Lower urgency care in the emergency department, and the suitability of general practice care as an alternative: a cross-sectional study

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Emergency department (ED) function is impeded when the number of people waiting to be assessed, treated, or leave exceeds its capacity.[1] It is, however, a misconception that overcrowding is caused by large numbers of people with problems that could be managed by general practitioners.[2]

The Australian Institute of Health and Welfare (AIHW) defines lower urgency care ("GP-type" patients) as ED presentations by people triaged as Australasian Triage Scale category 4 or 5, who did not arrive in an ambulance, police, or correctional services vehicle, were not admitted to hospital or referred to another hospital, and did not die.[3] This definition may overestimate the number of GP-type patients in EDs,[4] but its prominent use prompts state governments to focus on increasing general practice services to reduce ED overcrowding.[5]

We therefore examined the assessment and management of ED patients defined by the AIHW criteria as receiving lower urgency care and to estimate how many could have been managed in general practice. We undertook retrospective chart reviews for all such patients who presented to the Nepean Hospital ED during 1–30 June 2021. Our study was approved as a low risk investigation by the Nepean Blue Mountains Local Health District Human Research Ethics Committee (2020/ETH01846).

We extracted information on care provided from FirstNet electronic medical records (Cerner) to identify cases of lower urgency care as defined by the AIHW. We then identified patients in this group we deemed potentially unsuitable for GP care, applying criteria based on a literature review and personal experience: people admitted to hospital but, because of access block, for whom care had been entirely provided in the ED until their discharge; people referred to the ED by a GP; those for whom care included radiology or pathology assessments; and people who presented with symptoms or diagnoses inappropriate for GP care. Patients were also potentially unsuitable for GP care if they received care in the ED difficult to deliver in general practice, including an inpatient or allied health team consultation, parenteral medication or fluid administration, wound closure or formal dressings, formal limb immobilisation, and prolonged observation (eg, for head injuries or serial troponin assessments). Admissions to the emergency medicine short stay unit (for patients who require treatment or observation for less than 24 hours) were deemed to be admissions (further details: Supporting Information). Patients who did not satisfy any of these criteria were classified as suitable for GP care, including those for whom urinalysis was the only investigation or oral medications the only treatment.

A total of 6483 people presented to the Nepean Hospital ED during June 2021; 654 were under 16 years of age (10.1%), 3284 were girls or women (50.7%), and 2028 were admitted to hospital (31.2%). According to the AIHW definition, 1995 people

Characteristics of 1995 people who presented the Nepean Hospital emergency department (ED) during June 2021 and required lower urgency care ("GP-type" patients) according to Australian Institute of Health and Welfare (AIHW) criteria[3]

Classification	Number
GP-type patients (AIHW criteria)	1995
Potentially unsuitable for general practice care*	1546 (77.5%)
Admitted to hospital but discharged from ED (access block)	66 (3.3%)
Referred to ED by a general practitioner	148 (7.4%)
Radiology performed	
Plain x-ray†	502 (25.2%)
Plain x-ray as only criterion	90 (4.5%)
Computed tomography	44 (2.2%)
Ultrasound	42 (2.1%)
Pathology testing performed	
All pathology	385 (19.3%)
Pathology as the only criterion (excluding troponin and D-dimer)	139 (7.0%)
Troponin or D-dimer	52 (2.6%)
Care received that would be difficult in general practice	
Specialty or allied health consultation	518 (26.0%)
Specialty or allied health consultation as only criterion‡	78 (3.9%)
Parenteral medications or fluids	220 (11.0%)
Parenteral medications or fluids as only criterion	21 (1.1%)
Wound closure or formal dressing	188 (9.4%)
Wound closure or formal dressing as only criterion	63 (3.2%)
Required immobilisation	234 (11.7%)
Immobilisation as only criterion	14 (0.7%)
Required prolonged observation	72 (3.6%)
Prolonged observation as only criterion	24 (1.8%)
No intervention in the ED, but problem unsuitable for GP care (Supporting Information, table)	10 (0.5%)
Time of presentation	
08:00 – 18:00	1171 (58.7%)
18:00 – 24:00	571 (28.6%)
24:00 – 08:00	253 (12.7%)

