



A SYSTEMATIC REVIEW OF STATES WITH FORMALIZED DIAGNOSTIC ABR PROTOCOLS AND LOSS-TO-INTERVENTION RATES

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The River School/Chattering Children



DISCLOSURE

Employed by The River School and Chattering Children

DC EHDI Learning Community Member

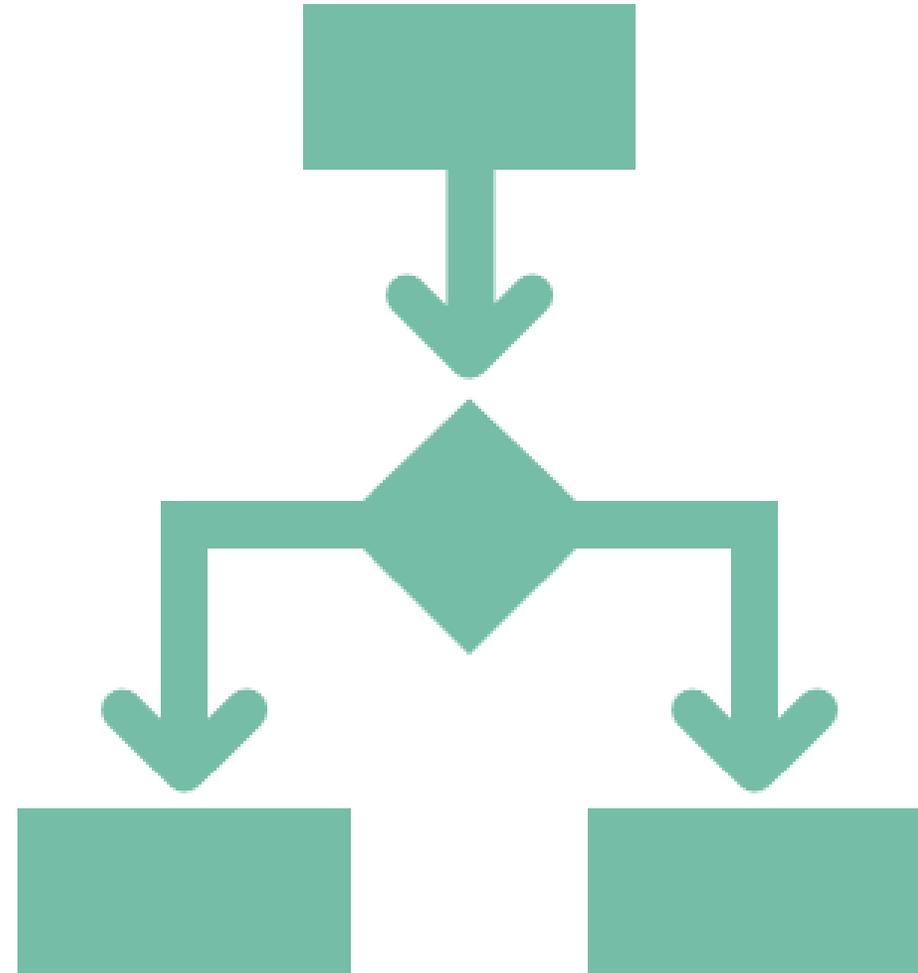
**Not officially affiliated with DC Department of Health



PURPOSE OF THE STUDY

STATES WITH PROTOCOLS

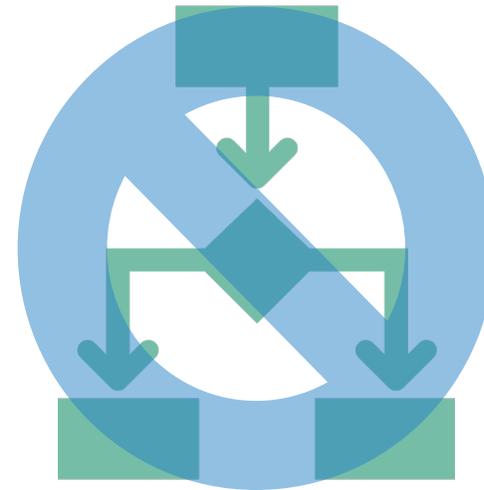
- Alabama
- Arkansas
- Connecticut
- Georgia
- Hawaii
- Illinois
- Iowa
- Kansas
- Michigan
- Minnesota*
- Mississippi
- Montana
- Nevada
- Ohio
- Oklahoma
- Tennessee
- Utah
- Vermont
- Virginia**
- Virgin islands*
- Washington
- Wyoming



***Not listed on 2016 CDC Data ** Protocol made/released 2018**

- **Alaska**
- **American Samoa**
- **Arizona**
- **California**
- **CNMI**
- **Delaware**
- **DC**
- **Florida**
- **Guam**
- **Idaho**
- **Indiana**
- **Kentucky**
- **Louisiana**
- **Maine**
- **Marshall Islands**
- **Maryland**
- **Massachusetts**
- **Micronesia**
- **Missouri**
- **Nebraska**
- **New Hampshire**
- **New Mexico**
- **New York**
- **North Carolina**
- **North Dakota**
- **Oregon**
- **Palau**
- **Pennsylvania**
- **Puerto Rico**
- **Rhode Island**
- **South Carolina**
- **South Carolina**
- **South Dakota**
- **Texas**
- **West Virginia**
- **Wisconsin**

STATES WITHOUT PROTOCOLS





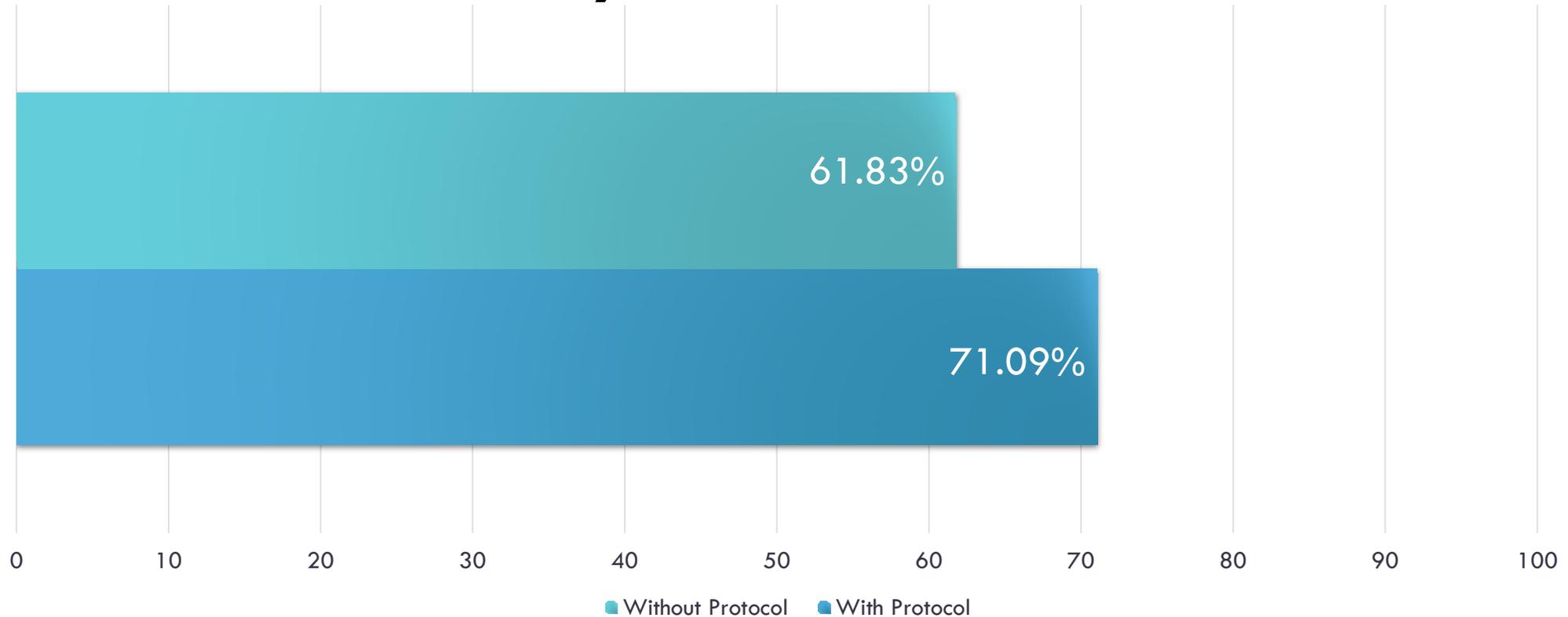
2016

THE DATA

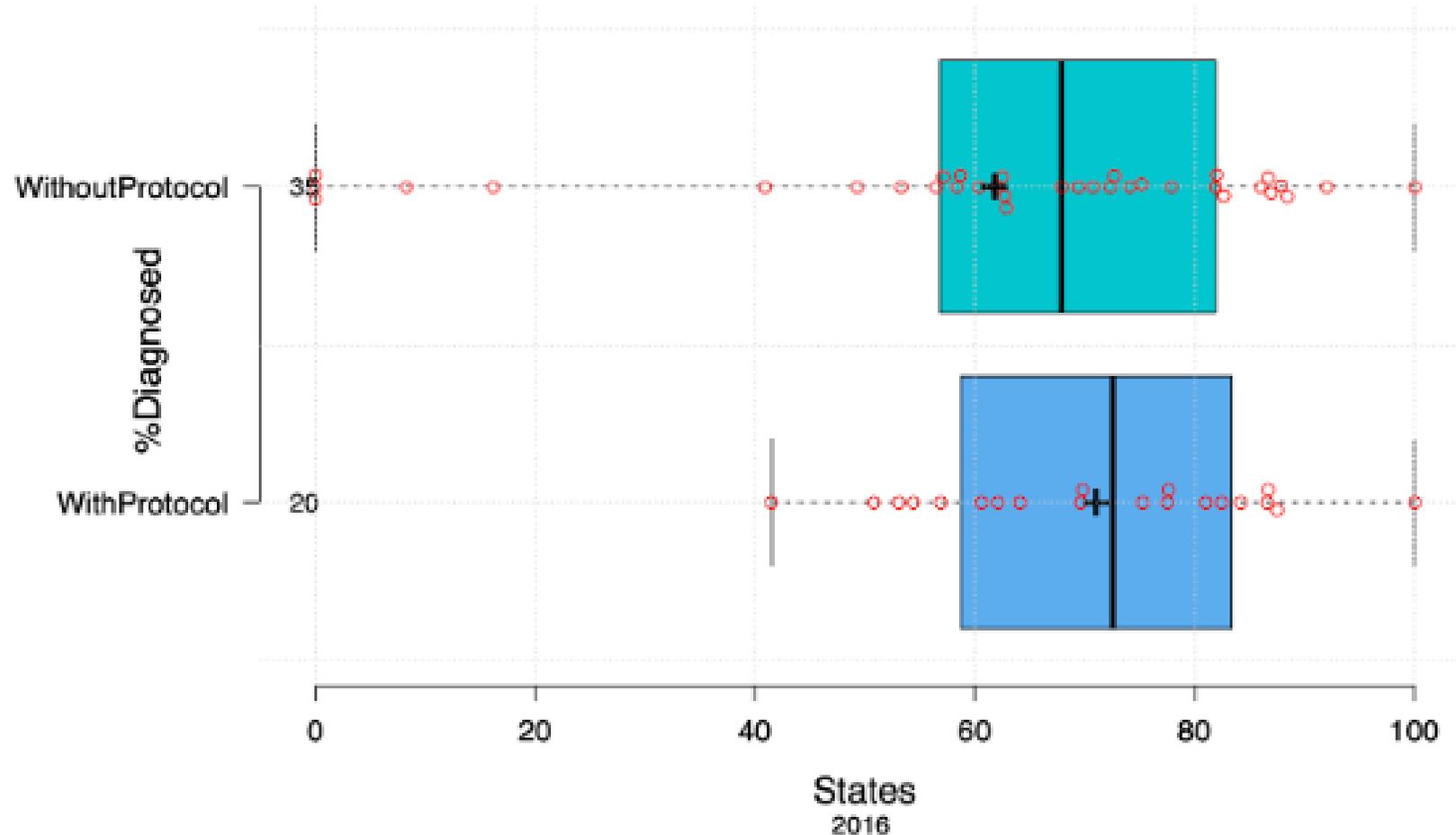
- Number of states with diagnostic protocols= **20**
 - Total Diagnosed with hearing loss= **2162**
 - Total diagnosed before 3 months= **1469**
- Number of states without diagnostic protocols= **36**
 - Total diagnosed with hearing loss= **4175**
 - Total diagnosed before 3 months= **2514**

