

Response Rates and Item Response

Behavioral Surveillance Branch
DACH, NCCDPHP

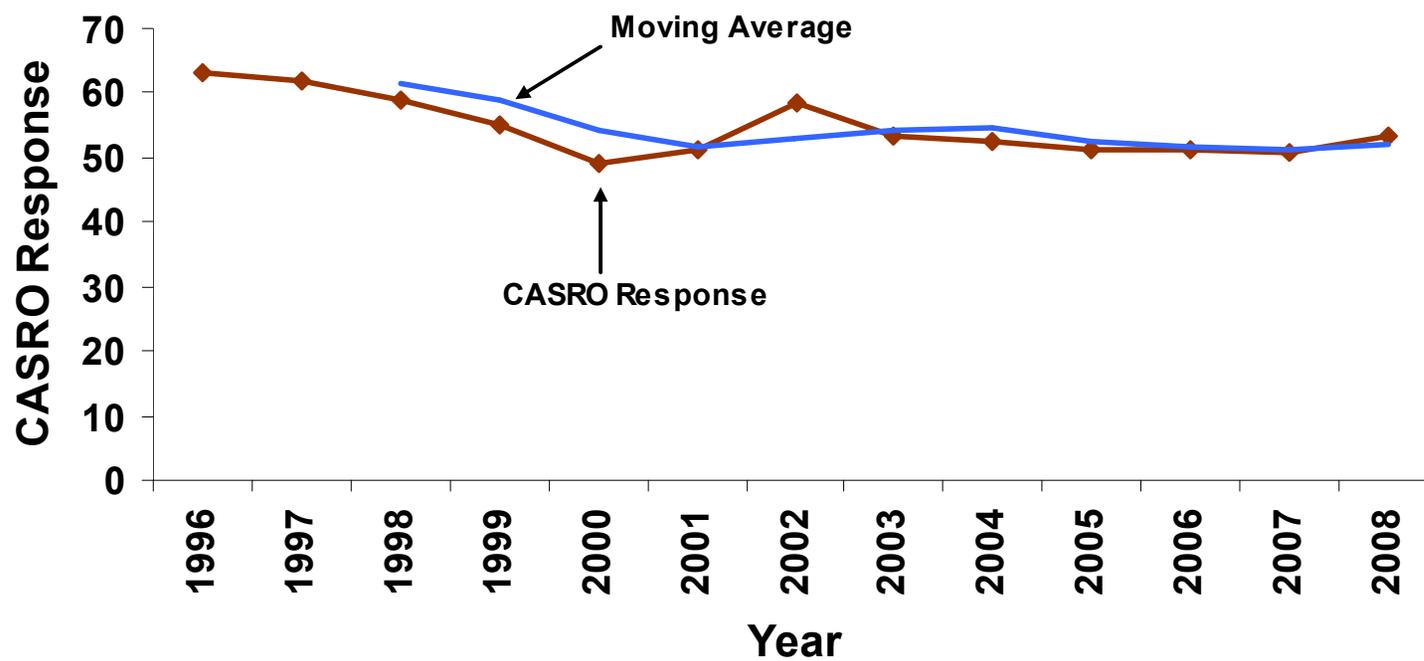
Mohamed G Qayad, MD, MSc, MPH, MSPH



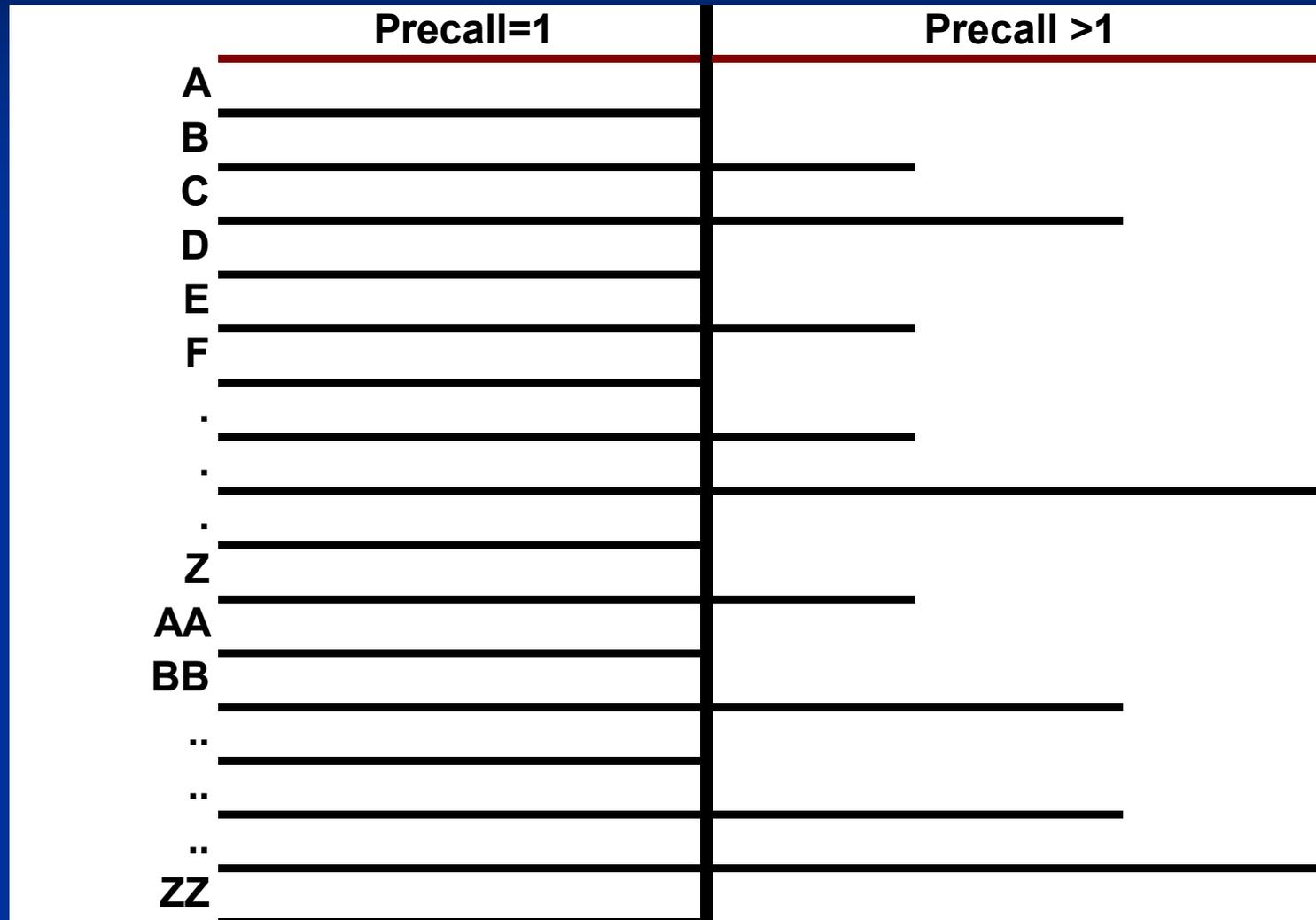
Outline

- Demonstrate response rate variations
- Demonstrate the effect of strategic calling decisions on the response rate
- Suggest comparable response rates across the States
- Demonstrate how to assess item response consistency
- Provide concluding remarks

