

The Impact of Pregnancy-Related and Maternal Factors on Well-Baby Care in HUSKY A For Babies Born in 2003

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This report explores the relationship between selected maternal characteristics and utilization of well-baby care. It specifically focuses on infants born in 2003 who were continuously enrolled for 15 months in HUSKY A (Medicaid managed care).

This report is innovative for two reasons. First, it fills an important gap in our understanding of how maternal and prenatal factors affect preventive well-care utilization in the early childhood period for families with Medicaid coverage. Whereas previous work has examined the impact of prenatal and maternal characteristics on pregnancy outcomes, no published studies to date have used Medicaid administrative data to examine their impact on preventive care for infants. Second, this study uses a novel strategy to link infant birth certificate data to infants' medical encounter data using maternal Medicaid administrative data. Analyses of these linked data allow Connecticut to obtain a more complete picture of health care during infancy and early childhood among children covered by HUSKY A. This information enhances the capacity to identify problems and target solutions for improving child health outcomes.

Methods

Birth records for all births to Connecticut residents in 2003 were matched against enrollment records for individuals who were ever enrolled in HUSKY A in 2003 to identify births to mothers who were enrolled in HUSKY A at the time they gave birth. The resulting 9,561 birth matches then were linked with infant HUSKY A enrollment records. A total of 8,749 birth records (92%) were matched successfully to an infant's enrollment record. Among the linked 8,749 births, 7,054 babies (81%), were continuously enrolled in HUSKY A for the 15-month period following

birth. Encounter data were then searched for records corresponding to well-baby visits that occurred between birth and the end of month 15. Number of visits were categorized in accordance with National Committee for Quality Assurance (NCQA) Health Plan Employer Data and Information Set (HEDIS) specifications.¹ The encounter record file was also searched for records of any emergency room visits that occurred 31 days post-birth through month 15. Descriptive statistics on well-baby care were generated for selected variables. The likelihood of having 6 or more well-baby visits was determined for selected maternal variables.

Results

In 2003, there were 42,826 births to Connecticut residents, including 9,561 births to mothers enrolled in HUSKY A. These mothers were more likely than non-HUSKY A mothers to be teens, Black non-Hispanic, Hispanic, urban residents, and smokers. HUSKY A mothers also were less likely to initiate prenatal care early or to have adequate prenatal care.²

The number of babies who were continuously enrolled in HUSKY A decreased steadily over time within the two-year period following birth to 37% of babies at 24 months.

Well-baby care: Just over half (55%) of Connecticut babies born to HUSKY A mothers in 2003 received 6 or more well-baby visits in their first 15 months of life. Two percent of infants did not receive *any* well-baby care (Figure 1).

Differences in receipt of recommended well-baby care (that is, receiving less than 6 visits within the first 15 months of life) were found for selected maternal sociodemographic and prenatal factors. Infants of mothers of younger age, lower education, and Black

non-Hispanic or Hispanic race/ethnicity were less likely to receive 6 or more well-child visits (Table 1). Babies enrolled in HealthNet were more likely than babies covered by other MCOs to receive 6 well-child visits. Babies who changed health plans during the first 15 months of life were less likely to receive six or more well-baby visits than babies whose families did not change health plans. Babies whose mothers did not initiate prenatal care in their first trimester were also less likely to receive 6 or more well-baby visits in the first 15 months of life.

