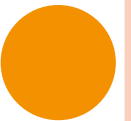


**RISK FACTORS FOR CENTRAL LINE  
ASSOCIATED BLOODSTREAM  
INFECTION: A COMPARISON OF  
FREQUENTLY INFECTED VS. RARELY  
INFECTED HOME PARENTERAL  
NUTRITION PATIENTS**

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# DISCLOSURES

- I have no disclosures.



# INTRODUCTION

- Home parenteral nutrition (HPN) is administered via a central venous catheter (CVC)
- The most frequent complication of HPN is central line associated bloodstream infection (CLABSI)
  - Hospitalization
  - Interruption of therapy
  - Health care \$\$\$\$
  - Impacts quality of life
- Identification of risk factors may help reduce CLABSI incidence in an HPN population



# OBJECTIVE

- The aim of this study was to compare risk factors for CLABSI in frequently infected (FI) and rarely infected (RI) HPN patients.



# METHODS

- CLABSI data collected by medical record review of all pediatric and adult patients from one home infusion provider
- Data collection period from January 2006 – December 2011
- 2 cohort groups established based on their individual infection rates per 1000 CVC days
- 21 patients in the FI group
  - 4.3/1000 CVC days (2.3/1000 - 8.3/1000)
- 21 patients in the RI group
  - 0.04/1000 CVC days (0/1000 - 0.45/1000)



# METHODS

- Data collected
  - Age
  - Sex
  - Diagnosis
  - Length of therapy
  - CVC type



# METHODS

- Risk factors identified from literature review and clinician experience
  - Dressing material
  - Presence of ostomy or enteric tube
  - Hub care antiseptic
  - IV push medications
  - Narcotic use
  - Number of CVC handlers
  - Lab draw method and frequency
- Data compared between FI and RI groups



# RESULTS: DEMOGRAPHICS

Group	Age	Sex	Diagnosis	Length of Therapy
FI	44 yrs (14 yrs – 75 yrs)	Female 57%	SBS 67% ID 33%	16 yrs (2 yrs – 34 yrs)
RI	50 yrs (15 yrs – 84 yrs)	Female 52%	SBS 95% ID 5%	23 yrs (10 – 36 yrs)

- Key:
  - SBS : Short bowel syndrome all causes
  - ID: Intestinal dysmotility all causes