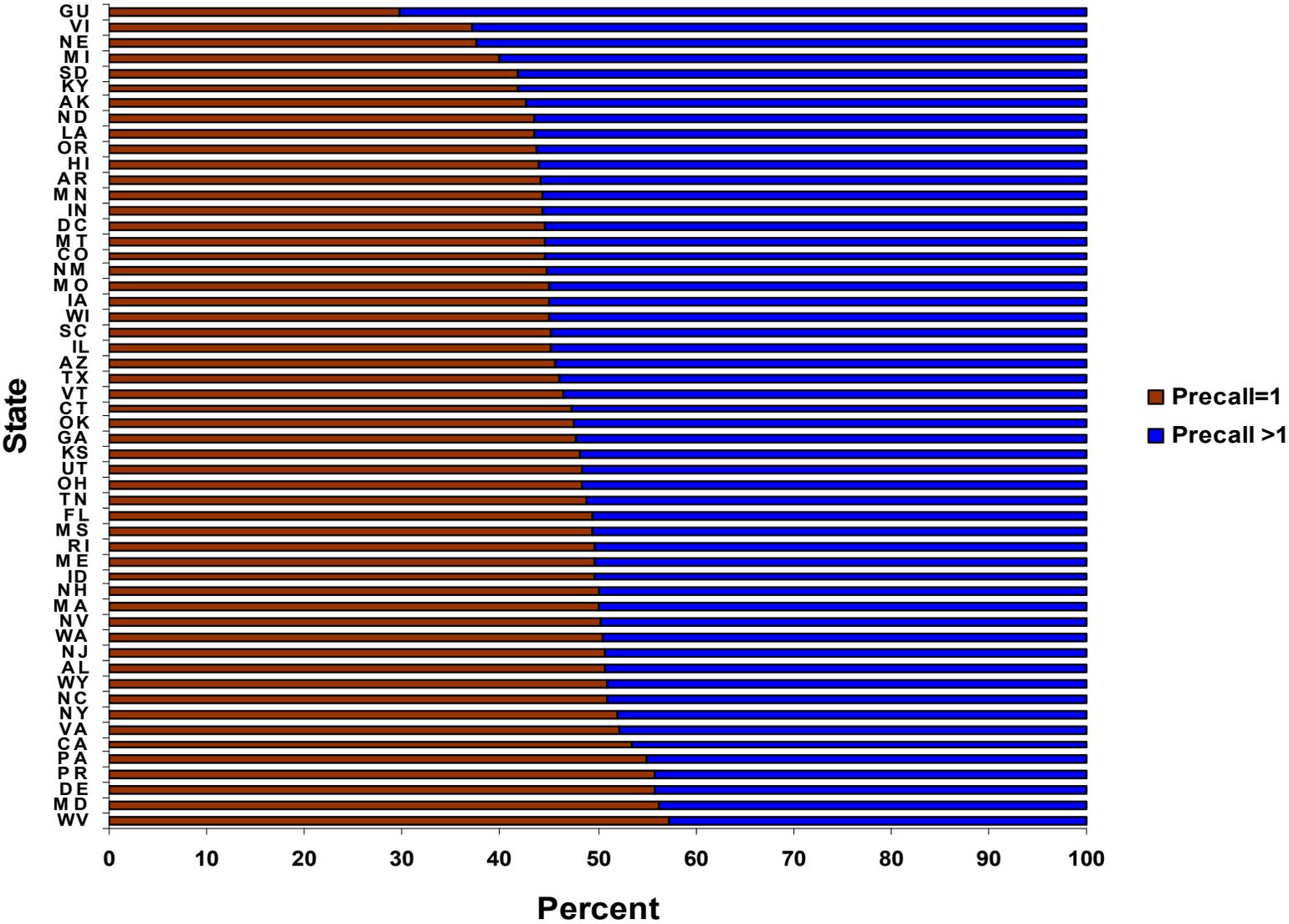
Median Response Rate Trend, BRFSS 1996-2008



