Comparison of trends of rural ER utilization and hospitalization rates of those experiencing homelessness in Traverse City between 2018-19 and 2021-22

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Purpose:

- Compare data of ED utilization and acute hospitalizations of the homeless population in Traverse City, Michigan based on age, gender and principal diagnosis of the time periods of 2018-19 and 2021-22
Methods:

- Retrospective deidentified chart review from 1/1/21-11/1/22.
- Evaluated ED utilization and acute hospitalization
- Compare this data to previous gathered research done in same time frame in 2018-2019
- Data is organized by gender, age, and principal diagnosis
- Trends in ED utilization and acute hospitalizations were also evaluated
Homelessness in Traverse City

- Point in Time (PIT) estimates of unhoused individuals in our Continuum of Care (CoC)
  - 2018: 235 unhoused people
  - 2019: 168 unhoused people
  - 2021: 202 unhoused people
  - 2022: 164 unhoused people
    - 24 were minors
    - 61 were female
    - 102 were male
    - 1 was transgender
Results:

- **ED visits 2021-22**: 627 unique encounters
  - Mean age 46
  - Female 34%, Male 66%
  - The most common principal diagnoses
    - Alcohol related 24.4%
    - External causes (injury/poisonings, etc.) 21.21%
    - Mental/behavioral 12.12%.

- **Acute hospitalizations 2021-22**: 121 unique encounters
  - Mean age 51
  - Female 34.7%, Male 65.3%
  - The most common principal diagnoses
    - Alcohol related making up 31.4%
    - Infectious 14.05%
    - Endocrine 11.57%.
Results:

Principal diagnosis for ED Use among Homeless Population, Munson Medical Center, Jan 1, 2021 - Nov 1, 2022

- Alcohol related: 1.12%
- External cause (injury, poisoning, etc.): 6.86%
- Mental/Behavior: 12.12%
- Abnormal Lab: 24.40%
- Other: 3.67%
- Total: 100%

Principal diagnosis for ED Use among Homeless Population, Munson Medical Center, Jan 1, 2018 - Oct 31, 2019

- Alcohol Related: 12%
- Abnormal Lab: 19%
- External Cause (injury, poisoning, etc.): 27%
- Mental/Behavior: 8%
- Other: 1%
- Total: 100%
Results:

Principal diagnosis for Acute Hospitalizations among Homeless Population, Munson Medical Center, Jan 1, 2021 - Nov 1, 2022

Principal diagnosis for Acute Hospitalizations among Homeless Population, Munson Medical Center, Jan 1, 2018 - Oct 31, 2019
Results:

Trends in ED Use and Acute Hospitalizations Among Homeless Population Over Time

- # of ED visits (2021-2022)
- # of acute hospitalizations (2021-2022)
- # of ED visits (2018-2019)
- # of acute hospitalizations (2018-2019)
Summary:

- Compared to data from 1/1/2018 - 10/31/2019, there was a 10% increase in the number of overall visits to the ED.
- No change in number of hospitalizations from 2018-2019 to 2021-2022.
- Alcohol-related visits were the leading cause of ED utilization and acute hospitalizations followed by traumatic injuries, mental health concerns, infectious and endocrine (diabetes complications).
- Large spike in ED utilization in spring months consistent in both data sets, potentially due to Safe Harbor (homeless shelter) closing.
- Although PIT count showed decrease in homeless population from 18-19 to 21-22, speaking with shelters and organizations that assist people experiencing homelessness, they report an increase in homeless population between the two time periods.
- May be too early in intervention to see change TC Street medicine has had on ED and acute hospitalization rates.
Resources:

- Descriptive analysis of emergency department and acute hospitalization encounters among the homeless population in a rural hospital. Jaclyn Israel, David Klee MD, Kelly Hirko PhD. Michigan State University College of Osteopathic Medicine
- HUD exchange PIT and HIC data
  https://protect-us.mimecast.com/s/2DZLCER7VyUoRjYWsnpe2f?domain=hudexchange.info/
Together, we can end homelessness.