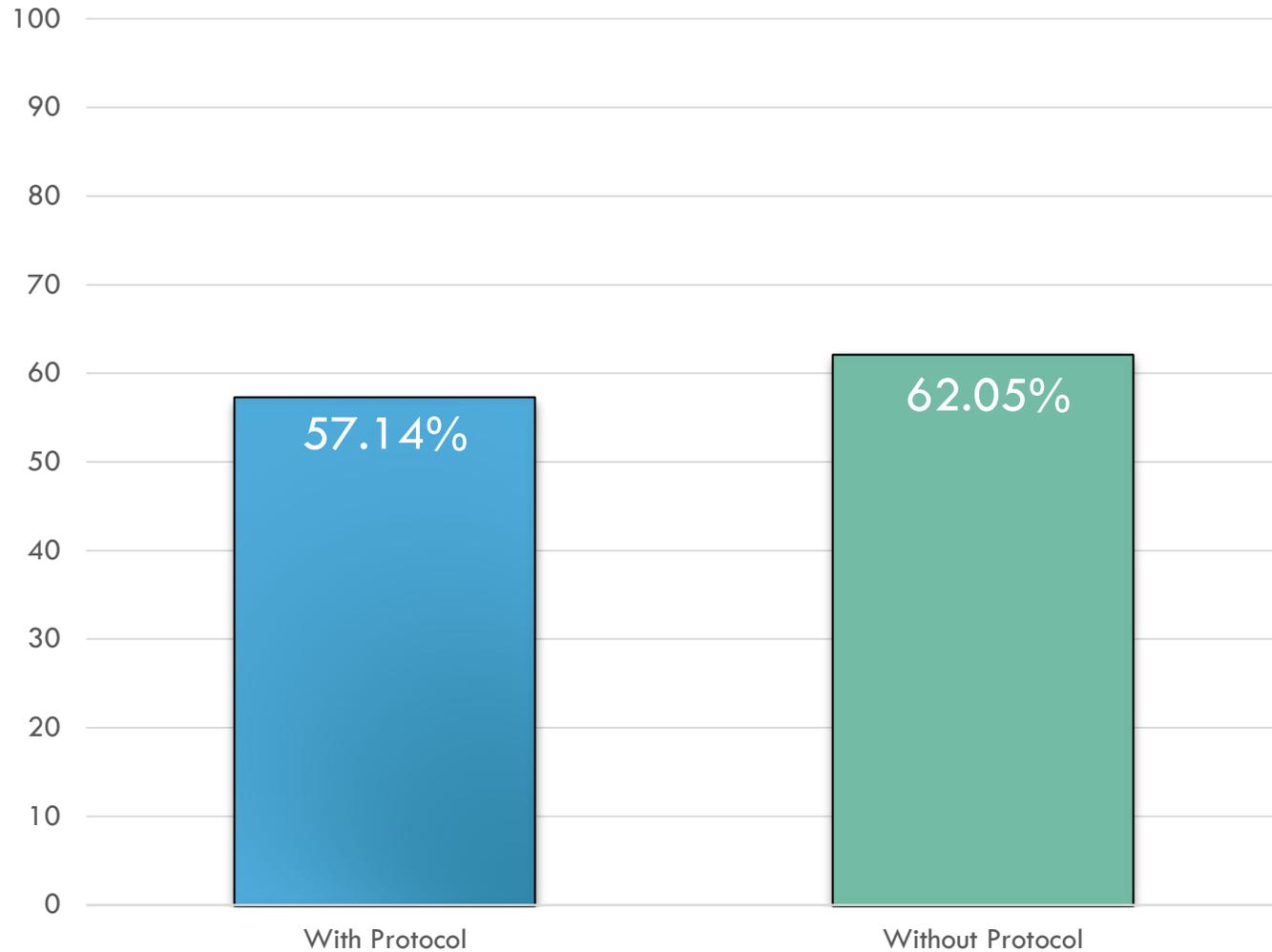


PERCENT DIAGNOSED BEFORE 3 MONTHS (INCLUDES NORMAL HEARING DIAGNOSIS)

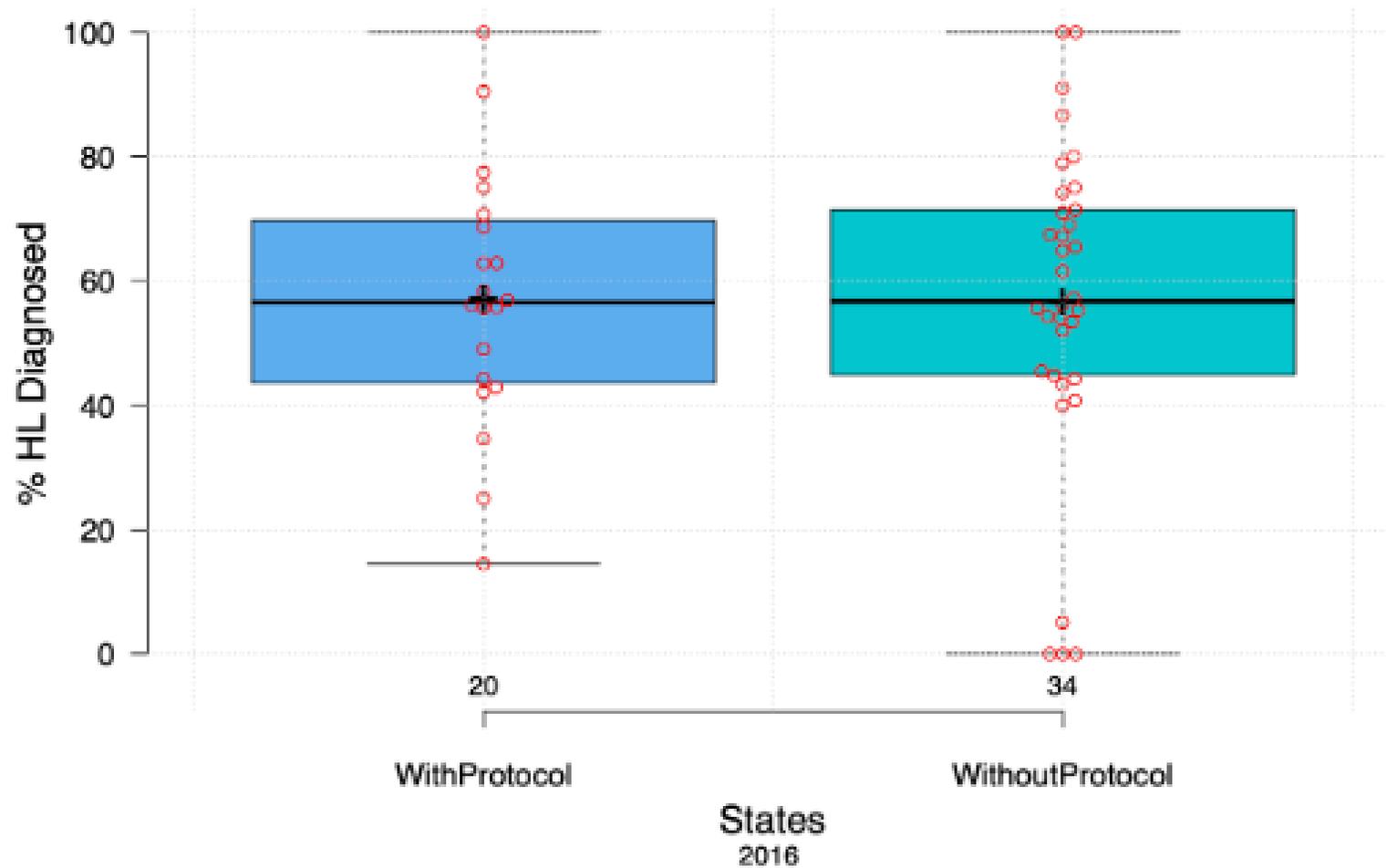


PERCENT DIAGNOSED BEFORE 3 MONTHS (INCLUDES NORMAL HEARING DIAGNOSIS)