Continues

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Classification	Number
Potentially suitable for general practice care	449 (22.5%)
Time of presentation	
08:00 – 18:00	194 (9.7%)
18:00 – 24:00	169 (8.5%)
24:00 – 08:00	84 (4.3%)

* As numbers refer to treatment criteria, patients can be included in multiple categories. † Includes eleven patients who underwent both x-ray and computed tomography assessments, and six who underwent both x-ray and ultrasound assessments. ‡ Excluded patients who presented with acute mental health problems only or for ophthalmology review. ◆

were GP-type patients (30.8%). However, 1546 of these patients (77.5%) satisfied one or more of our criteria for being potentially unsuitable for GP care. Of the 449 people suitable for GP care (6.9% of all ED presentations), 194 presented to the ED during 8:00 am – 6:00 pm (mean, 6.5 per day) and 255 during 6:00 pm – 8:00 am (mean, 8.5 per day) (Box).

ED lengths of stay are relatively short for people with minor problems (a large proportion of which is waiting time), they require minimal medical resources, can be managed as ambulatory patients, and do not contribute to overcrowding.[6] Further, people often do not know whether general practice or ED care is more appropriate for their needs; the convenience of bundled medical and allied health staff, imaging facilities, and other diagnostic testing in the ED influences their decision-making.[4] Without community education about who should seek ED care or artificial barriers to ED access, a large proportion of GP-type patients will present to EDs. Finally, providing an out-of-hours GP service for the small number of suitable people who would otherwise present to the ED overnight might not be viable.[7]

We may have underestimated the number of people suitable for GP care. Our criteria for identifying patients as potentially suitable or unsuitable for GP care were based on ED resource use. Pathology and radiology examinations and interventions, such as suturing and the management of orthopaedic injuries, may not always mean that GPs could not have managed these patients; further, some radiology and pathology may have been unnecessary.

Nevertheless, we found that more than three-quarters of patients deemed suitable for GP care by the AIHW criteria were potentially unsuitable. The AIHW definition should not be used when formulating health policy, planning, or allocating resources.

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1 Australasian College for Emergency Medicine. Policy on standard terminology (Policy document P02; version 5). Revised Dec 2014. https://acem.org.au/ACEM/media/ACEM-Documents/Policy%20and%20Regulations/P02_Standard_Terminology_Dec-14.pdf (viewed June 2023).

2 Richardson DB, Mountain D. Myths versus facts in emergency department overcrowding and hospital access block. *Med J Aust* 2009; 190: 369-374. https://www.mja.com.au/journal/2009/190/7/myths-versus-facts-emergency-department-overcrowding-and-hospital-access-block

3 Australian Institute of Health and Welfare. Use of emergency departments for lower urgency care: 2015–16 to 2018–19 [web report]. Updated 2 July 2020. https://www.aihw.gov.au/reports/primary-health-care/use-of-ed-for-lower-urgency-care-2018-19/contents/lower-urgency-care/summary (viewed Dec 2022).

4 Nagree Y, Camarda VJ, Fatovich DM, et al. Quantifying the proportion of general practice and low-acuity patients in the emergency department. *Med J Aust* 2013; 198: 612-615. https://www.mja.com.au/journal/2013/198/11/quantifying-proportion-general-practice-and-low-acuity-patients-emergency

5 Smith A, Sakkal P, Ilanbey S. Perrottet to push federal government to overhaul Medicare, fund more free GPs. *Sydney Morning Herald*, 5 Jan 2023. https://www.smh.com.au/politics/nsw/perrottet-to-push-federal-government-to-overhaul-medicare-fund-more-free-gps-20230104-p5cae5.html (viewed Jan 2023).

6 Schull MJ, Kiss A, Szalai JP. The effect of low-complexity patients on emergency department waiting times. *Ann Emerg Med* 2007; 49: 257-264.

7 Ruffin RE, Hooper JK. Responses to access block in Australia: the Queen Elizabeth Hospital Medical Division. *Med J Aust* 2003; 178: 104-105. https://www.mja.com.au/journal/2003/178/3/responses-access-block-australia-queen-elizabeth-hospital-medical-division ■

Supporting Information

Additional Supporting Information is included with the online version of this article.