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Why 'primary care' patients go to emergency departments: demographic profile and reasons for presentation

Peter M. Siminski
University of Wollongong, siminski@uow.edu.au

Andrew J. Bezzina
bezzina@uow.edu.au

Kathy Eagar
University of Wollongong, keagar@uow.edu.au

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Abstract

This paper investigates why (potential) primary care patients attend an ED rather than a GP. An understanding of why patients make decisions such as this is critical if the health system is to be better positioned to meet the increasing demand for improved services and outcomes.

We found that the rate of potential primary care presentations varies greatly by age and by sex and that the pattern of primary care presentations is different to that of other ED presentations. In relation to reasons, we found that, regardless of age or sex, the top three reasons were self-assessed urgency; being able to 'see the doctor and having tests or X-rays done in the same place'; and self-assessed seriousness or complexity. Older patients in particular were unlikely to give reasons associated with GP affordability or availability for attending an ED.

We conclude that primary care presentations in the ED are the result of patients, particularly older people, making active decisions that the ED, and not the GP, provides the service they need. This has important implications for the design of ED services and the likely success of diversionary strategies.

Keywords

Primary, care, patients, emergency, departments, demographic, profile, reasons, for, presentation

Disciplines

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P Siminski and K Eagar. Centre for Health Service Development (CHSD), University of Wollongong, New South Wales.

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Introduction

Background

Less urgent presentations at Emergency Departments (EDs) have been the subject of much political and media attention. They have been perceived as a problem not only in Australia but in many other countries¹⁻¹¹. A recent study focussed on the reasons that 'potential primary care' patients give for presenting to EDs rather than to general practitioners¹². The main finding was that patients identified "very appropriate and sensible reasons for coming to the ED – urgency, complexity and being able to have the diagnostic tests they had anticipated would be required". It was argued that improvements to GP affordability and availability would hence be unlikely to affect the numbers of such attendances in a large way.

This paper explores presentation patterns specific to potential primary care cases, how they compare to other presentations and what reasons for presentation are associated with the age and sex subgroups of potential primary care cases. It investigates patterns of presentation by age and sex, which age and sex groups account for the highest rates of potential primary care presentations and how likely these are to change in the future.

Methods

The paper draws on two data sources. One is a NSW administrative data set - EDIS (Emergency Department Information System)¹³. The other is from a survey of patients conducted in 2004, described by Siminski et al.¹².

In both sources, the analysis focussed on potential primary care attendances. Based on a review of the literature¹⁴ attendances were classified as “potential primary care” in the survey when they met all of the criteria below:

- low urgency and/or acuity (Category 4 or 5 on the Australasian Triage Scale)
- did not arrive by ambulance
- were self-referred
- were presenting for a new episode of care and
- were not expected to be admitted (according to staff in the ED).

The same definition was used in EDIS, with two exceptions. ‘Not admitted’ was used as a criterion instead of ‘not expected to be admitted’ since this was a retrospective analysis. Source of referral was not available in EDIS.

De-identified EDIS data for 1997 and 2005 were analysed. The number of presentations and presentation rates were calculated from EDIS data and the estimated resident population for NSW¹⁵.

