

# **Preterm Birth and Continuation of Child's Follow-up Care After Hospital Discharge**

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# Background

- Preterm birth is associated with neonatal intensive care unit (NICU) admission and exerts significant physical and emotional toll on immediate family members including the mother.
- Perinatal guidelines by AAP and ACOG requires that preterm babies should be examined weekly or semi-monthly during the immediate period after discharge from the hospital.

# Objectives

- This study examined the factors that are associated with use of child's follow-up care namely attending a well-baby checkup after NICU discharge among women with preterm babies.
- **Research questions:**
  - a) What is the relationship between preterm birth with subsequent admission into the NICU and continuation of care namely the use of health services such as taking the new baby to a doctor, nurse, or other health care worker during the first week after NICU discharge or for a well-baby checkup postdischarge.
  - b) What are the factors that are associated with continuation of the use of health services after NICU discharge?

# Objectives

- To determine the:
  - Percentage of women with preterm birth and NICU admission who took their newborn for hospital first week visit and well-baby checkup after NICU discharge.
  - Factors that may influence mothers' attendance at a well-baby checkup after NICU discharge.

# METHODS

- Pregnancy Risk Assessment and Monitoring System (PRAMS)
  - Cross-sectional surveys of newly delivered moms who had live-born infants within 2 to 6 months before being contacted
  - Multi-state (33 states) data for United States from 2004-2009
  - Linked with birth certificates

# METHODS

- Sample size (combined 2004-2008 PRAMS)
  - Women who had preterm or very preterm babies admitted into the NICU
- Data analysis
  - Weighting of complex survey data
  - Used ‘svy’ command of STATA 10
  - Analysis
    - Bivariate and multivariate analyses
    - Chi-squared, logistic regressions;  $p=0.01$



# Results

- Analysis sample = **44,307**
  - Term = 11,915 (26.9%)
  - Preterm = 32,395 (73.1%)
- Population estimate = 980,785

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	Doctor visit 1 <sup>st</sup> week % (p-value)	Well baby check up % (p-value)
<b>Term</b>		
Yes	91.61 (0.00)	98.45 (0.1288)
No	8.388	1.55
<b>Preterm</b>		
Yes	95.19	98.07
No	4.8	1.93

# Characteristics of the Mothers in the Study

		Percentage	99% CI
<b>Marital status</b>	Married	58	(56, 59)
	Other	42	(41, 44)
<b>Age (13-53)</b>	Less than 18	3.7	(3.2, 4.2)
	18-24	30	(29,31)
	25-29	26	(24, 27)
	30-34	24	(22, 25)
	35-39	13	(12,14)
	40+	3.9	(3.4, 4.5)
<b>Parity</b>	Primigravida	43.2	(42, 45)
	One or more prior birth	55.9	(55, 57)
	Missing	0.9	(.59 , 1.2)

# Characteristics of the Mothers in the Study

		Percentage	99% CI
<b>Income</b>	Less than \$10,000	20.22	(19.19, 21.29)
	\$10,000 to \$14,999	8.96	(8.16, 9.82)
	\$15,000 to \$19,999	6.4	(5.71, 7.17)
	\$20,000 to \$24,999	6.11	(5.52, 6.77)
	\$25,000 to \$34,999	9.42	(8.61, 10.3)
	\$35,000 to \$49,999	9.04	(8.26, 9.88)
	\$50,000 or more	31.18	(29.89, 32.5)
	Missing	8.67	(7.94, 9.47)
<b>Education</b>	Less than high school	4.1	(3.6, 4.7)
	High School	45	(44, 47)
	College	51	(49, 52)

# Characteristics of the Mothers in the Study

	Percentage	99% CI
<b>Race</b>		
White	66.77	(65.62, 67.90)
Black	24.39	(23.41, 25.39)
American Indian	0.85	(0.71, 1.02)
Asian	3.18	(2.79, 3.60)
Others	4.42	(3.9, 5.00)
Missing	0.39	(0.26, 0.59)
<b>Ethnicity</b>		
Hispanic	13.6	(12.73, 14.52)
Non-Hispanic	80.86	(79.81, 81.86)
Missing	5.54	(5.00, 6.14)
<b>Prior Medicaid</b>		
No Medicaid before preg.	81.6	(80.51, 82.63)
Medicaid before preg	17.98	(16.96, 19.05)
Missing	0.42	0.26, 0.68)

# Logistic regression predicting attendance at a well-baby checkup

	Odds Ratio	P-value	99% CI
<b>Reference group (younger than 18 years)</b>			
18-24	12.08	0.000	2.19, 66.76
25-29	46	0.000	8.04, 266
30-34	12.089	0.001	1.77, 82.13
35-39	33.71	0.000	3.53, 322.27
40+	14.87	0.004	1.31, 169.19
<b>Reference group (Very preterm)</b>			
Preterm	0.31	0.001	0.12, 0.80

# Conclusion

Relatively young maternal age between 25 and 29 years could predispose women to inadequate maternal attendance at well baby check up post discharge from a NICU.

# Nursing Implications

- Support groups for mothers who are within the age of 25-29 years who have a baby in the NICU
  - Nurses can be advocates for support groups
  - Encourage mom to attend support groups
- Follow-up services at clinics and doctor offices
- Teaching in hospital and in home
  - Understand importance of doctor visits