

Pharmacist Managed Lithium In An Inpatient Academic Medical Center

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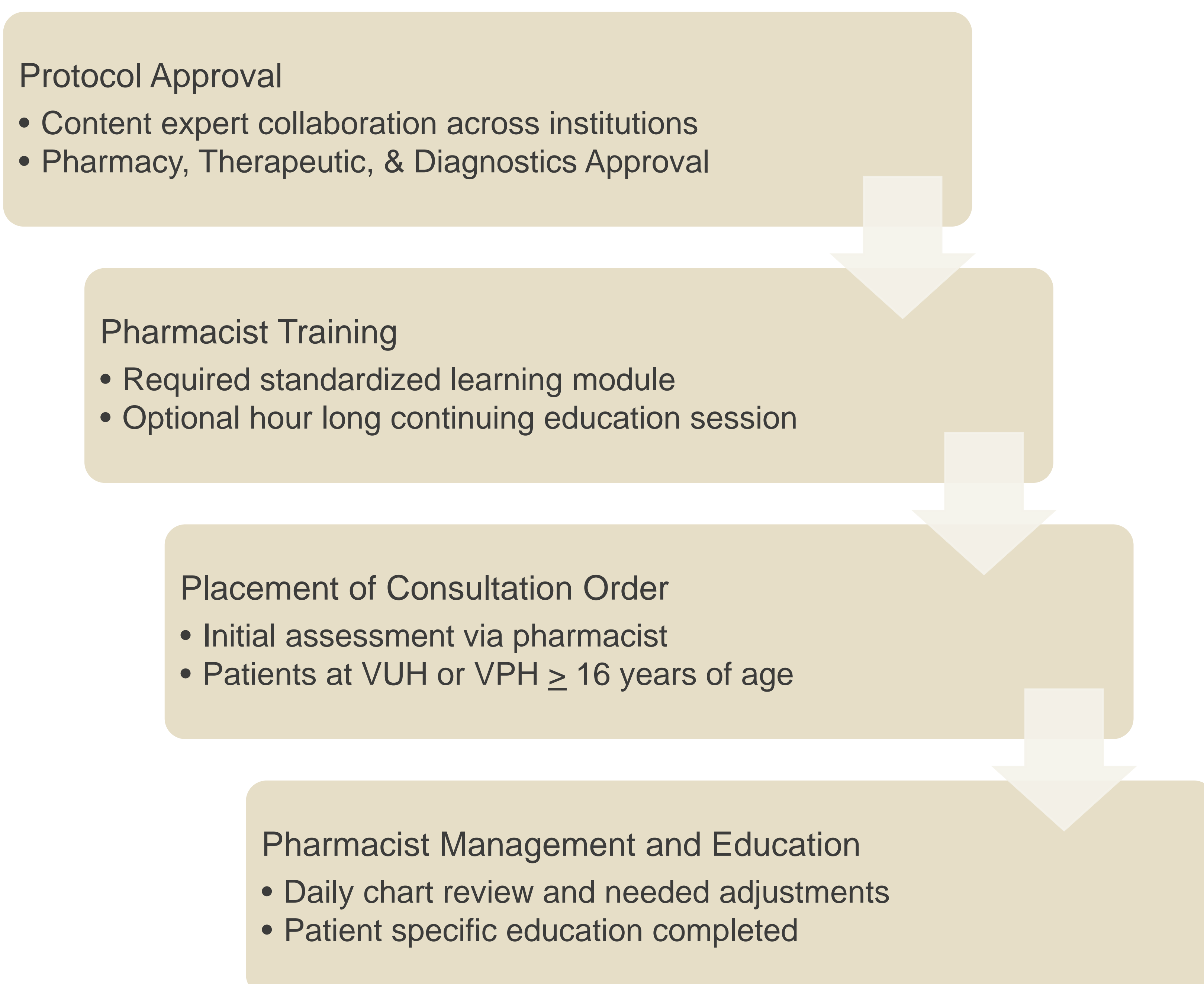
BACKGROUND

- Lithium is a commonly utilized narrow therapeutic index medication for the treatment of various mood disorders
- A medication utilization evaluation performed regarding the use of lithium within the Vanderbilt University Adult (VUH) and Psychiatric Hospitals (VPH) found that 89.9% of patients received a lithium level within 24 hours of admission with 6.1% of patients being hospitalized for 4 or more days prior to receiving a level
- This was a concern due to multiple factors which may result in lithium toxicity and the potential for lithium toxicity to mimic other medical conditions for which patients seek treatment