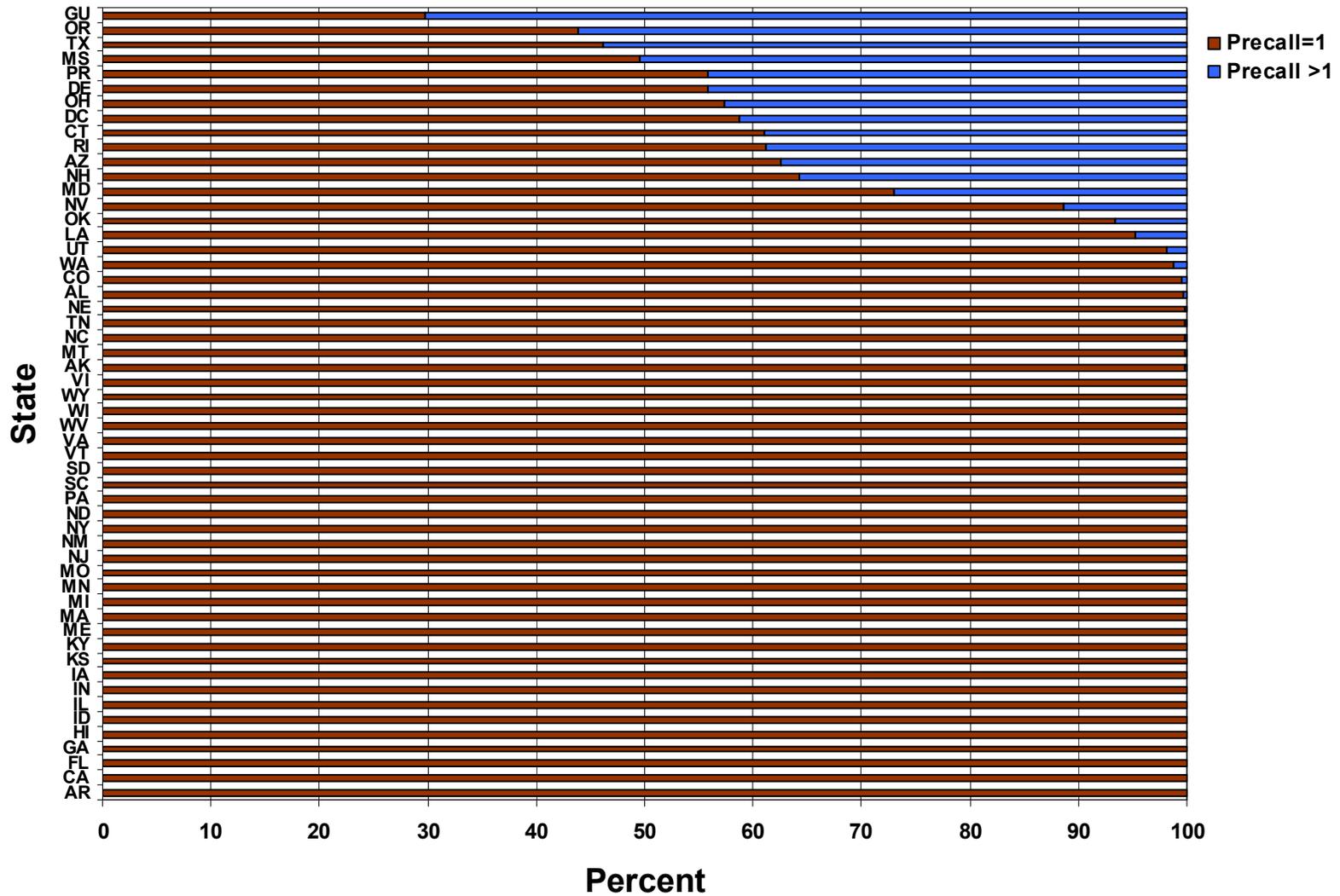
Shows who was called qualitatively



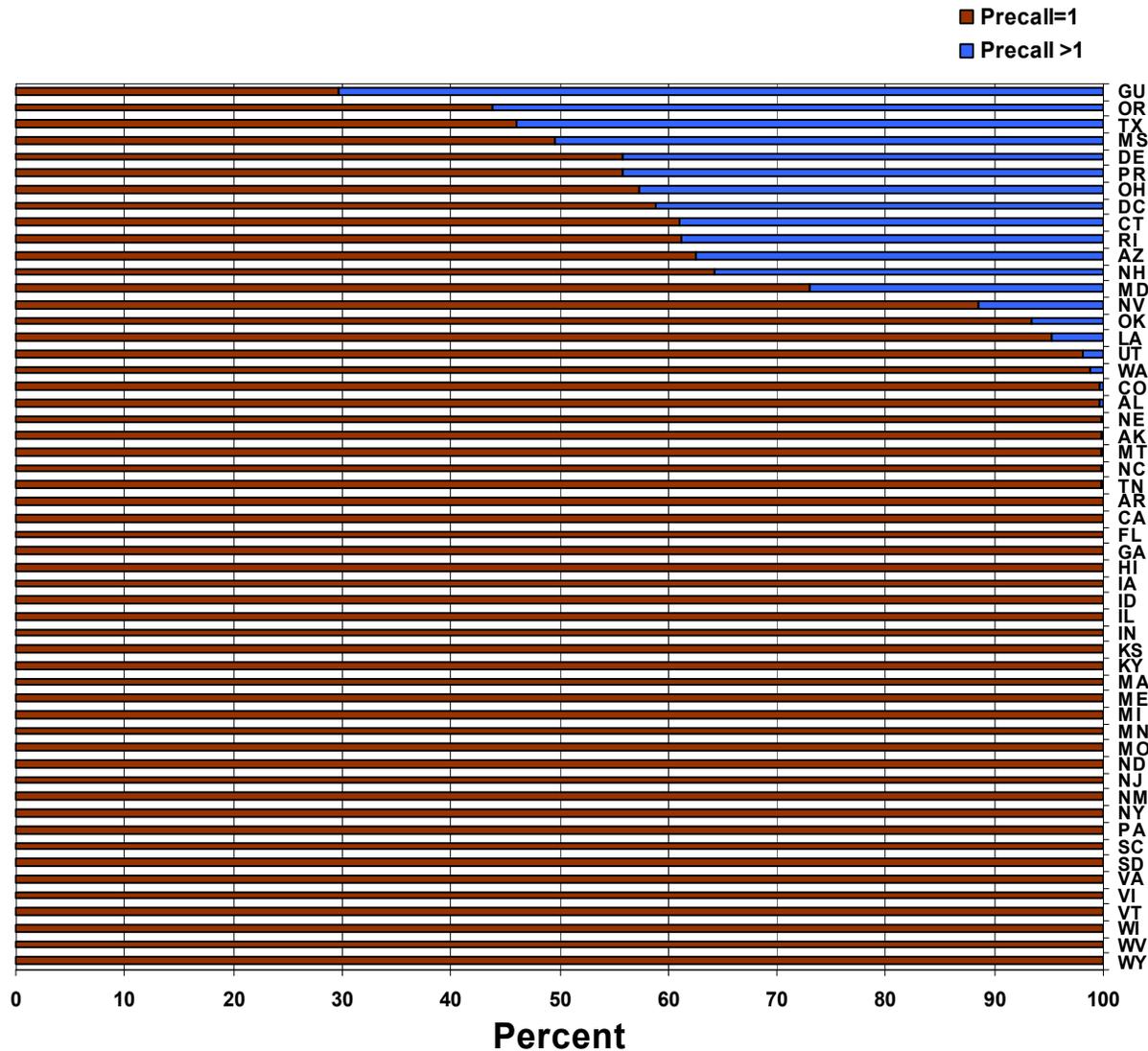
Percent of the sample by prescreened status BRFSS, 2009



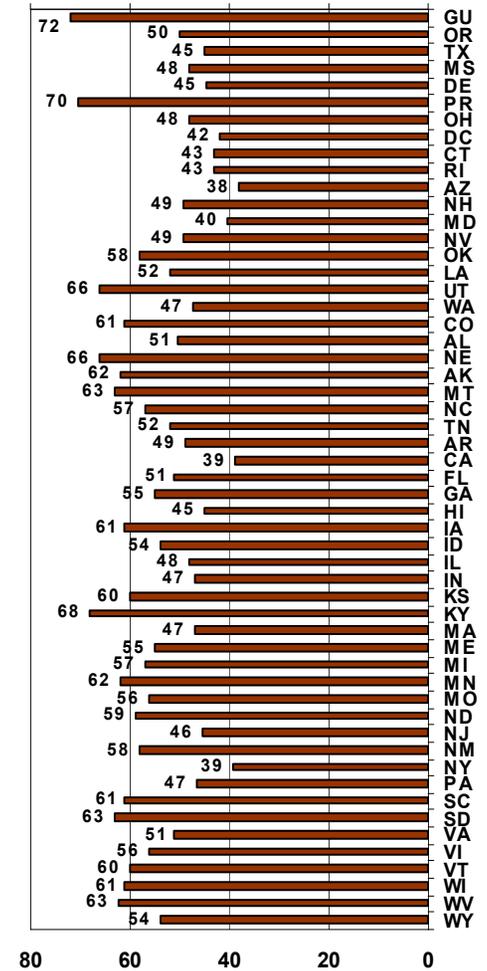
Percent of the numbers with call attempts ≥ 1 by prescreened status, BRFSS 2009.



