

Characteristics of an At-Risk Patient Population Presenting to a Philadelphia Student-Run Free Clinic within 30 Days of Hospital Visit

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Abstract

30-day readmission rates are the parameter that hospitals and insurance companies use to measure clinical quality of care and set reimbursement levels for care.¹ The 2019 readmission rate for United States hospitals was 14.9%; however, reported readmission rates vary in accuracy due to exclusion of at-risk populations or patients who seek care outside the hospital network.^{2,3} Between 2013 and 2018, people who use drugs (PWUD) in Philadelphia experienced drastic increases in bacterial infections resulting in hospitalizations. Specifically, increases were seen in skin and soft tissue infections (SSTIs) (91%), osteomyelitis (73%), bacteremia (253%), and infective endocarditis (240%).⁴ This rise in infection-related hospitalizations were not mirrored in people who do not use drugs.⁴

Introduction

As coordinators of a student-run urgent care clinic operating within a Philadelphia syringe exchange and harm-reduction social services organization, we serve an at-risk patient population that includes a large portion of individuals who are transiently housed, people who engage in sex work, and people who use drugs (PWUD). We sought to determine our at-risk population's impact on current readmission rates and the ability of hospitalization to meet their unique medical needs.

Methods

We conducted a retrospective review of 607 electronic charts for patients who sought care at our student run clinic associated with a syringe exchange in Kensington, Philadelphia from January 2017 to January 2020, and identified patients who visited our clinic within 30 days of self-reported hospitalization. We identified time since hospitalization, purpose for hospitalization, and reason for clinic visit.

Objective

We characterized the medical and social factors that contributed to urgent care clinic presentation within 30 days of hospital discharge or after leaving against medical advice (AMA).

