



**CHILDBIRTH
CONNECTION**

since 1918

*Helping women and health professionals
make informed maternity care decisions*

Achieving the Potential of Evidence-Based Maternity Care

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Director of Programs
Childbirth Connection

Celebrating QR Connections: Women's Health
Wellesley College
March 11, 2010



Childbirth Connection

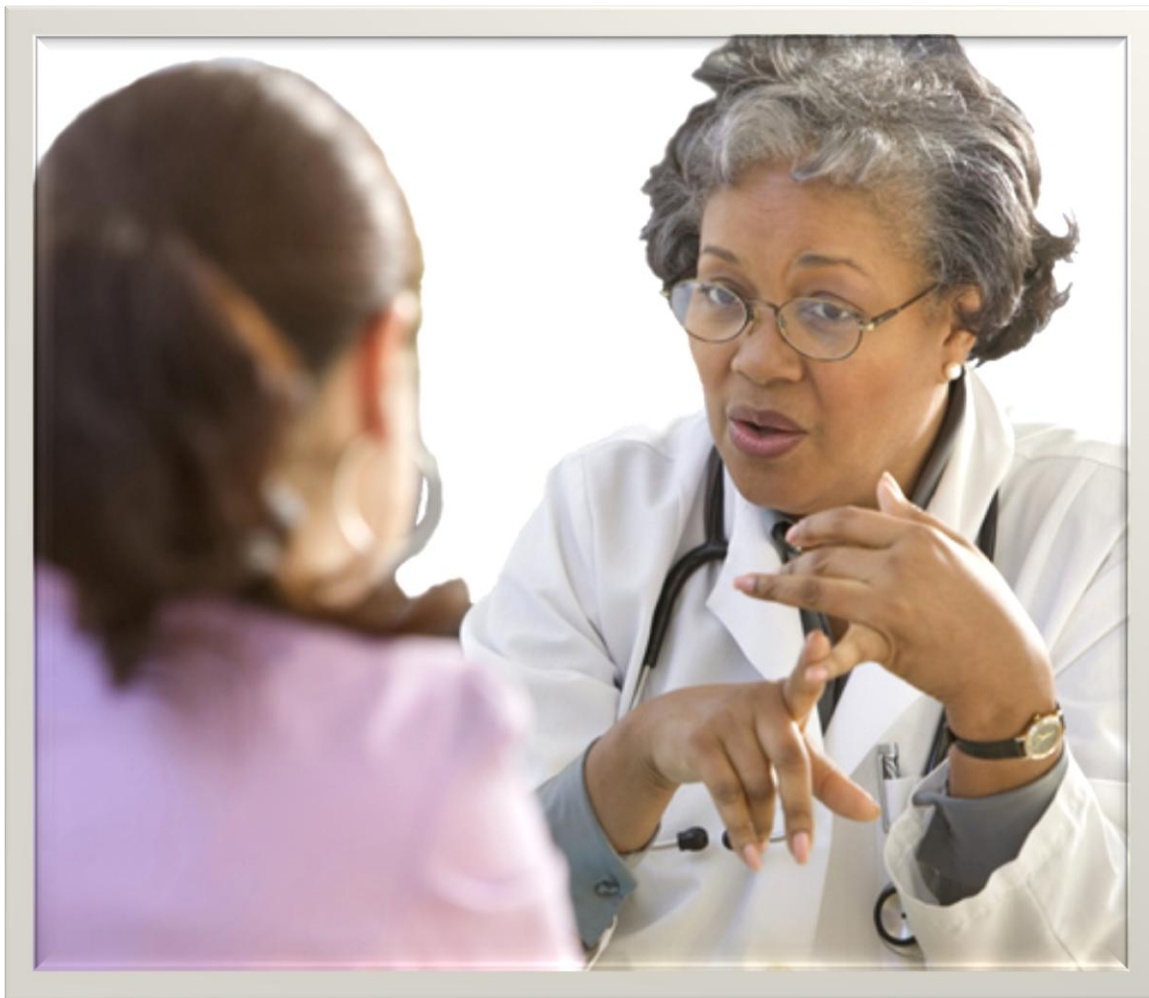
- Established 1918 as Maternity Center Association
- 92 years of maternity care quality improvement on behalf of women, newborns and families
- Innovation and leadership in areas such as: maternity nursing, nurse-midwifery education, childbirth and parenting education, freestanding birth center care

