The Role of Prenatal Care as a Women's Health Strategy to Reduce Infant Mortality

SACIM April 24, 2013

Why Prenatal Care?

- Despite ongoing considerations of its efficacy, prenatal care is still considered a key public health strategy to prevent adverse pregnancy outcomes

Why Prenatal Care?

- Prenatal care as an infant mortality intervention strategy grew out of favor in the aftermath of the Medicaid expansions which increased prenatal care utilization but did not simultaneously lead to a decrease in low birth weight and preterm delivery

Why Prenatal Care?

- The result of what some might consider a “policy failure” was the recognition that the nine months of pregnancy is insufficient to make a difference on its own and led to the movement for well-woman’s health care /preconception/interconception care
- Simultaneous decreased emphasis on prenatal care

Why Prenatal Care?

- Our approach (until recently) of abandoning prenatal care as an important intervention strategy failed to take many factors into consideration:
  - Medicaid payment for delivery does not equal Medicaid payment for prenatal care
  - The highest risk women were not affected by the Medicaid expansion
  - Quality and content of prenatal care minimally addressed by Medicaid expansion
- Studies of prenatal care effectiveness routinely plagued by selection bias

Improving Adequacy and Quality of Prenatal Care to Reduce Infant Mortality

- **So, given this history, can improvements in prenatal care make a difference in infant mortality rates?**
- If all women of all racial/ethnic groups have access to early and excellent high quality prenatal care, will there be an impact on infant mortality? Yes, because high quality PNC can:
  - Reduce behavioral risks (e.g. smoking, alcohol, substance abuse, appropriate weight gain)
  - Reduce the impact of pre-existing morbidities
  - Provide Social Support to reduce stress
  - Link to high-risk delivery system and appropriate levels of care for delivery
  - Link to postpartum care-interconception care- family planning

Three Components of Prenatal Care

- Early and Ongoing Assessment of a Woman's Risk Status

- Health Education and Health Promotion:
  - Pregnancy, parenting and well-child care
  - Nutrition
  - Hygiene
  - Changes in a woman's body, fetal growth and development
  - What to expect from PNC visits and pregnancy, as it progresses
  - Warning signs of potential health problems
  - Avoiding harmful exposures

- Interventions to Address Risk Factors and any Health Problems which are discovered

Healthy People 2010 Objectives

16-6. Increase the proportion of pregnant women who receive early and adequate prenatal care.

Target and baseline:

Objective	Increase in Maternal Prenatal Care	1998 Baseline	2010 Target
		Percent of Live Births	
16-6a.	Care beginning in first trimester of pregnancy	83	90
16-6b.	Early and adequate prenatal care	74	90

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Healthy People 2010 Objectives

Live Births, 1998	Maternal Prenatal Care	
	16-6a. First Trimester	16-6b. Early and Adequate
	Percent	
TOTAL	83	74
Mother's race and ethnicity		
American Indian or Alaska Native	69	57
Asian or Pacific Islander	83	74
Asian	86	76
Native Hawaiian and other Pacific Islander	75	67
Black or African American	73	67
White	85	76
Hispanic or Latino	74	66
Not Hispanic or Latino	85	76
Black or African American	73	67
White	88	79

Prenatal Care Utilization

Table D. First trimester prenatal care by race and Hispanic origin of mother: United States, 1980, 1985, 1990, 1995, 2000–2002

Year	All races[1]	Non-Hispanic		American Indian[2]	Asian or Pacific Islander[2]	Hispanic[3]
		White	Black			
2002	83.7	88.6	75.2	69.8	84.8	76.7
2001	83.4	88.5	74.5	69.3	84.0	75.7
2000	83.2	88.5	74.3	69.3	84.0	74.4
1995	81.3	87.1	70.4	66.7	79.9	70.8
1990	75.8	83.3	60.7	57.9	75.1	60.2
1985	76.2	. . .	. . .	57.5	74.1	. . .
1980	76.3	. . .	. . .	55.8	73.7	. . .

. . . Data not available.

[1]Includes races other than white and black and origin not stated.

