

Introduction

Breastfeeding is recognized as an essential part of assuring the best health for infants.

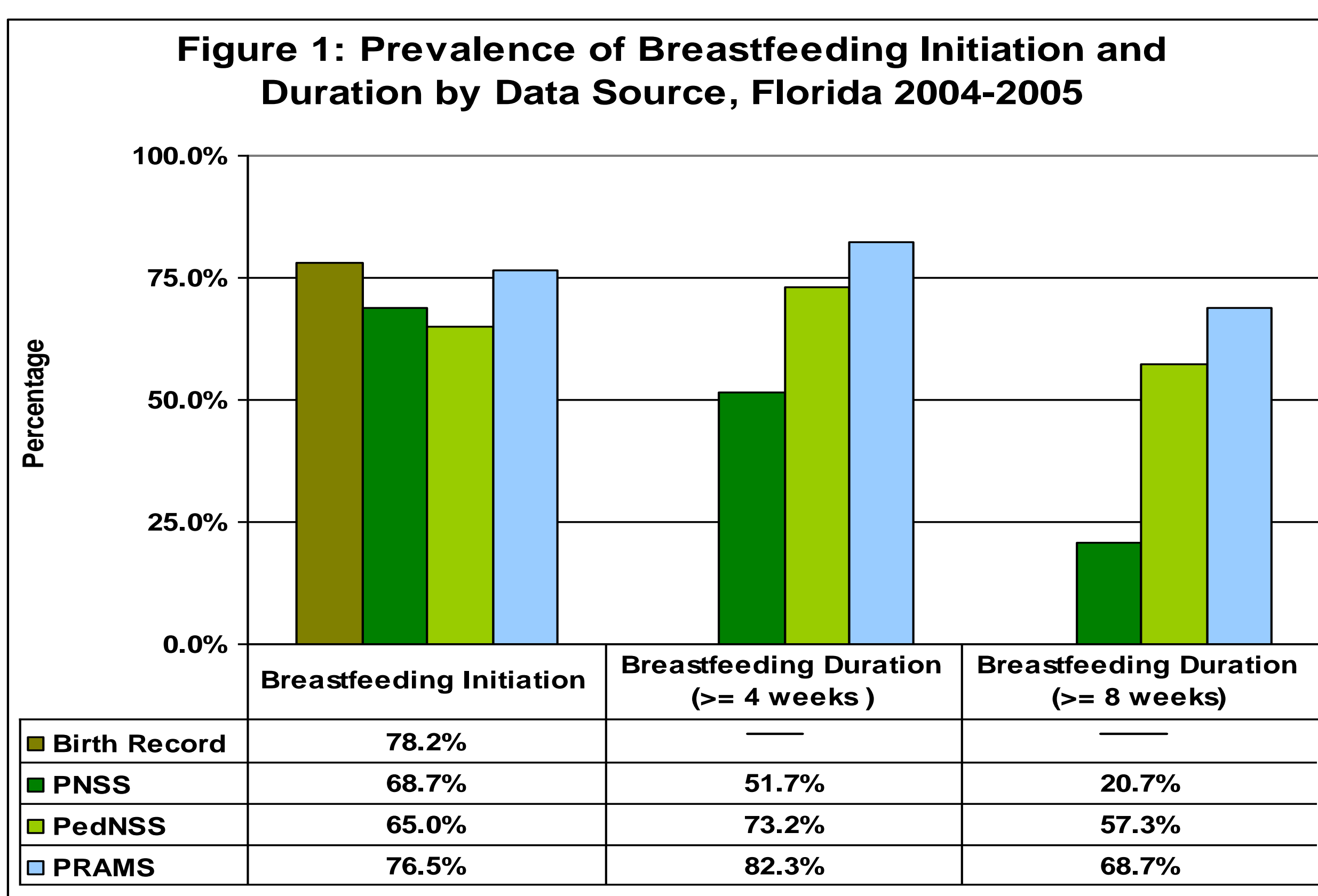
The following Florida data sources are used to monitor breastfeeding practices:

- The birth record documents the live birth of an infant, characteristics about the infant and parents.
- The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) collects data for two CDC surveillance systems:
 - Pregnancy Nutrition Surveillance System (PNSS)
 - Pediatric Nutrition Surveillance System (PedNSS)
- The Pregnancy Risk Assessment Monitoring System (PRAMS)

Breastfeeding Prevalence by Data Source:

Figure 1 shows the prevalence of breastfeeding initiation and duration for the above listed datasets.

- Breastfeeding Initiation: Women who reported current or ever breastfeeding at the time of information collection.
- Breastfeeding Duration: Of women who reported initiating breastfeeding, length of time infant was breastfed was measured by time period reported or calculation based on last WIC visit date.



Issue:

- As Figure 1 demonstrates, there are variations in breastfeeding behavior measurements dependent on the data source.
- To accurately assess breastfeeding practices among mothers, it is important to:
 - Assure the validity and accuracy of the data sources.
 - Determine appropriate data sources for measuring breastfeeding practices.