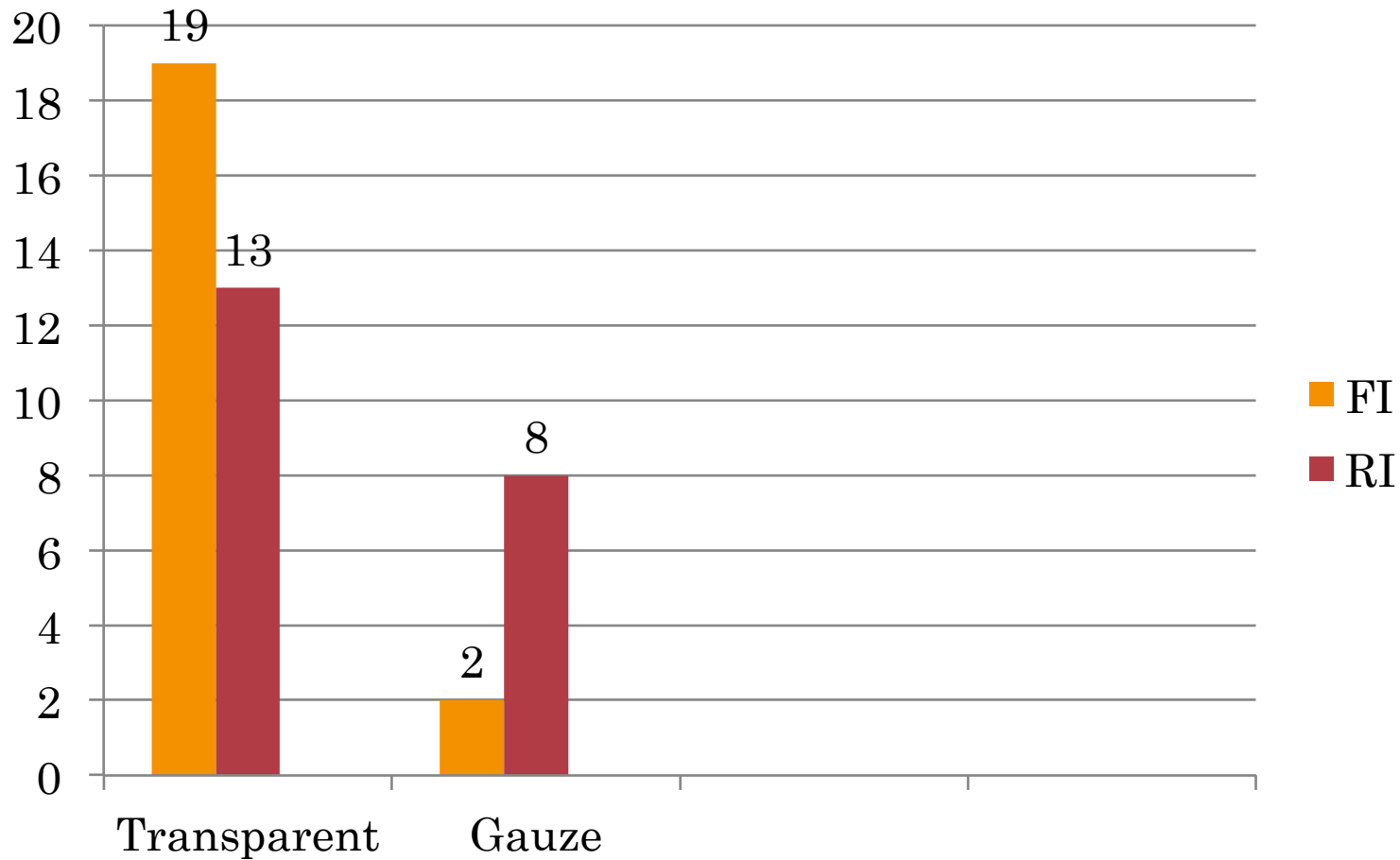


# RESULTS: CVC BY TYPE

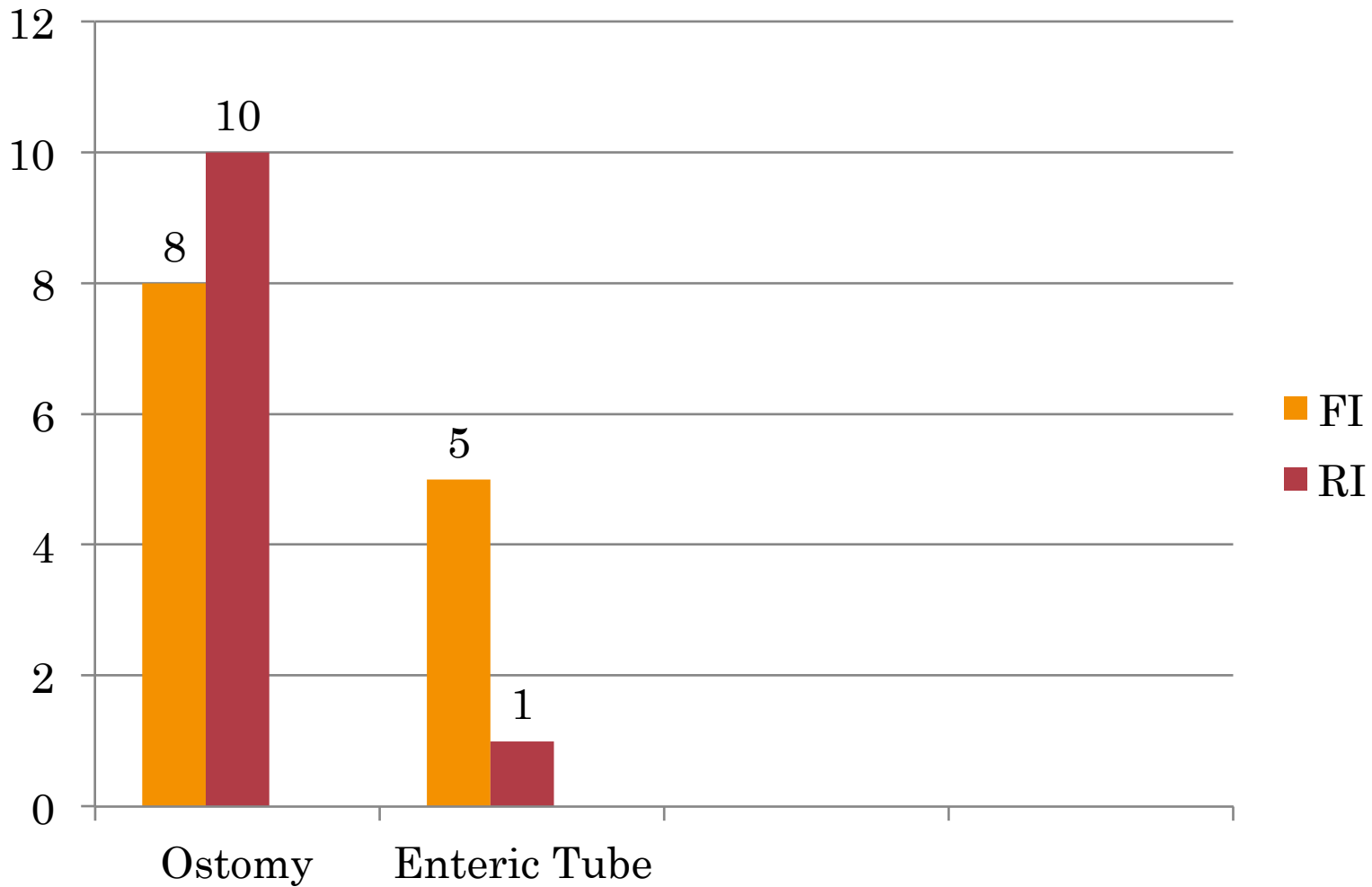
Group	Tunneled	Port	PICC
FI	77% (17)	18% (4)	5% (1)
RI	100% (21)	0	0



