

Children and Family Health Services

Maternal and Child Health Report

Focus on Hamilton County Women and Children

Volume 4 Issue 9

October 1999

Measuring Inadequate Prenatal Care

This edition of the Maternal and Child Health report includes information on prenatal care using Hamilton County data from 1997 and 1998 births. It also explains how adequacy of prenatal care is currently measured in the public health literature.

Table 1 displays the total number of births in both 1997 and 1998 as well the number and percentage of birth to mothers who received no prenatal care.

Table 1 Births to Mothers who Had No Prenatal Care

	1997	1998
Hamilton County births	11633	11574
No Prenatal Care	427 (3.7%)	307 (2.7%)

Source: WCHOP Analysis of Birth Certificates

In 1997, 3.7 percent of births had no prenatal care, this dropped to 2.7 percent in 1998. The figures for the State of Ohio were somewhat lower. In 1997, 1.1 percent of births in Ohio had no prenatal care and in 1998, 1.2 percent of births received no prenatal care.

Table 2 includes another measure of prenatal care, the Adequacy of Prenatal Care Utilization Index (APCNU). The APCNU is an index which includes both a measure of initiation of prenatal care

(trimester care began) and of utilization of care (number of visits based on gestational age of the baby). The month care began, initiation of care, is grouped four ways : (month 1 or 2), (month 3 or 4), (month 5 or 6), and (month 7-9 or none).

A second index determines if the woman received the appropriate number of prenatal visits based on the standard of one visit per month through 28 weeks, one visit every 2 weeks from 28 to 36 weeks, and one visit a week until delivery.

The recommended number of visits is then adjusted according to gestational age. A ratio of actual/expected visits is calculated. The Kotelchuck APCNU index is a sum of these two indices: adequacy of initiation and received services.¹

Kotelchuck's APCNU index defines care as "Inadequate" when care was started after the 4th month or if less than 50 percent of expected visits were received. The number of expected visits is based on gestational age (see Table 4, p. 3).

"Intermediate" care is when care starts by the 4th month or 50-79 percent of expected visits were received. Care is defined as "Adequate" when prenatal care begins by the 4th month and 80-109 percent of expected visits are received.

Finally, "Adequate Plus" is when care begins by the 4th month and 110 percent or more of expected visits are received.

Table 2 Prenatal Care in Hamilton County, According to Kotelchuck index

	1997	1998
Adequate Plus	30.8	27.9
Adequate	51.6	55.3
Intermediate	7.3	7.6
Inadequate	10.0	9.2

Source: WCHOP Analysis of Birth Certificates

Most Ohio births (85.5 percent) were to mothers who received prenatal care in the first trimester. Only 3.1 percent of Ohio births were classified as having late (3rd trimester) or no prenatal care. Nationally, the utilization of prenatal care has increased steadily in the 1990s after having shown little or no improvement in the 1980s.²

Table 3 illustrates the wide variation in utilization of prenatal care across Hamilton County neighborhoods. On average, 9 to 10 percent of Hamilton County births are classified as receiving “Inadequate” prenatal care.

Table 3 Inadequate Prenatal Care (1997-1998) neighborhood variation

	Lowest percentage	Highest Percentage
0 North Bend	24.3	Evanston
0 Mariemont	27.5	S.Cumminsville/ Millvale
1.4 Mt. Lookout	29.0	Over-the-Rhine

North Bend and Mariemont had no births classified as having inadequate prenatal care, while Evanston, South Cumminsville/Millvale, Over-the-Rhine each had high percentages of births with inadequate prenatal care.

¹ Kotelchuck (1994) “Overview of Adequacy of Prenatal Care Utilization Index”

² Ventura, S.J, Martin, J.A., Curtin, S.C., Matthews, T. J., and Park, M.M. (2000) “Births: Final Data for 1998 : National Vital Statistics Reports.” 48(3). Hyattsville, MD: National Center for Health Statistics.

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Table 4 Recommended Visits by Weeks of Gestation

<u>Months Gestation</u>	<u>Weeks Gestation</u>	<u>Recommended Visits</u>
10+	45*	19*
	44	18
	43	17
	42	16
9	41	15
	40	14
	39	13
	38	12
8	37	11
	36	10
	35	9
	34	9
	33	8
7	32	8
	31	7
	30	7
	29	6
6	28	6
	27	6
	26	6
	25	5
5	24	5
	23	5
	22	5
	21	4
	20	4
4	19	4
	18	4
	17	3
	16	3
3	15	3
	14	3
	13	2
	12	2
2	11	2
	10	2
	9	1
	8	1
	7	1
1	6	1
	1-5	0

*for each additional week gestation, add one additional visit