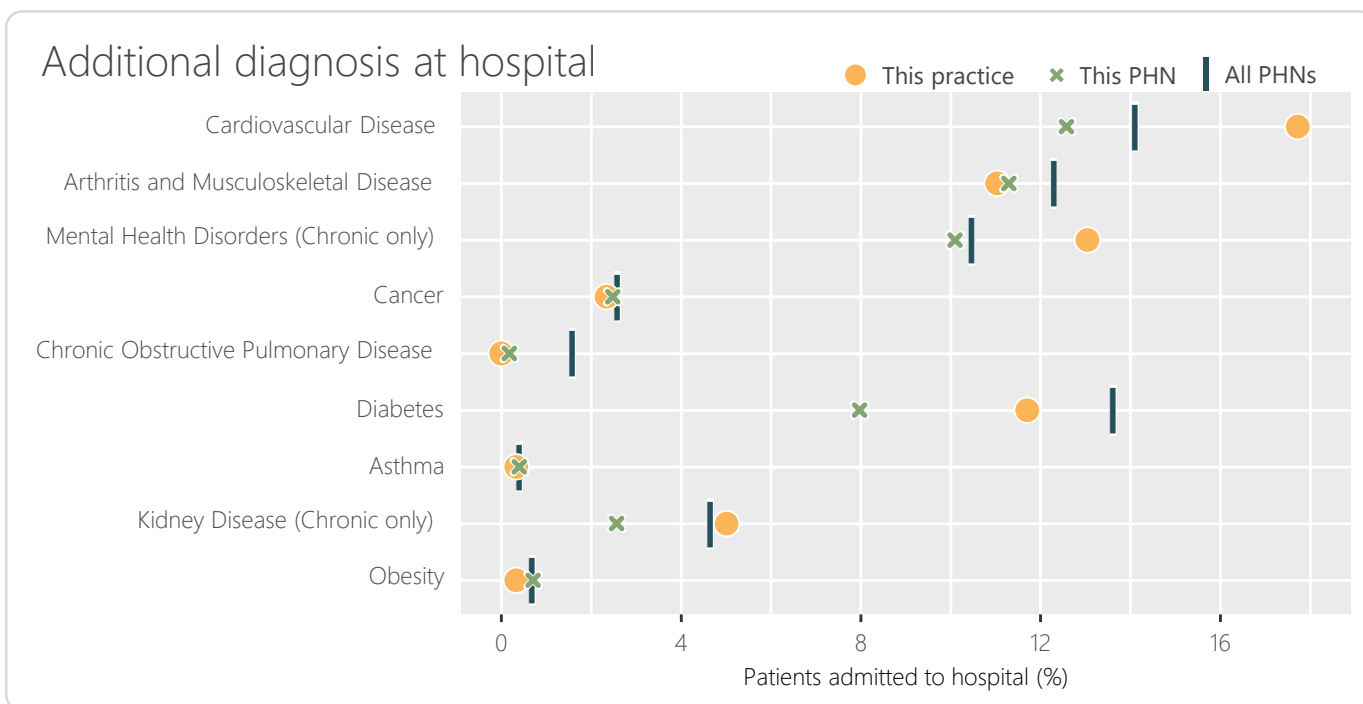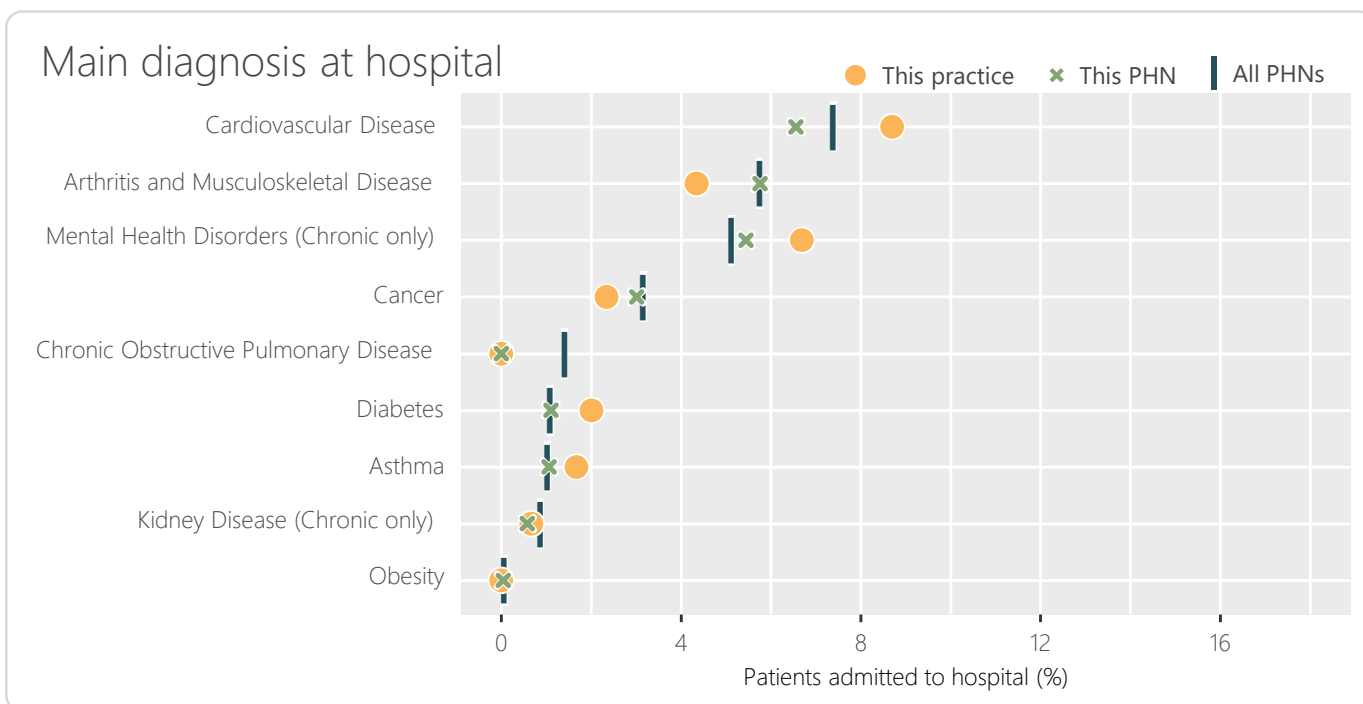
Note that some patients may have multiple chronic diagnoses in their additional hospital diagnoses, and therefore may be included in more than one row in the second chart. Note that patients may be included in one chart but not the other. For example, a patient hospitalised for a fractured hip but whose asthma condition contributed to the length of their hospitalisation will not be shown in the main diagnosis chart but will be included for the asthma condition in the second chart. This patient is included in the denominator for both charts.