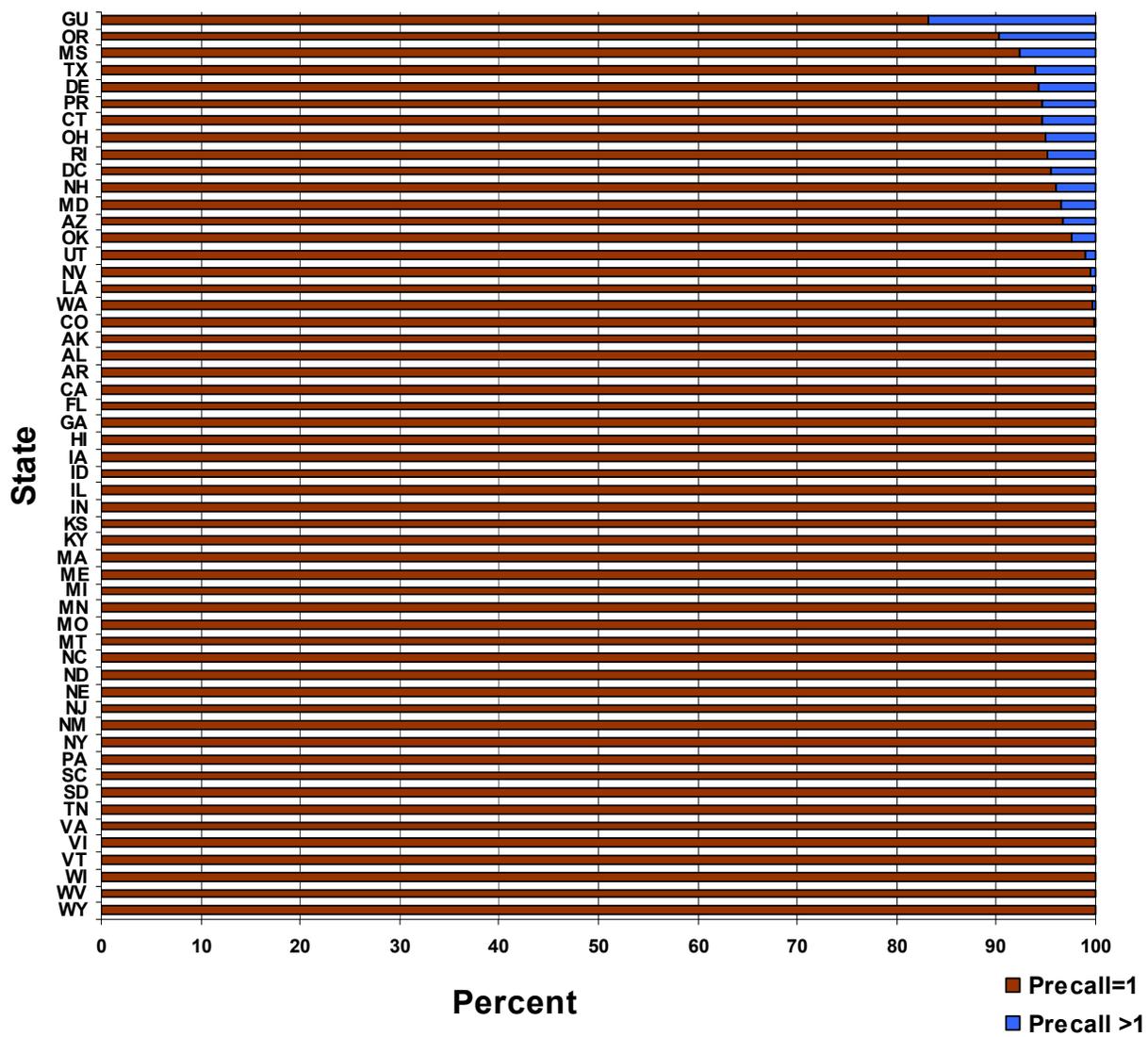
Percent of the numbers with call attempts ≥ 1 by prescreened status, BRFSS 2009.



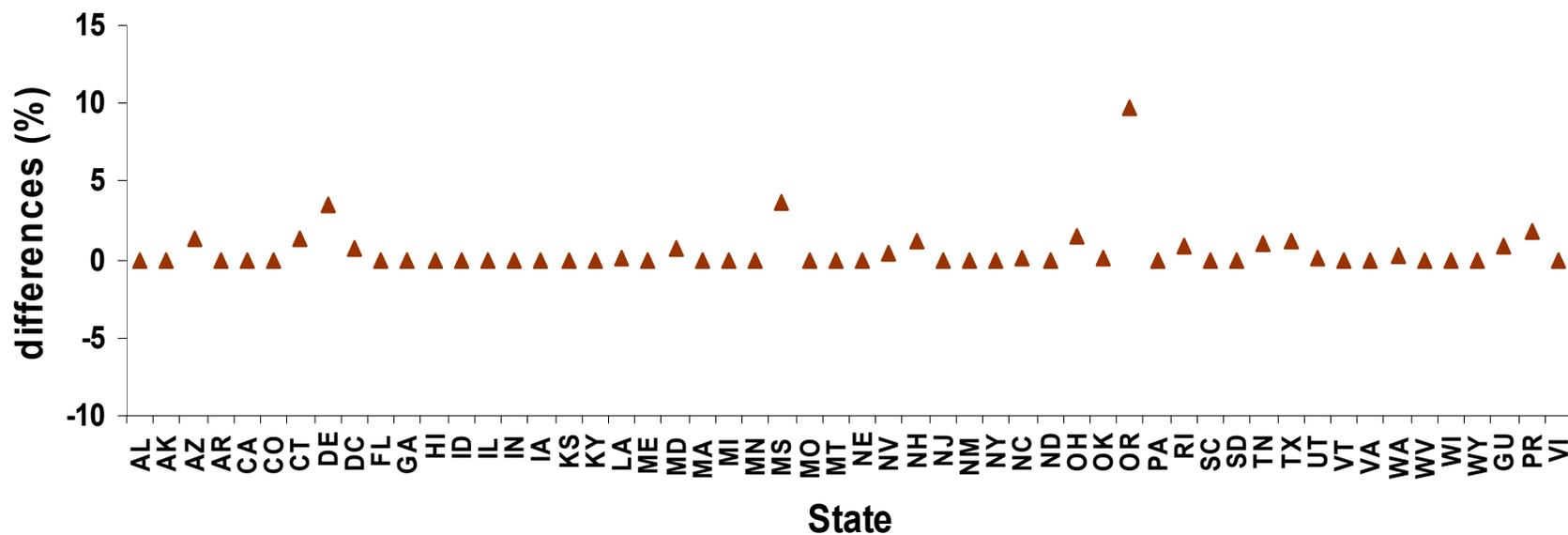
CASRO Response, BRFSS 2009



Percent of completes by prescreened status by State, BRFSS 2009



Differences between Response Rates for numbers prescreened "To be called" and Actual Response Rates, BRFSS 2009



$$\left[\frac{110+120}{(110+120+EligHH)} + \left(\frac{110+120+EligHH}{(110+120+EligHH+Ineligible)} \right) \times TotalUnknown \right]$$

