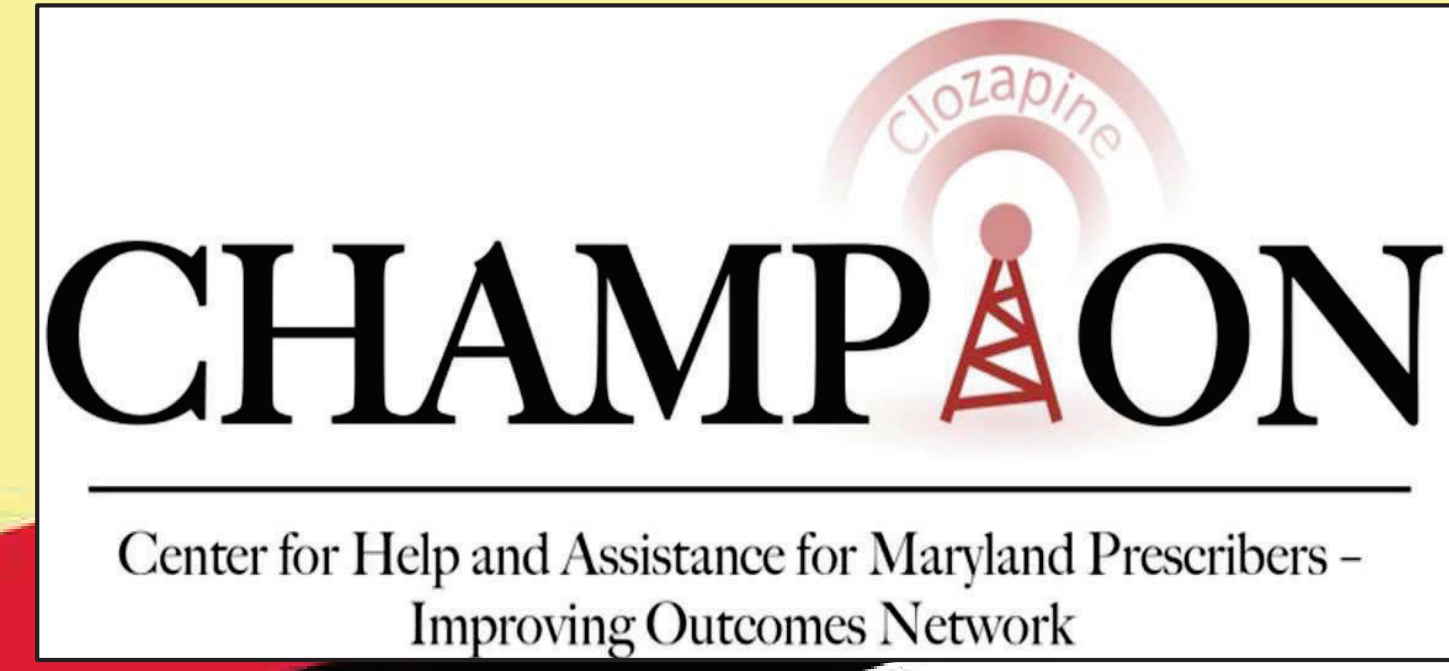


# Use of Point of Care Absolute Neutrophil Count Monitoring during a Randomized Controlled Trial of a Tele-Mentoring Program, Project ECHO, to Increase Clozapine Prescribing