Condition in Focus

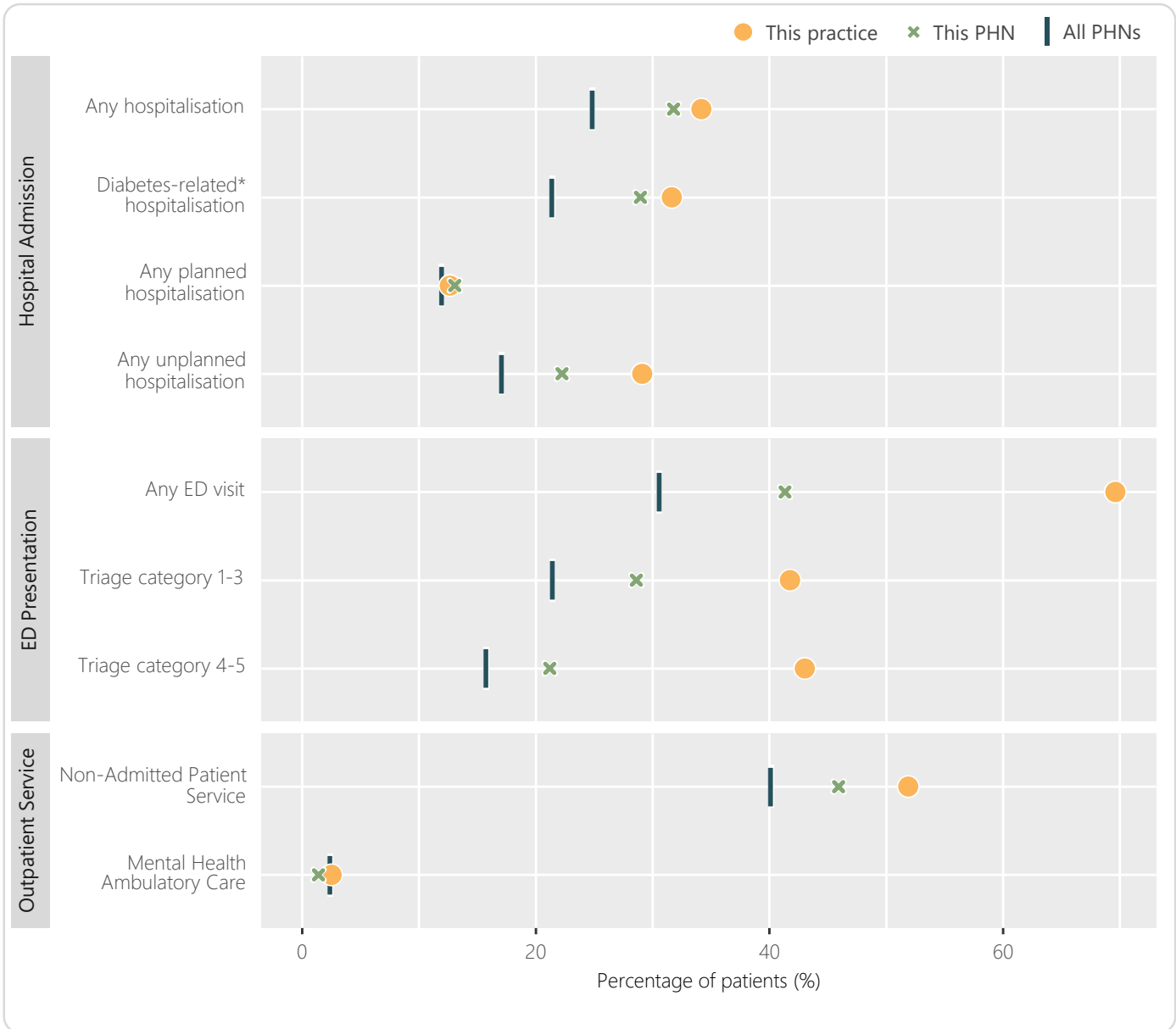# Diabetes

Patients with diabetes at your practice

Among patients who visited your practice in 2019, 79 (6.6%) patients were coded as having *ever been diagnosed* in your practice with diabetes. This compares to 2% among Lumos participating practices in this PHN. Coded diabetic patients are identified using a yes/no diabetes flag that Lumos received from your extraction vendor. This page provides a deeper insight into this diabetes cohort.