Purpose of Data Quality Reports

- Assess the accuracy, completeness, reliability & internal consistency of the data
- Assist BRFSS coordinators in identifying stages in the process where errors introduced
- Provide opportunities for timely intervention to correct data collection and other operational problems
- Provide BRFSS data collectors, monitors, and supervisors with the opportunity to review familiar data concerns
- Monitor State performances

Data Quality Reports

- BSB produces two Data Quality reports:
 - Short version on the Web – updated as new data submitted
 - Detailed version every 3 months (Cumulative), sent to each State

BRFSS Quarterly Data Quality Report (1)

- **Sample description**
 - **Table 1.01 - 1.04**
- **Sample biases**
 - **Table II.01- II.05**
- **Magnitude & Consistency of monthly efforts**
 - **Tables III.01 – III.13**

BRFSS Quarterly Data Quality Report (2)

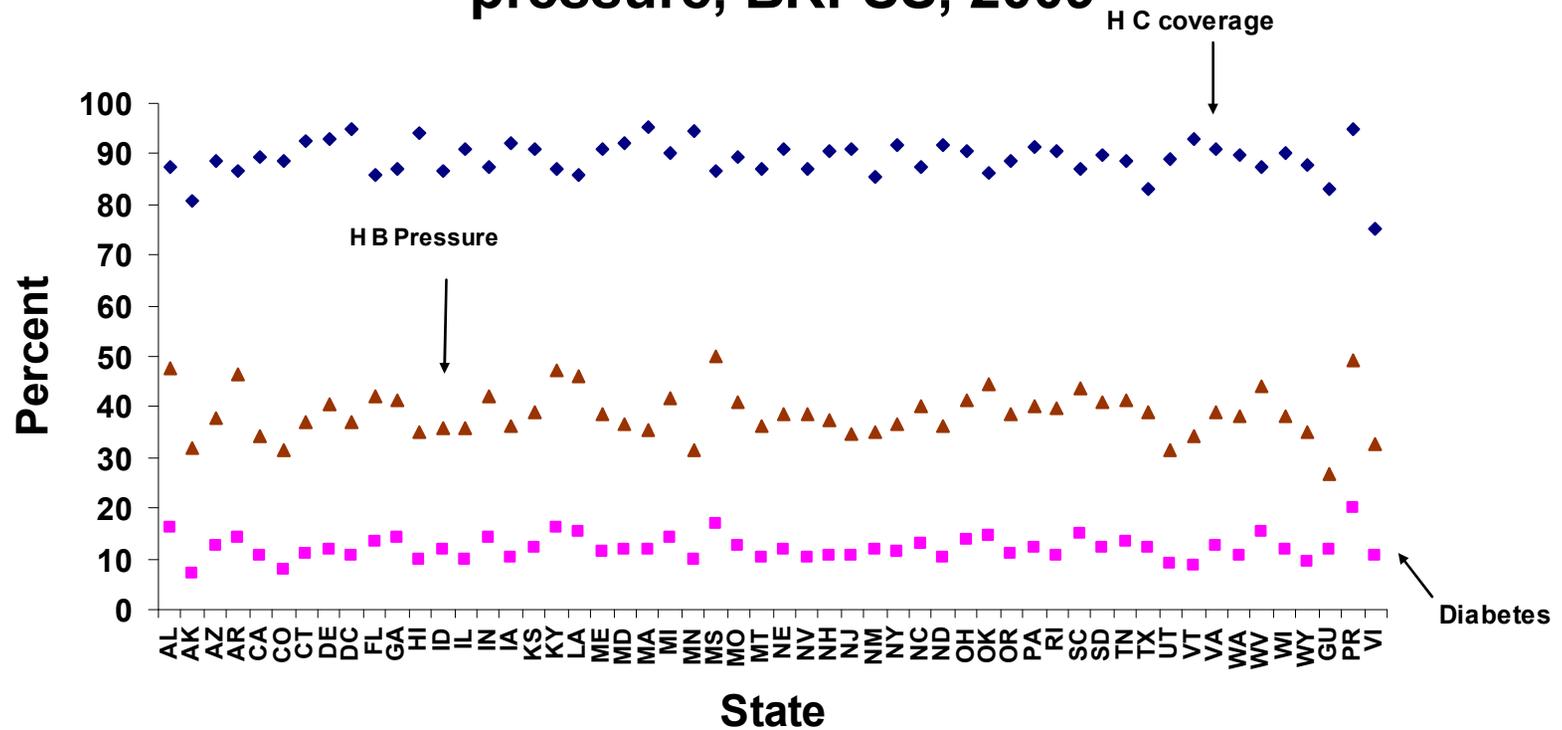
- **Proper assignment of disposition codes**
 - **Tables IV.01 – IV.04**
- **Unit Non-responses**
 - **Tables V.01 – V.06**
- **Item Non-response**
 - **Tables VI.01 – VI.03**

BRFSS Quarterly Data Quality Report (3)

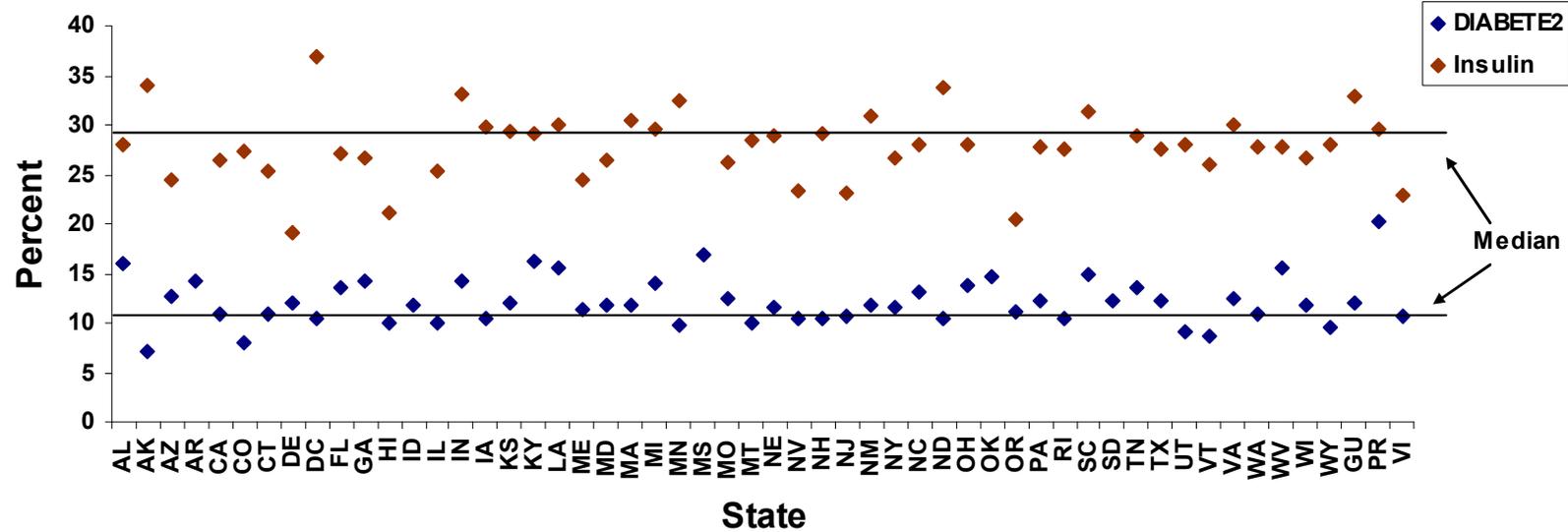
- HH rosters, number of adults & phone #
 - Tables VII.01 – VII.04
- Recruitment, Retention, and Assignment of Interviewers
 - Tables VIII.01 – VIII.02
- Interviewer outliers
 - Table IX.01 – IX.11