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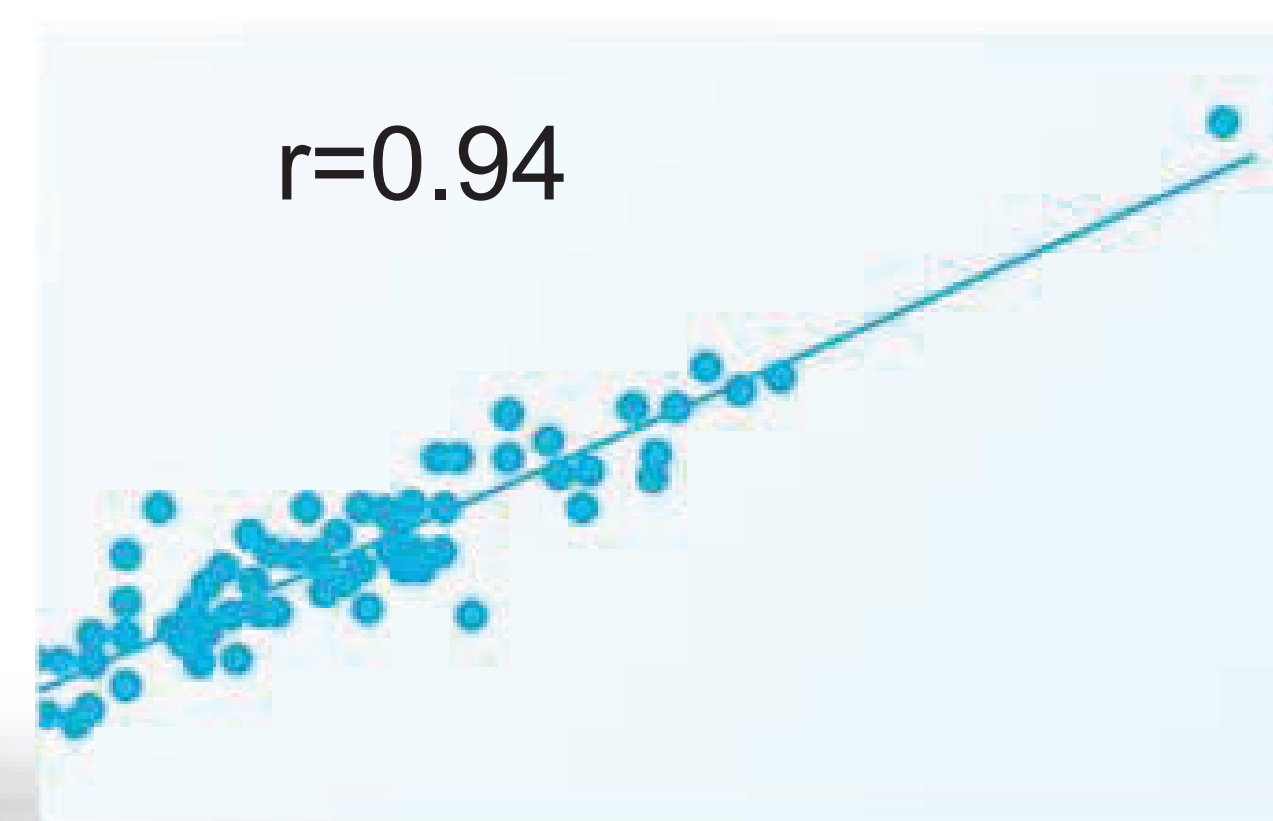
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## Background

- Clozapine has superior efficacy among antipsychotics for treatment resistant schizophrenia and is the only antipsychotic with a Food and Drug Administration (FDA) indication for reducing suicidality in schizophrenia.
- Despite superior efficacy and outcomes for many patients, clozapine is prescribed infrequently in the United States (US).
- Among many barriers to prescribing clozapine, primary barriers include complicated logistics related to performing the required absolute neutrophil count (ANC) monitoring and the lack of prescriber knowledge and self-reported competence about how to use clozapine.
- A new device Athelas Home (previously One) was cleared by the FDA for point of care monitoring, a platform we included in our telementoring project to improve clozapine knowledge, competence and clozapine use

## Methods

- We performed a randomized effectiveness trial testing a 26 biweekly educational based clozapine intervention, Clozapine CHAMPION ECHO (Center for Help and Assistance for Maryland Prescribers- Improving Outcomes Network) using the Extension for Community Healthcare Outcomes (ECHO) platform (hub and spoke telementoring model)
- Both the CHAMPION ECHO and enhanced treatment as usual condition received the Athelas Home point of care device for ANC monitoring and instructions for use free of charge during our study over a 3-year period (pre, during and post).

