Original Research Article

Characteristics of Non-urgent cases in the emergency department VS primary care

Abstract

This research was done in Riyadh, Saudi Arabia, at Primary healthcare facilities and emergency department with the same catchment region. To outline the patients who use unscheduled services in primary healthcare and those who go to an emergency department for treatment of non-urgent diseases. The results found that there were more women in primary care institutions than in emergency rooms. More than 87% of the patients in both categories had visited a doctor at least once in the last 2 years. Nearly the same number (44% in primary care and 42% in the emergency department) of people in both groups reported routinely taking medication. Patients who went to the emergency room experienced symptoms for a considerably shorter periods of time than patients in primary care. 17.3% (95% CI 14-20) of patients in primary care institutions had only had symptoms for one day or less, as opposed to 42.1% (95% CI 35-59) of emergency department patients. There were no differences in the age distribution among those with symptoms that lasted less than a day. The primary differences between individuals investigated at the various sites appeared to be symptoms, prior hospitalisation, and current impression of symptoms. Between the patients of the primary care clinic and the patients of the ED, there were no appreciable sociodemographic disparities.

Key words: Healthcare surveys, adult, community medicine, attitude to health, cross-sectional, emergency department, triage, family practice.

Introduction

Up to 55% of visits to emergency departments (ED) are, according to medical experts and researchers, for non-urgent caes that are more appropriately treated with general care (1,2). This claim has been made for many years. This has been associated with low socioeconomic level,

minimal education, and young (1,3–5). However, in the majority of prior studies, only urgent patients in an ED have been compared with patients in primary care (5–8).

Resources have been devoted in substantial amounts to gatekeeping and sending non-urgent patients to general care since there are now much fewer hospital beds available and 24-hour emergency departments. Less research has been done on the extent to which structural modifications have had the desired impact than there was in the 1990s.

This study sought to shed more light on the question of whether patients visiting primary care frequently differ from ED patients with a similar level of urgency (ED triage level four), rather than focusing on how ED patients with such non-urgent complaints differ from those who visit the ED with urgent conditions. Few research on this subject have previously been published, but those studies were either small, relied on dated data, or mostly focused on services offered after hours (9).

In this study, it attempted to ascertain whether there were any differences in the demographics, past medical histories, chief complaints, perceptions, and duration of symptoms prior to the visit between patients who sought medical attention for non-urgent conditions at an ED and those who used non-scheduled services in primary care.

Method:

Patient participants in this cross-sectional interview-based study came from a specified catchment area (Emergency department in King Saud medical city Riyadh Saudi Arabia). All known urgent cases in the period from Jul 2022 to May 2023 was studied. All patients who was selected as known urgent due to Canadian triage system during the study period. Our Inclusion criteria include (Age between 20 and 8, ability to understand Arabic language, the physical and mental capacity to participate in an interview, the absence of intoxication or drug use, the absence of dementia are all requirements, patients had to be at triage level health, be able to wait for a doctor's evaluation for at least an hour without running any risk to their health)

Structured interview

There were 80 questions in the structured interview. The questions were created piecemeal. A group of experts from the medical and social behavioral sciences first reviewed the responses to open-ended questions used in a pilot research.

The final interview will consist of 80 questions that covered the following topics Sociodemographic information about the patients, how they perceive their symptoms, Prior illnesses, prior experiences, knowledge of the healthcare system, expectations, attitudes, Usage of healthcare information and social network. Prior to the main study, this interview will be tried in two further pilot trials. Epidata 4.0 was used to enter the data. SPSS 24 for Windows and Statistica version 7 was used for recoding and univariate analysis. Excel for Windows was used to calculate confidence intervals using the binomial exact approach. When analyzing ordinal data, the Mann-Whitney U-test was used.

Results

At primary care facilities, there were more women than at emergency departments (63%, 95% CI 59-67). The combined mean age of the primary care and emergency department groups (both sexes) was 49 years. The groups were comparable in terms of age distribution, greatest level of education attained, marital status.

Compared to 36% of patients in primary care, 42% of ED patients had routine monitoring for chronic disorders (difference of 6%, 95% CI 0.12-15.4). There were no variations in the chronic illness types.

Over 87% of the patients in both groups had seen a doctor at least once. In both groups, almost the same percentage (44% in primary care and 42% in the ED) said they regularly took medicine. Furthermore, there was no discernible difference in the percentage of patients with free care cards between those getting primary care (23%, 95% CI 20-30) and those in the ED (34%, 95% CI 25-39).

45.6% (95% CI 42-50) of the patients at the primary care facilities reported respiratory symptoms, mostly infections and allergies. 8.9% (95% CI 6-11) of people experienced genital or urinary tract issues, whereas 14.2% (95% CI 11-17) had musculoskeletal complaints. The most frequent symptoms in the ED were related to the musculoskeletal system (20.8%, 95% CI 13-25), the digestive system (23.9%, 95% CI 18-30), or trauma (19.2%, 95% CI 14-26).