- **Item Response Data Quality Checks**

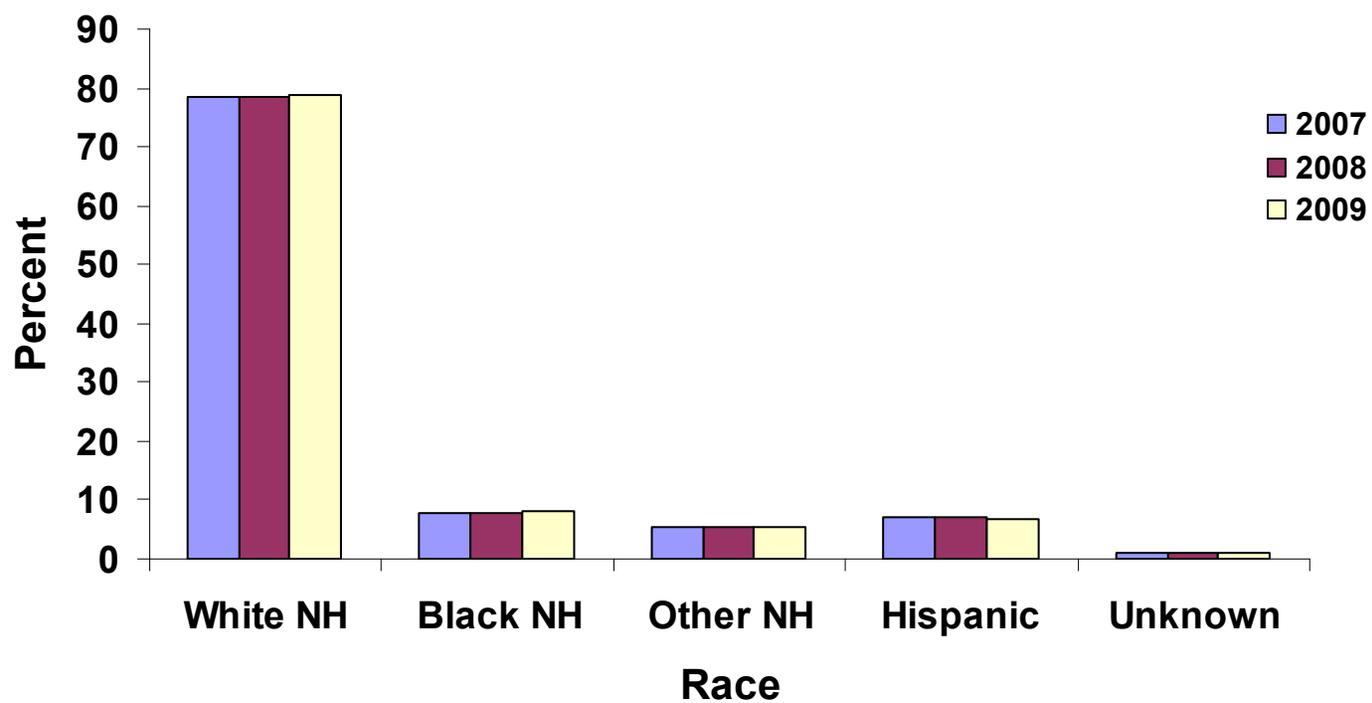
Percent with health insurance, ever told had diabetes and ever told had high blood pressure, BRFSS, 2009



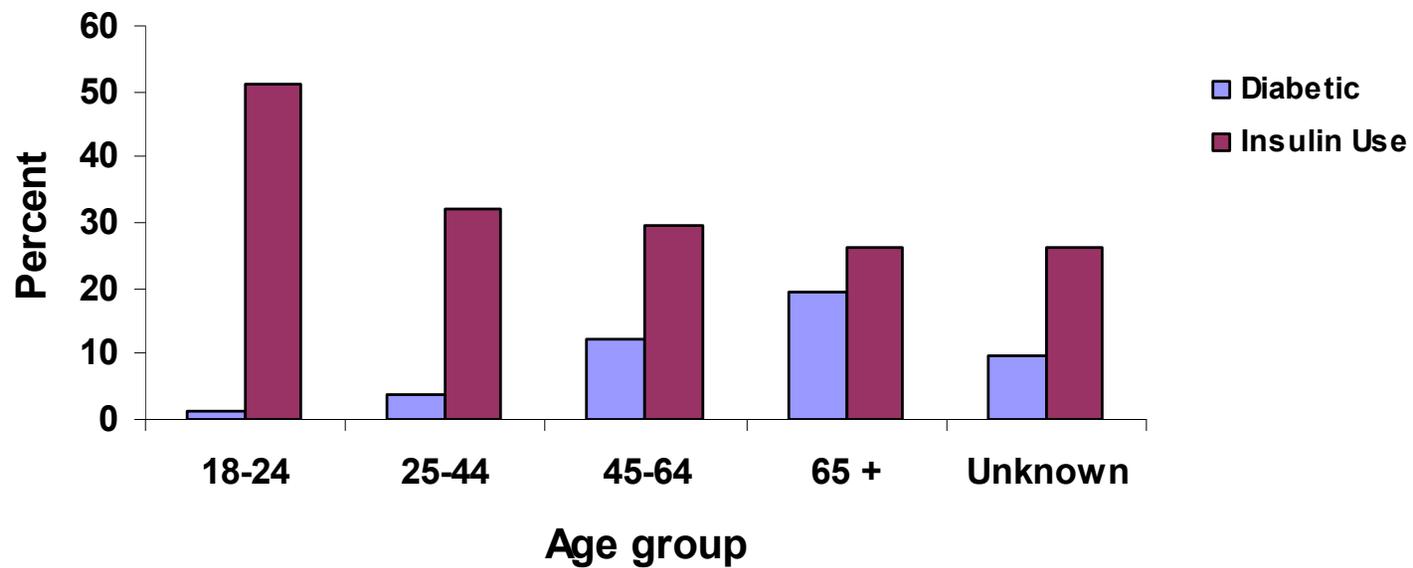
Percent of respondents ever told had diabetes and percent of diabetics taking insulin, BRFSS 2009