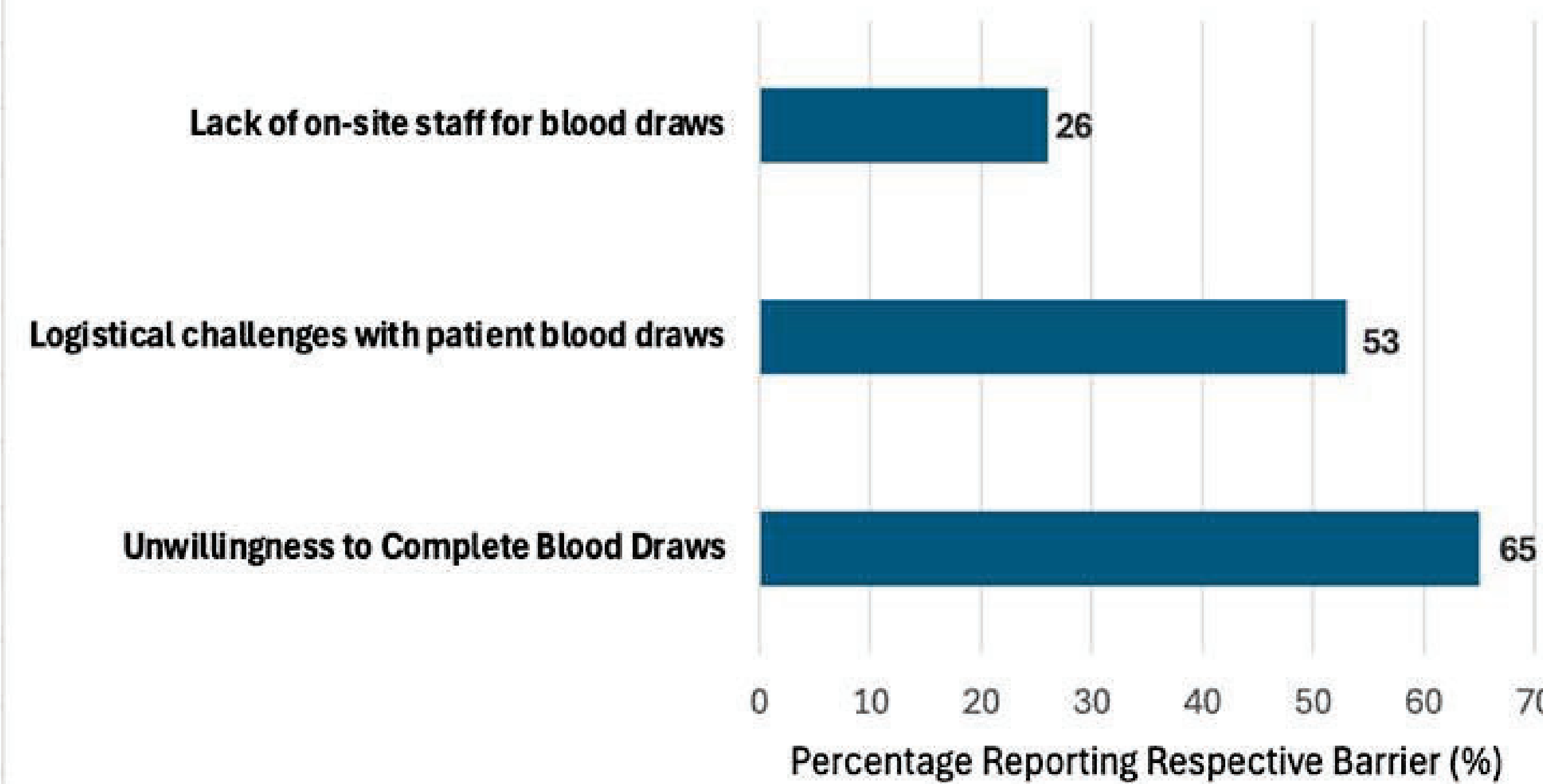


## Prescriber Demographics

	Total (N=266)
<b>Age years (n, %)</b>	
<39-49	177 (66.5%)
50-60+	89 (33.5%)
<b>Male (n, %)</b>	73 (27.4%)
<b>Black (n, %)</b>	64 (24.5%)
<b>Profession</b>	
Nurse practitioner	79 (29.7%)
Physician	179 (67.3%)
Physician assistant	8 (3.0%)

## Major Barriers to Clozapine Prescribing

Primary Barriers to Clozapine Prescribing (N=277)