[2]Includes persons of Hispanic and non-Hispanic origin.

[3]Includes all persons of Hispanic origin of any race.

NOTE: Race categories are consistent with the 1977 Office of Management and Budget guidelines; see "Technical Notes."

Measurement of Prenatal Care Utilization on Birth Certificate

- Birth certificate data on month PNC began collected differently in 1989 and 2003:
  - In 1989, month prenatal care based on "month prenatal care began"
  - In 2003 revision month prenatal care based on "date of first prenatal visit"
- 2003 birth certificate recommends obtaining data from the medical record; no instructions provided in 1989
- PNC data based on 2003 birth certificate reported on 28 states and one territory
  - NCHS has not included PNC utilization statistics in its recent Births reports

Prenatal Care Utilization Update 2006 and 2007

Table II. Timing of prenatal care, and primary cesarean and vaginal birth after previous cesarean (VBAC) by race and Hispanic origin of mother: 19 (revised) states, 2006 and 2007

Timing of prenatal care				
	18 reporting areas [1,2,3]			
Race and Hispanic origin of mother	1st trimester PNC		Late or no PNC	
	2007	2006	2007	2006
All races and origins [4]	67.5	69.0	8.4	7.9
Non-Hispanic white	74.9	76.2	5.5	5.2
Non-Hispanic black	57.1	58.4	12.6	11.8
Hispanic [3]	56.1	57.7	12.9	12.2
Method of delivery				

Prenatal Care Utilization Update 2008

Table C. Selected medical and health characteristics of births, by race and Hispanic origin of mother: Total of 27 reporting states, 2008

Race and Hispanic origin of mother	All births	Prenatal care		Method of delivery	Diabetes	
		First trimester care	Late or no care[1]	Primary cesarean delivery[2]	Prepregnancy[3]	Gestational[4]
		Percent			Per 1,000	
All races and origins[5]	2,748,302	71.0	7.0	23.8	6.5	40.6
Non-Hispanic:						
White[6]	1,366,527	76.7	4.8	24.1	5.9	39.1
Black[6]	349,243	60.2	11.3	26.4	9.2	34.9
American Indian or Alaska Native[6]	16,494	53.3	13.4	18.8	17.7	50.3
Asian[6]	147,132	77.9	4.7	25.0	5.9	70.6
Hispanic[7]	787,484	64.7	9.2	21.9	6.4	40.2
Mexican	529,677	63.5	9.6	20.0	6.6	41.3
Puerto Rican	43,484	66.7	7.8	25.8	8.4	45.8
Cuban	14,627	81.3	3.3	43.0	5.8	36.8
Central and South American	98,171	65.9	9.2	24.0	4.6	37.9

[1]Refers to care beginning in third trimester or no care.

[2]Primary cesarean rate is the number of women having a cesarean delivery per 100 births to women without a previous cesarean.

[3]Refers to diagnosis prior to this pregnancy.

[4]Refers to diagnosis in this pregnancy.

[5]Includes other races not shown separately and origin not stated.

[6]Race and Hispanic origin are reported separately on the birth certificate. Race categories are consistent with the 1997 Office of Management and Budget standards; see "Technical Notes." Data by race are non-Hispanic and exclude mothers reporting multiple races.

[7]Includes all persons of Hispanic origin of any race and of other Hispanic groups.

NOTE: Includes California, Colorado, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Montana, Nebraska, New Hampshire, New Mexico, New York, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Washington, and Wyoming.

Prenatal Care Utilization Not Improving

- First trimester prenatal care entry and percentage of women with late or no prenatal care far from HP 2010 objectives

- Racial and ethnic disparities remain pervasive

Healthy People 2020

- MICH-10 Increase the proportion of pregnant women who receive early and adequate prenatal care
- MICH-10.1 Prenatal care beginning in first trimester
  - Baseline: 70.8 percent of females delivering a live birth received prenatal care beginning in the first trimester in 2007
  - **Target: 77.9 percent**
  - Target-Setting Method: 10 percent improvement
  - Data Source: National Vital Statistics System (NVSS), CDC, NCHS More Information