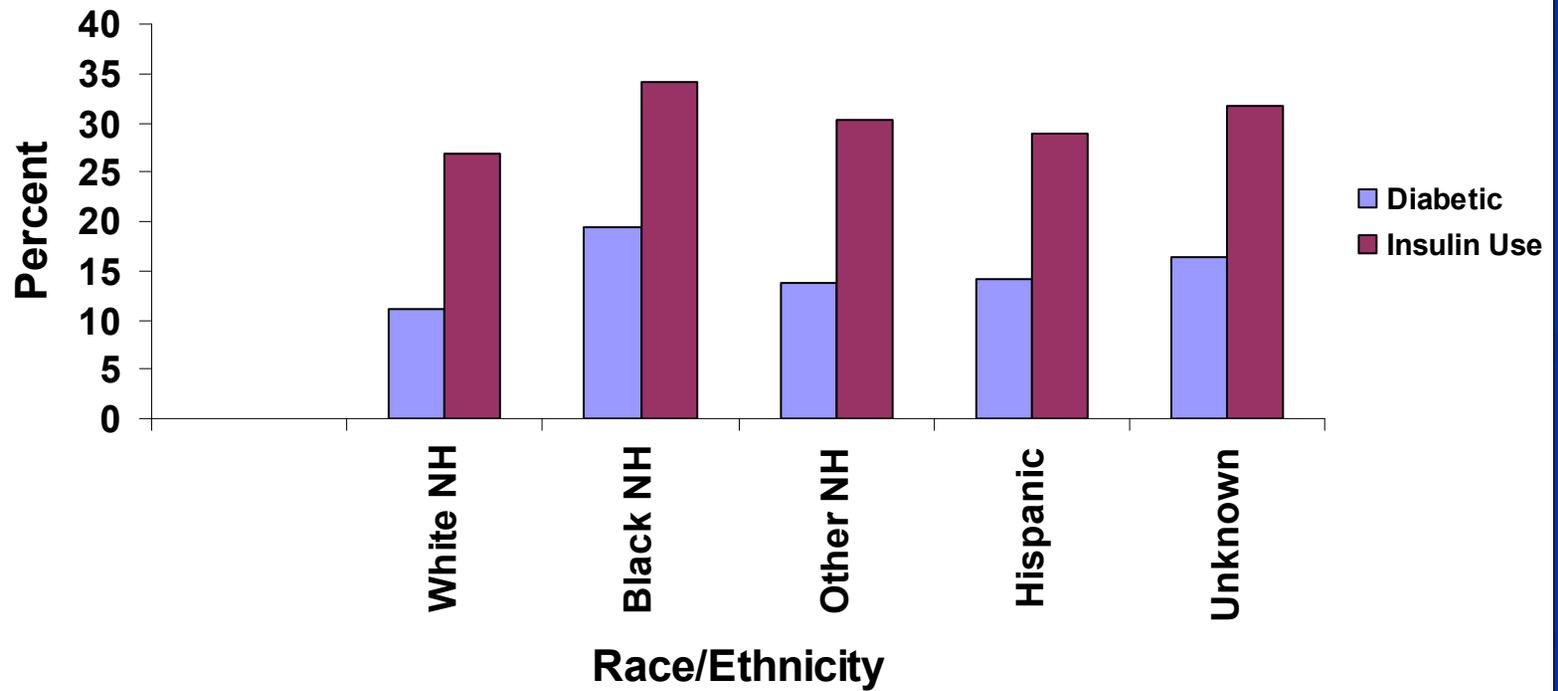
Race/Ethnic distribution of Respondents by year, BRFSS 2007-2009.



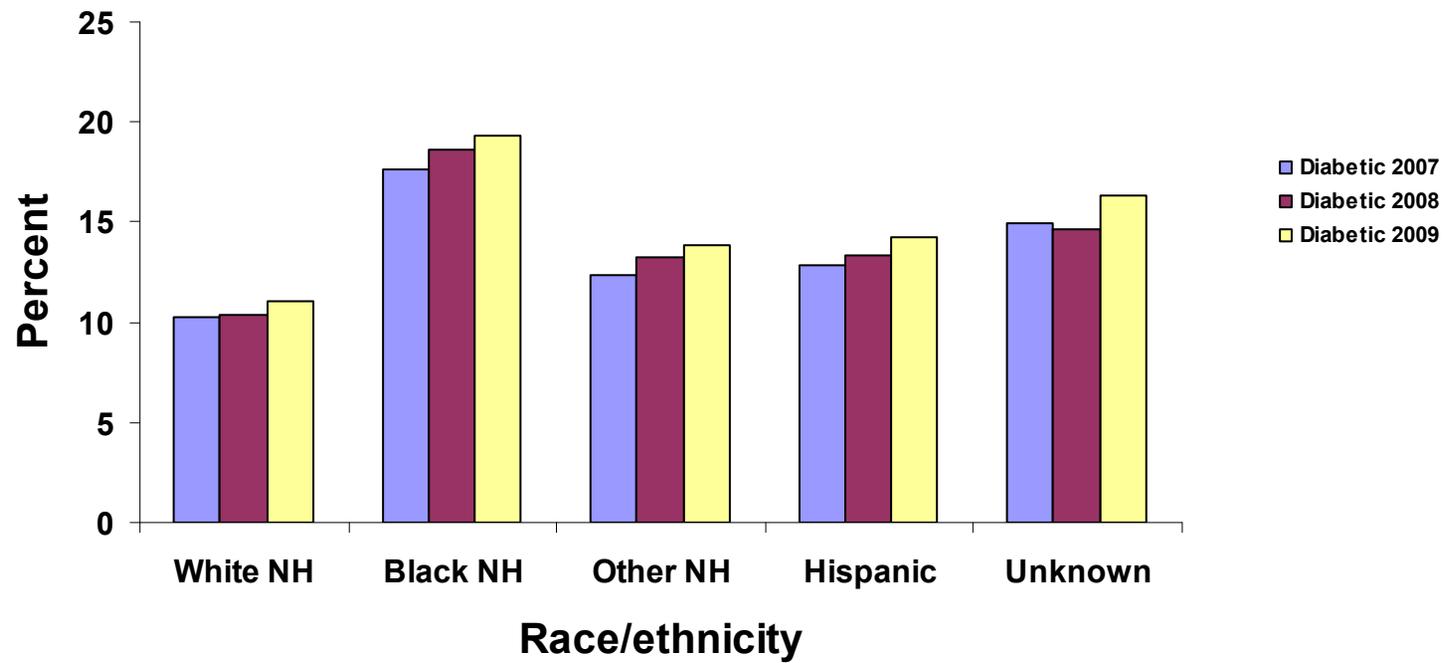
Percent of respondents with diabetes and use of insulin by age group, BRFSS 2009