Results

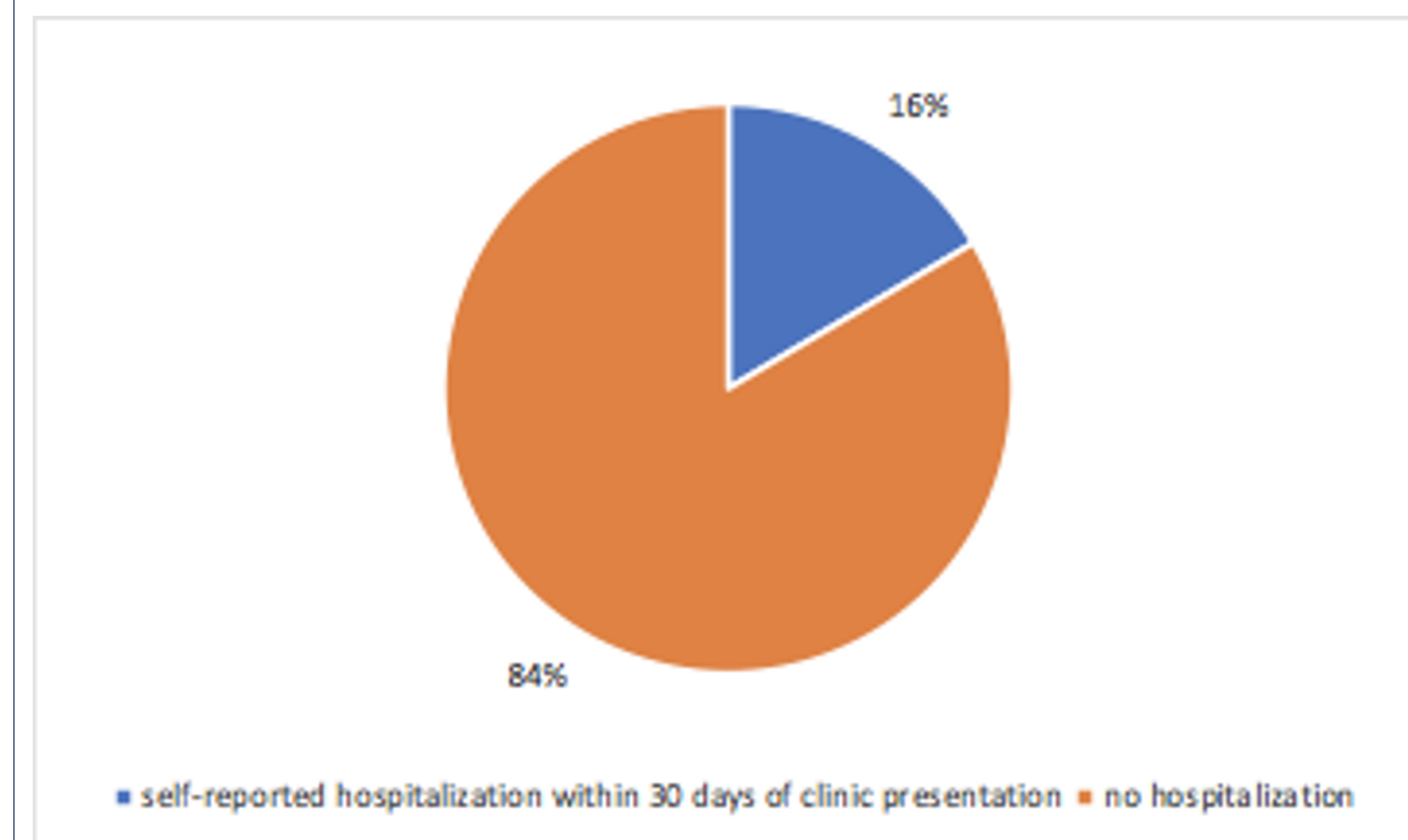


Figure 1: Of 607 patient visits from 2017-2020, 100 of those self-reported hospitalization within 30 days of clinic presentation