Table 1. Factors Affecting Well-baby Care in 2003

Characteristic		% with 6 or more visits	Relative Risk
Race/ethnicity	Black, non-Hispanic	48.6%	0.85 (0.80, 0.89)***
	Hispanic	51.1%	0.89 (0.85, 0.93)***
	Other, non-Hispanic	56.4%	1.02 (0.92, 1.13)
	White, non-Hispanic	63.4%	1.26 (1.21, 1.31)***
Maternal age	19 or younger	51.9%	0.93 (0.87, 0.98)**
	Older than 19	56.0%	1.08 (1.02, 1.14)**
Maternal residence	Bridgeport/Hartford/New Haven	49.1%	0.84 (0.80, 0.88)***
	All other towns	58.5%	1.19 (1.14, 1.25)***
Maternal education ^a	Fewer than 12 years	50.4%	0.87 (0.82, 0.92)*
	12 or more years	58.0%	1.06 (1.02, 1.09)***
Maternal language	English	55.6%	1.08 (0.99, 1.18)
	Non-English	51.3%	0.92 (0.85, 1.01)
Health plan	BlueCare	53.2%	0.94 (0.90, 0.98)**
	CHNCT	54.6%	0.98 (0.93, 1.04)
	HealthNet	61.0%	1.16 (1.12, 1.21)***
	Preferred One	40.1%	0.71 (0.63, 0.80)***
	Changed health plans	46.5%	0.81 (0.76, 0.86)***
Prenatal care initiation	First trimester care	56.0%	1.06 (1.01, 1.12)*
	Late prenatal care	52.9%	0.94 (0.89, 1.00)*
Prenatal care adequacy	Adequate	56.3%	1.05 (0.99, 1.11)
	Inadequate	53.7%	0.95 (0.90, 1.01)
Maternal smoking	Smoker	55.9%	1.01 (0.96, 1.07)
	Non-smoker	55.2%	0.99 (0.93, 1.04)
Gestational age	Pre-term	42.6%	0.74 (0.68, 0.82)***
	Full-term	57.3%	1.35 (1.23, 1.48)***
Birthweight	Normal	56.7%	1.35 (1.24, 1.48)***
	Moderately Low	44.3%	0.79 (0.72, 0.87)***
	Very low	27.6%	0.50 (0.36, 0.68)***

^aMothers older than age 19

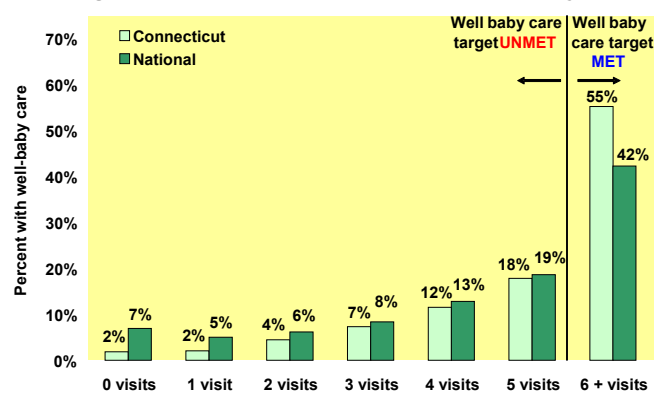
Note: Bold indicates a statistically significant association between the noted characteristic and having six or more well-baby visits compared to all other strata

for that characteristic. Association p levels are denoted by * (p<0.05), ** (p<0.01), and *** (p <0.001).

Emergency room use: More than half (56%) of babies had at least one emergency room visit in the period between 31 days after birth and 15 months of age. A total of 3,929 babies made 9,175 visits (an average of 2.3 visits per baby). Twenty eight percent of the visits were for diagnosis and treatment of upper respiratory infections, otitis media and conjunctivitis. Babies who had received six well-baby visits were no more or less likely than those with less well-baby visits to have received emergency care.

National comparison: In 2003, 55% of Connecticut babies in Medicaid received six or more well-baby visits, compared to 42% of babies covered by Medicaid nationally in plans that report to NCQA (Figure 1):

Figure 1. Connecticut vs. National Well-Baby Care



Conclusion

- Nearly half of all babies born to HUSKY A mothers in 2003 received *fewer* than the recommended number of visits in the first 15 months of life.
- Risk for receiving less than recommended care was associated with maternal characteristics and with health plan enrollment.
- Well-baby care was not associated with decreased utilization of emergency care.
- A significant proportion of babies in HUSKY A do not remain enrolled in the critical early period of life.

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¹ HEDIS specifies that managed care organizations report the proportion of babies who were continuously enrolled between 30 days and 15 months and who received well-baby care from birth through the first 15 months of life. Visits are counted by whether a baby had no visits, 1 visit, 2 visits, 3 visits, 4 visits, 5 visits, and 6 visits or more, without respect to timeliness of the visit. Babies are only counted once per category.

² Connecticut Voices for Children. Births to Mothers in HUSKY A: 2003 and 2004. New Haven, CT: CT Voices, 2006. Available at www.ctkidslink.org.