

Enhancing Infection and Overdose Prevention for Persons with Injection Drug Use-Related Infections: Evaluation of an Inpatient Quality Improvement Program

Carly C. Speight, PharmD Candidate 2021¹; Bobbi Jo Stoner, PharmD, BCPS²; George Guthrie Jr., MHA³; Turkeisha Brown, MSN, RN, NE-BC²; Claire E. Farel, MD, MPH²; M. Patricia Rivera, MD, ATSF, FCCP²; Asher J. Schranz, MD, MPH²
¹Eshelman School of Pharmacy, UNC Chapel Hill; ²Medicine-Infectious Diseases, UNC Chapel Hill; ³Data Analytics-Quality Improvement, UNC Chapel Hill

Carly Speight,
 PharmD Candidate 2021
 carly_speight@unc.edu

Background

- Hospitalizations for injection drug use-related infections (IDU-I) are increasing in North Carolina.
- Many IDU-I, such as endocarditis, bone, joint, and spine infections, require long antimicrobial courses and extended inpatient stays.
- **Prolonged hospitalizations are opportunities to engage patients in overdose and infection prevention.**
- We aimed to:
 1. Pilot an inpatient quality improvement program
 2. Provide interventions to enhance patient care for drug-related infections

Methods

Setting:

- University of North Carolina (UNC) Hospital, a large tertiary academic medical center in Chapel Hill, NC

Population:


- Inpatients on the infectious diseases or pulmonary teams with IDU-I
- Suspected to have injected drugs over the past year, or felt to benefit from drug-related infection prevention and overdose services

Intervention:

- A checklist of recommendations was provided to the care teams (**Figure 1**)
- After review of the medical record, our team made interventions on the appropriate services
- Provision of these services during a 9-week period was reviewed

Figure 1. Intervention Checklist

6 Bed Tower Quality Improvement Project

Patient Name: _____ Patient MRN: _____ Date: _____ 

Please send the following tests:

- HIV antigen/antibody
- Hepatitis A IgG
- Hepatitis B surface antigen
- Hepatitis B core total antibody
- Hepatitis B surface antibody
- Hepatitis C antibody
- Hepatitis C RNA

Consider offering patient the following immunizations:

- Hepatitis A Hepatitis B Tdap

Please prescribe for discharge to UNC Central Outpatient Pharmacy:

- Narcan 4mg/actuation Nasal Spray. Quantity 1 (box of two sprays)
- Uninsured/ Pharmacy Assistance: Naloxone 1 mg/mL intranasal solution (Dose 2 mL, quantity 4 mL)

Consider asking the patient if they would be willing to receive information on syringe exchange programs.

If so, please provide the attached handout regarding information on syringe exchange program serving their county of residence.

Results

Baseline Characteristics

20 patients identified:

- Median age: 32 years (IQR 27-38)
- 70% female
- Median LOS: 11 days (IQR 5-42)
- “Other” diagnoses: MRSA bacteremia, endophthalmitis, fever, epidural abscess, CF exacerbation, wound infection