Healthy People 2020

- MICH-10.2 Early and adequate prenatal care
  - Baseline: 70.5 percent of pregnant females received early and adequate prenatal care in 2007
  - **Target: 77.6 percent**
  - Target-Setting Method: 10 percent improvement
  - Data Source: National Vital Statistics System (NVSS), CDC, NCHS

Measurement of Prenatal Care Adequacy: Incomplete Picture

- **NO Information Routinely Collected on Content and Quality of Prenatal Care**
- Information on quality and content of prenatal care is only available from special studies or through surveillance such as PRAMS in which women retrospectively report on select content (e.g., health education provided)
- Information on prenatal care enhancements not routinely collected

Pivotal Points for Action with Respect to Prenatal Care

- **Increasing Women's Entry into Care During the First Trimester (Building on the ACA):**
  - Linkage to Well-Woman Health Care and Reproductive Health/Life Plans
  - Case-Finding strategies added to Case Management/Home Visiting/Healthy Start
  - Adoption of Universal Strategies of Western Europe which Provide Support and Recognition of Pregnant Women from Early in Pregnancy

Pivotal Points for Action with Respect to Prenatal Care

- **Revisiting the Visit Schedule**
- *Caring for Our Future: The Content of Prenatal Care Report* of the USPHS Expert Panel on the Content of Prenatal Care – 1989
  - Specific content and timing of prenatal visits, contacts and education should vary depending on risk status of pregnant woman and her fetus – more visits *early* to assess risk and to permit delivery of health promotion and interventions for found medical/psychosocial risks