Study Objective

To examine the validity and reliability of breastfeeding practices on the following datasets using PRAMS as the “gold standard”:

- Birth Record
- WIC Pregnancy Nutrition Surveillance System (PNSS)
- WIC Pediatric Nutrition Surveillance System (PedNSS)

Methods

Data: The linked PRAMS and birth record file (3,928 records) was linked to PNSS (1,923 records) and PedNSS (1,536 records) data for calendar years 2004 and 2005.

Analysis:

- For accuracy and reliability, agreement with PRAMS was used as an indicator of data validity.
- Estimates for sensitivity, specificity, positive predictive value, and negative predictive value statistics were calculated.
- All analyses were performed using Statistical Programming Software for the Social Sciences (SPSS) for Windows 16.0.

Validity Measures:

Sensitivity is the percentage of women identified by PRAMS as positive for the breastfeeding behavior and who were also identified to be positive by the comparison data source.

Specificity is the percentage of women identified by PRAMS to be negative for the breastfeeding behavior that were also identified to be negative by the comparison data source.

Positive predictive value is the percentage of women accurately identified by the comparison data source to be positive for the breastfeeding behavior using PRAMS as the reference.

Negative predictive value is the percentage of women accurately identified by the comparison data source to be negative for the breastfeeding behavior using PRAMS as the reference.

Conclusions

Using PRAMS as the “gold standard”:

- The birth record, PNSS, and PedNSS perform fairly well at measuring the percentage of women reporting breastfeeding initiation and not initiating breastfeeding.
- PNSS did not perform well at measuring duration at four weeks or more or eight weeks or more.
- PedNSS performed fairly well at measuring duration at four weeks or more and at eight weeks or more.

Implications

The accuracy of breastfeeding measures is dependent on the data source. The following are recommended for the respective breastfeeding behavior measures.

Recommended data sources for monitoring breastfeeding initiation:

- The birth record, PNSS, and PedNSS datasets can be used to monitor and assess breastfeeding initiation practices among Florida’s WIC population.

Recommended data sources for monitoring breastfeeding duration:

- PRAMS and PedNSS can be used to monitor breastfeeding duration practices. PedNSS can provide both state and local level estimates for Florida’s WIC population. PRAMS can provide state duration estimates for WIC and Non-WIC populations up to eight weeks after birth.



