A cross-sectional study of emergency department visits by people who inject drugs

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Abstract

Background: people who inject drugs (PWID) have worse health than non-injectors and are at heightened risk of incidents that necessitate hospital emergency department (ED) visits.

Study Objectives: to describe ED visits by PWID in Melbourne, Australia and compare reasons with those given in Vancouver, Canada.

Methods: in 2008-2010, 688 Melbourne PWID were interviewed about their ED visits; these data were contrasted with published data about ED visits by PWID in Vancouver.

Results: participants reported 132 ED visits in the month preceding interview – 27.3% drug-related, 20.5% trauma-related (principally physical assault), 13.6% for psychiatric problems. Melbourne PWID are less likely to attend ED for soft tissue injuries and more likely to attend after physical assault than PWID in Vancouver.

Conclusion: PWID in Melbourne and Vancouver attend EDs for different reasons; information about PWID visits can help EDs cater for them and provide insights for prevention.

Introduction

People who inject drugs (PWID) have substantially worse health than non-injectors and are at risk of overdose and other serious sequelae that result in hospital emergency department (ED) presentations.[1, 2] We describe visits to EDs reported by PWID in Melbourne, Victoria, Australia and contrast them with data from Vancouver, British Columbia, Canada.

Materials and methods

Our data were drawn from baseline interviews with participants in the Melbourne Injecting Drug User Cohort Study (MIX). MIX is a longitudinal study of mostly young and out-of-treatment PWID, primarily heroin injectors, with HIV prevalence below 1% and fewer than 20% in unstable housing. Participants were eligible if aged 18-40 years and had injected drugs at least once a month for six months before interview. Baseline interviews were conducted from April 2008 to January 2010. Participants were asked how many times they visited an ED in the preceding four weeks and for the reasons.

Comparisons with Vancouver data were made using Chi-squared tests for proportions.

MIX has ethical approval from the Monash University Human Research Ethics Committee.

Results

Ninety-two of the 688 MIX participants (13.4%) described 132 visits to EDs (median 1, mean 1.4, range 1-5) in the four weeks before their baseline interview. ED visits resulted in hospitalisation for 35 participants (38.0%). Table 1 shows why PWID visited EDs.

Table 1. Reasons for ED visits.

Reason for ED visit	Frequency	%	Group %
Abdominal/gastrointestinal problem	7	5.3	
Alcohol poisoning/drunk	8	6.1	
Fainting	2	1.5	
Injecting-related (various)	8	6.1	
Injecting-related (soft tissue injuries†)	6	4.5	27.3
Injecting-related (overdose)	22	16.7	
Medication request	3	2.3	
Migraine	1	0.8	
Miscellaneous chronic conditions	3	2.3	
Pneumonia	1	0.8	
Pregnancy	3	2.3	
Psychiatric problems	18	13.6	
Respiratory problems	4	3.0	
Seizure	3	2.3	
Stroke	1	0.8	
Trauma (cause not specified)	4	3.0	
Trauma (accidental)	8	6.1	20.5
Trauma (assault)	15	11.4	
Unspecified injuries/conditions	15	11.4	
Total	132	100.0	

† e.g, cellulitis, abscesses

Overdose was the modal reason for attending an ED; adding visits for other injecting-related reasons (see the Group column in Table 1) took total injecting-related attendances to over a quarter of all visits. Trauma accounted for more than a fifth of visits; over half the trauma visits followed a physical assault. Psychiatric problems (suicidal ideation, anxiety) were mentioned frequently.

Our participants visited EDs at a rate of 19.2 visits per 100 people per month; in 2009, the ED visit rate across the state of Victoria was 2.5 per 100 people per annum.[1, 2]

Discussion

Our data show that PWID in Melbourne attend EDs frequently and for many reasons – mostly not directly related to injecting drugs. The proportion of MIX participants attending ED due to soft tissue injuries is significantly lower than in Vancouver (4.5% vs. 17.6%, 18.3% and 16.6% in [3-5] respectively; $p<0.001$) and the proportion attending after physical assault is substantially higher (11.4% vs. 3.6% in [5], $p<0.001$); this may reflect differences PWID service provision in Melbourne and Vancouver, much lower proportions of Melbourne PWID in unstable housing and living with HIV, injecting frequencies associated with the primary drugs (heroin in Melbourne vs. cocaine in Vancouver), and differences in health care systems. Note that MIX data are self-reported while Vancouver data derive from linkage to electronic health records (from St Paul's Hospital ED), which may bias our results.

Conclusion

ED attendance by PWID in Melbourne and Vancouver differs, notably in the proportions of visits related to soft tissue injuries and physical assault. Increased focus on violence, by needle-syringe programs and other PWID services, might reduce trauma-related ED attendance in Melbourne; Fairbairn et al [4] suggested improved drug treatment provision and general health care access could decrease ED attendance by Vancouver PWID. In addition to informing prevention, information about the reasons PWID require emergency treatment can help EDs cater for these high-risk individuals.

Article Summary

1) Why is this topic important?

PWID generate a disproportionately large burden to health systems and are greatly over-represented in ED attendances compared to non-injecting populations, therefore the reasons they attend ED are of value to ED staff and other emergency medical personnel.

2) What does this study attempt to show?

This study attempts to show the reasons why PWID in Melbourne visit hospital EDs and why these might differ from the reasons given in other locations.

3) What are the key findings?

Over 27% of ED visits by Melbourne PWID are for injecting-related reasons (principally overdose), over 20% are for trauma (mostly assault), and over 13% for psychiatric problems. Far fewer Melbourne than Vancouver PWID attend EDs due to soft tissue injuries.

4) How is patient care impacted?

Prior understanding of why local PWID visit ED enables more efficient clinical response, and enables PWID services to focus on issues that contribute significantly to ED attendance

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