



Snohomish County, WA

Human Services
Research Division

Frequent Utilizers Project

Rachelle McCarty, ND MPH
Sean DeBlicek, MAIPS
Robin Fenn, PhD LICSW

September 2013

Results in Brief:

Twenty-nine individuals accounted for 553 EMS contacts and 420 EMS transports in Snohomish County in a ten-month period.

The most common primary impression cited for initiating EMS contact/transport is Behavioral/Psychiatric.

Alcohol and/or drug-related primary impressions also account for a large number of EMS encounters.

Most of these visits are billed to publicly funded insurance programs.

Policy Brief No. 4-2013

EMS Service Providers Report Psychiatric Concerns and Substance Use As Most Common Clinical Impressions

The Top 29 Utilizers of Emergency Medical Services (EMS) from Snohomish County Fire District #1 and Everett Fire District were identified for a 10-month period from January 1, 2012 to October 31, 2012. This brief summarizes their encounters with all county EMS districts as well as human services, criminal justice, mental health, and emergency departments.

Who are the EMS frequent utilizers?

- The average age of the top 29 utilizers was 50 years old.
- Forty-eight percent of the frequent utilizers were male.
- These 29 individuals were contacted by EMS crew from any Snohomish County fire district 553 times in a ten month period, or an average of nearly twice per month. The single most frequent utilizer had 42 contacts, or nearly once per week.
- Of these 553 contacts, 420 resulted in transporting the patient to an emergency department, for an average of 15 transports per person.
- The Top 5 most common causes account for 43% of all contacts, and 44% of all transports.

Table 1: Top Five Most Common Causes of Contacts and Transports by EMS Primary Impression¹

| EMS Impression | Contacts |
|----------------------------|------------|
| Behavioral/Psychiatric | 64 |
| Diabetes symptoms | 53 |
| Pain (nontraumatic) | 44 |
| Other | 43 |
| <i>not specified</i> | 27 |
| <i>specified, uncommon</i> | 16 |
| Chest pain | 36 |
| TOTAL | 240 |
| | Transports |
| Behavioral/Psychiatric | 48 |
| Pain (nontraumatic) | 37 |
| Other | 35 |
| <i>not specified</i> | 23 |
| <i>specified, uncommon</i> | 12 |
| Chest pain | 34 |
| Abdominal pain | 32 |
| TOTAL | 186 |

What behavioral/psychiatric services do they receive?

- When EMS Primary Impressions otherwise coded² but strongly suggestive of Behavioral/Psychiatric issues are included in this category, it accounts for 15% of all EMS contacts as well as 15% of all EMS transports.
- Thirty-one percent of these individuals were seen in the Snohomish County Triage Center for mental health crises, accounting for 32 encounters during the study period.
- The North Sound Mental Health Administration Regional Support Network provided outpatient mental health services to half of the individuals (52%). Five individuals (17%) spent 98 total days in an inpatient mental health facility.

Does substance use contribute to EMS utilization?

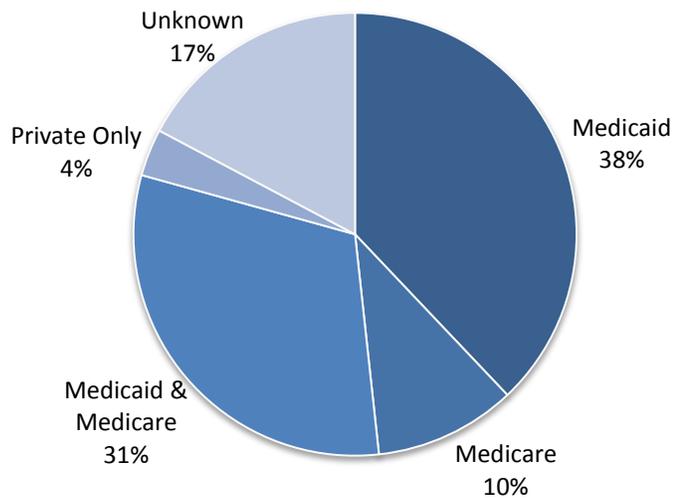
- EMS Primary Impressions which clearly state or strongly suggest alcohol and/or drug use (AOD)³ account for 13% of all contacts and 16% of all transports, making AOD the second most common cause of contact and the leading cause of transport to emergency departments.
- Only one individual received County-funded inpatient detoxification treatment for drug or alcohol abuse during our study period. None of them accessed publicly-funded, community-based drug or alcohol treatment services.