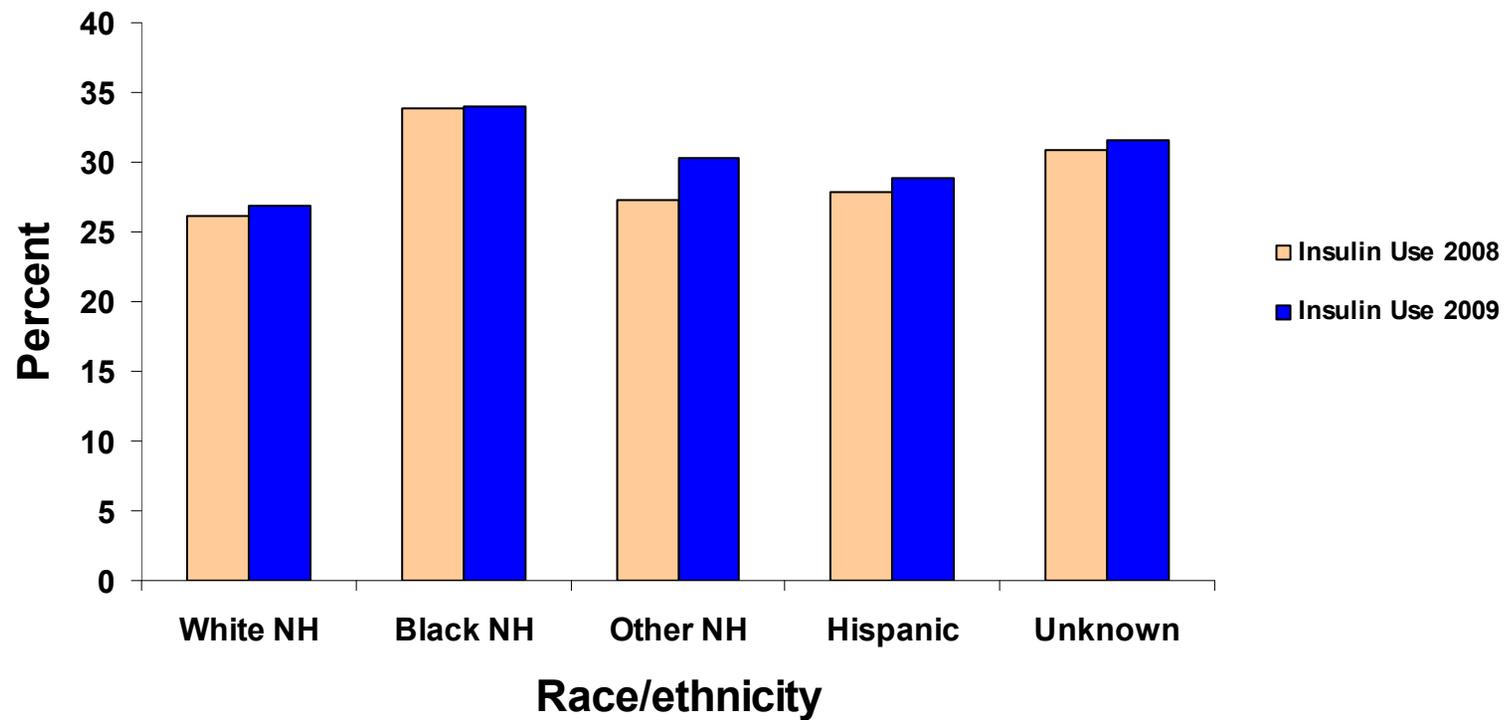
Percent of diabetics and insulin use by race/ethnicity, BRFSS 2009



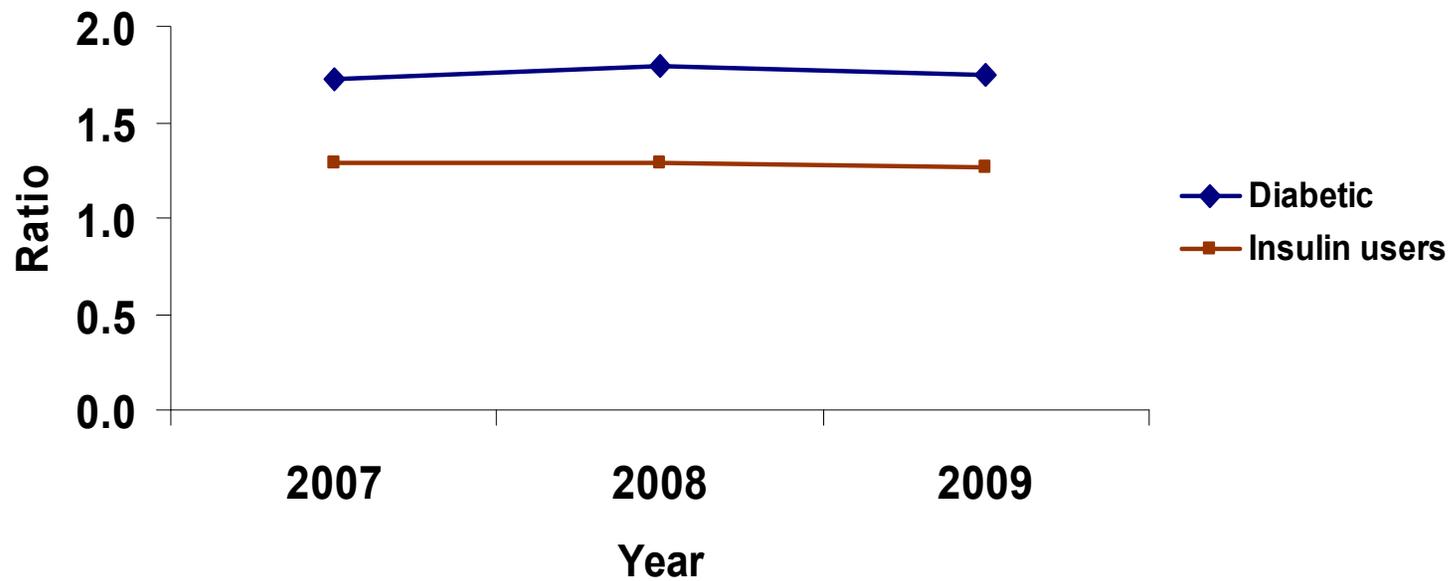
Percent of diabetics by race/ethnicity, BRFSS 2007-2009



Percent of insulin users among diabetics by race/ethnicity, BRFSS 2008-2009



Ratio of percent diabetics and insulin users among Blacks to that of Whites by year, BRFSS 2007-2009



Conclusion

- States need to evaluate the benefits of calling all numbers or only to those prescreened as “To be called”
- Need your feedback about the suggested way of calculating the response rate
- State coordinators need to review the DQ reports and examine item response consistency