HYPOTHESIS

- Patients who receive pharmacist consultations should receive prompt measurement of lithium trough levels to help ensure appropriate continuation or discontinuation of therapy based on admission levels
- Patients who receive pharmacist consultations should receive laboratory monitoring and medication education which allows for the safe use of lithium within the Vanderbilt University Medical Center (VUMC) inpatient facilities

PRACTICE ESTABLISHMENT AND PROCESS



PROTOCOL GUIDANCE

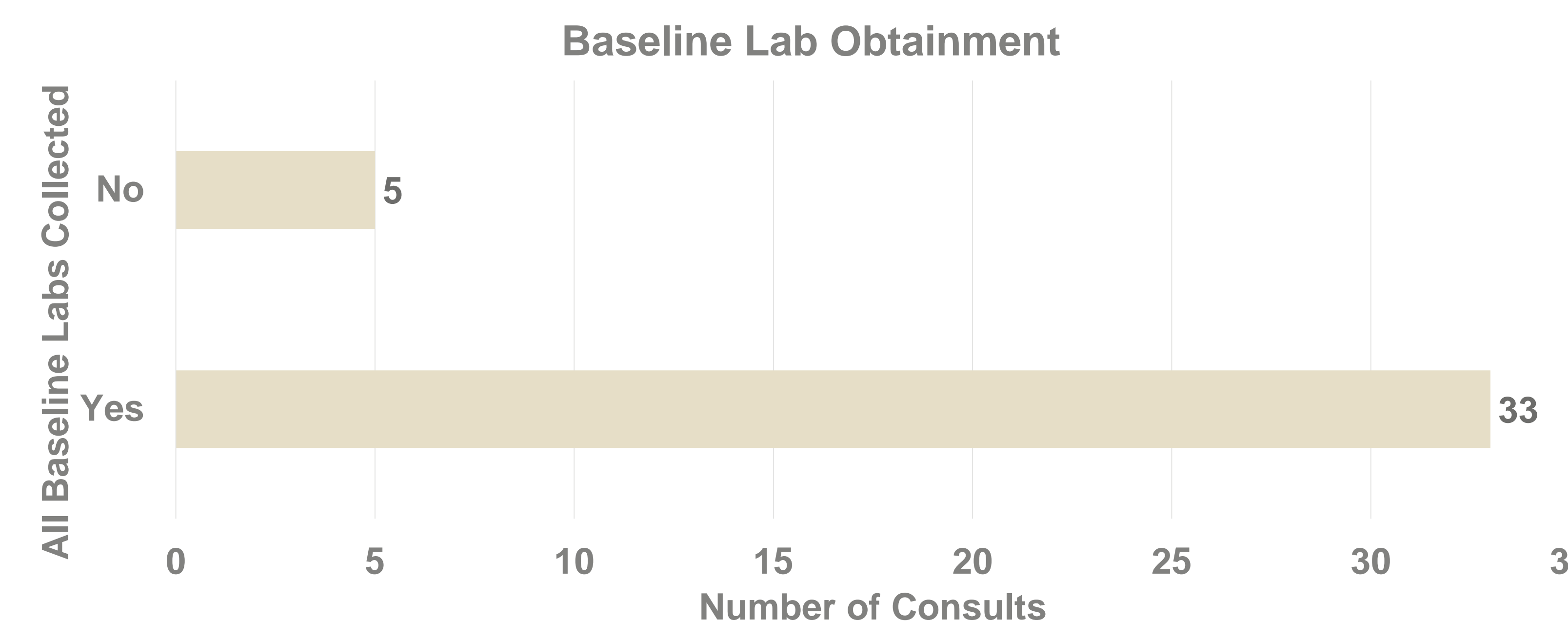
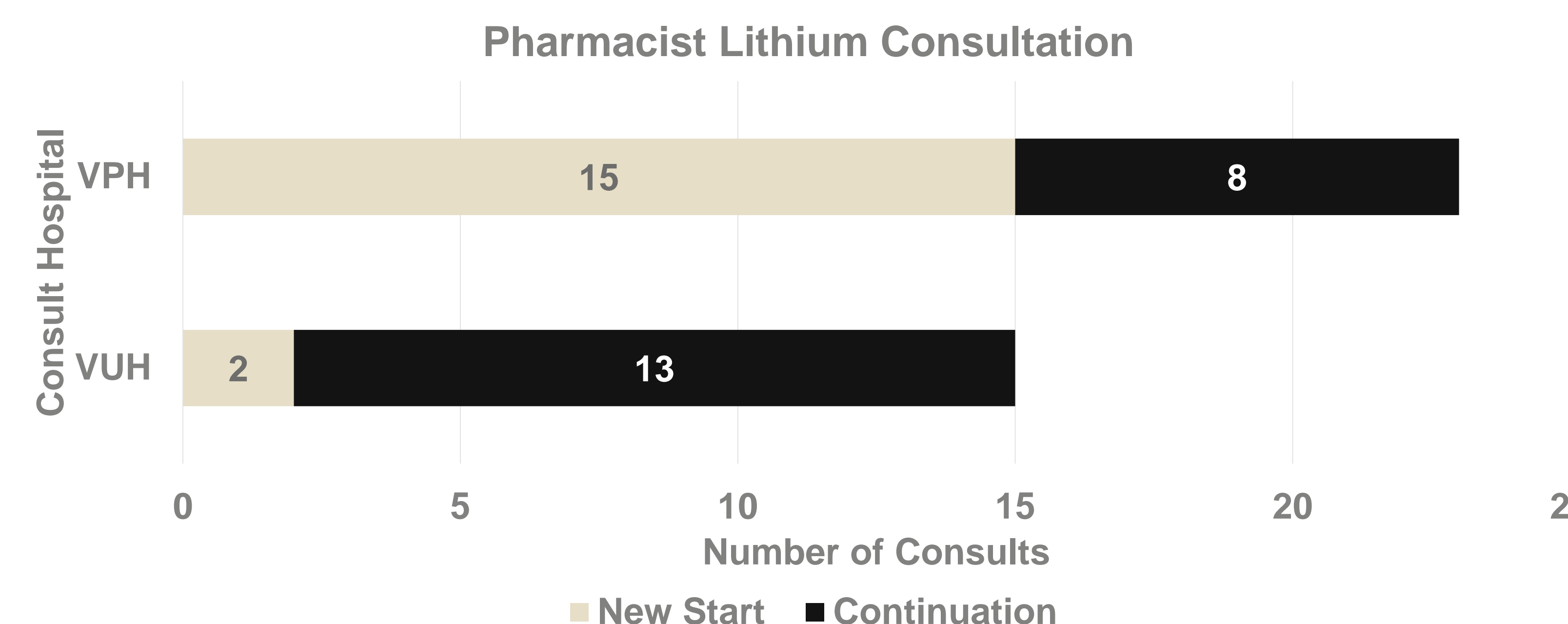
Baseline Laboratory Parameter	Frequency of Ordering
Lithium Trough Level*	Every Admission
Basic Metabolic Panel	Every Admission
Pregnancy Test ⁺	Every Admission
Thyroid Stimulating Hormone	Every 6 Months

