

Surveying Homeless and/or Substance Using Adults Presenting to the Emergency Department

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Health Research and
Education Network**

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Conflicts of Interest

- ▶ None to declare



Objectives

By the end of this session you will be able to:

- ▶ Discuss the impact of substance use and homelessness on the emergency department (ED) setting
- ▶ Understand the benefits and challenges of conducting research with this population in the ED environment
- ▶ Develop a protocol to maximize data capture in the ED



Substance Use in the ED

- WHO estimates that 10-18% of injured patients presenting to the ED are alcohol-related cases¹
- Drug Abuse Warning Network estimates that in 2008 in the US 650 ED visits per 100,000 population were due to drug misuse or abuse²
- During a health promotion study at my ED, 43% screened positive for substance use

(1) World Health Organization "Alcohol and Injury in Emergency Departments" 2007

(2) Drug Abuse Warning Network "National Estimates of Drug Related Emergency Department Visits, 2008"

(3) Cummings GE et al. "Health Promotion and disease prevention in the emergency department: a feasibility study" *CJEM* 8(2): 100-105

Unstably housed patients in the ED

- ▶ Being unstably housed is associated with increased rates of ED utilization (6.0 visits/year vs. 1.6 visits/year)¹
- ▶ In one study, homeless patients made 10.4% of ED visits, but were only 3.9% of all the patients²
- ▶ The Edmonton Homeless Count identified 2,421 individuals in 2010³

(1) D'Amore J et al. "The Epidemiology of the Homeless Population and Its Impact on an Urban Emergency Department" *Acad Emerg Med* 2001; 8:1051-1055.

(2) Moore G et al. "Homelessness: patterns of emergency department use and risk factors for re-presentation" *Emerg Med J* 2011; 28:422-427.

(3) Homeward Trust "2010 Edmonton Homeless Count"

Improving ED Care

- ▶ ED is good at managing acute health issues
- ▶ Less adept at managing key determinants of health that are clearly linked to re-visits and poor health outcomes
- ▶ Regular health satisfaction surveys are mailed out to ED users after their visit
- ▶ May not sample the population with the highest rates of use and health needs



Satisfaction With Care and Needs Assessment Survey of Homeless and/or Substance Using Adults Presenting to the ED

Objectives:

1. To characterize patients presenting to the ED who are unstably housed and/or presenting with acute or chronic substance use issues.
2. To assess satisfaction with ED experience and the perceived need for a broader range of medical and/or social services.
3. To determine resource utilization (ED visits and admissions) over the next six months.



Study Team

- ▶ Ryan Cooper MD, MPH, FRCPC(C)
- ▶ Ginetta Salvalaggio MD, MSc, CCFP
- ▶ Cristina Villa-Roel MD, MSc
- ▶ Amanda Newton PhD
- ▶ Cameron Wild PhD
- ▶ Brian Rowe MD, MSc, CCFP(EM)
- ▶ Christine Vandenburghe MSc
- ▶ Scott Kirkland MSc
- ▶ Sahil Gupta
- ▶ Kelsey Roelofs



Study Funding



- ▶ Study was approved by the Health Research Ethics Board at the University of Alberta



Study Setting

- ▶ Edmonton, Alberta; population of 730,000 inhabitants
- ▶ Royal Alexandra Hospital; annual census of 66,000 patients; located in the inner city



Inclusion and Exclusion Criteria

Inclusion Criteria

- ▶ Chief complaint related to acute or chronic substance use

And/or

- ▶ Unstable housing situation

Exclusion Criteria

- ▶ Age < 16 years
- ▶ Language barrier
- ▶ Medically unstable throughout ED visit
- ▶ Previous completion of the survey
- ▶ Unable to provide informed consent
- ▶ Direct consult or admission
- ▶ In custody of police or corrections institution



Control group

- ▶ Enrolled in 1:4 ratio
- ▶ No financial compensation for participating in the study



Survey Components

- ▶ **Demographic Information**

- ▶ DOB, gender, ethnicity, education level, legal status, sleeping arrangements for past 30 days, income, past medical history, vaccinations, drug use patterns
- ▶ Food, Shelter and Safety Concerns

- ▶ **Additional Services**

- ▶ What have you accessed?
- ▶ What would you access in the ED?