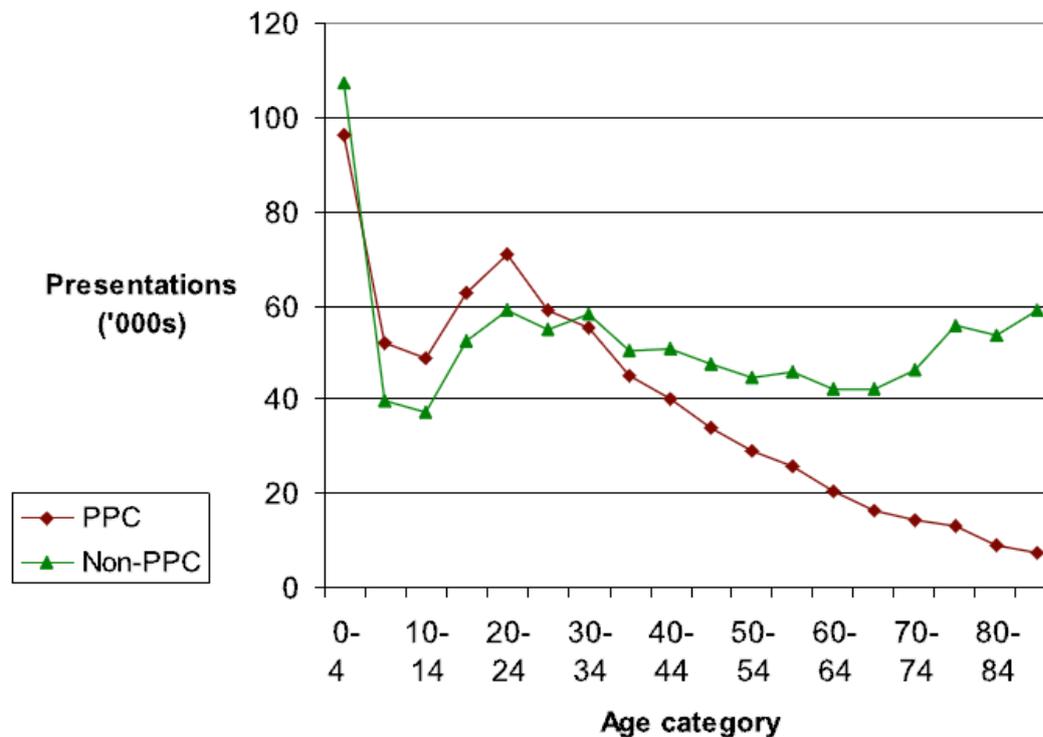
The survey (which has been described elsewhere¹³) was carried out in 5 emergency departments across a spectrum of rural, regional and metropolitan settings in the Illawarra region of New South Wales.

Results

Presentations by age and sex

The number of ED presentations in 2005 by age and potential primary care status is shown in Figure 1. Potential primary care presentations are clearly dominated by younger age groups. Almost half (47%) of potential primary care presentations were by people aged under 25 years of age. By far the largest number of presentations was by children aged 0-4 years, accounting for 14% of the total. This pattern contrasts with the profile of non-potential primary care presentations. The ‘non-potential primary care’ profile is characterised by a relatively even distribution by age, with the primary exception of a high number of presentations by 0-4 year olds.

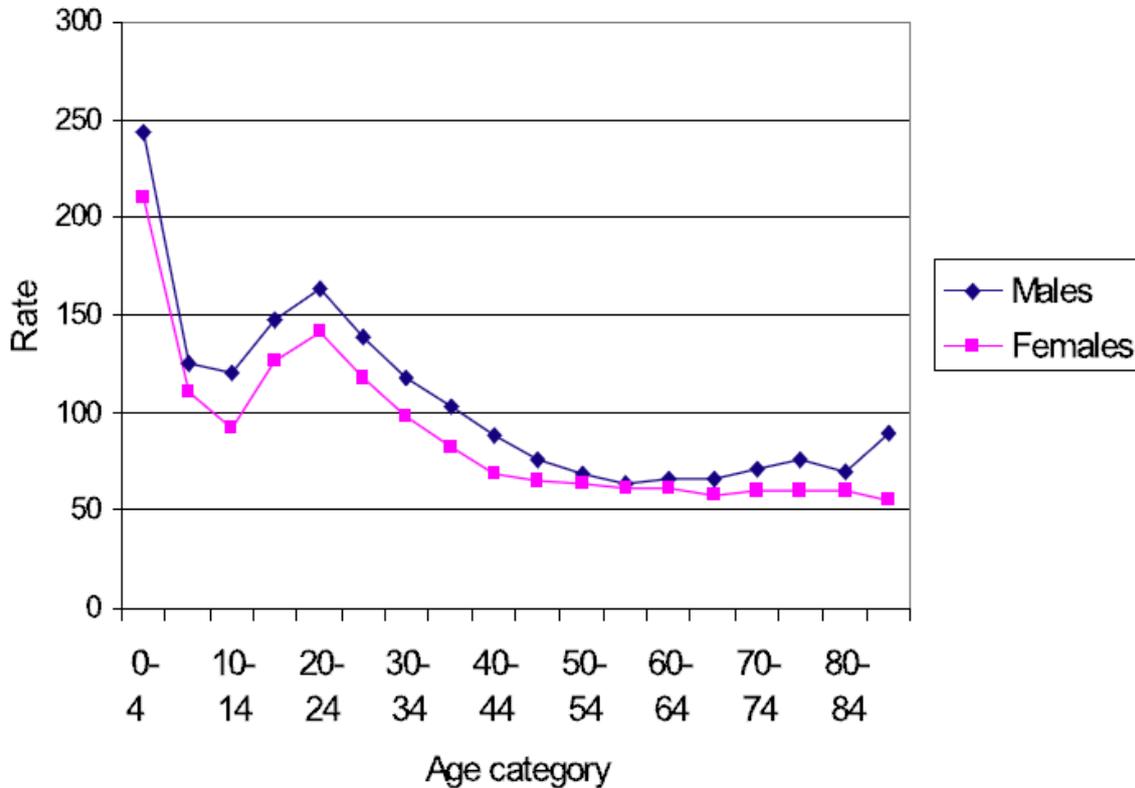
Figure 1 ED Presentations ('000s) by Potential Primary Care (PPC) status and Age group – NSW, 2005 (EDIS) [a]