The following graph shows the distribution of your patients with diabetes by diabetes type, age cohort, frequency of GP visits and selected GP measures recorded.
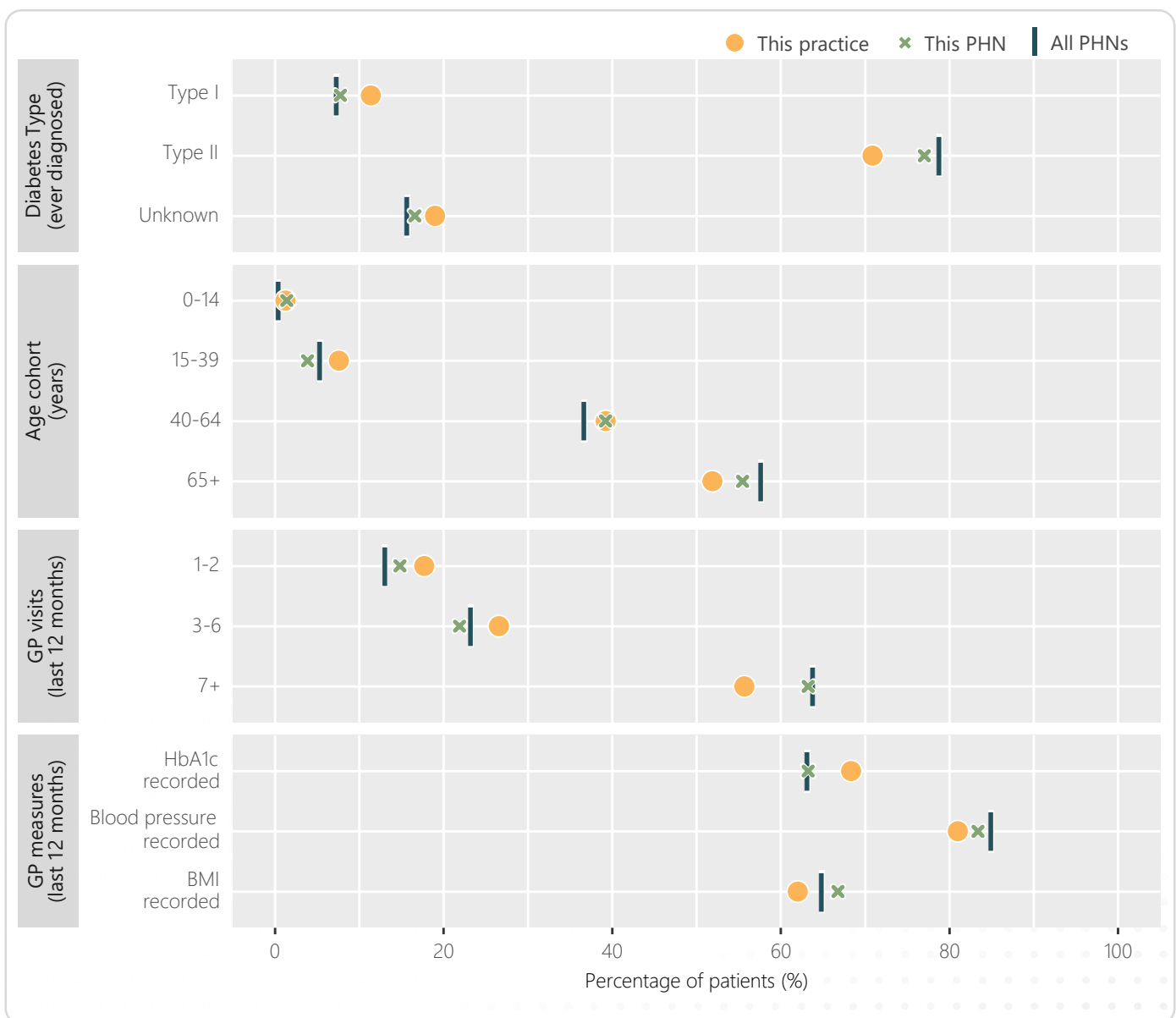
NSW health service use among patients with diabetes at your practice

Among patients coded as having diabetes at this practice and who visited this practice in 2019, the following proportion used other NSW health services in the same 12 month period.

Note that some patients have used multiple health services, and therefore will appear multiple times in this chart.
*Diabetes-related hospital diagnosis as the main or additional diagnosis

Information about your patient's diabetes in NSW health services

Of those patients who visited this practice in 2019 who were not coded as diabetic, 13 (1.2%) had a diabetes-related hospitalisation.

Appendix

Acknowledgements

Additional Information

General practice visit

A GP visit is defined in this report as an encounter with a doctor or nurse at your practice in 2019. Patients may have also visited other GPs during this time. Information on the visits of your patients to other GPs is not included in your data. The PHN and all PHN level data will take into account patients that visited multiple practices, where applicable.

Chronic conditions

This report only presents data on those patients who have visited your practice in 2019 where a chronic condition has been recorded and the record has been extracted for the Lumos program. This includes historical information about your patients' health status that has been recorded.

Accessibility/Remoteness Index of Australia (ARIA)

The ARIA is a relative geographic measure of access to services, based on a patient's postcode. Further detailed information on ARIA can be found here:
https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005?OpenDocument

Index of relative socio-economic advantage and disadvantage (IRSAD)

The IRSAD is used to rank geographic areas in accordance with their socio-economic advantage and disadvantage.

It has been developed based on social and economic data on individuals and households collected as part of the 2016 Census of Population and Housing conducted by the Australia Bureau of Statistics (ABS).

A low score indicates relative greater disadvantage (and a lack of advantage) and a high score indicates relative greater advantage (and a lack of disadvantage) in a geographic area.

Further detailed information on the IRSAD can be found at the following link:
https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001~2016~Main%20Features~SOCIO-ECONOMIC%20INDEXES%20FOR%20AREAS%20(SEIFA)%202016~1

Patient population demographics (Page 5)

ARIA and IRSAD is reported at the patient level. ARIA is based on a patient's geographical area provided on a hospital or ED discharge record, when available, or on a patient's postcode recorded at their general practice otherwise. For PHN and all PHNs, the percentage of patients in each category are based on practices participating in the Lumos program.