* Continuation of therapy only; + Females age 16 – 50 years

Day	New Start Dosing Plan [^]
0	150mg BID
1	300mg BID
2	450mg BID
3	450mg BID
4	450mg BID and order trough for day 5
5	Evaluate trough and proceed appropriately

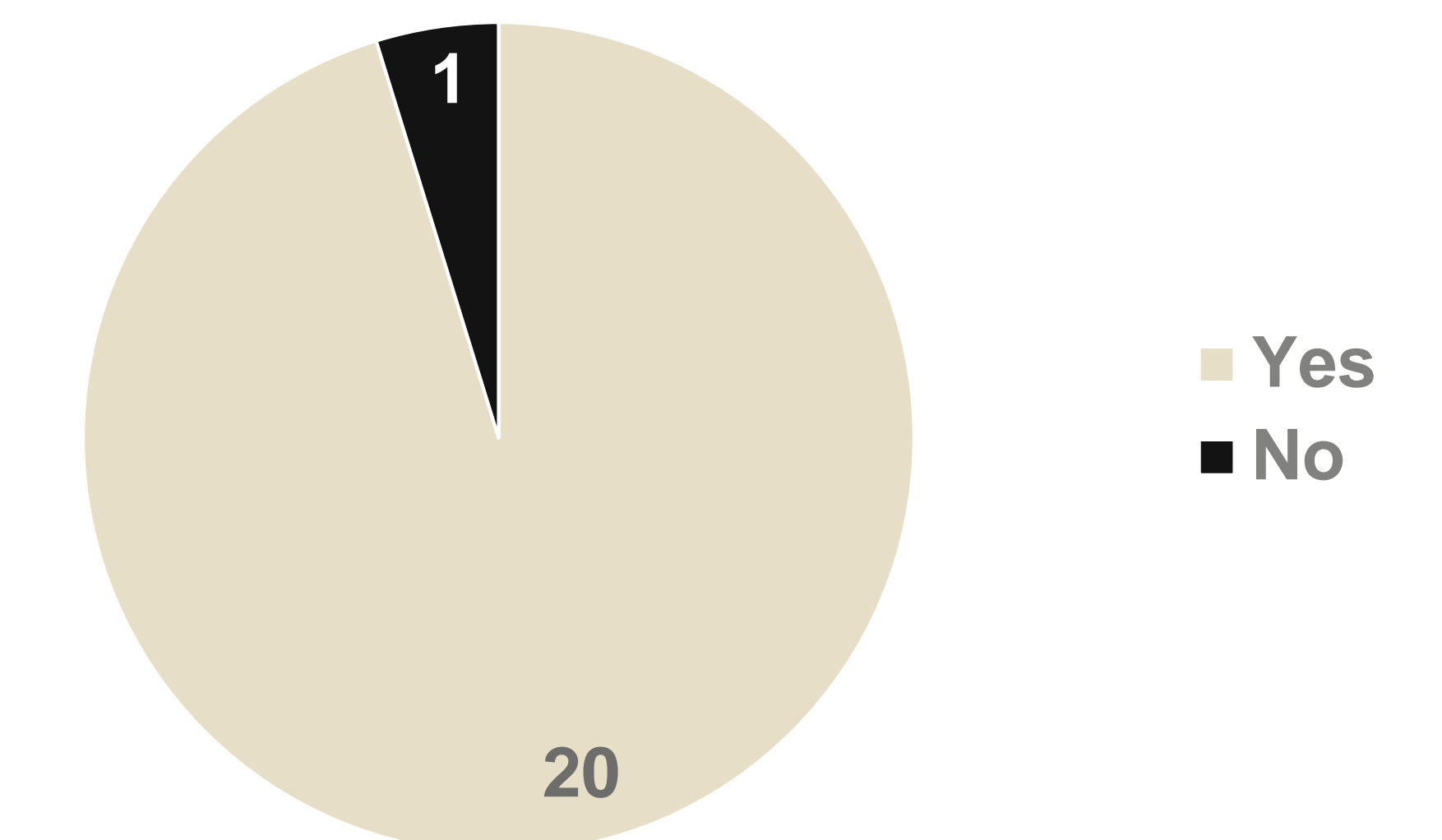
[^] Excluding presence of drug-drug interactions, renal dysfunction, etc.

RESULTS



RESULTS CONTINUED

Lithium Level within 24 Hours of Admission for Continuation of Therapy (N = 21)



Estimated Provider Time Savings

Consult Notes	
Total Notes	285
Total Time (Minutes)	5,700
Average Time per Patient (Minutes)	150
Patient Education	
Total Education Sessions	25
Total Time (Minutes)	250
Average Time per Patient (Minutes)	10

Associated Pharmacist Value per Intervention

Intervention	Associated Value	Total Value
Chart Note	\$25 - \$60	\$7,125 - \$17,100
Patient Education	\$20	\$500

CONCLUSIONS

- Pharmacist managed lithium therapy results in obtainment of serum lithium levels within 24 hours of admission in 95% of patients compared to 89.9% of patients pre-consult implementation.
- Pharmacist managed lithium therapy can result in noteworthy time savings to providers in terms of monitoring, management, and patient education.

IRB APPROVAL AND DISCLOSURES

This presentation was determined to be exempt by the VUMC IRB. Authors have the following to disclose concerning possible financial or personal relationships with any commercial entities that may have a direct or indirect interest in the subject matter of this presentation: Kayla Johnson - nothing to disclose, Zachary Haffler - nothing to disclose, Lindsey Miller - nothing to disclose.