a) Only includes presentations at EDs with the EDIS system

Figure 1 is partly a function of the age distribution of the population. It is thus useful to examine the rate of presentations, rather than simply raw numbers. Potential primary care presentation rates are shown in Figure 2. Overall, the male rates are 18% higher than the female rates on an age-standardised basis. The rate is clearly highest among the younger age groups.

Figure 2 ED Potential Primary Care (PPC) Presentation Rates by Sex and Age (per 1000 people) – NSW, 2005 (EDIS) [a]

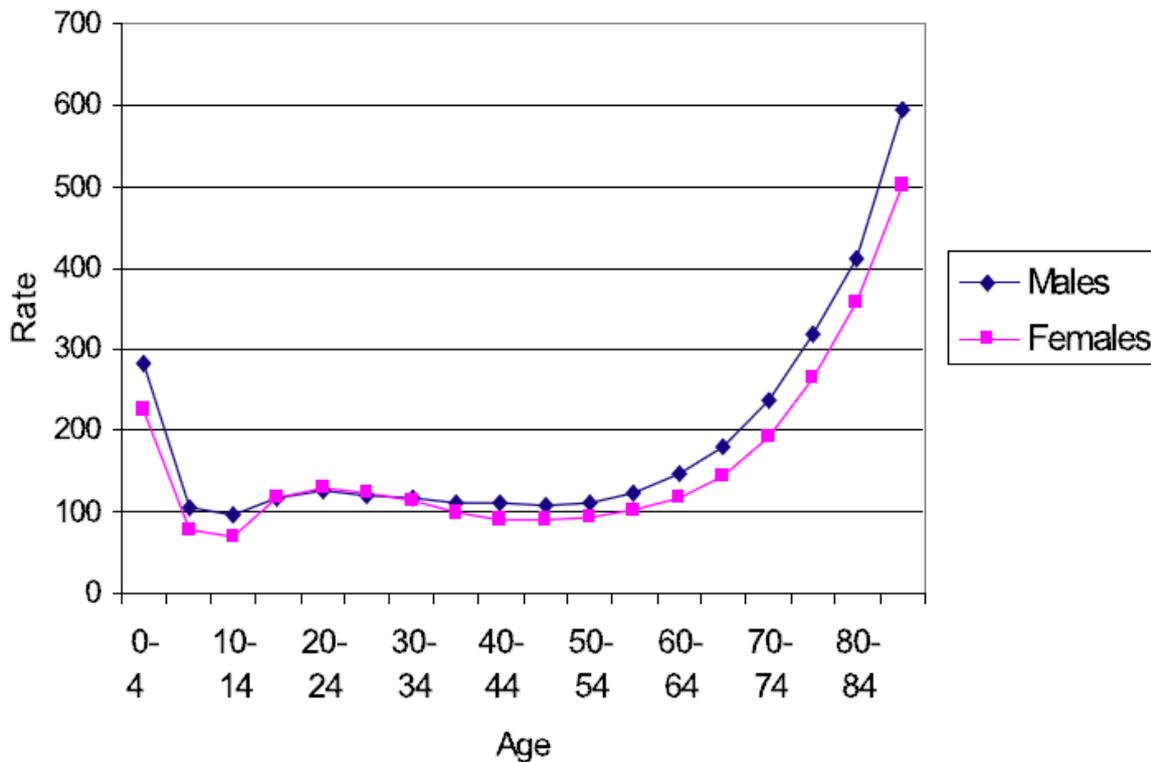


a) Only includes presentations at EDs with the EDIS system.

