911 or Primary Care - Who Should I Call?

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Problem Identification & Need

- US emergency departments (EDs) are overcrowded & overwhelmed – especially in Vermont
- An estimated 37% of all ED visits are for non-urgent complaints[1]
- Factors associated with frequent ED use for non-urgent complaints include:
  - Low income[2]
  - A high number of prescribed drugs[2]
  - A history of heart disease[2]
  - Acute-on-chronic musculoskeletal pain[3]
  - Convenience[1, 4, 5]
  - **Overestimation of disease severity**[3]
  - **Lack of understanding of services provided**[1, 3, 5]

UVM Medical Center ER overwhelmed, urges patients to seek treatment elsewhere

By **Dominic Minadeo**
Oct 14 2022

Area hospitals struggling amid emergency room bed shortage

NBC 5
Updated: 6:22 PM EDT Oct 17, 2022

A rise in patients awaiting long-term care beds is crowding Vermont's ERs

By **Erin Petenko**
Oct 19 2022

Public Health Costs

- An estimated **$8.3 billion** is spent each year on emergency department care that could be provided in another location[6]
- This value has nearly doubled in the past decade ($4.4 billion annual cost for such care in 2010)[7]

+ Mental illness treatment costs **$89B** in total health spending.
+ Hypertension-related hospitalizations total **~$113B** each year.
+ Costs for diabetic patients are **2.3X** higher than those without.

Behavioral Health:

~2.4 Billion ED Visits = ~$4.6 Billion Opportunity*

Approximately 18.5 percent of U.S. adults have a mental, behavioral or emotional health disorder, and patients who present with mental health issues account for between 7-10 percent of all ED visits across the country[16]. Mental illness treatment accounts for $89 billion of national healthcare spending[17]. The average patient with psychiatric service needs directly costs an ED $1,198-$2,264 per visit, with many patients presenting dozens of times over a year[18].

Hypertension:

~1.2 Billion ED Visits = $2.3 Billion Opportunity*

Expenses for hypertension-related hospitalizations total about $113 billion each year, and patients with high blood pressure contribute to 2.5 times more in healthcare spending that those without[19,20]. On average, hospitalization costs for patients with a primary diagnosis of ischemic heart disease are estimated at $31,106, as well as $17,298 for those with cerebrovascular disease, and $18,693 for those with neither disease. Hypertension-associated costs for these patients amount to $3,540, $1,133 and $2,254, respectively, when compared to patients without hypertension as a secondary diagnosis[21].

Diabetes:

~618,000 ED Visits = $1.2 Billion Opportunity*

Healthcare costs for Americans with diabetes are 2.3 times greater than those without diabetes. The total costs of diagnosed diabetes have risen to $327 billion in 2017 from $245 billion in 2012[22]. Additionally, hospital stays for patients with diabetes are longer, and more likely to originate in the ED than for patients without diabetes[23]. Moreover, uninsured people with diabetes have 168 percent more ED visits than people who have insurance[24].

Community Perspective

"Porter Medical Center's Emergency Department is consistently overwhelmed with patients, similar to other EDs across the state"

"Many patients present to the ED for chronic issues and medication refills, both of which would be better managed at a primary care office"

- Jeffrey Abell, PA-C, Porter Medical Center Emergency Department

"About a quarter of patients transported to the emergency department could be managed at a primary care office. Patients often do not understand the severity of their symptoms"

"Non-emergent ambulance transports often take resources away from emergency situations, and can delay response times"

- Michele Sandler, Advanced EMT, Middlebury EMS

Intervention & Methodology

- **Goal:** To reduce emergency department burden by directing non-urgent complaints to primary care offices
- **Population:** Greater Middlebury area
- **Intervention:** Flyers informing what symptoms should prompt one to call 911 or present to the ED, vs symptoms that should prompt a call to a PCP

Results & Response

- The flyer can be posted at locations where it will be seen by many community members
- The flyer can also be distributed to patients at primary care offices or the emergency department
- Quantitative assessment determining the effectiveness of the intervention can be assessed by a pre- and post-evaluation of emergency department visits to Porter Medical Center, specifically investigating the severity of the complaint, the patient's location of residence, and their subjective reasoning for presenting to the ED

Evaluation of Effectiveness & Limitations

- To determine the effectiveness of this intervention, a longitudinal study would need to be implemented to evaluate the patient demographics, specific complaints, and location of residence of those presenting to Porter Emergency Department over an extended period of time (months to years). This information could be compared to pre-intervention analysis of the same data.
- Limitations of this study include its inability to be provided to all patients within the community, the subjective perception of one's current illness, and the potential use of additional emergency departments within the surrounding communities.

Recommendations & Future Research

- Assess effectiveness via multiple patient parameters as previously described (see: evaluation of effectiveness)
- Consider additional educational sessions with high-risk groups (such as workshops or short lectures) to allow community members to ask questions and clarify topics
- Extend this educational methodology to other communities, and determine the effectiveness of the intervention on other populations

References

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