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Research

Effects of armed conflict on access to emergency health care in Palestinian West Bank: systematic collection of data in emergency departments

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Abstract

Objective To assess the impact of restrictions in access to hospital services imposed on the civilian population during the armed conflict in the Palestinian territories occupied by Israel.
Design Consecutive registration of demographic and medical data, with information about transportation time, delay in access to hospital, and course of hospital contact.
Setting Three hospital emergency departments in Bethlehem and Nablus, in the occupied Palestinian West Bank, during one week in each hospital.
Participants All patients seeking health care in the three hospitals during the study period.
Results A total of 394 of the 2228 emergency department contacts reported being delayed at checkpoints or by detours on their way to the emergency department. Hospital admission was significantly more common for these patients: 32% (n = 125) compared with 13% (n = 205) among those who were not delayed.
Conclusion 18% of the emergency department contacts were delayed because of the occupation. The higher hospital admission rate in this group suggests that restrictions in access to hospital services influence the severity of the medical conditions presented.

Introduction

Armed conflict affects public health in various ways. In the Palestinian territories occupied by Israel, tight restrictions have been imposed on the population. Towns and villages are encircled by military checkpoints, making passage difficult, unpredictable, and occasionally impossible.

The World Health Organization recommends collection of data in emergency departments as a tool to assess the health consequences of armed conflicts.[1] Through systematic data collection, we analysed the extent of restrictions in access to hospital services and its impact on the frequency of admission to hospital.

Methods

We included all emergency department contacts during eight days and nights in January 2005 in one hospital in Bethlehem and two hospitals in Nablus in the occupied Palestinian West Bank. A registration form was filled out for each patient, including details of age, sex, residence, civil status, reason for hospital contact, main diagnosis, causes of injuries, and course of hospital contact. We obtained information about each patient's distance travelled to the hospital, transportation time, means of transportation, and any delay. We categorised self reported delay as conflict related delay (checkpoints, detour, and curfew) and other delay (traffic jam and other reasons). For each patient, we calculated speed of travel on the basis of transportation time and distance.

Results

Among all 2228 people who contacted the three hospitals during the study period, 394 (18%) reported being delayed at checkpoints or by detours. Admission to hospital was more common among old and very young patients than among young and middle aged patients. In all age groups, admission was significantly more common for patients who were delayed as a result of the conflict (32%) than for those who were not (13%; $P < 0.0001$). In Nablus, which is burdened with the most severe closures, 34% of the emergency department contacts who experienced conflict related delay were admitted compared with 12% of those who were not delayed. In Bethlehem, 27% of the delayed contacts and 15% of the non-delayed contacts were admitted (table).

The median speed of the patients who were not delayed was 18.0 (range 0.7-120) km/h, whereas it was 15.5 (0.3-90) km/h for those delayed by the conflict and 12.0 (2.7-48) km/h for those delayed by other reasons. The patients delayed by the conflict had generally travelled a greater distance than the others.

Discussion

Although we collected data during a relatively calm period in the West Bank, 394 of the 2228 emergency department contacts reported being delayed at checkpoints or by detours on their way to hospital, and they were more likely to be admitted to hospital than were non-delayed patients. One possible explanation for this is that people who have to pass checkpoints live at a greater distance from the hospital. The need to pass a checkpoint might discourage sick people from seeking medical care in fear of being denied access or held back. When they eventually do seek help, their condition has deteriorated and admission is needed. Our study might have underestimated the health consequences of movement restrictions in the West Bank, as it did not include data about people who were completely denied access to emergency departments.

The West Bank closure system comprises more than 600 physical barriers placed on roads by the Israeli army to restrict Palestinian traffic. Most of these checkpoints are placed within

Number (percentage) of patients delayed or not, by course of hospital contact

Hospital and delay	Course of hospital contact			
	Discharged to home	Admitted or referred to other hospital	Dead or not stated	All
Al Watani, Nablus				
Conflict related delay	53 (44)	58 (48)	10 (8)	121
Other delay	72 (76)	20 (21)	3 (3)	95
No delay	706 (80)	122 (14)	52 (6)	880
All	831 (76)	200 (18)	65 (6)	1096
Rafidya, Nablus				
Conflict related delay	100 (72)	31 (22)	7 (5)	138
Other delay	61 (94)	4 (6)	0	65
No delay	243 (90)	16 (6)	12 (4)	271
All	404 (85)	51 (11)	19 (4)	474
King Hussein Hospital, Bethlehem				
Conflict related delay	88 (65)	36 (27)	11 (8)	135
Other delay	65 (72)	20 (22)	5 (6)	90
No delay	341 (79)	67 (15)	25 (6)	433
All	494 (75)	123 (19)	41 (6)	658
All hospitals				
Conflict related delay	241 (61)	125 (32)	28 (7)	394
Other delay	198 (79)	44 (18)	8 (3)	250
No delay	1290 (81)	205 (13)	89 (6)	1584
All	1729 (78)	374 (17)	125 (6)	2228

the occupied territories and do not restrict the interaction between Israelis and Palestinians, but rather between Palestinians and Palestinians.[2]

The UN Bertini mission in 2002 obtained a commitment from Israeli authorities to clear ambulances at checkpoints within 30 minutes.[3] The Red Crescent uses this definition when reporting delay of ambulances.[4] In our study, we did not specify the delay in terms of time, as we assumed that quantification of their delay by patients would be too inaccurate. Additionally, defining a level of "acceptable delay" makes no sense from a medical point of view.

The Geneva Convention of 1949 and the additional protocols of 1977 mandate the right to access to medical care for civilians under occupation. The reported delay in access to healthcare facilities is not in accordance with these principles.

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2 Lenin Y, Eran S, Raz E. *Forbidden road: Israel's discriminatory road regime in the West Bank 2004*. Jerusalem: Btselem, 2004.
3 Bertini C. *Mission report: 11-19 August 2002*. UN Secretary General. Available at: htpp://domino.un.org.bertini_rpt.htm.
4 Palestine Red Crescent Society. PRCS weekly press release for the period 31 December 2005-06 January 2006. Available at: www.palestinercs.org/pressreleases/Year%202006/pr070106wbrr.htm.

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What is already known on this topic

Research in the health consequences of armed conflicts is still in its infancy

The occupation of Palestine includes movement restrictions that may influence access to health care, but the size of this problem is not known

What this study adds

Data collection among emergency department contacts showed that patients delayed by the Israeli occupation were more likely to be admitted to hospital than were other patients