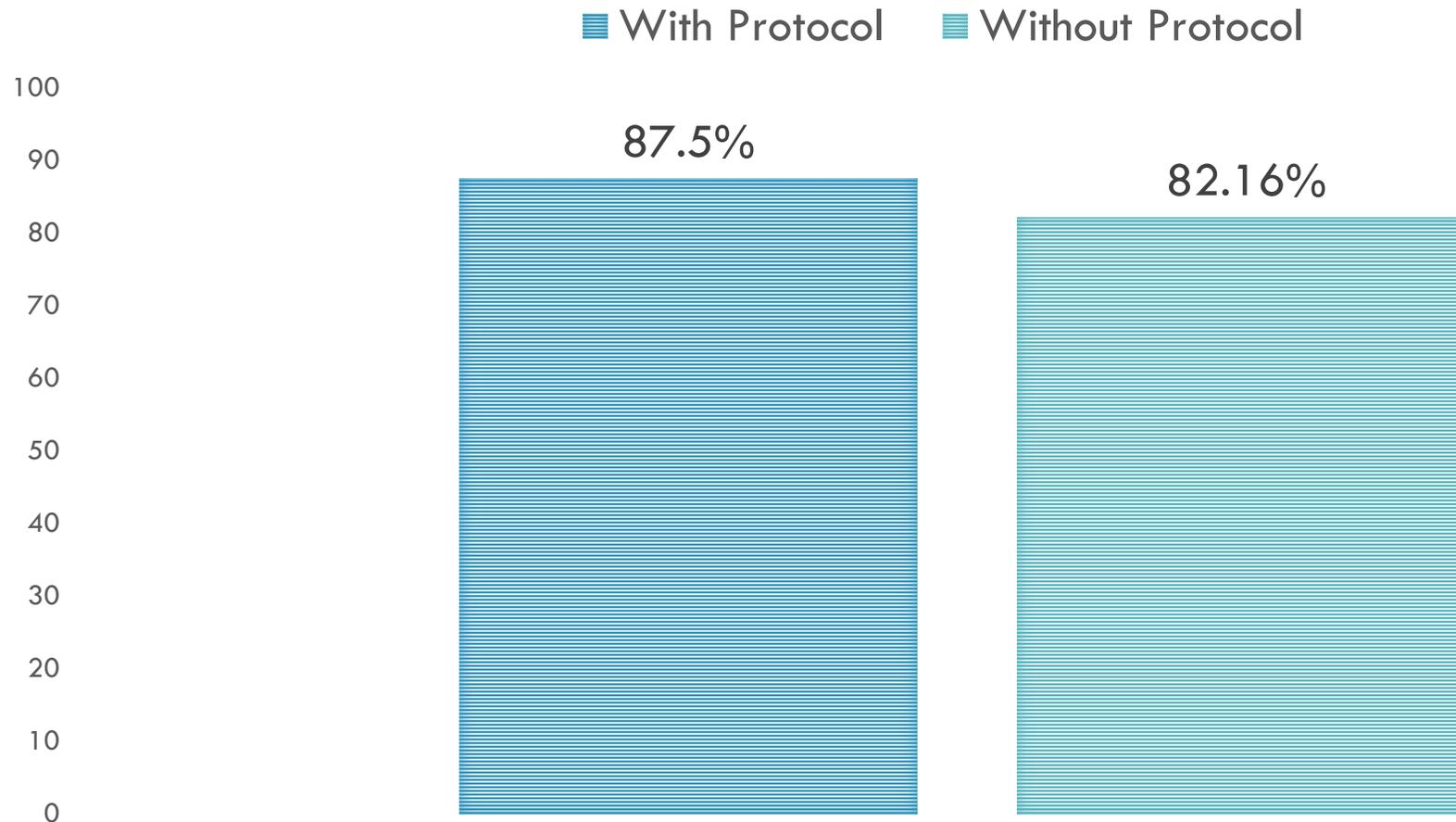


**PERCENT
DIAGNOSED
WITH HEARING
LOSS BEFORE 3
MONTHS**

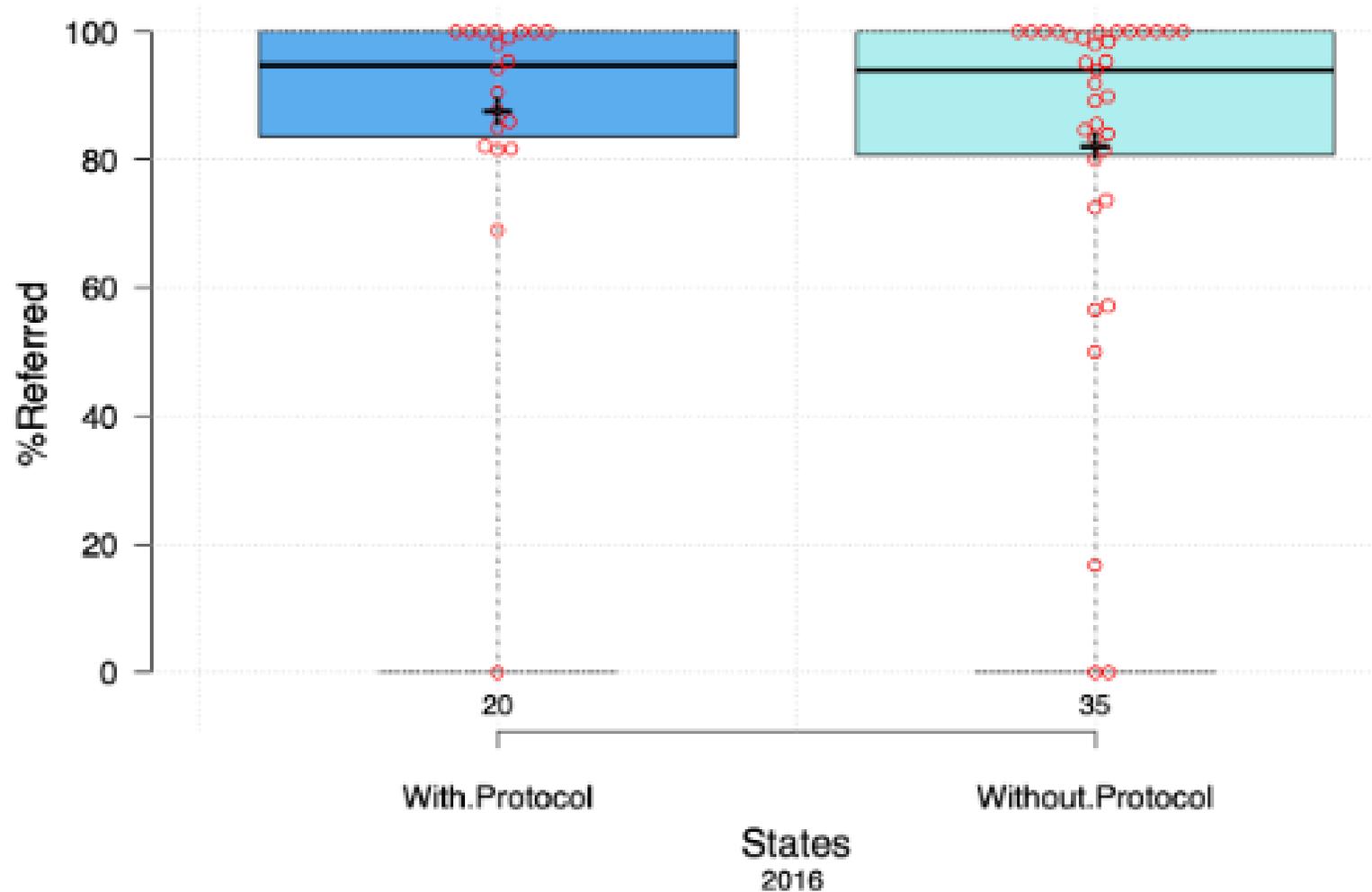


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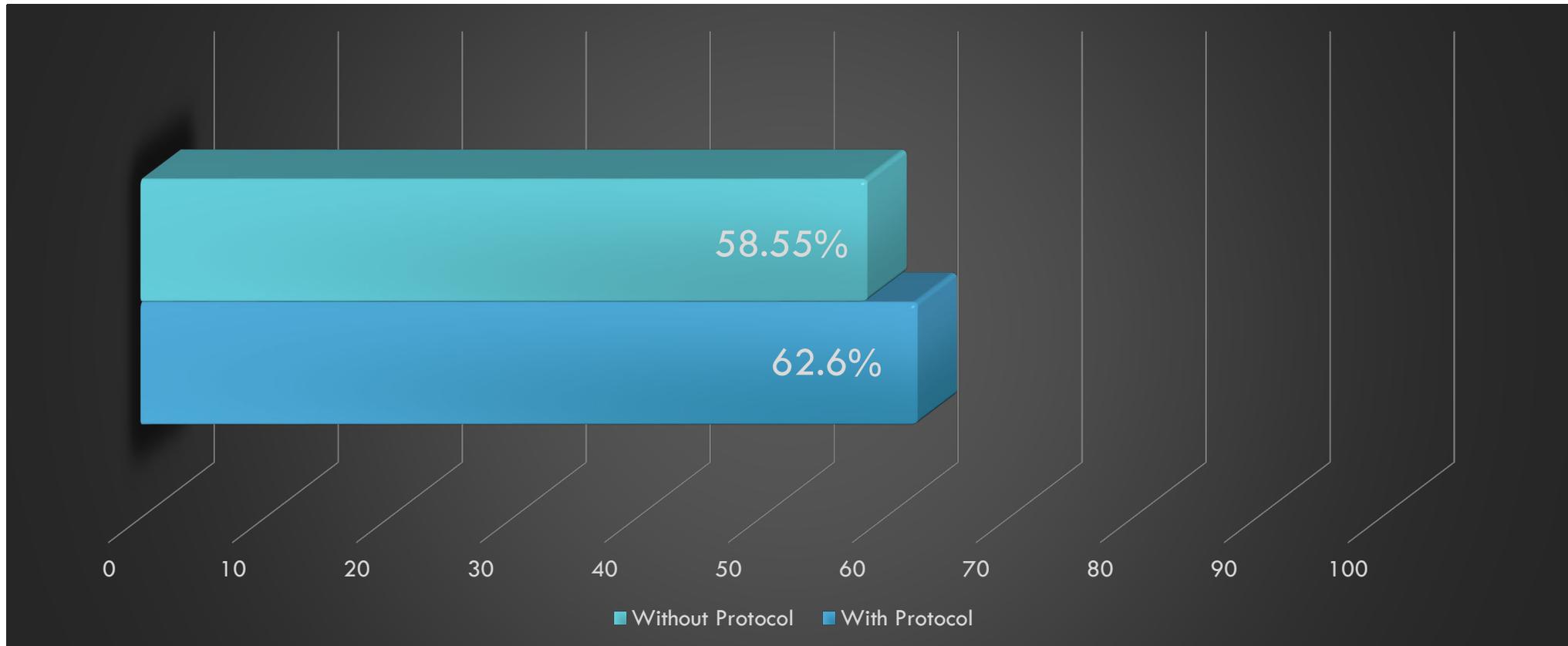
PERCENT REFERRED TO PART C EARLY INTERVENTION