## Self-Reported Competence Related to ANC Monitoring

- Competence for monitoring ANC was highest rated among 26 (100 mm VAS): 72.6 mean score
- Competence for recognizing BEN and developing treatment plan for severe neutropenia were lowest competency: 48.3 and 45.8 mean scores respectively

## Usage of POC Device

- 39/43 (91%) sites accepted a device.
- 17/21 (81%) ECHO sites used it at least once during the pre-intervention period as did 18/20 (90%) of eTAU sites used at least once.
- At endpoint, 31% (71/225) of prescribers self reported they are using the POC device

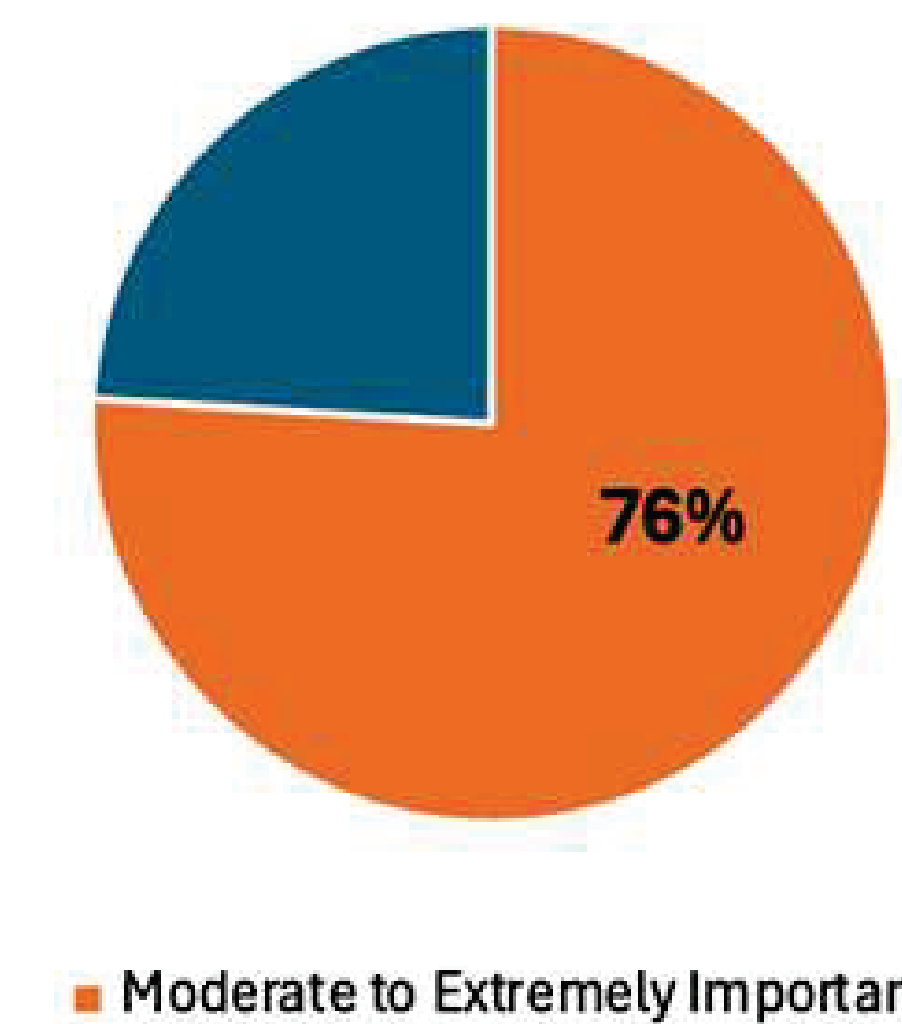
	ECHO	eTAU
<b>Intervention:</b>		
Percentage of sites using POC device	37.5%	50%
Times POC device was used at each site (mean ± σ)	221.3 (± 274.6)	67.3 (± 91.2)
Number of patients POC device was used on at each site (mean ± σ)	30.2 (± 39.0)	9.0 (± 8.9)
<b>Follow-up:</b>		
Percentage of sites using POC device	37.5%	45%
Times POC device was used at each site (mean ± σ)	374.8 (± 394.4)	110.7 (± 78.4)
Number of patients POC device was used on at each site (mean ± σ)	42.2 (± 46.9)	13.9 (± 9.8)