Compared to patients in primary care, those who visited the emergency room had symptoms for a lot less time. Compared to 42.1% (95% CI 35-59) of ED patients, 17.3% (95% CI 14-20) of patients in primary care facilities had only had symptoms for one day or fewer. In the category of individuals with symptoms lasting less than a day, there were no variations in the age distribution.

When compared to patients in primary care, those in the ED reported higher levels of anxiety regarding their symptoms (VAS: median 6, mean 10, interquartile range [IQR] 3 to 8 vs. median 5, mode 1, IQR 1 to 7, p 0.001). At the two facilities, the median age of the most nervous patients (VAS > 5) was comparable. Compared to patients in primary care, patients at the ED reported feeling more concerned by their symptoms (VAS median 8, mode 10, IQR 6 to 10 vs. median 8, mode 8, IQR 5 to 9; p = 0.017). At either hospital, there was no discernible difference in age between patients who were most disturbed (VAS > 5) and those who were least disturbed. The ED patients who were the most upset tended to be younger, nevertheless.

Table 1 Demographic characteristics

	Primary health care			Emergency department		
Gender	N	%	95% confidence interval	N	%	95% confidence interval
Male	199	35.04	(31-39)	89	46.35	(41-56)
Female	361	63.56	(59-67)	96	50	(43-58)
Missing	8	1.40		7	3.646	
Age group						
20 to 34	128	22.54	(18–26)	43	22.4	(19–31)
35 to 49	183	32.22	(31–39)	58	30.21	(24–40)
50 to 64	128	22.54	(18–26)	44	22.92	(19–31)
65 to 80	123	21.65	(19–25)	40	20.83	(16–28)
Missing	6	1.05		7	3.646	
Highest completed education						
Compulsory school	79	13.91	(12–18)	31	16.15	(12–21)
Secondary school, high school	251	44.19	(43–57)	96	50	(45–60)
University	221	38.91	(36–44)	62	32.29	(27–41)
Education not specified	6	1.05	(0–3)	1	0.521	(0–4)
Missing	11	1.93		2	1.042	
Married						
Yes	375	66.02	(64–72)	112	58.33	(51–68)
No	186	32.75	(30–38)	75	39.06	(35–48)
Missing	7	1.23		5	2.604	

Table 2 Signs and symptoms at presentation

	Primary healthcare			Emergency department		
	N	%	95% confidence interval	N	%	95% confidence interval
Organ system involved						
Respiratory	259	45.6	(42–50)	11	5.729	(3–10)
Circulatory	18	3.16	(1–4)	26	13.54	(9–19)
Digestive	31	5.45	(2-6)	46	23.96	(18–30)
Genital and urinary tract	51	8.97	(6-11)	18	9.375	(4–12)
Skin	42	7.39	(4-8)	5	2.604	(1–4)
Muscle and skeletal	81	14.26	(11-17)	40	20.83	(13–25)
Trauma	26	4.57	(2-6)	37	19.27	(14–26)
Miscellaneous	60	10.56	(8-14)	9	4.688	(4–12)
Duration of symptoms						
One day or less	99	17.43	(14–20)	81	42.19	(35–59)
One week or less	241	42.43	(38–46)	75	39.06	(31–47)
>One week	226	39.79	(37–45)	34	17.71	(11–23)
Missing	2	0.35		2	1.042	