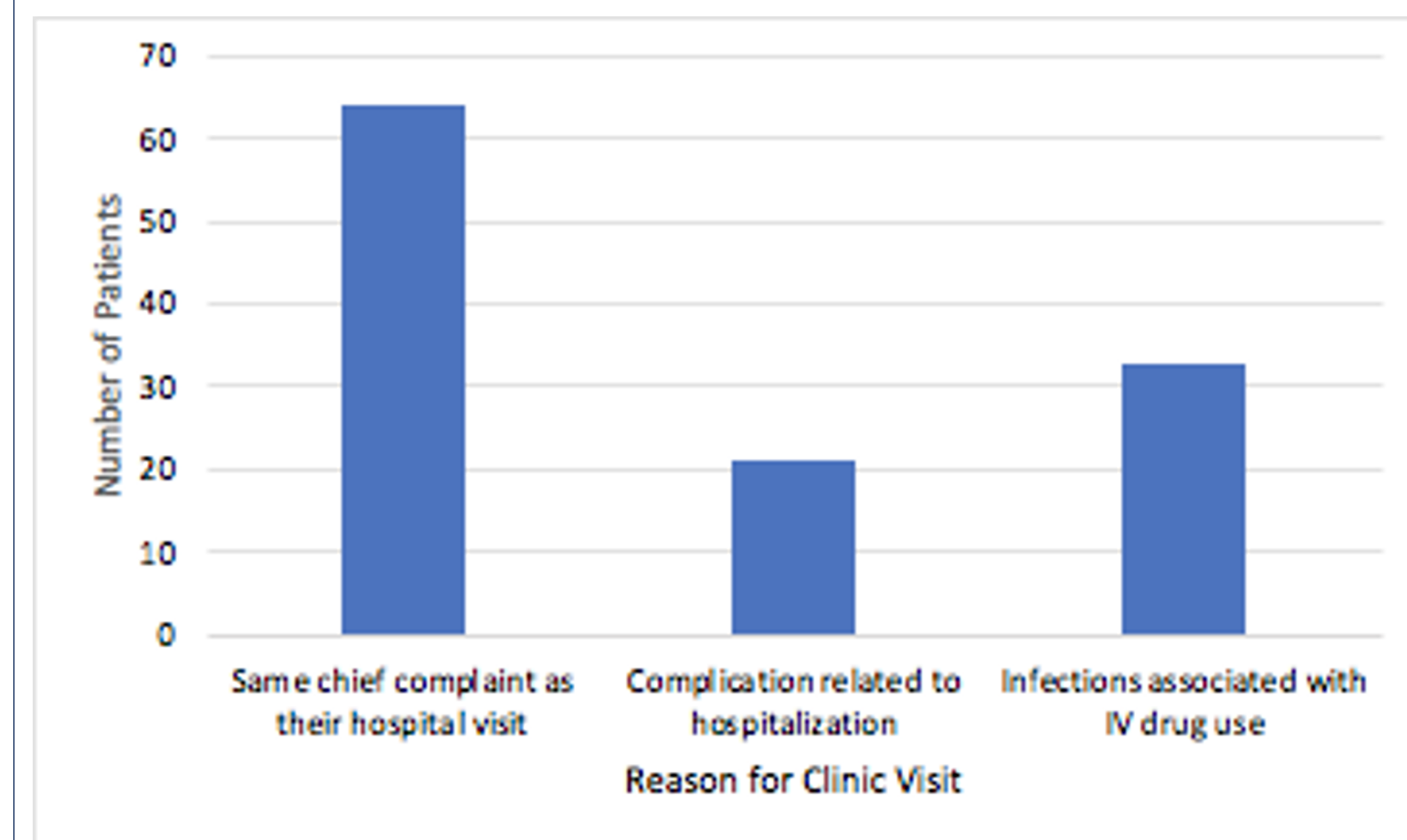


Figure 2: Of the 100 clinic visits, 64% presented with the same chief complaint as their hospitalization, 21% presented with a complication related to their hospital visit, and 33% were from infections associated with IV drug use (ie. abscess, cellulitis, osteomyelitis)