## Satisfaction with POC Device

31.6% (71/225) of Prescribers used the POC device

29% (66/225) reported device was used to initiate new patients

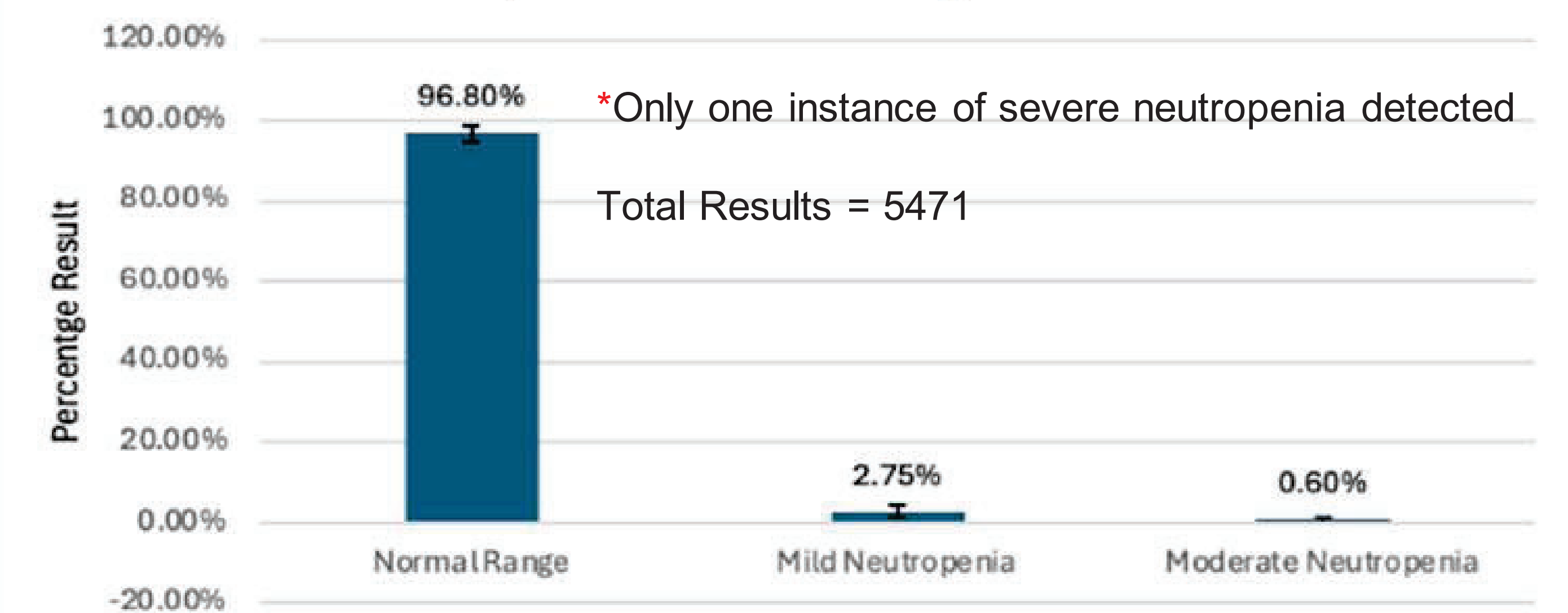
Prescribers Rating Athelas One Device as Moderate to Extremely Important to Their Decision in Prescribing Clozapine (N=71)



- 97% of prescribers using device reported satisfaction

## ANC Results

Absolute Neutrophil Count Results by Athelas One Device



## Conclusion

- The most commonly reported barrier to the use of clozapine relates to monitoring of ANC.
- Prescribers are highly competent in knowing how to monitor for ANC during clozapine treatment
- The Athelas Home device was seen as helpful and the majority were satisfied with its use.
- Sites assigned to the ECHO condition used the Athelas Home device on average in more patients and more frequently than did the eTAU sites.
- Access to easy, immediate ANC results, in compliance with FDA monitoring was a significant factor in decision to prescribe clozapine.