What additional services do they use?

- Though hospital records suggest that three of these individuals are homeless, none received County housing services.
- These individuals accounted for at least 575 contacts with the Emergency Departments (ED) in Snohomish County. The average number of ED visits was 20 per person, or twice per month. The most ED visits by one individual was 55.
- Nine of the 29 (31%) individuals were housed at the Snohomish County Jail for a total of 17 encounters and 444 days of incarceration during the study period.

What are the funding sources for these frequent utilizers?

Most of these individuals are covered by publicly-funded programs.



Note: The Unknown category is comprised on individuals for whom insurance data are not available. They may be privately insured, or lack insurance.

Policy Implications:

- The most common initiator of EMS contacts and transports was for behavioral/psychiatric primary impressions. Over half of these patients access outpatient community mental health services, yet their management is not preventing high utilization of EMS services.
- AOD use is a common contributor to high EMS utilization and subsequent ED contact, yet none of these individuals accessed community-based treatment during the study window.
- Most contact documented by EMS resulted in transport to an ED. Since ED's specialize in providing high quality acute medical care, they may not be the best facilities for providing consistent mental health or substance abuse services for these individuals. The cost of ED management for these individuals is also higher than other services.
- "Diabetes symptoms" is a very common reason for contact, but not for transport, suggesting that diabetes symptoms may be effectively controlled on-scene.
- "Other" is a frequently coded primary impression, but provides for challenging interpretation of cause for EMS activation.
- Though 31% of the EMS frequent utilizers were seen in the jail during this period, they were not categorized as frequent utilizers of the jail (9+ bookings in the study period); the cross-utilization of EMS and jail suggests complexity of service needs, but not necessarily a high level of criminality.

This project was funded by the Amerigroup Foundation and the Snohomish County Chemical Dependency/Mental Health Program Advisory Board.

Technical Notes:

¹ Contact is any reported interaction with the EMS crew. A contact does not always result in transport to the emergency department. Specific, uncommon occurrence refers to a category containing two or fewer incidents of this primary impression.

² Probable Behavioral/Psychiatric include impressions with multiple issues listed including indication of behavioral/psychiatric problem (coded in analysis as MIXED)

³ Alcohol and/or drug use category created by summing individual events coded as substance/drug abuse, drug/alcohol/poison, poisoning/drug ingestion, and substance abuse + behavioral. "Poisoning" may not be specific to alcohol/drug ingestion. "Other" and "Mixed" category impressions that mentioned alcohol use or intoxication were included in the denominator. Codes including altered level of consciousness, generalized weakness, seizure, syncope and fainting may or may not be alcohol/drug related and were not included in the reported percentage.

Data Notes

Analyses performed on data available to Snohomish County Human Services Research Division as of September, 2013.

EMS contacts and transport data presented was compiled from the ESO database and one County fire district's legacy database for the top 29 frequent utilizers of Emergency Medical Services identified in Snohomish County Fire District #1 and Everett Fire District for a 10-month period from January 1, 2012 to October 31, 2012.

Where primary impression was blank (8 contacts) or consisted of multiple impressions in one field (29 contacts, 28 transports), we could not collapse with other categories.

Age: Age at start of study window, January 1st, 2012

Sex: Sex documented in hospital record data and ESO.

Insurance: from Provider One and EMS records where available

Emergency Department: one hospital system with available data; otherwise counts come from EMS records

EMS: from ESO data for fire districts in Snohomish County, and one district's legacy database

Homeless shelter and housing: HMIS assistance data from County services

Alcohol and Other Drug use (AOD): none of these individuals had entries in the state TARGET database for outpatient services during the study period

Triage Center: use of County crisis stabilization center from County service data

Jail: use of County Jail service data