Childbirth Connection

- National program to promote evidence-based maternity care, 2000-
- *Transforming Maternity Care* project, 2007-
- Active work with policy makers, quality community
- Mission: improve the quality of maternity care through research, education, advocacy and policy
- Key audiences: childbearing women, health professionals, policy makers, journalists

Today's Main Topics

- Position of maternity care in U.S. health care system
- Performance of U.S. maternity care system
- Opportunities for improvement: evidence-based maternity care
- Charting a pathway to maternity care quality improvement



Position of Maternity Care in U.S. Health Care System

Universal Experience

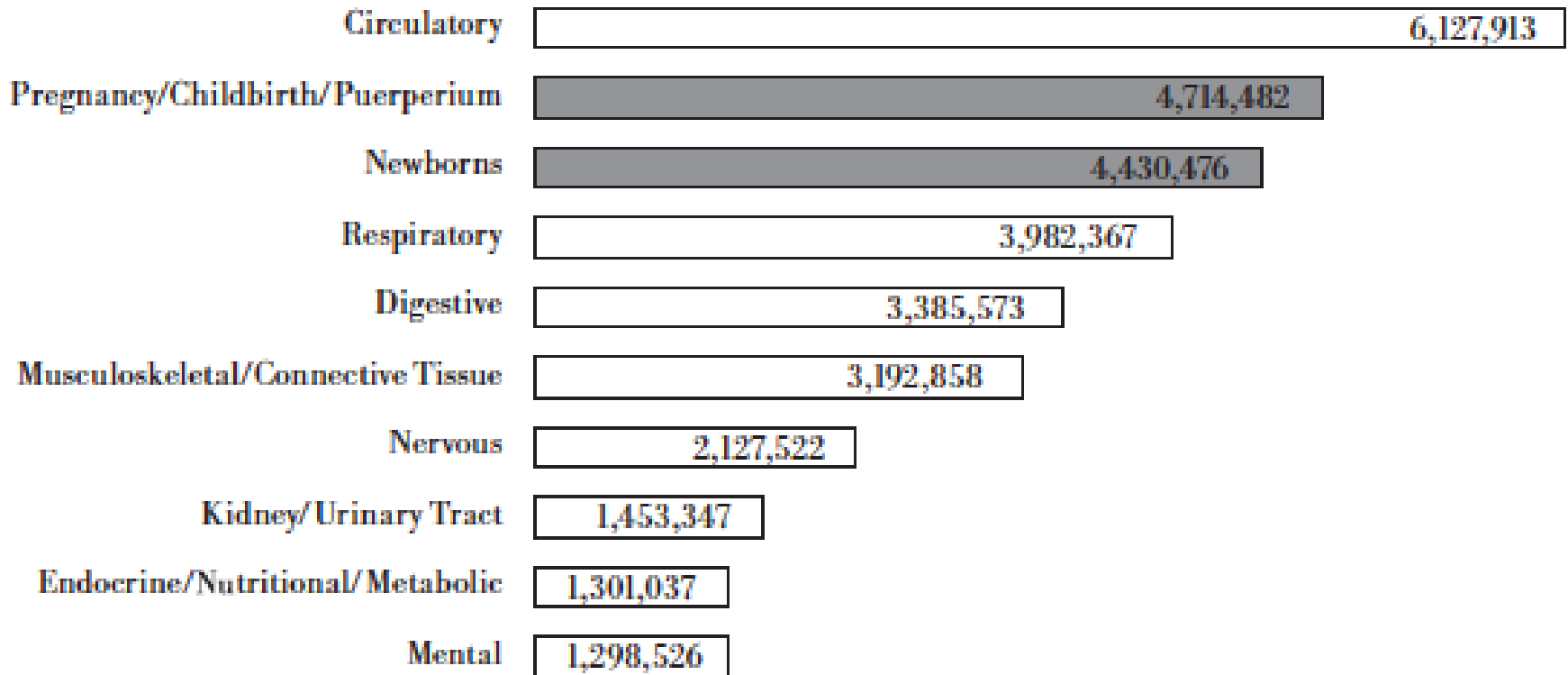
- Impacts entire population at beginning of life
- About 85% of women give birth one or more times
- 4.3 million births in 2007 — largest number ever registered