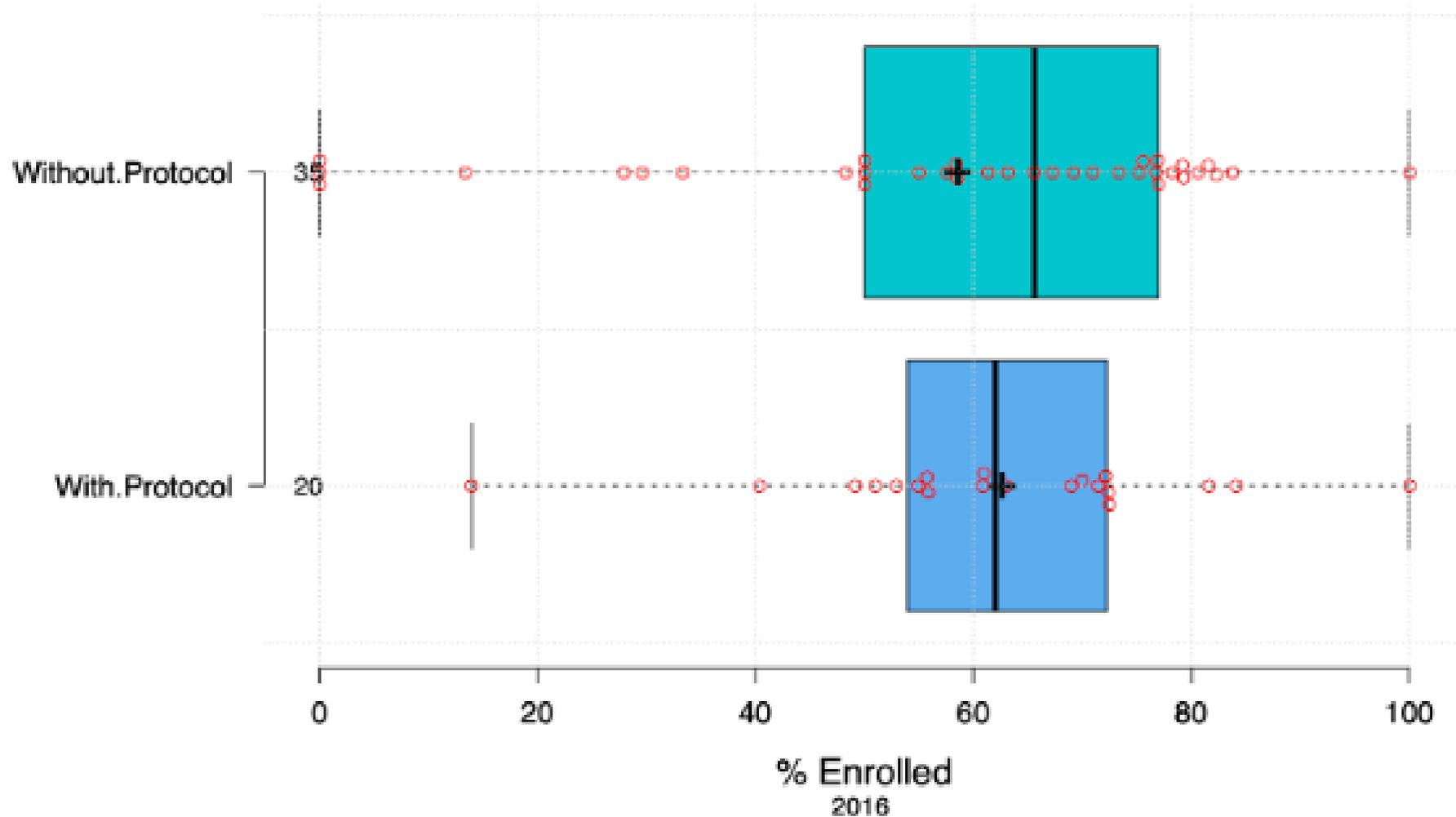
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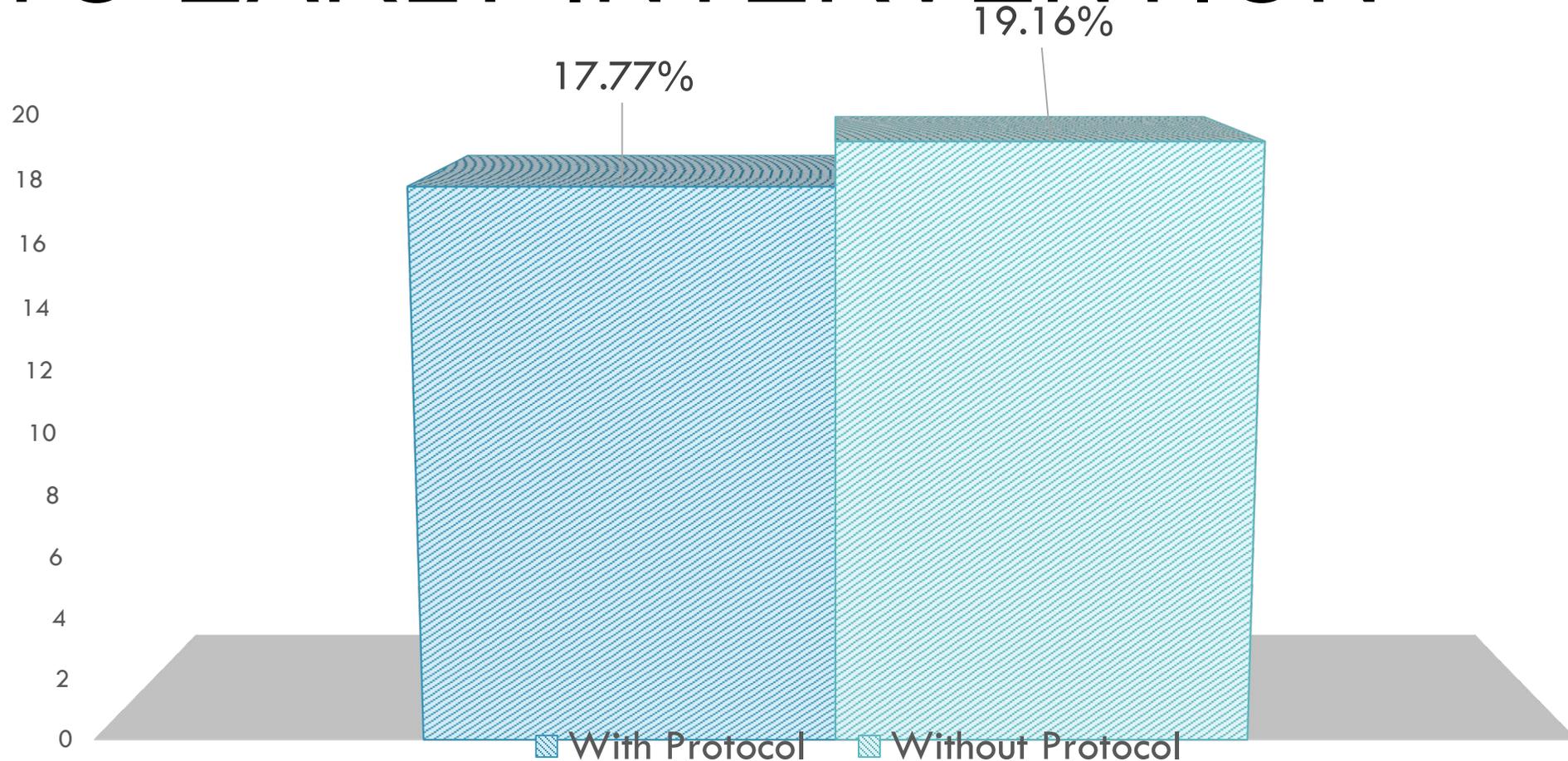
PERCENT ENROLLED TO EARLY INTERVENTION