- ▶ **Satisfaction with Care Questionnaire**

- ▶ Modeled after the Health Quality Council of Alberta's standard survey



Key questions for the pilot study

- ▶ How do we reliably identify our target group?
- ▶ What is the optimal shift duration?
- ▶ What barriers will we face in patient recruitment?



Pilot study

- ▶ Took place from Tuesday June 22, 2010 to Thursday July 22, 2010
- ▶ A total of 15 data collection shifts of different lengths were trialed during this period
- ▶ Data collection shifts were a random selection of weekdays, weekends, days, evening and night hours



Identification of our Target Population

- ▶ Registration data unreliable
- ▶ Sensitivity to the population
- ▶ Varying definitions of homelessness



Screening Question

“We are conducting a study trying to improve the service we provide in the Emergency Department. We will be asking some questions about your housing status to determine your eligibility to complete a satisfaction survey.”

“Have you had a permanent place to stay at for the past 30 days, like your own house or apartment?”



Substance Use

- ▶ Presenting complaint screened for each patient
 - ▶ Those presenting for acute or chronic substance use concerns were eligible for inclusion
 - ▶ List of possible complaints identified and included in standard operating procedure
 - ▶ Some examples: acute intoxication or withdrawal, injury or trauma related to intoxication or withdrawal, chronic medical conditions related to substance use (e.g. cirrhosis, talc lung etc.)
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Screening Process

- ▶ 601 patients screened
- ▶ 62 (10.3%) were eligible to complete the survey
- ▶ 15 patients were enrolled into the pilot study
- ▶ **Most common reasons for non-inclusion:**
 - ▶ Unable to provide informed consent (n=15)
 - ▶ Left without being seen (n=14)
 - ▶ Refused (n=10)
 - ▶ Not yet assessed by ED team (n=7)



Demographics

		Non-Eligible	Eligible	Enrolled	Control	Unstable Housing	Substance use	Both
Gender	Male	52% 282/539	57% 27/47	67% 10/15	0% 0/4	60% 3/5	71% 5/7	67% 2/3
	Female	48% 257/539	43% 20/47	33% 5/15	100% 4/4	40% 2/5	29% 2/7	33% 1/3
Age		48.09	41.92	48.10	47.22	48.47	45.29	54.02



ED Visit

		Non-Eligible	Eligible	Enrolled	Control	Unstable Housing	Substance Use	Both
Discharge Destination	“Home”	70% 388/552	79% 37/47	87% 13/15	100% 4/4	80% 4/5	86% 6/7	100% 3/3
	Inpatient	14% 78/552	1% 4/47	7% 1/15	0%	0%	14% 1/7	0%
	Other	7% 39/552	13% 6/47	7% 1/15	0%	20% 1/5	0%	0%
Wait Time		2.39 SD 2.04	3.05 SD 2.12	3.20 SD 1.53	2.56 SD 3.20	4.15 SD 1.15	2.47 SD 1.53	2.05 SD 2.57
LOS		9.23 SD 12.13	9.26 SD 7.55	11.52 SD 9.09	13.14 SD 6.16	10.35 SD 12.18	12.52 SD 7.00	12.04 10.38
Visit Time		7.13 SD 12.21	7.05 SD 7.40	8.32 SD 8.21	10.18 SD 6.46	6.19 SD 11.30	9.39 SD 6.37	9.59 SD 7.43



Recruitment Issues

Benefits

- ▶ Lots of “down time” in the ED
- ▶ Target population seemed generally receptive to the survey

Challenges

- ▶ Inability to provide informed consent
- ▶ Long wait times for ED care space and ED team assessment
- ▶ High rates of patients who leave without being seen



Protocol Changes

- ▶ 9 hour shifts (3 hours of screening + 6 hours of follow up)
- ▶ Shift overlap when possible
- ▶ Use of additional research team members to capture patients still in the ED at the end of a recruitment shift
- ▶ Ethics approval to start the survey in the waiting room (no intermediary required)
- ▶ Enhanced education of ED staff about goals of the survey



Study Update

- ▶ Recruitment is ongoing
 - ▶ 165 target participants recruited
 - ▶ 40 control participants recruited
- ▶ Target sample size is 208 participants



Take Home Points

- ▶ Unstably housed and/or patients presenting with acute or chronic substance use issues are frequent users of ED services
- ▶ There are benefits and challenges to recruiting this target group in an ED setting
- ▶ Study protocols should anticipate lengthy ED stays and incorporate ways to capture patients who may leave without being seen



Questions?

Thank you!

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