

Pharmacists Administered Parenteral Medications: A Descriptive Study of a Novel Inpatient Training Program

BACKGROUND

- Parenteral medication administration is a critical component of in-hospital patient care with the task traditionally falling on nurses and physicians.
- Despite legislative and pharmacy association support, underutilization of pharmacists in parenteral medication administration likely stems from various factors, including the lack of formalized training, limited awareness by other healthcare professionals, and unclear legal guidance.^{1,2,3}
- At Vanderbilt University Medical Center (VUMC), additional qualified staff members are often needed for timely medication administration during emergency response situations, therefore a novel training program was developed to train pharmacists and ensure competency.

OBJECTIVE

- To describe the implementation and outcomes of a pharmacist-based medication administration training program.

METHODS

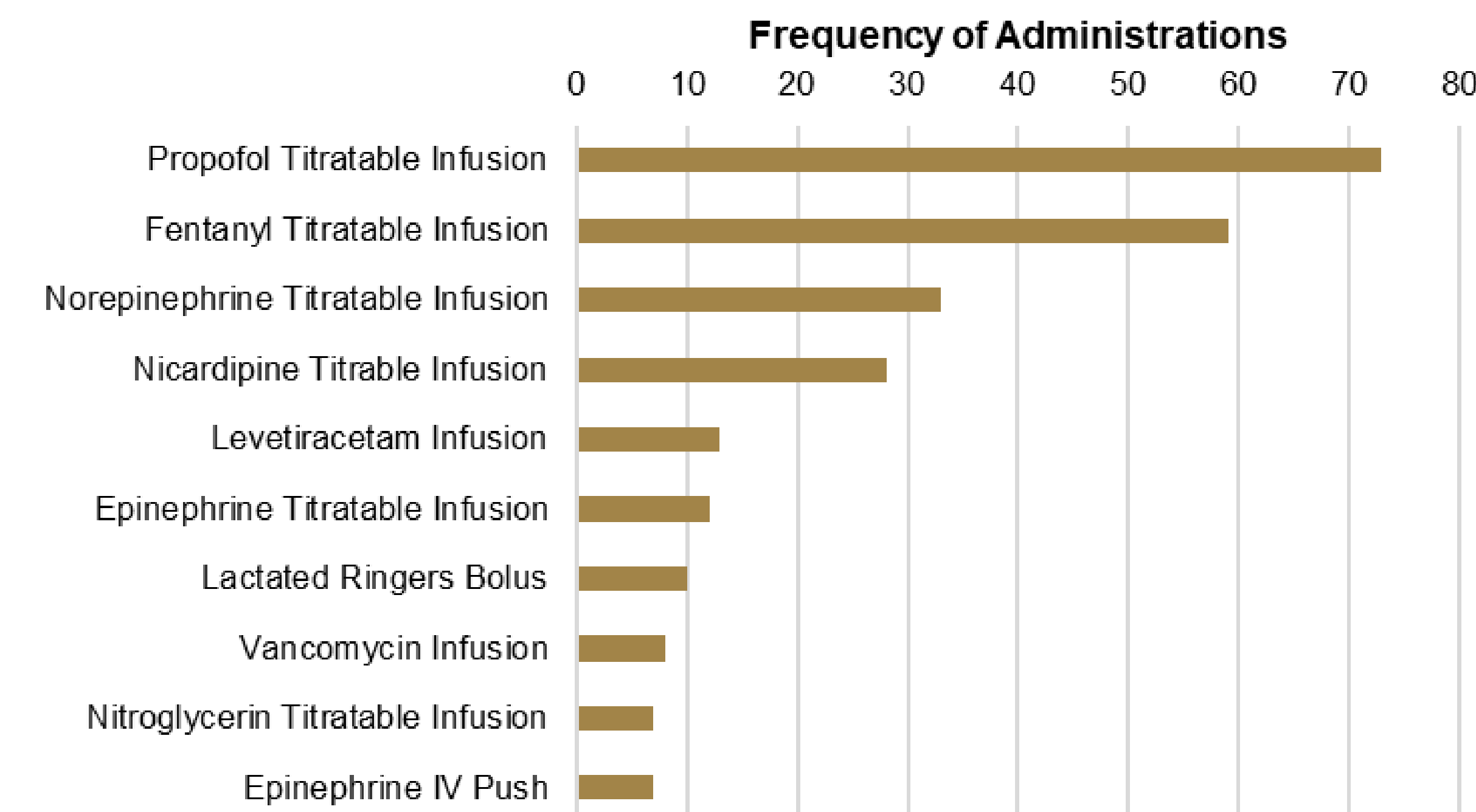
- Study Design:** Single-center, retrospective analysis at VUMC, an academic medical and Level I trauma center
- Time Frame:** September 1, 2022 – August 31, 2023
- Inclusion Criteria:** Parenteral medications administered by trained clinical pharmacists and residents
- Primary Outcome:** Assess the feasibility and safety of trained pharmacists administering parenteral medications
- Methods:**
 - Hospital policy was updated to reflect Tennessee State Law regarding the scope of practice for pharmacists and medication administration
 - A standard operating procedure was developed to define the education and training requirements for medication administration competency
 - Training was offered starting in July 2022 with email recruitment to all clinical pharmacists with a focus towards those who respond to codes and emergencies
 - Data was collected using the i-Vent feature within the EPIC electronic medication administration record