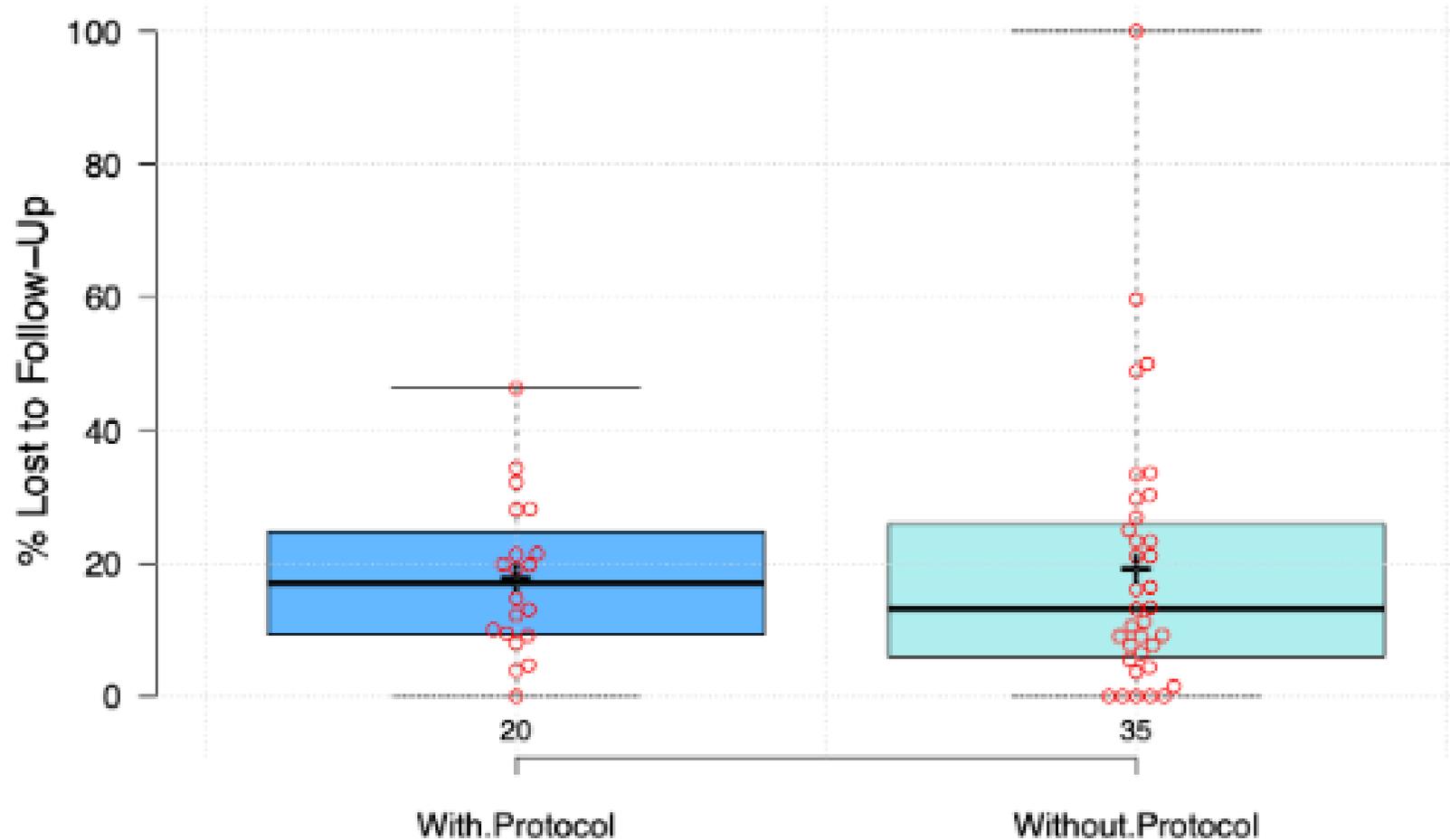
PERCENT ENROLLED TO EARLY INTERVENTION



PERCENT LOST TO FOLLOW-UP TO EARLY INTERVENTION



PERCENT LOST TO FOLLOW-UP TO EARLY INTERVENTION





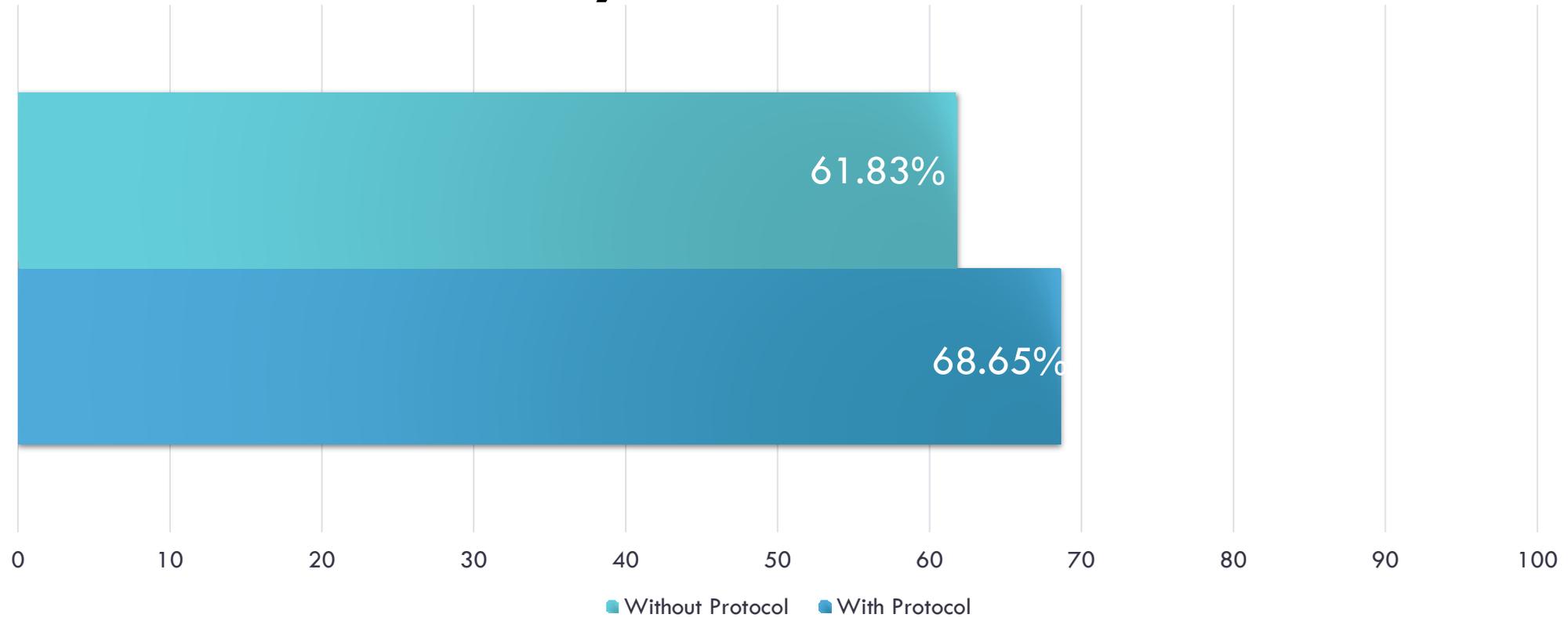
2017

THE DATA

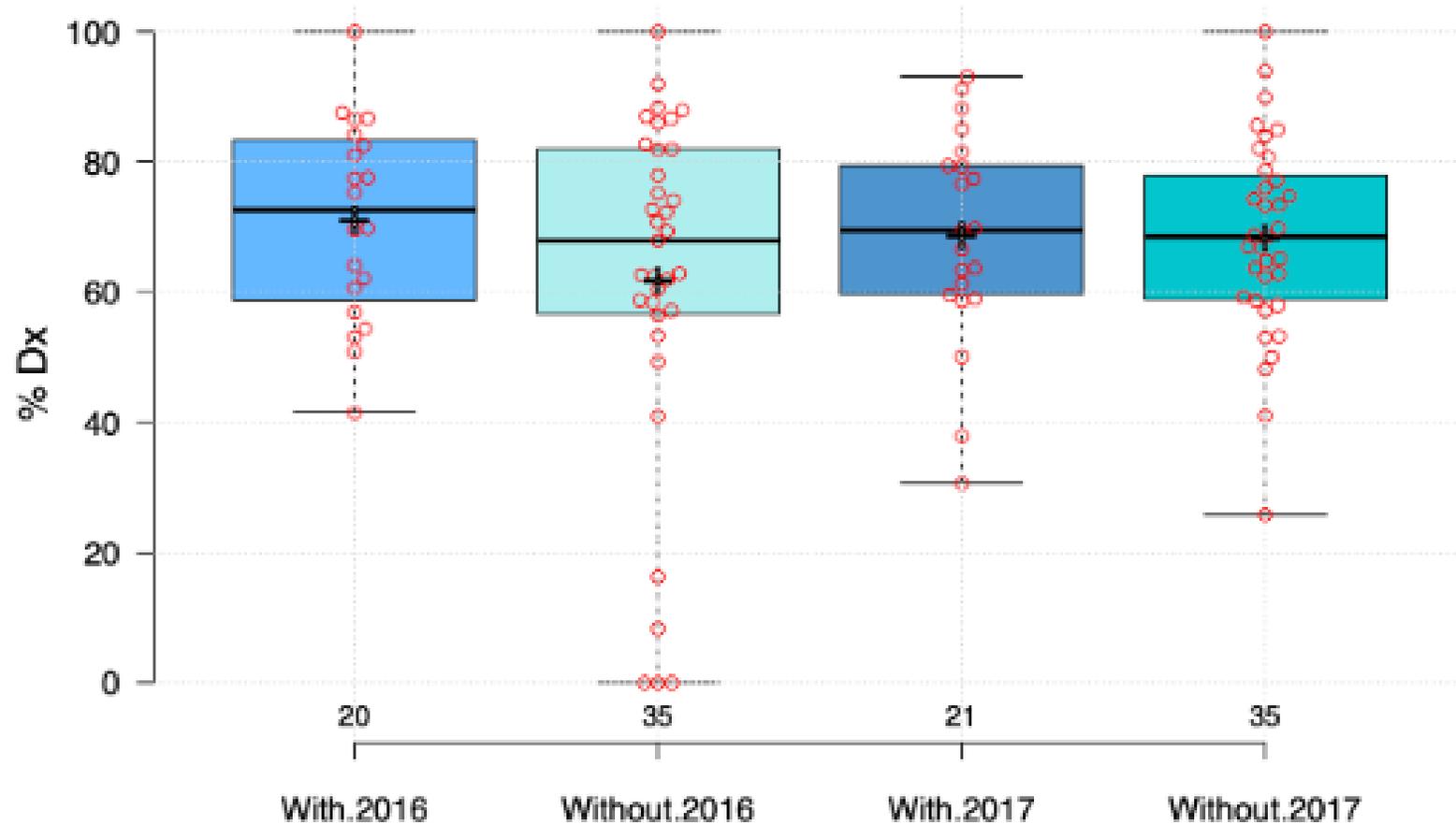
- Number of states with diagnostic protocols= **21**
 - Total Diagnosed with hearing loss= **2355**
 - Total diagnosed before 3 months= **1415**
- Number of states without diagnostic protocols= **36**
 - Total diagnosed with hearing loss= **4198**
 - Total diagnosed before 3 months= **2481**

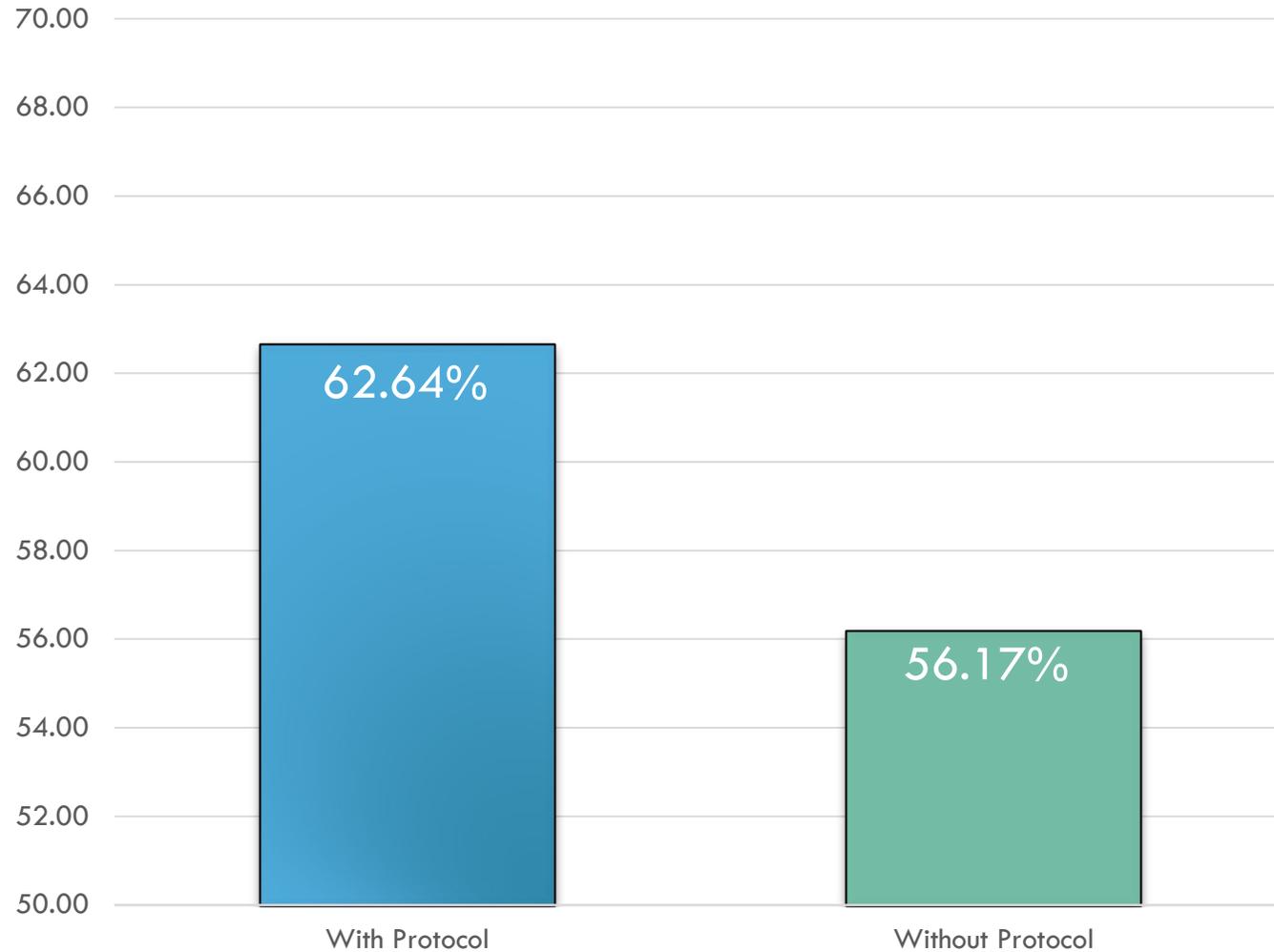


PERCENT DIAGNOSED BEFORE 3 MONTHS (INCLUDES NORMAL HEARING DIAGNOSIS)