Figure 1 signs and symptoms

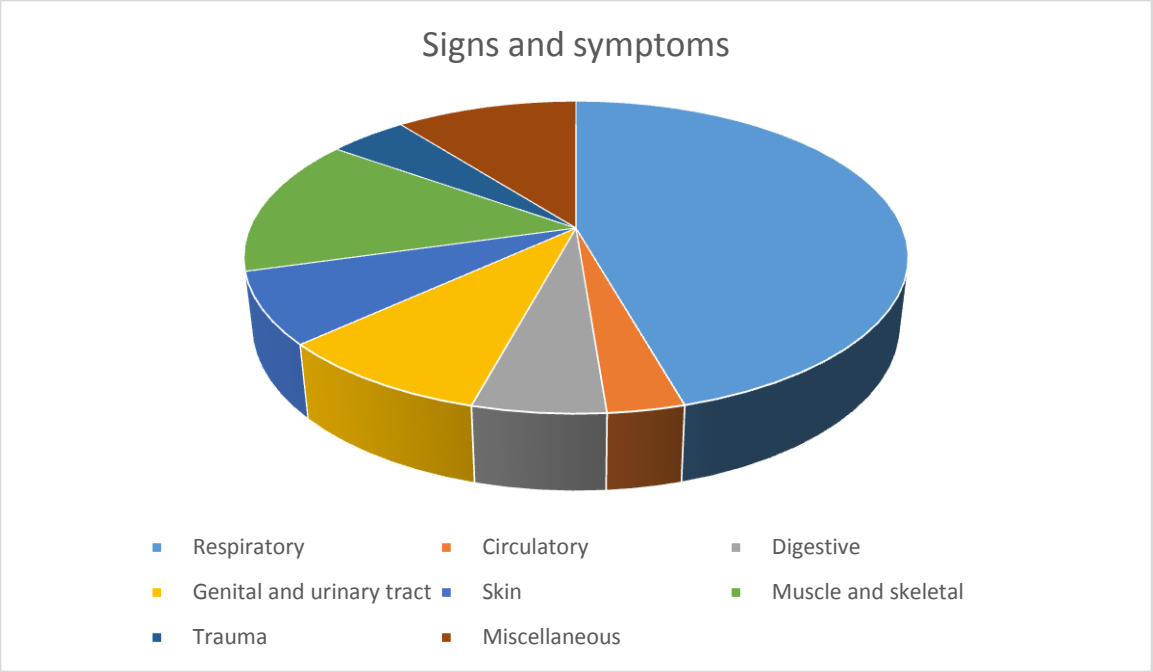
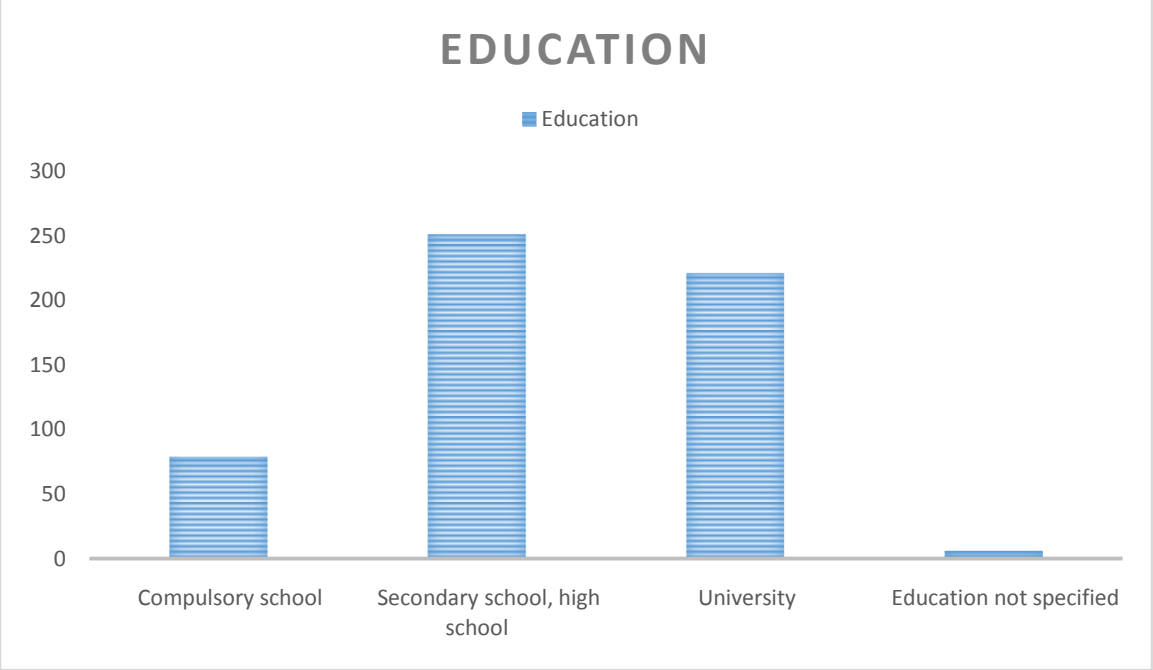


Figure 2 education



Discussion

Except for gender, there were no significant sociodemographic differences between non-urgent patients presenting in the ED and those visiting primary healthcare facilities. Patients who presented in the ED reported different types of symptoms, more frequent hospitalisations, and shorter symptom durations before seeking care. In addition, the patients were more troubled and apprehensive about their symptoms than those who went to primary care. The findings corroborate the earlier discovery that ED patients regularly utilise alternative healthcare services (10). But we discovered that primary care was also affected by this. The discovery of comparable high percentage of free-care card users in both categories when compared to the general population further supports this regular use.

We further reduced the chance that selection bias may influence our findings by comparing patients with similar levels of urgency. The likelihood of a non-participation impact was reduced by the almost equal percentage of patients who rejected to participate in the two contexts. We also believe that the results have a high degree of generalizability to the county of Saudi arabia and perhaps other sizable urban areas because the distribution of completed education, the unemployment rate, and the immigrant population were all consistent with the county of Saudi arabia overall distribution (11–13).