To compare these data to the PHN or NSW population refer to the Health Stats NSW website: http://www.healthstats.nsw.gov.au/Indicator/dem_pop_phnmap/.

Datasets

Patient information from this general practice was linked to the following NSW state-wide health data collections: NSW Admitted Patient Data Collection (NSW APDC); NSW Emergency Department Data Collection (NSW EDDC); NSW Non-Admitted Patient Data Collection (NSW NAP); NSW Mental Health Ambulatory Care Data Collection (NSW MH-AMB); and NSW Registry of Births, Deaths and Marriages – Deaths (NSW RBDM Deaths), not including deaths of NSW residents who die interstate.

Hospital admissions includes completed inpatient separations (discharges, transfers and deaths) from all public hospitals, public psychiatric hospitals, multi-purpose services. Public hospitalisations are updated quarterly. Admissions to private hospitals, and private day procedure centres in NSW are also included. These are updated annually and may not always be available for the full year period reported here.

Emergency department presentations includes occasions where a person presented to an emergency department for emergency care and treatment. Emergency department records are separate to hospital records, even in the case where a patient is subsequently admitted to the hospital.

Non-admitted patient services are any services provided by a healthcare provider of NSW Health (clinical or therapeutic) for a patient who is not formally admitted to a hospital or multi-purpose service. Examples include community nursing, drug and alcohol rehabilitation. Mental health and oral services are excluded.

Mental health ambulatory care are services where a patient received mental health assessment, treatment, rehabilitation or care outside of psychiatric hospital settings, including crisis assessments, psychiatric outpatients, liaison and outreach services.

ED presentation time window (Page 13)

ED presentations include those occurring from mid-January to mid-December 2019. This 11 month window allowed investigation of whether the patient visited their GP within 14 days of their ED visit during the entire calendar year of 2019.

For those patients who presented to the ED multiple times during this 11 month period, only the most recent ED visit is included. For those who attended the GP multiple times during this 12 month period, their most recent visit prior to their ED visit and their most recent visit after ED visit were considered.

If your practice had less than 12 months of data available, the mid-January date was changed to the date specified on page 3 of your report minus 14 days. The PHN and all PHN data used the full 11 month period.

Hospital admission time window (Page 18)

Admissions to hospital include those occurring from February to November 2019. This 10 month window allowed investigation of whether the patient visited their GP within 28 days of their hospital admission during the calendar year of 2019.

For those patients who were admitted to hospital multiple times during this 10 month period, only the most recent hospitalisation is included. For those who attended the GP multiple times during this 12 month period, their most recent visit prior to their hospitalisation and their most recent visit after their hospitalisation were considered.

If your practice had less than 12 months of data available, the February date was changed to the date specified on page 3 of your report minus one month. The PHN and all PHN data used the full 10 month time period.

Hospital diagnosis ICD-10-AM codes (Page 19)

Chronic hospital admissions were coded from ICD-10-AM codes as outlined below:

Chronic Condition	ICD-10-AM Codes
Asthma	J45-J46
Arthritis and Musculoskeletal Disease	M chapter (excluding M86.0-M86.2)
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
Cardiovascular Disease	I chapter (excluding I01, I21, I23, I24, I26.0, I30, I33, I40, I62.0, I84), Q20-Q28
Chronic Obstructive Pulmonary Disease	J40-J44
Diabetes	E10-E11, E13-E14, O24.0, O24.1, O24.3, O24.4, O24.9
Kidney Disease (Chronic only)	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
Mental Health Disorders (Chronic only)	F chapter (excluding F10.0, F11.0, F12.0, F13.0, F14.0, F15.0, F16.0, F17.0, F18.0, F19.0, F23, F43.0, F52.5, F84.2, F98.5, F98.6), G30, G47.0-G47.2, G47.8, G47.9, O99.3, R44, R45.0, R45.1, R45.4, R48, Z00.4, Z03.2, Z04.6, Z09.3, Z13.3, Z50.2, Z50.3, Z54.3, Z61.9, Z63.1, Z63.8, Z63.9, Z65.8, Z65.9, Z71.4, Z71.5, Z76.0
Obesity*	E66

*Hospitalisations for some conditions, such as obesity, may be underestimated.
https://www.aihw.gov.au/getmedia/7dec4d0e-f50b-42f5-a548-4b9ded6b6313/15022.pdf.aspx?inline=true.

Illuminating the patient journey

Lumos