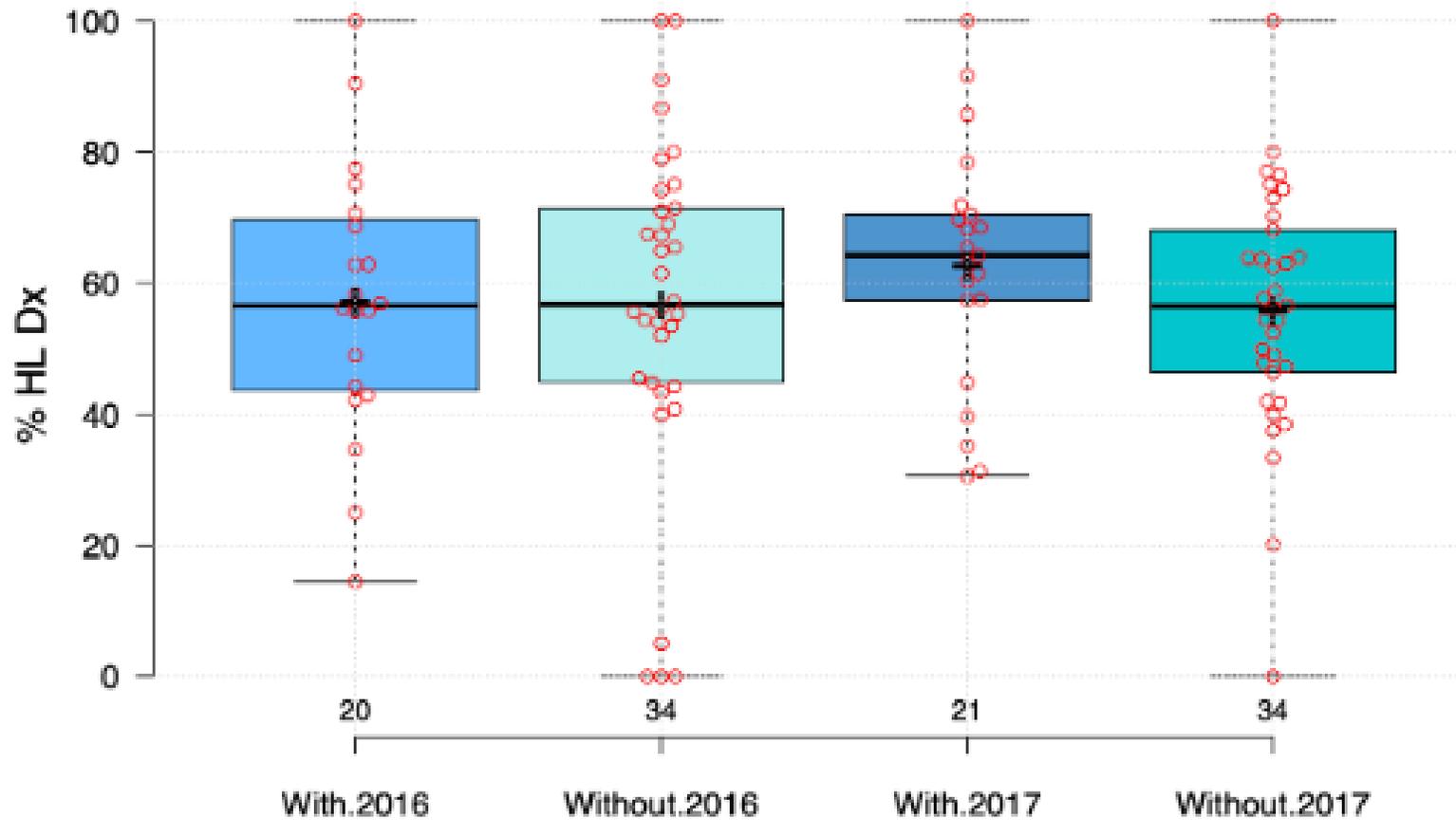


PERCENT DIAGNOSED BEFORE 3 MONTHS (INCLUDES NORMAL HEARING D



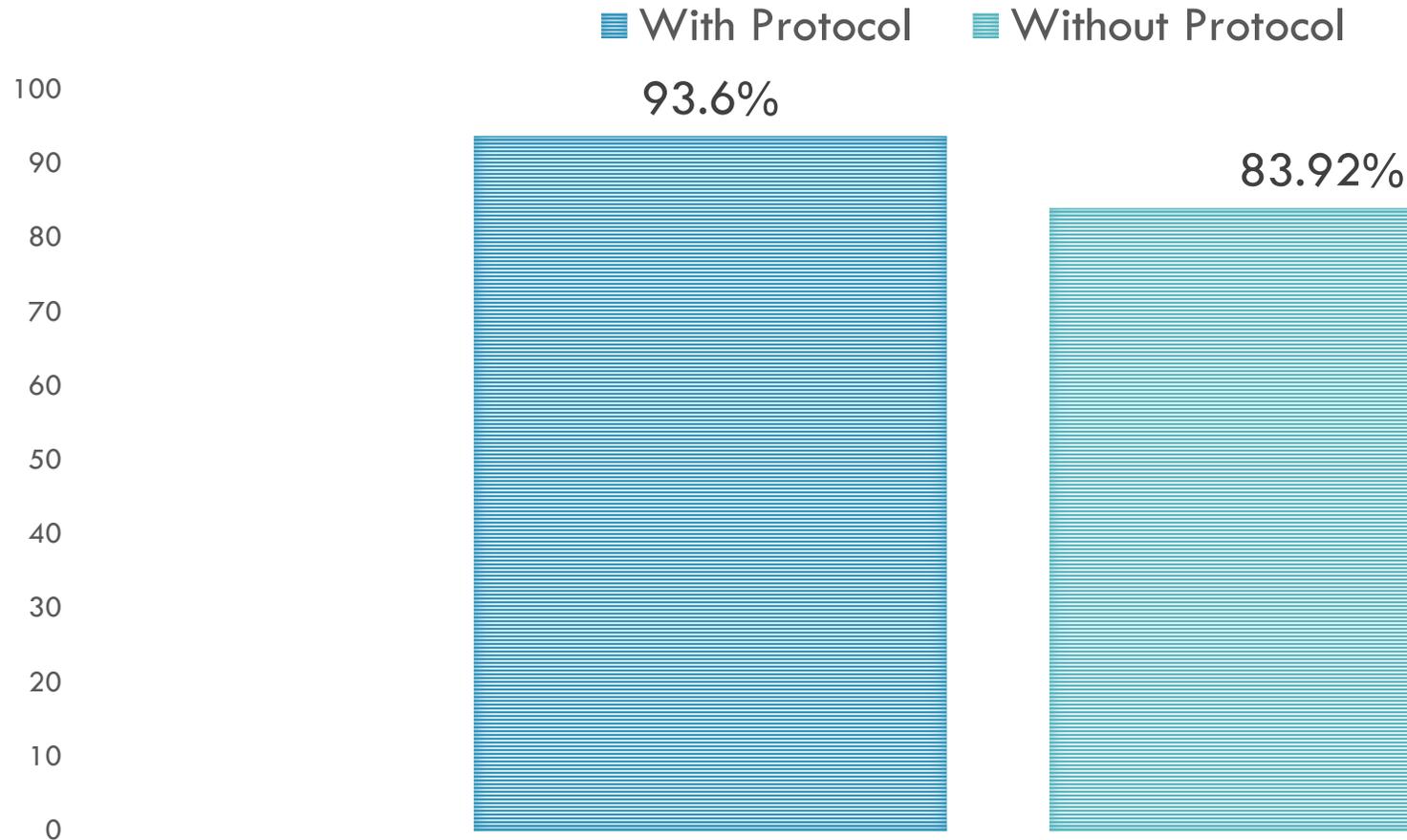


**PERCENT
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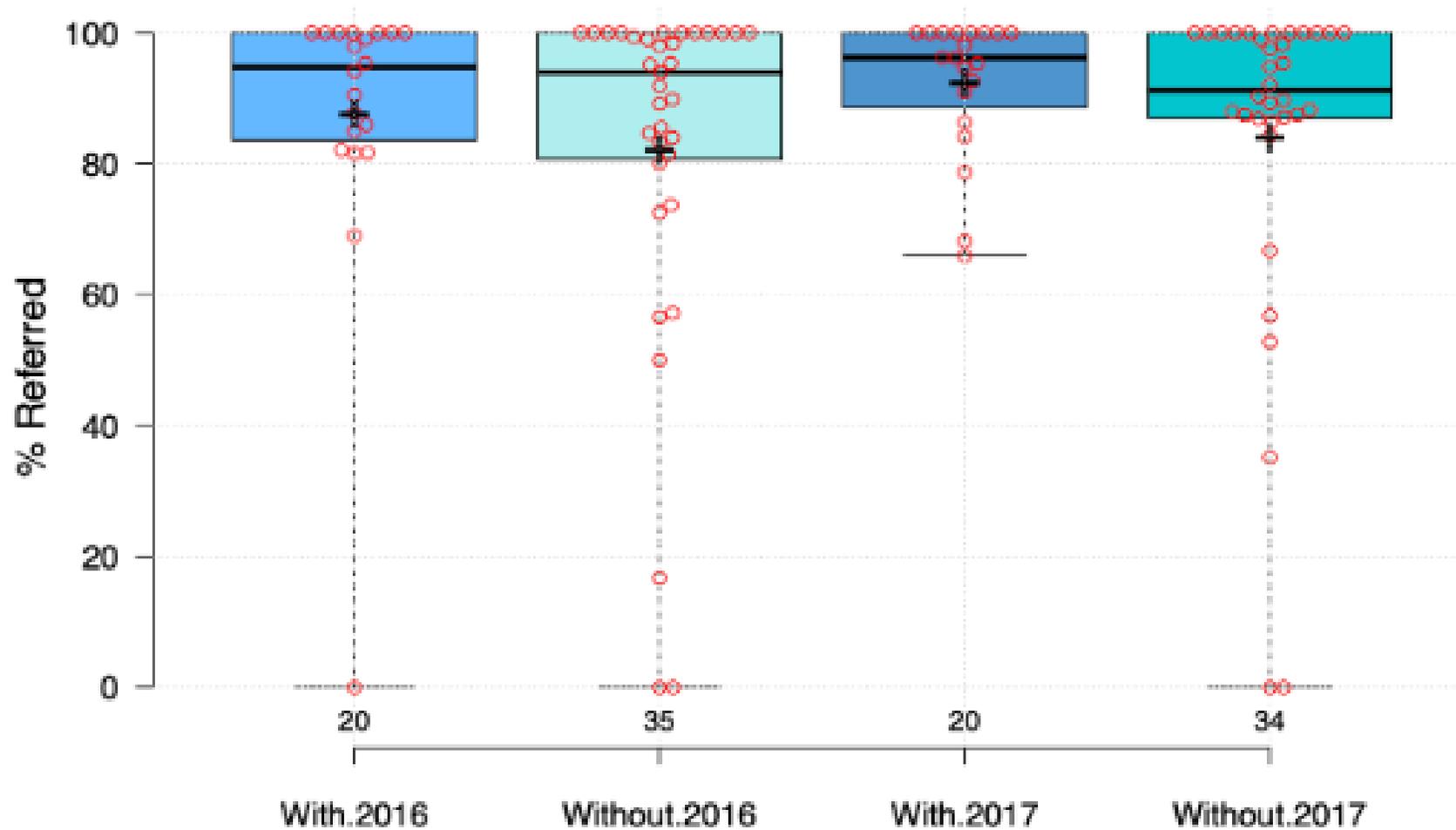