The majority of earlier research (5–8) compared urgent ED patients with non-urgent ED patients, but not with patients in primary care. As a result, it has been difficult to extrapolate past results about the use of outpatient care, and we believe that our study provides crucial data on these patient categories (14).

As additional markers of the patient's state, prior studies have also employed perceived general health (15) or data on earlier hospitalisations or visits gathered from retrospectively collected registry-based information (16). We minimised the possibility of information bias by conducting thorough, systematic face-to-face interviews. Aside from certain analyses of mostly non-urgent or regular ED visitors (5), (17–19), we have not discovered any research that are comparable to ours in which data have been gathered in this way.

Conclusion

This study demonstrates that the chief criteria separating people seeking care at an ED from those visiting a primary care facility are symptoms, prior hospitalisation, and current perception of symptoms. These elements must be taken into account if policymakers feel the need to affect patients' seeking behaviours.

COMPETING INTERESTS

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

References

1. Pereira S, Oliveira e Silva A, Quintas M, Almeida J, Marujo C, Pizarro M, et al. Appropriateness of emergency department visits in a Portuguese university hospital. Ann Emerg Med. 2001;37:580–6.

2. Richardson LD, Hwang U. Access to care: A review of the emergency medicine literature. Acad Emerg Med. 2001;8:1030–6.

3. Padgett DK, Brodsky B. Psychosocial factors influencing non-urgent use of the emergency room: A review of the literature and recommendations for research and improved service delivery. Soc Sci Med. 1992;35:1189–97.

4. Sempere-Selva T, Peiro S, Sendra-Pina P, Martinez-Espin C, Lopez-Aguilera I. Inappropriate use of an accident and emergency department: Magnitude, associated factors, and reasons – an approach with explicit criteria. Ann Emerg Med. 2001;37:568–79.

5. Afilalo J, Marinovich A, Afilalo M, Colacone A, Leger R, Unger B, et al. Nonurgent emergency department patient characteristics and barriers to primary care. Acad Emerg Med. 2004;11:1302–10.

6. Northington WE, Brice JH, Zou B. Use of an emergency department by nonurgent

patients. Am J Emerg Med. 2005;23:131–7.

7. Murphy AW, Leonard C, Plunkett PK, Brazier H, Conroy R, Lynam F, et al. Characteristics of attenders and their attendances at an urban accident and emergency department over a one year period. J Accid Emerg Med. 1999;16:425–7.

8. David M, Schwartau I, Anand Pant H, Borde T. Emergency outpatient services in the city of Berlin: Factors for appropriate use and predictors for hospital admission. Eur J Emerg Med. 2006;13:352–7.

9. Christensen MB, Christensen B, Mortensen JT, Olesen F. Intervention among frequent attenders of the out-of-hours service: A stratified cluster randomized controlled trial. Scand J Prim Health Care. 2004;22:180–6.

10. Hansagi H, Olsson M, Sjoberg S, Tomson Y, Goransson S. Frequent use of the hospital emergency department is indicative of high use of other health care services. Ann Emerg Med. 2001;37:561–7.

11. Swedish Association of Local Authorities and Regions. Statistical yearbook from the county councils in Sweden. 2003. ISBN 91-7188-819-5.

12. Swedish Association of Local Authorities and Regions. Health care and regional development. 2002. pp. 15–17. ISBN 91-7188-819-5.

13. Swedish Association of Local Authorities and Regions. Statistical yearbook from the county councils in Sweden. 2005. ISBN 91-7164-005-3.

14. Lowe RA, Abbuhl SB. Appropriate standards for “appropriateness” research. Ann Emerg Med. 2001;37:629–32.

15. Lee A, Hazlett CB, Chow S, Lau F, Kam C, Wong P, et al. How to minimize inappropriate utilization of Accident and Emergency Departments: Improve the validity of classifying the general practice cases amongst the A&E attendees. Health Policy. 2003;66:159–6.

16. Beland F, Lemay A, Boucher M. Patterns of visits to hospital-based emergency rooms. Soc Sci Med. 1998;47:165–79.

17. Byrne M, Murphy AW, Plunkett PK, McGee HM, Murray A, Bury G. Frequent attenders to an emergency department: A study of primary health care use, medical profile, and psychosocial characteristics. Ann Emerg Med. 2003;41:309–18.

18. Sun BC, Burstin HR, Brennan TA. Predictors and outcomes of frequent emergency department users. Acad Emerg Med. 2003;10:320–8.

19. Bergh H, Marklund B. Characteristics of frequent attenders in different age and sex groups in primary health care. Scand J Prim Health Care. 2003;21:171–7.