Most Common Hospital Condition

- 25% of those discharged from U.S. hospitals in 2007 were childbearing women and newborns
- Care of childbearing women and newborns was by far the most common reason for hospitalization

Most Common Hospital Condition

Leading Major Diagnostic Categories by # Discharges, U.S., 2005



Source: Agency for Healthcare Research and Quality 2008

Technology-Intensive Care

Six of ten most common hospital procedures in 2007
were maternity related

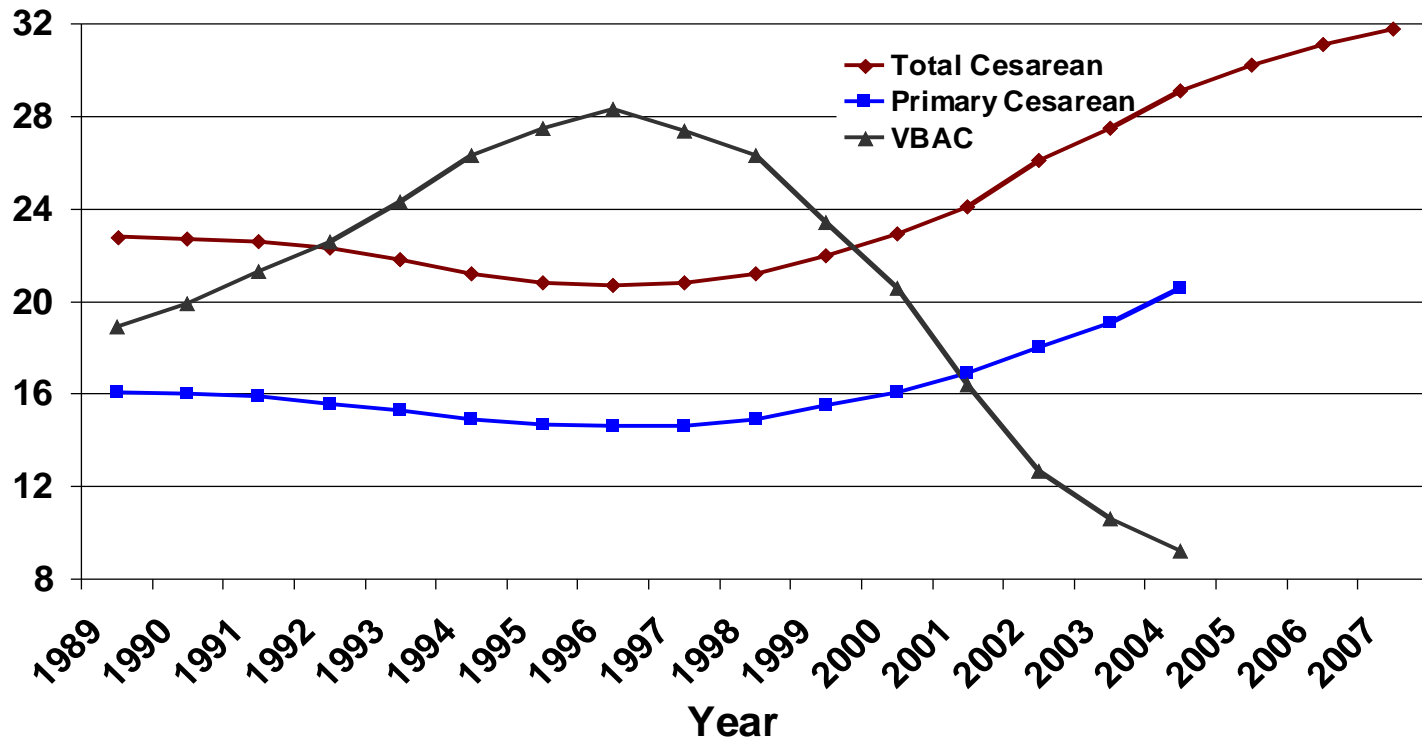
<u>Maternal and Newborn Procedures</u>	<u>Rank Among All Procedures</u>	<u>Cumulative Increase 1997-2007</u>
prophylactic vaccinations and inoculations	2	189%
cesarean section	3	85%
repair of obstetric laceration	5	27%
circumcision	7	12%
fetal monitoring	8	25%
artificial rupture of membranes to assist delivery	10	56%