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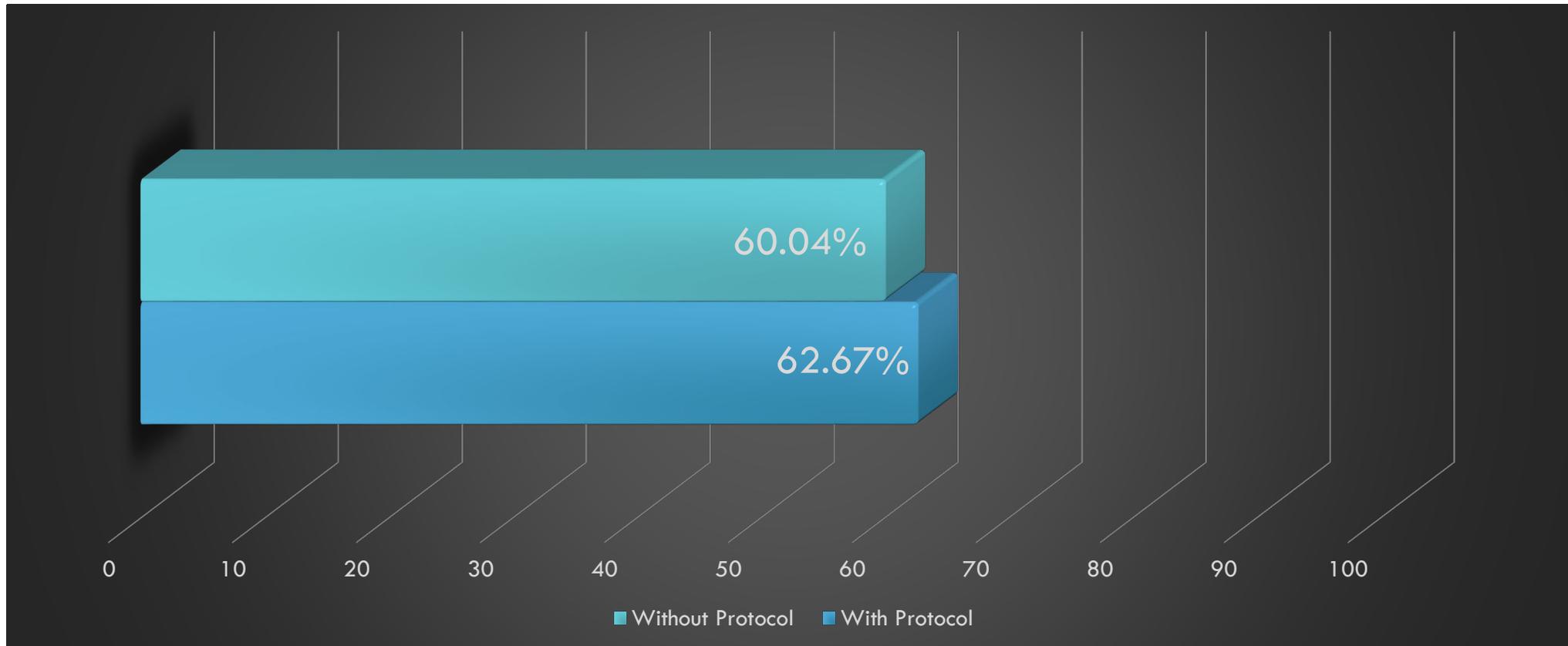
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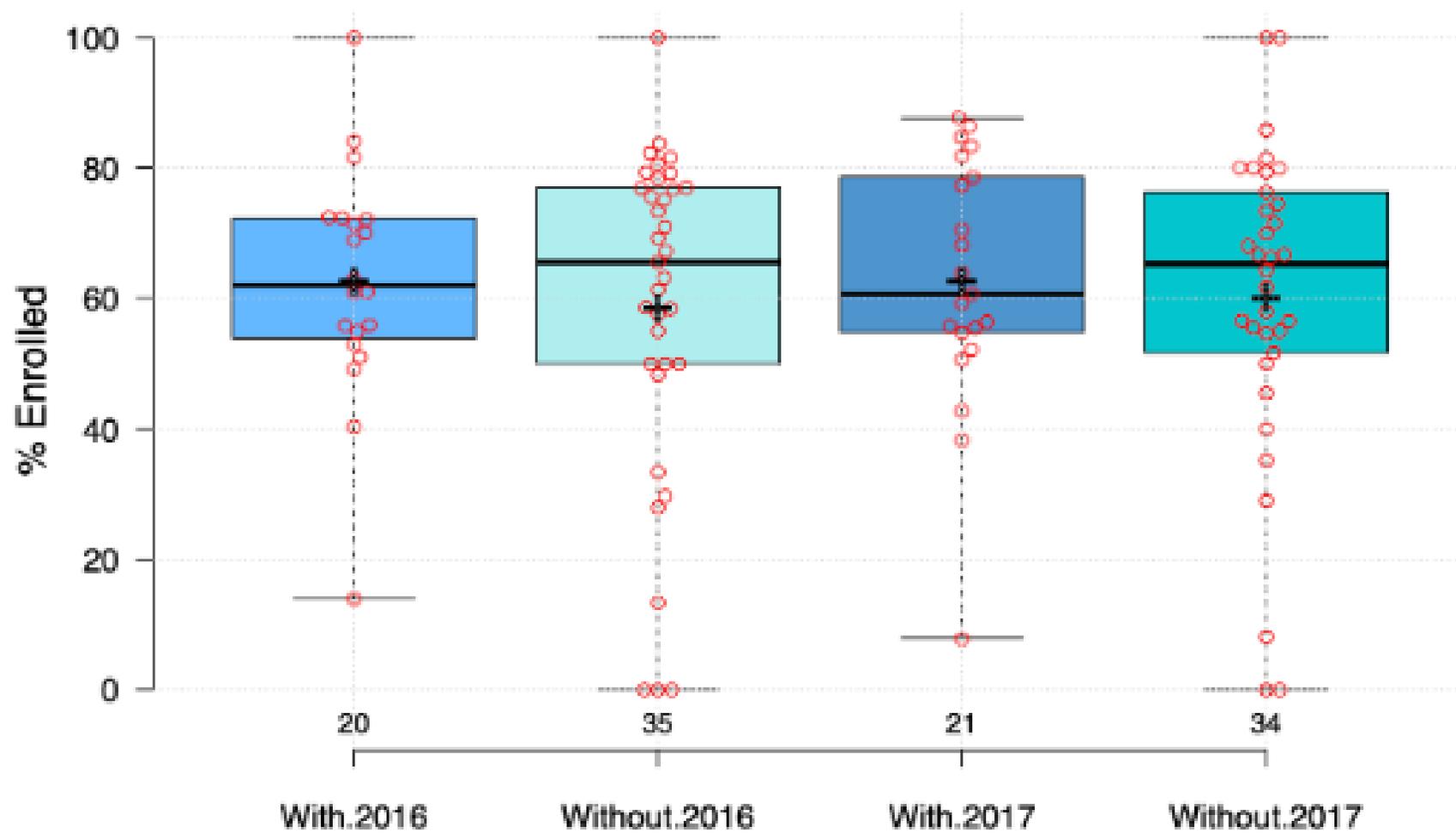
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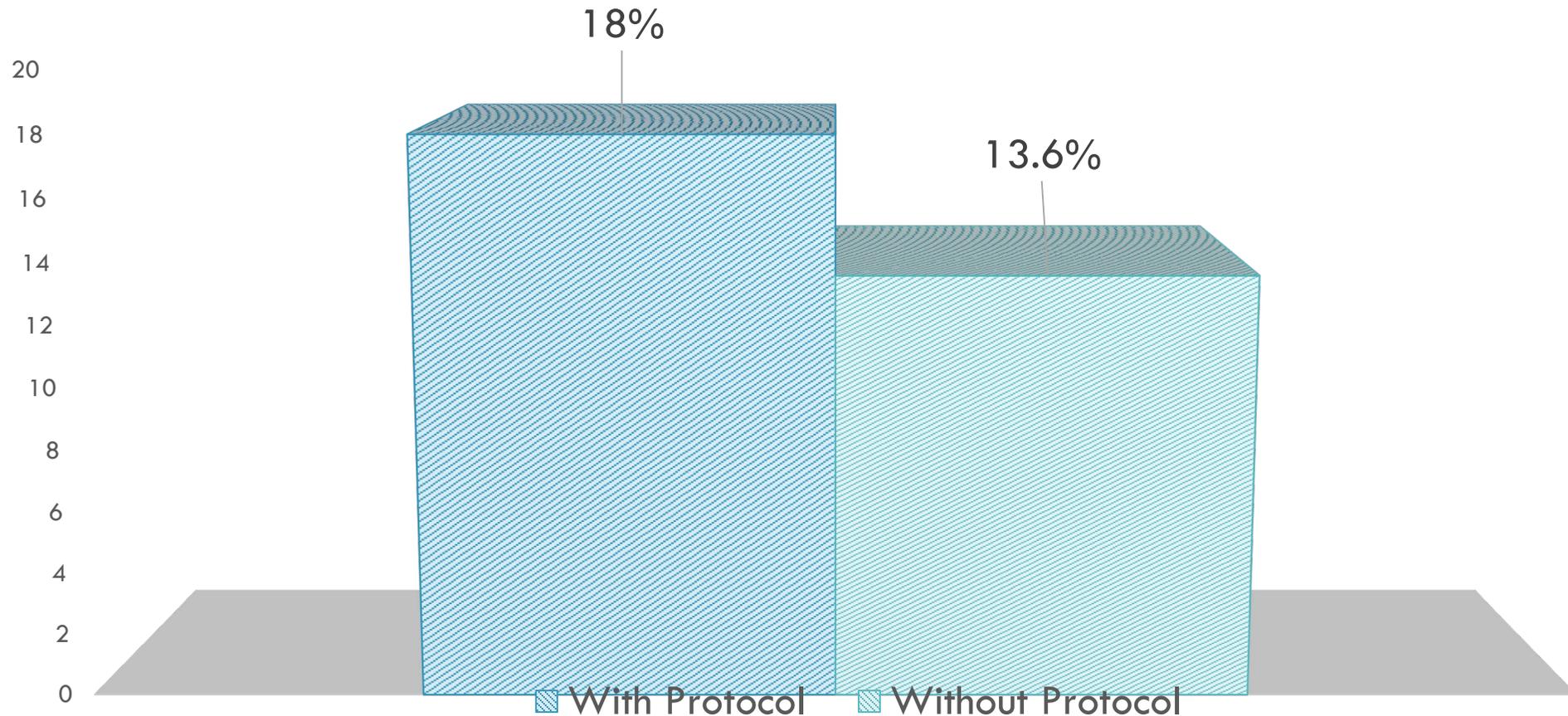
PERCENT ENROLLED TO EARLY INTERVENTION