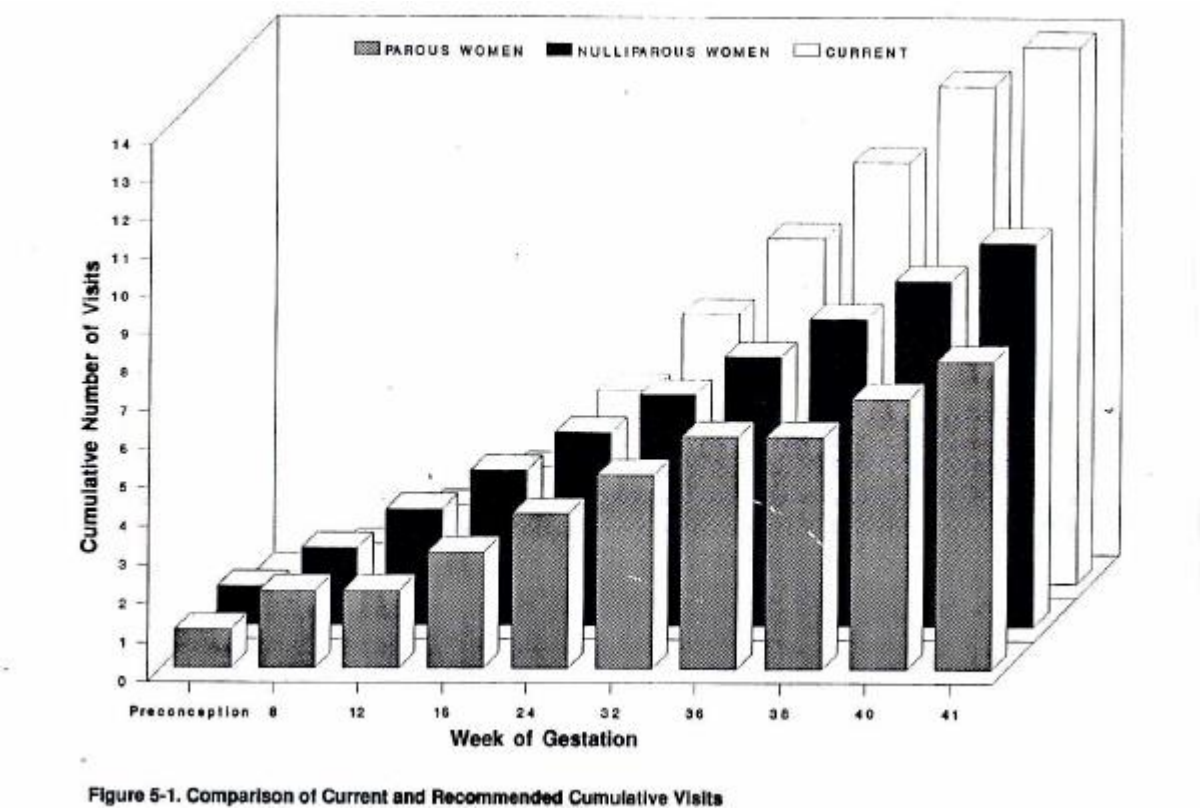

Figure 5-1. Comparison of Current and Recommended Cumulative Visits

Pivotal Points for Action with Respect to Prenatal Care

Addressing the Content and Quality of Prenatal Care

- *Caring for Our Future: The Content of Prenatal Care Report* of the USPHS Expert Panel on the Content of Prenatal Care – 1989
  - Need for a comprehensive prenatal care record– (Illinois promotion of minimum prenatal care dataset)
  - Effectiveness of PNC will be improved by additional research on specific content of care
- Develop strategies for ongoing monitoring/measuring the content and quality of prenatal care

Electronic Prenatal Dataset: Illinois CHIPRA Proposal

- A minimum set of prenatal data available to prenatal providers/hospitals electronically
- A valuable information source identifying test results, prenatal complications, and risk factors
- A tool to assist in providing appropriate level of care and avoiding duplicate testing

Why an Electronic Prenatal Dataset?

- To assure continuity of care:
  - When a woman changes prenatal providers
  - Uses the emergency room
  - Presents for delivery without prenatal care records
- To promote efficiency:
  - Information provided in a standard user-friendly format (1-page, organized, clearly labeled, problem list)
  - Hospital relieved of having locate a prenatal care record
  - One source of prenatal data regardless of number of prenatal providers involved
- To improve quality:
  - Allows provision of appropriate level of care
  - Appropriate care leads to improved outcomes
- To control costs:
  - Reduces duplication of services – services received and test results are readily available – no need to repeat
  - Better outcomes result in lower costs
- To improve research on content and quality of care

Ensure Universal Access to Prenatal Care Enhancements

- **Eliminate Differential Focus and Reimbursement of PNC Components beyond "Medical" :**
  - Smoking cessation
  - Alcohol and substance abuse treatment
  - Screening, Treatment, and Social Support for Stress, Depression, Intimate Partner Violence
  - Nutrition
  - Oral Health

Pivotal Points for Action with Respect to Prenatal Care

- **Resume Reporting on Prenatal Care in the National Vital Statistics Reports**
  - In order to draw attention to the importance of prenatal care as an infant mortality reduction strategy, we need to continue to report on progress or lack thereof

Pivotal Points for Action with Respect to Prenatal Care

- **Develop/Test/Expand New Models of Prenatal Care and Prenatal Care Enhancements**
  - Build on the Strong Start Initiative and provide support for integrated and new models of prenatal care: Centering Pregnancy, Maternity Care Home, Birthing Centers, Doula Supports during Pregnancy and Labor and Delivery

Pivotal Points for Action with Respect to Prenatal Care

- **Increasing Women's Voice in the Delivery of Prenatal Care**
  - Promoting Strategies that Empower Women with respect to decision-making throughout pregnancy and labor and delivery
  - Increasing women's choice of providers, and sites of both prenatal care and delivery
  - (January 28, 2010: Revamping the US Maternity Care System: Childbirth Connections)

Pivotal Points for Action with Respect to Prenatal Care

- **Improve the delivery of high-risk maternal health care**
  - Strengthen support for development/ enhancement of the regional perinatal system in each state
  - Improve clinical practice/protocols for high-risk maternal conditions
  - Develop a uniform approach to maternal health and maternal death surveillance

Improving Prenatal Care as an Infant Mortality Reduction Strategy

- While prenatal care is not sufficient to improve perinatal outcomes and reduce rates of infant death, it is an essential component of the continuum of reproductive/perinatal care that continues to deserve attention