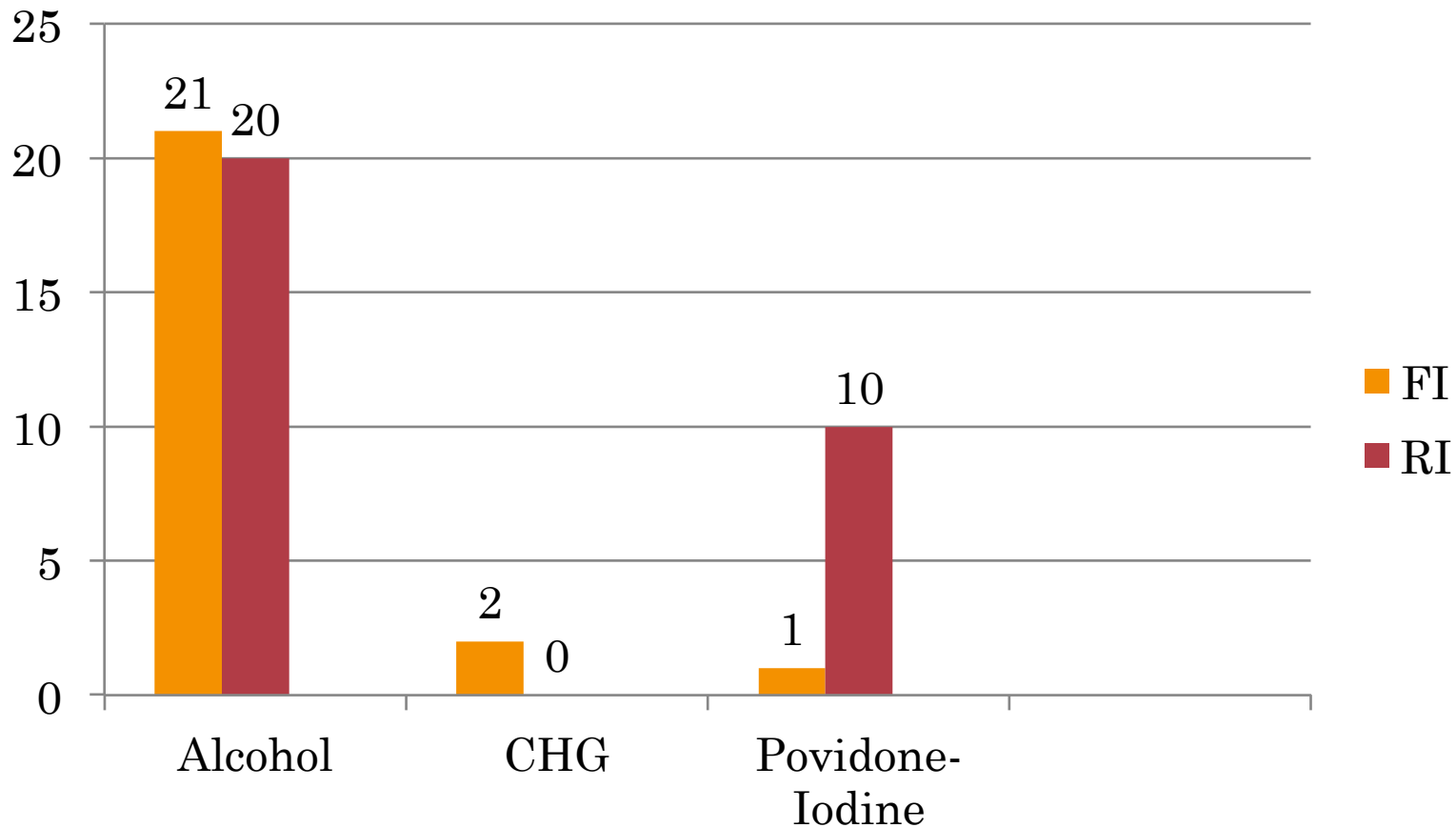
# RESULTS: DRESSING MATERIAL



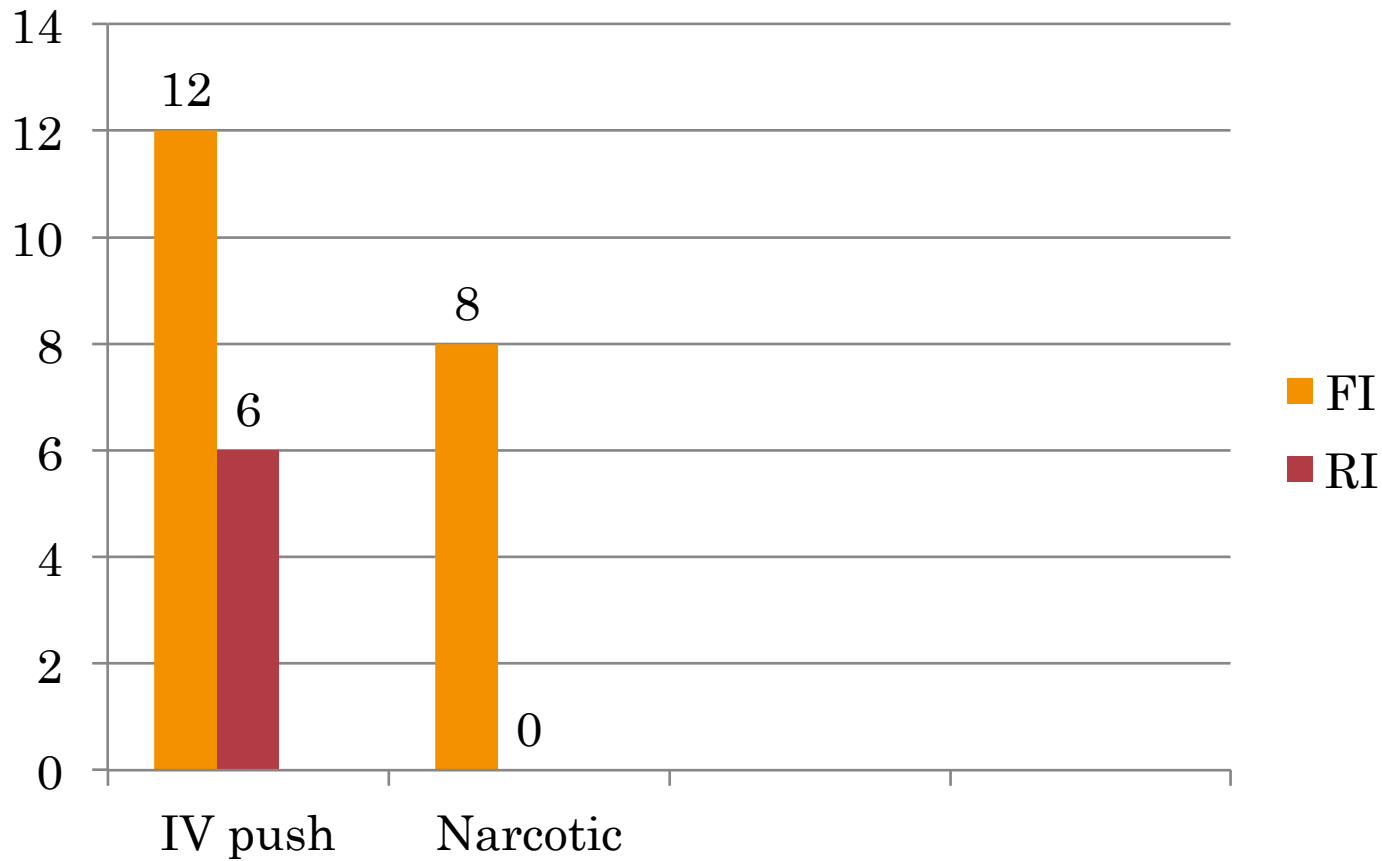
# RESULTS: OSTOMY/ENTERIC TUBE



# RESULTS: HUB ANTISEPTIC

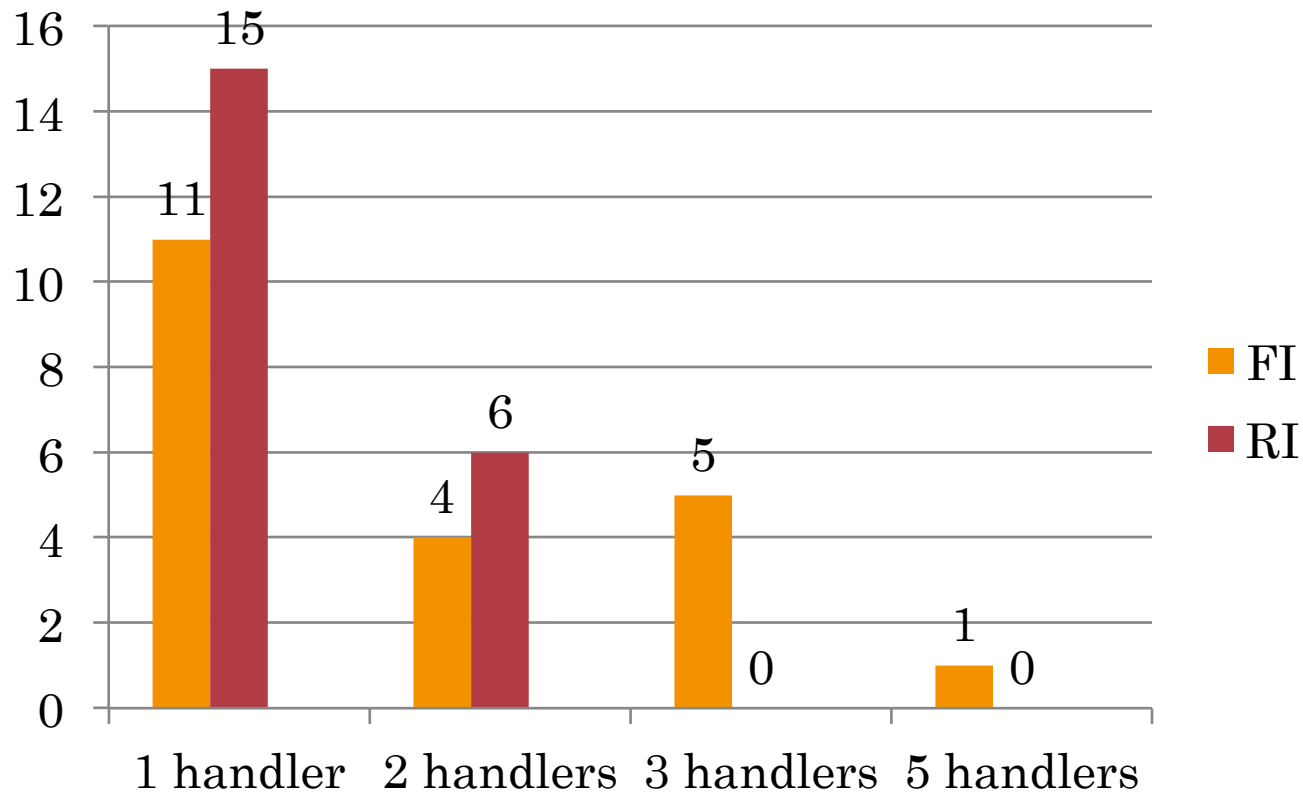


# RESULTS: IV PUSH MEDICATIONS AND NARCOTICS

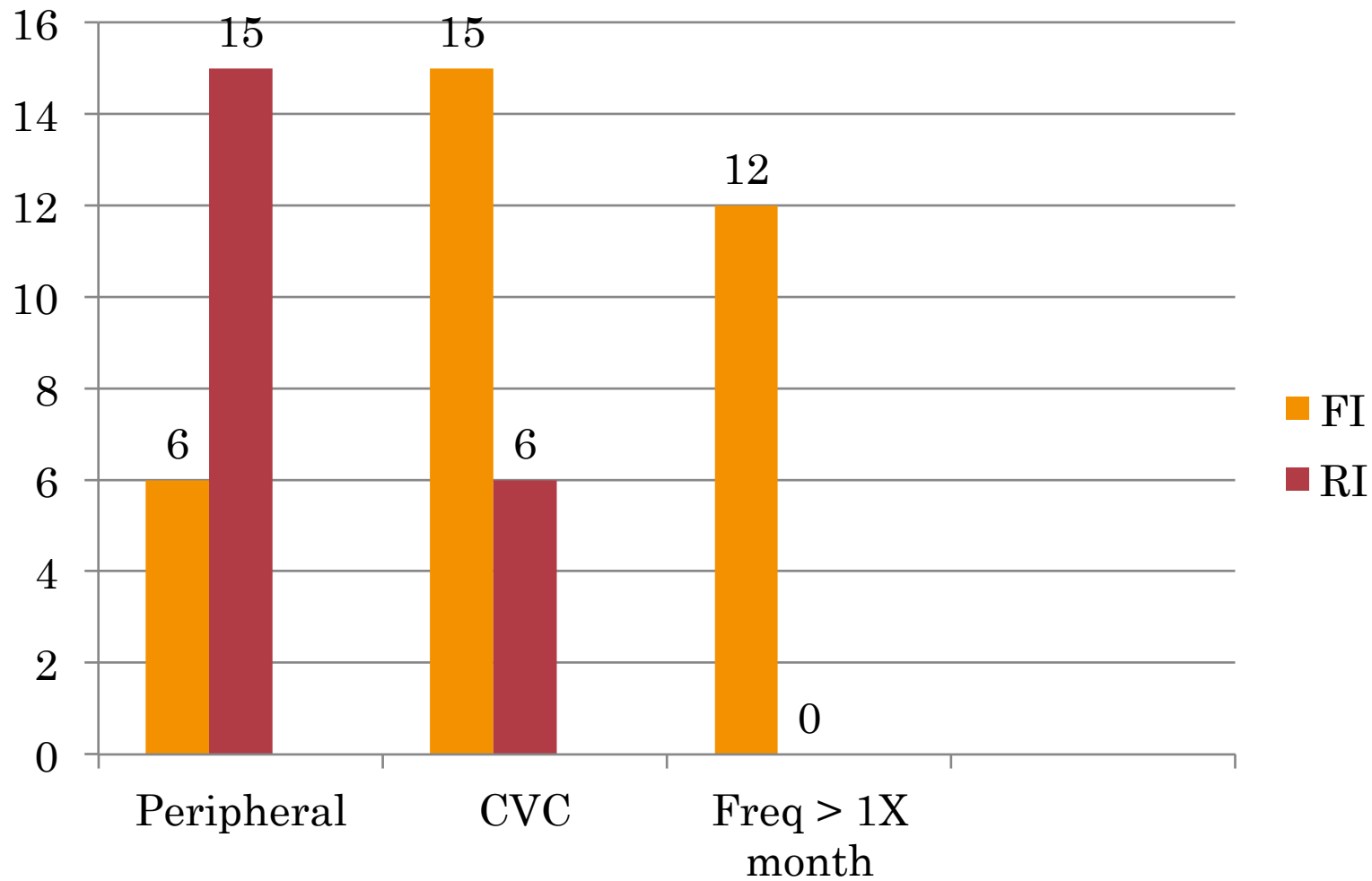


# RESULTS: HANDLERS

- FI group had more handlers than RI group



# RESULTS: LAB DATA



# CONCLUSION

- HPN consumers are able to maintain a very low infection rate as evidenced by this RI group
- Risk factors that may increase infection identified by comparing these 2 cohorts of HPN consumers:
  - More than 2 CVC handlers
  - Frequent lab draws more than once monthly
  - CVC rather than peripheral lab draws
  - Use of IV push medications and narcotics
  - Presence of enteric tube





# CONCLUSION

- Factors that may contribute to CLABSI to a lesser degree
  - Shorter length of therapy
  - Diagnosis of intestinal dysmotility
  - Port use rather than tunneled CVC
- Recognition and implementation of strategies to reduce risk factors for CLABSI is a priority in the care of HPN patients
- More studies with larger populations of HPN patients need to be conducted