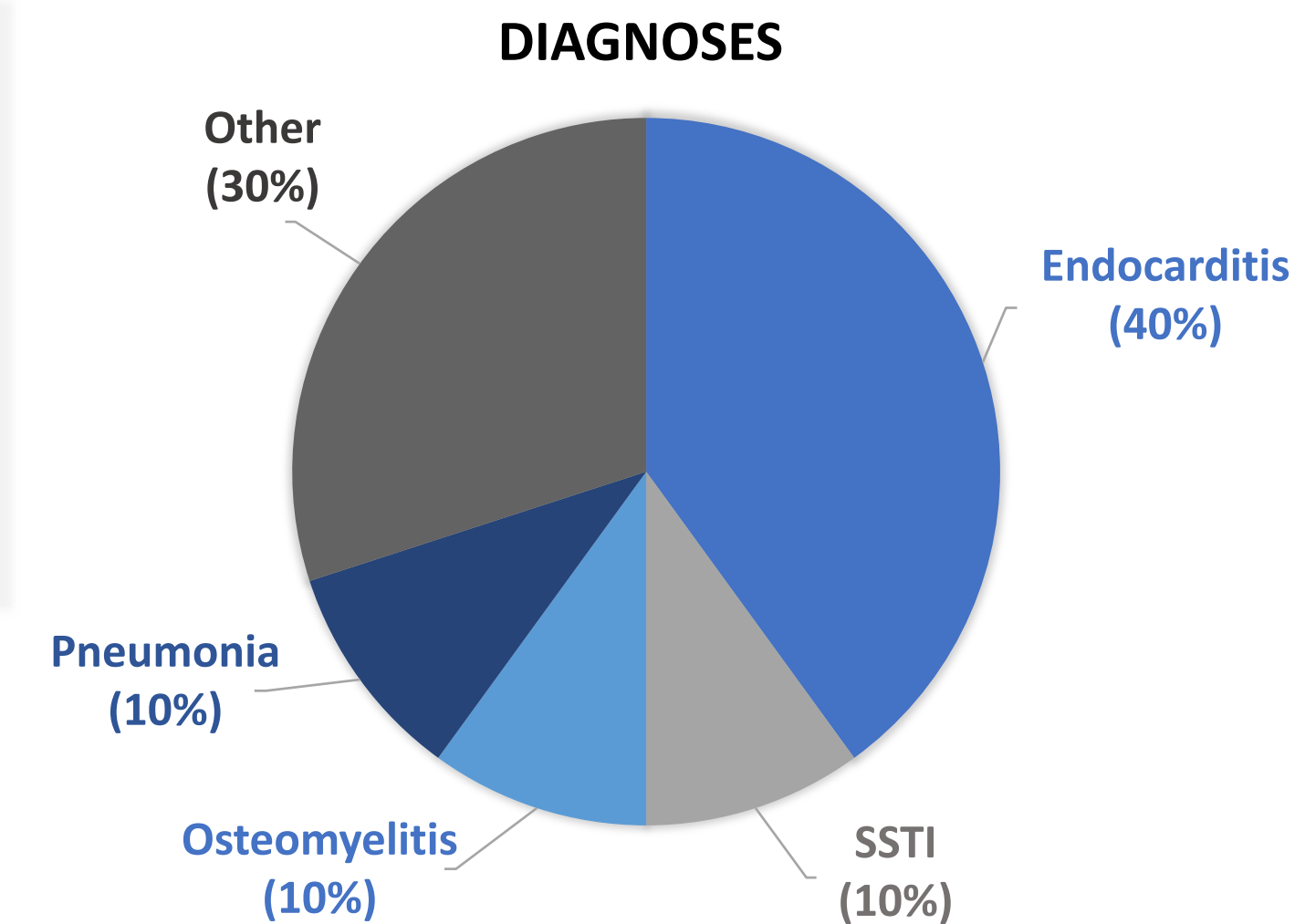


Table 1. Percentages of Services Provided to Eligible Patients

Intervention	N	% Receiving Intervention
HIV test	19	95%
Hep A Immunity	18	90%
Hep B Screening	18	90%
Hep C Screening	19	95%
Hep A Immunization	4	20%
Hep B Immunization	7	35%
Tdap Immunization	10	50%
Naloxone prescription	12	60%
Syringe program referral	10	50%
Hep C Diagnoses	8	
Hep B Diagnoses	2	
HIV Diagnoses	0	

Limitations:

1. Baseline data was not available, therefore we were unable to assess the effect of our intervention on the population.
2. Not all patients required certain immunizations due to preexisting immunity, but this data was not collected.

Pilot Program Outcomes (Table 1):

- Screenings for Hepatitis A (HAV) and Hepatitis B (HBV) immunity performed in 90% of patients
- HAV, HBV, and Tdap immunizations administered to 20%, 35%, and 50%, respectively
- Naloxone prescription provided to 60% of patients at discharge
- 50% of patients referred to syringe programs in their community

Conclusions

- **For inpatients with IDU-I, an intervention checklist can help ensure systematized delivery of comprehensive preventive care.**
- In a setting without comprehensive addiction consultation, we were able to provide guideline-concordant care for infection and overdose prevention to patients hospitalized with IDU-I.