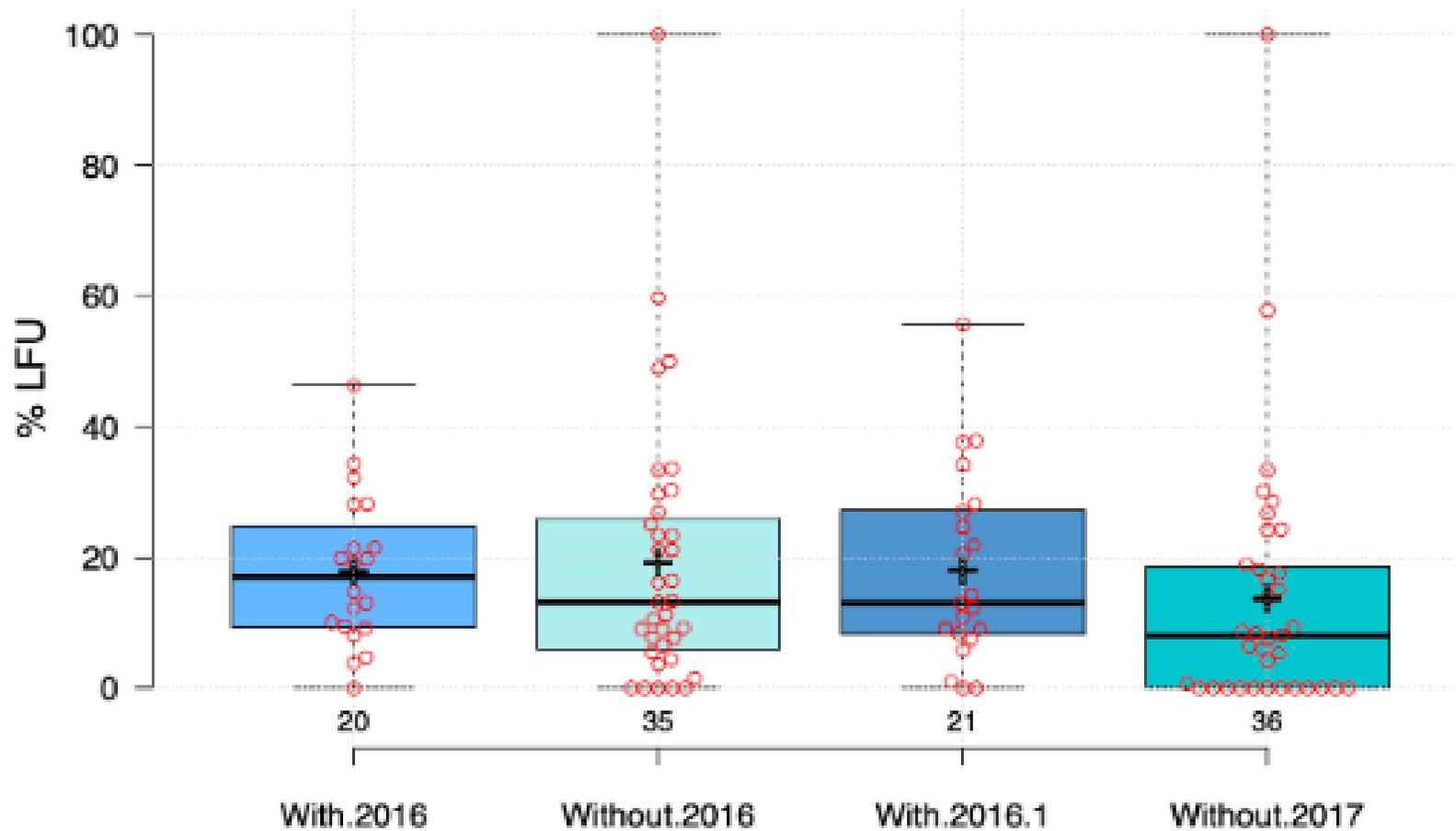
PERCENT ENROLLED TO EARLY INTERVENTION



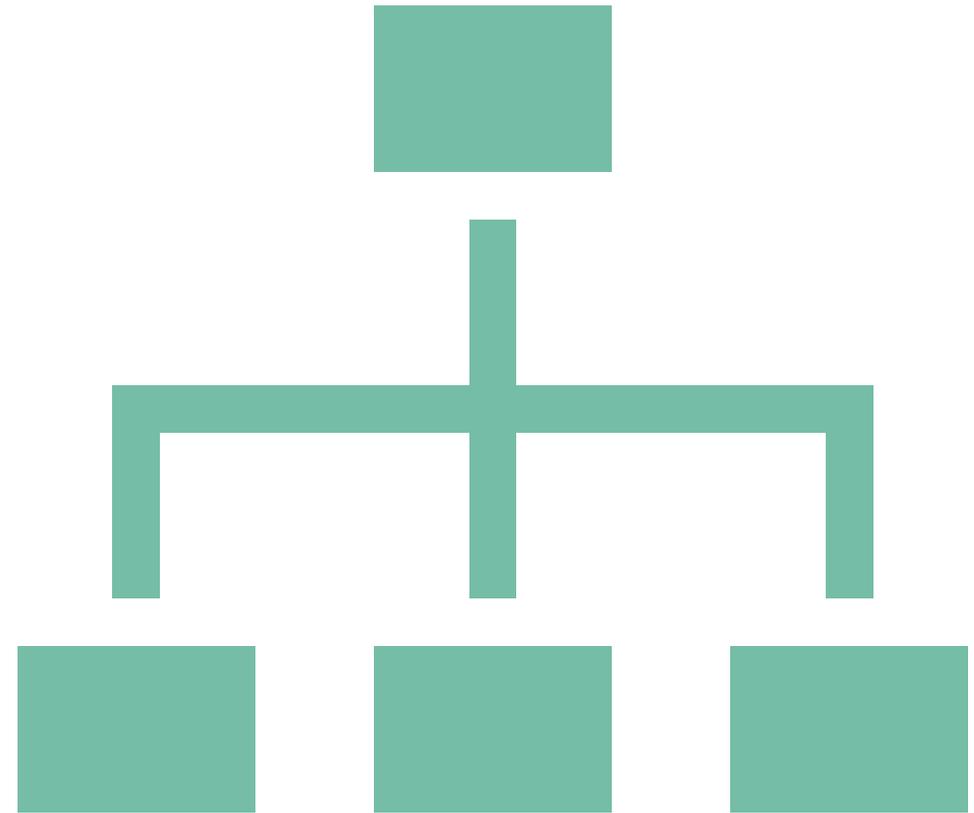
PERCENT LOST TO FOLLOW-UP TO EARLY INTERVENTION



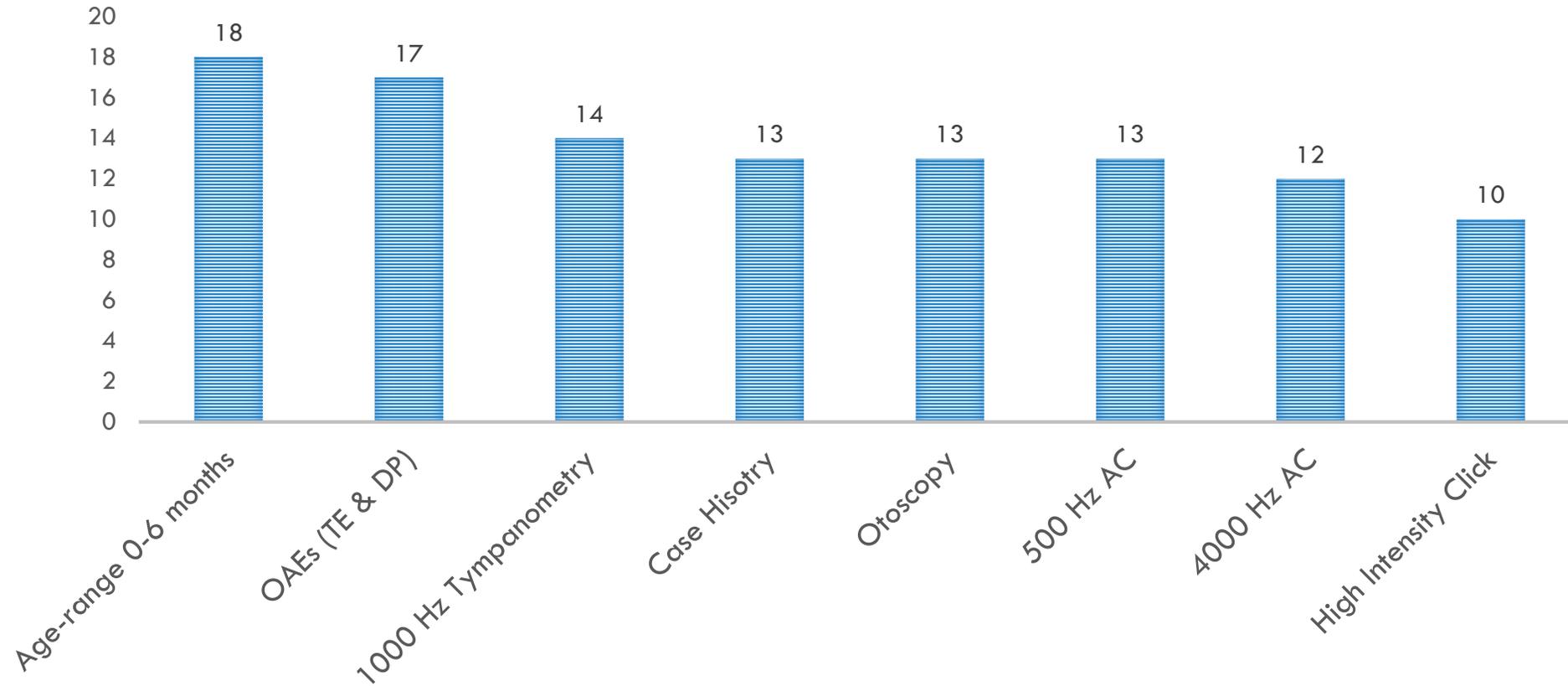
PERCENT LOST TO FOLLOW-UP TO FARI Y INTERVENTION



WHAT'S IN THE PROTOCOLS?



MOST POPULAR TOPICS WITHIN PROTOCOLS



LESS POPULAR TOPICS COVERED IN THE PROTOCOLS



- Age-range 6-12 months
- Annual Calibration
- Acoustic Reflexes
- Frequency specific AC/BC
- 2000 Hz AC
- Report to DOH
- Refer to EI
- Risk Factors
- Amplification

- Age-range 12 months+
- 226 Hz Tymps
- AC Click
- 1000 Hz AC
- Behavioral testing 500-4000 Hz
- Reports
- AuD Qualifications
- Medical Referrals
- Unilateral

ADDITIONAL BUT RARE TOPICS COVERED IN THE PROTOCOLS

- ❖ Daily Listening Checks

- ❖ Room Environment

- ❖ Parent Report Evaluations

- ❖ Acoustic Reflexes

 - ❖ 500 Hz

 - ❖ 1000 Hz

 - ❖ 2000 Hz

 - ❖ 4000 Hz

- ❖ Click- Air and Bone Conduction

- ❖ No Show

- ❖ DOH Follow-up

- ❖ ANDSD

- ❖ Air Conduction

 - ❖ 250 Hz

 - ❖ 3000 Hz

 - ❖ 8000 Hz

- ❖ Bone Conduction

 - ❖ 500 Hz

 - ❖ 1000 Hz

 - ❖ 2000 Hz

 - ❖ 4000 Hz

 - ❖ Click

- ❖ Behavioral testing

- ❖ Clinician Observation

- ❖ Initial/re-screen guidelines

- ❖ Normative Data

SUMMARY



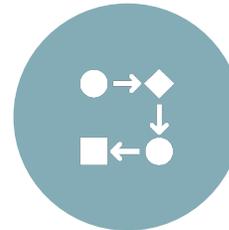
Generally more infants are diagnosed before 3 months in states with protocols



The average loss to early intervention is slightly lower for states with protocols



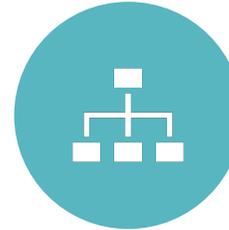
Referral rate is better for states with a protocol than without and improved from 2016 to 2017



Data for states with protocols is relatively stable from 2016 to 2017, but more variable for those states without protocols



The majority of protocols cover basic ABR parameters and affiliated test procedures (OAEs, tympanometry, etc.)



Protocols vary widely among states

Protocol	Create a diagnostic protocol for all centers to unify test measures for diagnosis before 3 months
Refer	Include, in protocol, how to make referrals when entering the diagnosis into the OZ database for better tracking
Communication	Continue working on ways to resolve communication breakdown between DOH and DOE

CALL TO ACTION- NEXT STEPS



QUESTIONS