Technology-Intensive Care: Cesarean Section

- Cesarean section is the most common operating room procedure in the country
- 2007 cesarean rate of 31.8% was 11th consecutive year of increase
- Record-level rate reached each consecutive year of this century

Technology-Intensive Care: Cesarean Section

Total Cesarean, Primary Cesarean, and Vaginal Birth After Cesarean (VBAC), U.S., 1989-2007



Maternity Care Most Costly Hospital Condition

- Hospitals are most costly segment of health care system
- Facility charges for pregnancy/childbirth and newborns (\$86 billion) far exceeded charges for any other hospital condition in U.S., 2006

Two Major Payers

1. Private Insurance

- Paid for 50% of maternal childbirth-related hospital stays in 2006
- Mostly via employment groups, some individual policies
- Pregnancy/childbirth and newborns were most common hospital conditions billed to private insurance in 2007 — 35% of billed discharges
- Pregnancy/childbirth and newborns were 1st and 3rd most expensive hospital conditions billed to private insurance in 2006 — 14% of billed hospital charges, or \$41 billion

Two Major Payers

2. Medicaid

- Paid for 42% of maternal childbirth-related hospital stays in 2006
- Combined federal/state program covers care for low-income pregnant women funded by taxpayers
- Pregnancy/childbirth and newborns were most common hospital conditions billed to Medicaid in 2007 — 53% of billed discharges
- Pregnancy/childbirth and newborns were most expensive hospital conditions billed to Medicaid in 2006 — 29% of billed charges, or \$39 billion

Facility Charges Vary by Setting and Mode of Birth

- Birth center, vaginal \$1,624
- Hospital, vaginal, no complications \$6,239
- Hospital, vaginal, complications \$8,177
- Hospital, cesarean, no complications \$11,525
- Hospital, cesarean, complications \$15,519

Data from 2003, most recent year for which all figures are available; current figures are higher

Hospital figures do not include newborn charges and fees for anesthesia caregivers

Birth center and hospital figures do not include fees for maternity caregivers

Performance of U.S. Maternity Care System



National Healthy People 2010 Goals

Mid-course Review: movement *away* from targets for:

- low birthweight, very low birthweight
- total preterm birth, late preterm birth (32-36 weeks)
- maternal labor and birth complications
- primary (initial) and repeat cesarean section in low-risk women
- cerebral palsy
- mental retardation

National Healthy People 2010 Goals

Mid-course Review

- numerous other maternity related goals had not reached 15% of target gains, including perinatal mortality, child mortality measure most closely associated with maternity care quality