RESULTS

Table 1. Participant Characteristics

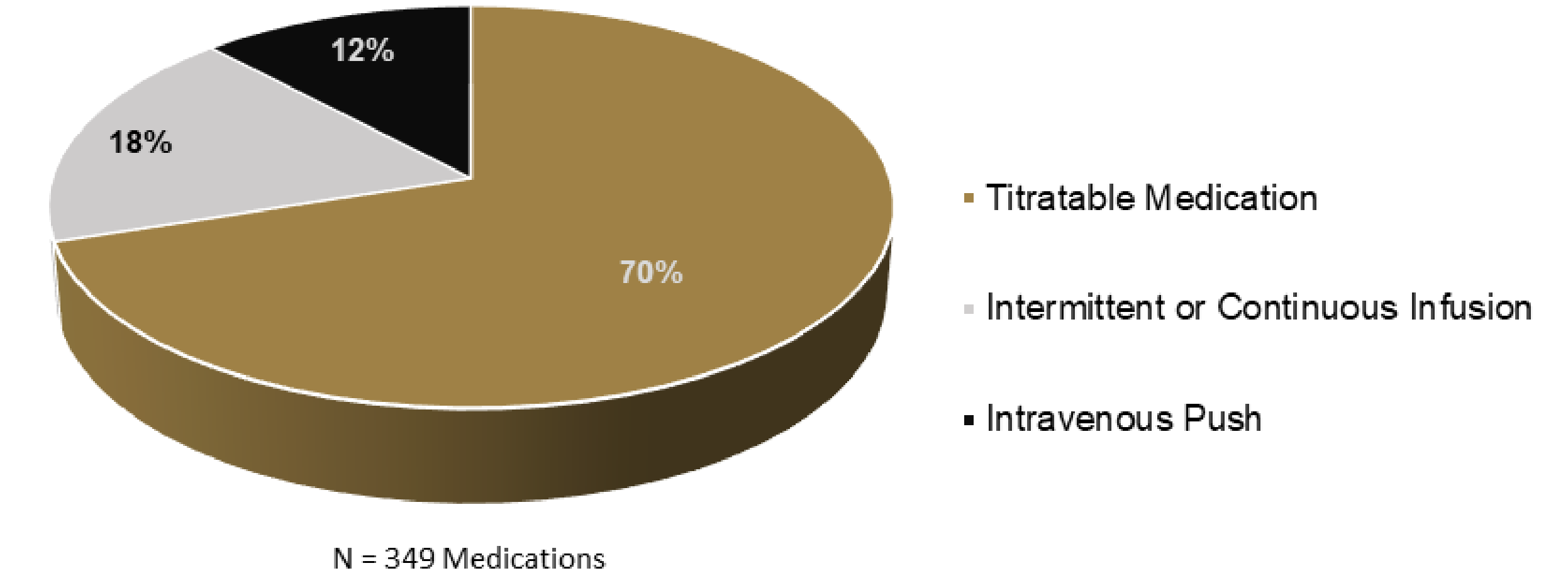
Characteristics	Participants, n (%)
Participants	30
Clinical Pharmacist – Specialist	10 (33)
Clinical Pharmacist	9 (30)
Post Graduate Year (PGY)-1 Pharmacy Resident	8 (27)
PGY-2 Pharmacy Resident	3 (10)
Specialties	
Emergency Medicine	6 (20)
Surgery	4 (13)
Cardiology	3 (10)
Other	17 (57)

Figure 1. Top 10 Pharmacist Administered Medications



RESULTS CONTINUED

Figure 2. Routes of Administration of Pharmacist Administered Medications



CONCLUSIONS

- Of the 30 pharmacists who completed the training program, 349 medications were administered to 284 patients. All the administrations in this study were completed within the adult emergency department.
- Throughout the study duration, no adverse events or medication safety concerns were reported. Additionally, an internal assessment of VUMC's medication safety reporting program revealed no instances of medication misadventures.
- The range of medications administered by pharmacists combined with the absence of adverse events, emphasizes the viability and safety of pharmacist-administered medications.
- As health-system pharmacy continues to evolve, adoption of standardized training programs, such as ours, can establish pharmacists as a vital contributor to interdisciplinary teams, resulting in enhanced patient care and safety.

REFERENCES

- NASPA, APhA. State maps - Pharmacist authority to administer medications. <https://naspa.us/wp-content/uploads/2022/02/NASPA-med-admin-maps-Dec-2021.pdf>. Published July 21, 2017. Updated December 2021. Accessed February 2, 2024.
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