Results

Figure 2: Breastfeeding Initiation: Measures of Validity, Florida 2004-2005

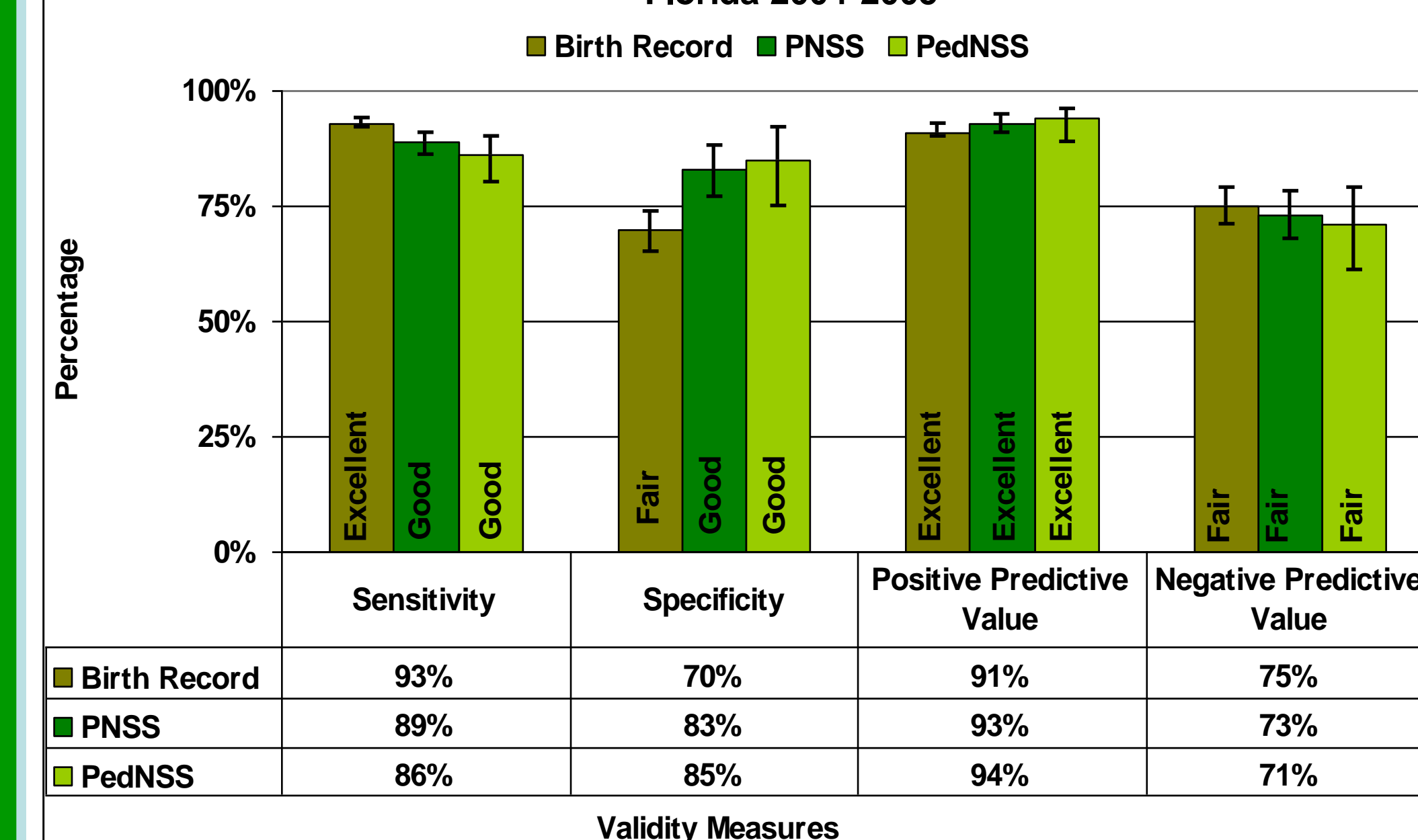


Figure 3: Breastfeeding Duration Measures of Validity: Four Weeks or More, Florida 2004-2005

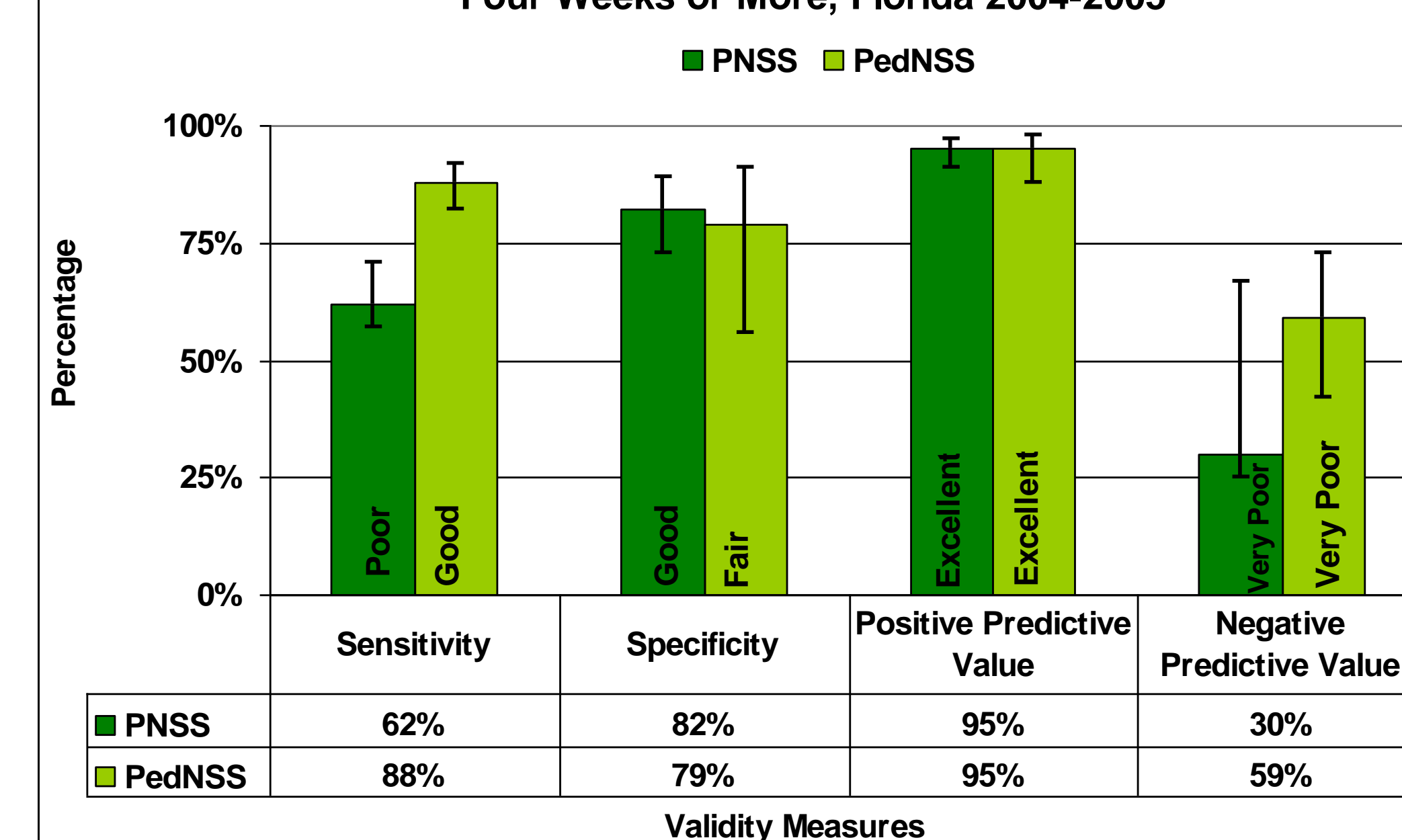


Figure 4: Breastfeeding Duration Measures of Validity: Eight Weeks or More, Florida 2004-2005