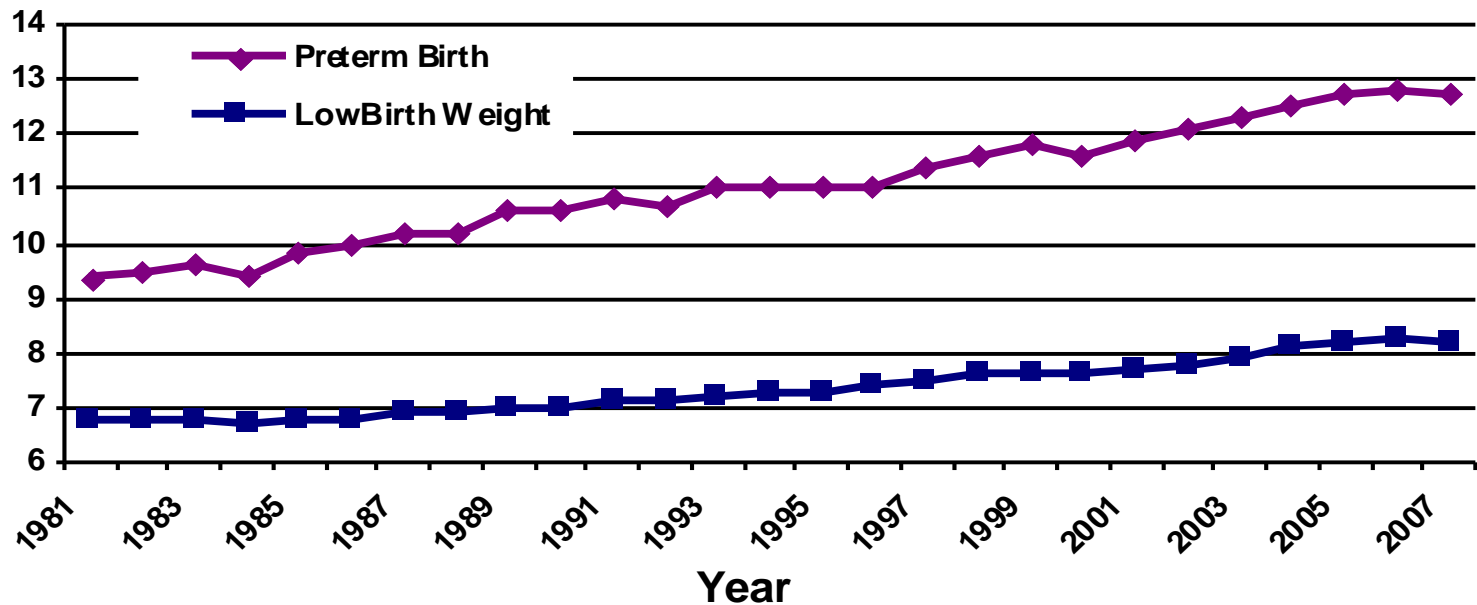
National Healthy People 2010 Goals

Midcourse review: disparities for black non-Hispanic women increasing for numerous indicators, including:

- neonatal death
- very low birthweight
- mental retardation
- cerebral palsy

Charting Preterm Birth, Low Birthweight

Preterm Birth Rate & Low Birthweight Rate, U.S., 1981-2007



Maternal Mortality

- Steady decline through most of 20th century
- Stagnation from 1982 to 1998
- Then increase, but CDC took position that this was due entirely to changes in definition and method of ascertainment
- However, recently reported analysis from California, with 14% of nation's births, suggests that maternal mortality rate tripled from 1996 to 2006, with perhaps one-third due to changes in reporting, and suspicion that obesity and cesarean section are factors
- Joint Commission issued Sentinel Event Alert 1/2010

New Mothers Speak Out

- Childbirth Connection's national *Listening to Mothers II* survey of women who gave birth in U.S. hospitals in 2005
- follow-up survey six months later focusing on postpartum experiences
- Illuminates “black box” of postpartum health due to lack of routinely and consistently collected data following hospital discharge

Health Problems: 1st 2 Months & 6+ Months, by Cesarean and Vaginal Birth

Table 1. Health problems in first two months and at six or more months after birth

Data item	In first two months			Problem persisted to at least 6 months*
	Major new problem	Minor new problem	Major or minor new problem*	
Cesarean only LTM II n=496				
Cesarean incision site pain	33%	45%	79%	18%
Cesarean incision site infection	8%	11%	19%	1%
Cesarean only LTM II/PP n=274				
Itching at cesarean incision site	24%	37%	61%	27%
Numbness at cesarean incision site	16%	41%	57%	31%
Vaginal only LTM II n=1077				
Painful perineum	15%	33%	48%	2%
Infection from cut/torn perineum	1%	4%	5%	1%

Health Problems: 1st 2 Months & 6+ Months All Mothers

Table 1. Health problems in first two months and at six or more months after birth

Data item	In first two months			Problem persisted to at least 6 months*
	Major new problem	Minor new problem	Major or minor new problem*	
<i>All LTM II n=1573</i>				
Physical exhaustion	24%	38%	62%	25%
Sore nipples/breast tenderness	19%	39%	59%	4%
Painful intercourse	12%	20%	32%	10%
Other breastfeeding problems	14%	15%	30%	
Bowel problems	9%	20%	29%	6%
Urinary problems	7%	17%	24%	11%
Breast infection	3%	5%	9%	-

Health Problems: 1st 2 Months & 6+ Months

All Mothers

Table 1. Health problems in first two months and at six or more months after birth

Data item	In first two months			Problem persisted to at least 6 months*
	Major new problem	Minor new problem	Major or minor new problem*	
<i>All LTM II/PP n=903</i>				
Sleep loss	29%	32%	61%	34%
Feeling stressed	23%	35%	58%	43%
Weight control	23%	27%	50%	40%
Lack of sexual desire	19%	24%	43%	26%
Feelings of depression	13%	24%	37%	17%
Backache	11%	25%	36%	24%
Heavy bleeding	9%	19%	28%	5%
Frequent headaches	8%	18%	26%	19%
Hemorrhoids	4%	22%	26%	9%
High blood pressure	4%	5%	9%	5%
Blood clots	2%	6%	8%	1%
Gall bladder problems	3%	2%	5%	2%
Kidney problems	1%	2%	3%	2%

International Comparisons

Overall Health Care Expenditures

Among 30 Organisation for Economic Co-operation and Development Nations, U.S.