People aged 65 and over accounted for only 8.9% of potential primary care presentations in 2005. However, this is an increase of 37% since 1997. Total elderly presentations increased by 71% over this period, compared to 26% for other age groups combined. (A small increase is probably due to increased hospital coverage by EDIS over the period. Thus increases in presentation rates should not be taken at face value. The emphasis here is on the discrepancy in growth rates between age groups.) Both rates are considerably higher than population growth over the same period (16% and 7% respectively). Thus, despite relatively low presentation rates, older age groups are of particular interest because of further projected population aging and their large increase in presentation rates.

For comparative purposes, non primary care presentation rates are shown in Figure 3. The non-potential primary care rate increases greatly with age from about 60 years. Males again have a higher presentation rate than females (16% higher on an age-standardised basis), though the difference is close to zero in most child-bearing age groups. Males aged 15-29 have a slightly higher presentation rate than immediately younger and immediately older age groups, but this spike is not as large as it is for potential primary care rates.

Figure 3 ED Non-PPC Presentation Rates by Sex and Age – NSW, 2005 (EDIS)[a]



a) Only includes presentations at EDs with the EDIS system.

Reasons for Presenting

There were no statistically significant differences between males and females in their reasons for attending an ED as a potential primary care patient. There were significant differences by age. The average number of reasons selected by patients differs with age, with younger patients (or their proxies) selected more reasons than older patients (or their proxies) (Table 1). The sample size of each group is also shown. All subsequent results should be interpreted in this context. The sample size is particularly small for children aged less than 5 years.

Table 1 Sample size and average number of reasons selected by age of patient

Age Group	Sample size	Average number of reasons [1]		
		Very important	Moderately important	Very important or moderately important
less than 5	19	2.8	2.1	4.8
5-14	36	2.3	1.3	3.6
15-29	105	2.1	2.0	4.1
30-64	154	2.2	1.3	3.5
65+	74	2.2	0.9	3.0
All ages ¹	388	2.4	1.4	3.7

[1] 'All ages' excludes those records with missing age to conform to its components

The complete set of results by age is shown in Table 2. The most striking finding is the consistency of the most prevalently selected reasons across all age groups. Regardless of age, Q1, Q7 and Q2 were selected as important or very important by the greatest proportion of people. For all age groups, these three reasons stood out from the other reasons.

Table 2 Very important and important reasons why patients presented to an ED by age: per cent of valid responses [1]

Summary reason	Age group (years)					
	less than 5	5-14	15-29	30-64	65 and over	All ages [2]
Q1: Problem too urgent	95	86	83	75	81	80
Q2: Problem too serious/complex	68	49	50	50	60	53
Q3: Medical treatment better at ED	42	31	35	34	33	34
Q4: Second opinion	21	8	16	13	13	14
Q5: Did not want GP to know	11	0	2	3	1	2
Q6: Prefer doctor I don't know	11	0	11	4	3	6
Q7: See doctor and have tests/X-rays done in same place	83	69	83	71	70	74
Q8: Not able to see GP as books are closed	17	14	19	19	5	16
Q9: Not happy with GP waiting time	44	22	20	31	11	24
Q10: Do not like making appointments	28	6	19	12	1	12
Q11: Easier to get to the ED	28	28	24	17	23	21
Q12: No charge to see a doctor	17	14	15	8	0	9
Q13: No charge for X-rays or medicine	17	14	18	9	0	10
Q14: Female doctor	0	0	5	2	0	2
Q15: Doctor or interpreter who speaks my language	0	0	5	2	0	2
Q16: Aboriginal health staff	0	0	5	2	0	2
Q17: Prefer ED environment	6	11	8	4	1	5
Q18: Traditional use by family	11	8	14	7	4	9