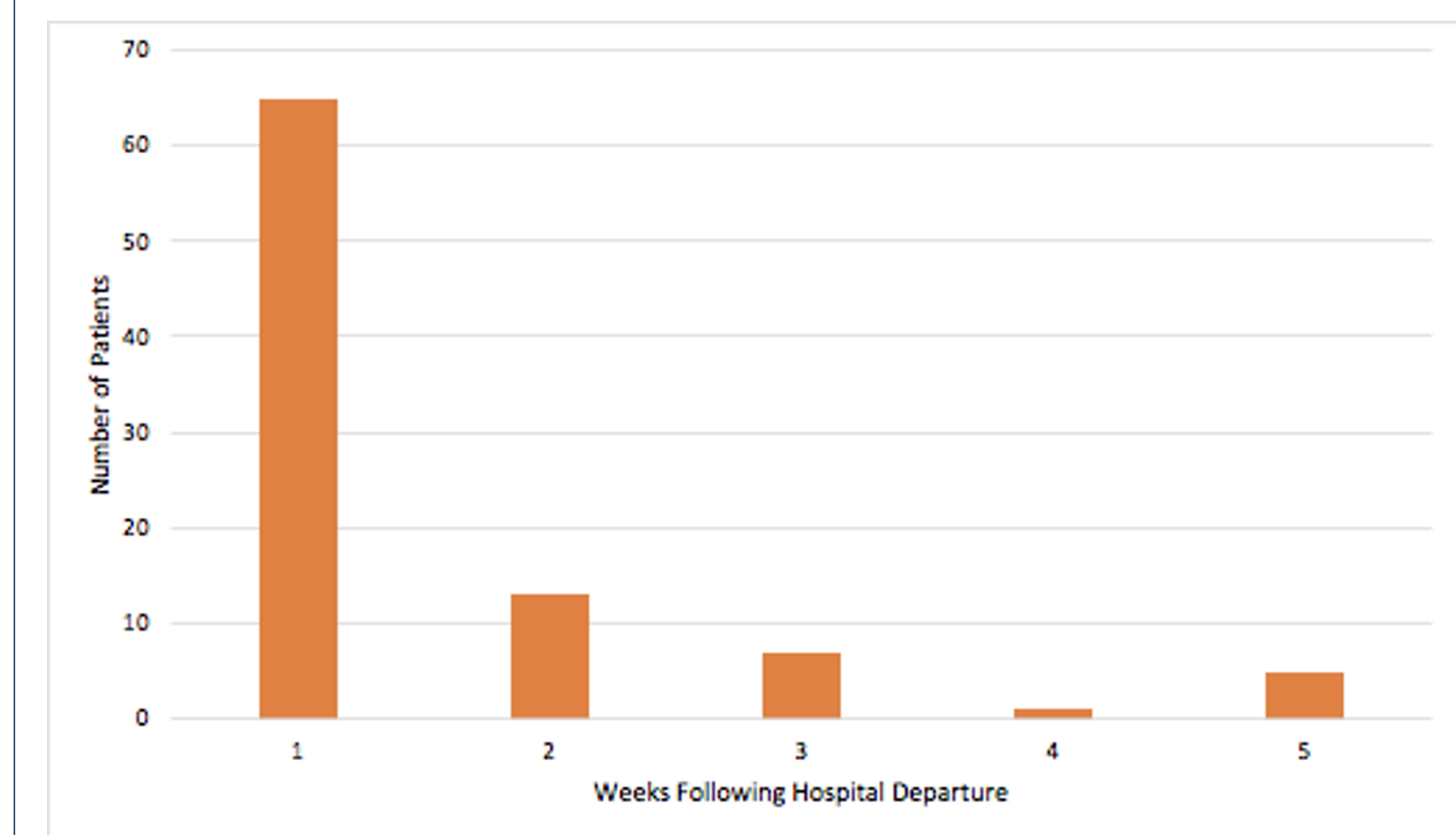


Figure 3: A majority of the patients presented to the clinic within 1 week of their hospital departure, with the average days of presentation being 7.5 days

Discussion

We identified a high incidence of clinic visits for medical needs associated with recent hospitalization, particularly injection-related infection, which suggests insufficient and incomplete hospital care for this at-risk population. The number of readmissions for this population is underestimated due to their ability to seek medical care outside of the hospital network.

The high proportion of patients seeking care for injection-related infections at our Kensington, Philadelphia clinic following hospitalization may point to opioid withdrawal as a contributing factor in shortened hospital stay. Indeed, instances of PWUD with injection-related infections leaving AMA have become widespread in recent years. For instance, PWUD with associated endocarditis were significantly more likely to leave AMA (15.7% vs 1.1%) and received a median of only 10 days of the recommended six weeks of IV antibiotics.⁵

Recent studies have indicated that ED induction of medication to treat opioid use disorder (MOUD) reduces early termination of hospital treatment, and ACTM, AAEM, and ACEP endorse ED initiation of MOUD to reduce opioid overdose and death post-hospitalization.^{6,7}

Appropriate and complete treatment of injection related infections is especially important given the recent projection that in the next 10 years, 1/3 of mortality due to injection drug use will be due to overdose, and 1/3 due to endocarditis.⁸ Additionally, the majority of our patient population are experiencing homelessness, living in shelters, or transiently housed. Accommodations should be made during the discharge planning process to ensure that patients are able to adhere to treatment plans with their current housing situations. This approach may allow patients to have greater adherence to post-discharge medical treatment and decrease both hospital readmission rates and need for follow-up urgent care.



Limitations

- Hospitalization within 30 days of clinic presentation was self-reported to volunteer first and second year medical students; a lack of standardized history questions between patient encounters likely contributed to an underestimation of the rate of recent hospitalization.
- Individual reports of hospital departure varied: retrospectively, determination of AMA status or departure after completed treatment necessitated a subjective review.
- During the summer of 2019, the closure of Hahnemann University Hospital limited the availability of volunteer physicians. Full-spectrum urgent care clinics were replaced by foot care clinics in the interim.

Future Prospects

Investigate:

- Motivations for premature termination of hospital treatment among PWUD and people with unstable housing
- Disparities in ED acute treatment protocols for injection-related infection
- Potential for ED initiation of buprenorphine for PWUD to decrease post-discharge infection-related morbidity and mortality

Acknowledgements

We would like to thank the patients who we had the privilege to serve and the staff of the harm reduction organization in which our clinic is based. We also would like to thank Drexel for the opportunity and resources to run this clinic.

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