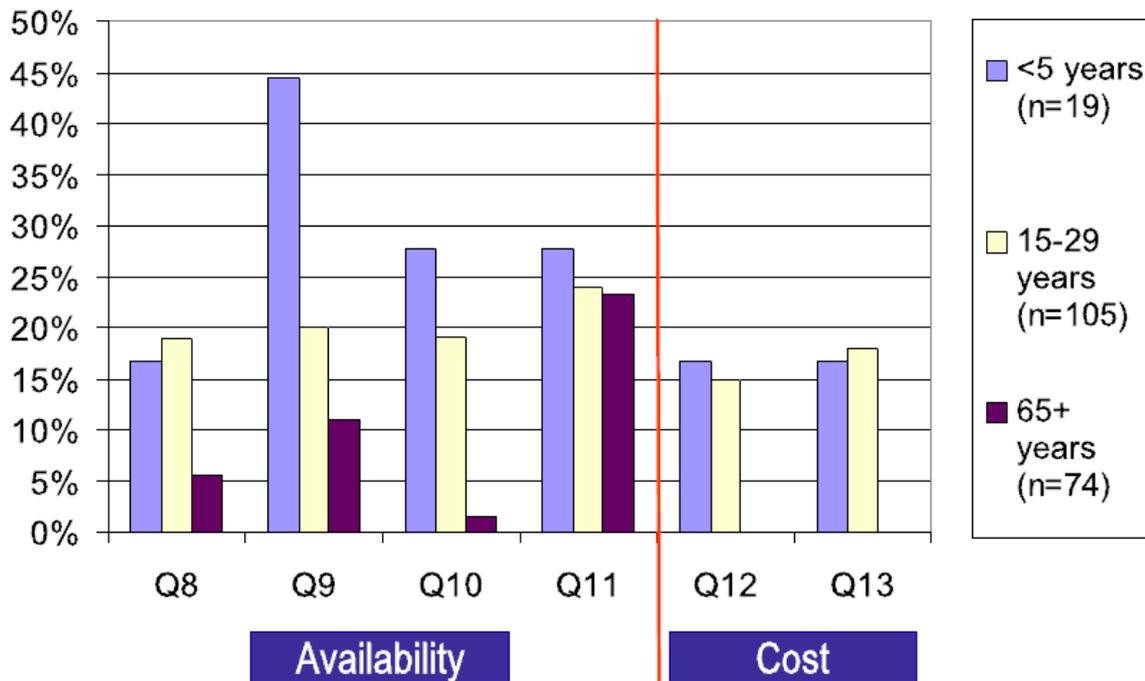
Notes:

[1] The reasons are in summary format. A copy of the survey can be found in Siminski et al. (2005)

[2] 'All ages' excludes those records with missing age to conform to its components

Figure 4 focuses on reasons relating to GP availability or affordability. Questions 8, 9, 10 and 11 all related to availability. Questions 12 and 13 are related to affordability.

Figure 4 Reasons associated with GP availability of affordability by selected age groups: per cent of all valid responses [1]



[1] Includes very important and moderately important reasons

Older patients were very unlikely to select affordability or availability reasons. In fact, of 74 respondents aged 65 or over, not a single person selected an affordability reason as being important. This is perhaps unsurprising, as older people are more likely to be bulk-billed than others 16. Older people were also unlikely to select issues of availability.

A second observation relates to the unremarkable responses of those aged 15-29. It was hypothesised that this group may be particularly susceptible to issues of availability and affordability. This does not appear to be the case.

Discussion

Potential primary care rates are much lower amongst older people than non- potential primary care rates. However, the potential primary care attendance rate has increased faster amongst older people than for all other age groups. In the context of the structural ageing of the population, it is significant that older people are reportedly unresponsive to the characteristics of GP services (availability and affordability) in the decision to attend EDs for less urgent cases.

There were no significant differences between the reasons given by males and females. Thus the higher rate of potential primary care attendances by males also appears unrelated to GP characteristics or other reasons for presentation. Instead, it reflects a higher rate of injuries amongst males 17.

The main finding is clear. While there are differences by age, patients in all age groups were most likely to identify self-assessed urgency; being able to see the doctor and having tests or X-rays done in the same place; and self-assessed seriousness or complexity as the reasons for presentation to ED.

We conclude that primary care presentations in the ED are the result of patients, particularly older people, making active decisions that the ED, and not the GP, provides the service that best meets their need. This has important implications for the design of ED services and the likely success of strategies designed to divert such patients to other treatment settings.

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