- had by far the greatest overall health expenditure per capita
- had greater than twice the average health expenditure per capita
- far exceeded all other countries in health expenditure as a share of gross domestic product

International Comparisons

Organisation for Economic Co-operation and Development

Among 30 member nations in 2003, U.S. had higher

- low birthweight rate than 23 others
- perinatal mortality rate than 14 others
- cesarean rate than 19 others

International Comparisons

World Health Report 2005: Make Every Mother and Child Count

- 29 nations with lower estimated maternal mortality rates
- 35 nations with lower early neonatal mortality rates
- 33 nations with lower neonatal mortality rates

Cautionary Body of Research: Developmental Origins of Health & Disease

- Sensitive periods of rapid development: prenatal and newborn, adolescence
- Concern about environmental, nutritional and medical exposures at these times
- Precautionary principle is warranted

“Perinatal Paradox Doing More and Accomplishing Less”

- Disappointing, often deteriorating outcomes, in concert with procedure-intensive care and very large financial investments
- Roger Rosenblatt, 1989 *Health Affairs* article
- more apt than ever now

Opportunities for Improvement: Evidence-Based Maternity Care



Challenge: Evidence-Based Maternity Care Not Reliably Delivered

- *Effective Care in Pregnancy and Childbirth* and other landmark publications, 1989
- No indication of uptake in the United States, 1999
- Continuing evidence-gaps: Milbank Report on *Evidence-Based Maternity Care*, 2008
www.childbirthconnection.org/ebmc/

Evidence-Based Maternity Care: Core Aim

- Provide **effective care with least harm** to childbearing women and newborns
- Possible care paths often have very different benefit/harm profiles
- Give priority to effective paths that are least invasive, ideally with limited or no known harms

Consistent with: First, do no harm

Evidence-Based Maternity Care: Basic Principles

- Question common assumptions
- Know that many studies of interventions are unreliable guides for decision making
- Look for the “gold standard”: up-to-date, well-conducted systematic reviews, when available
- Make informed decisions considering effectiveness and safety, women’s preferences, available care options
- Beware of misleading claims of “evidence-based” products and services that may not reflect these principles

Systematic Review

Contrasts with “narrative review”

Procedures for limiting bias and fostering validity

Develop up front and then carry out protocol that specifies:

- key questions: safety and effectiveness in health care interventions
- key parameters, including interventions, populations, study designs, outcomes, and report languages to be included and excluded
- search strategy for finding relevant studies
- quality assessment procedures for eliminating poorer quality relevant studies
- Procedures for summarizing results, including use of meta-analysis, as appropriate

Who Needs Systematic Reviews?

Clinicians determining how to provide care

Policy makers encouraging specific types of care (e.g., reimbursement)

Clinical practice guideline developers

Researcher planning a study and funders allocating research resources

Patient and families making informed health care decisions

Journalist reporting on results of a new study

In general, the place to begin for diverse stakeholders

How to Find Systematic Reviews

Cochrane Collaboration (health and medicine)

Campbell Collaboration (social, educational, crime and justice interventions)

Agency for Health Care Research and Quality: one type of “comparative effectiveness research”

Other public agencies throughout the world

Journal literature via Pub Med and other databases, using search strategies for systematic reviews and meta-analyses

Problem: we do not have needed databases that bring these especially valuable resources together in one place

Maternity Care Lessons from Systematic Reviews

Evidence-Based Maternity Care: What it Is and What It Can Achieve
(Sakala and Corry, 2008)

Available at www.childbirthconnection.org/ebmc/

Issued jointly by Childbirth Connection, Reforming States Group, and Milbank Memorial Fund

Takes stock of U.S. maternity care system, identifies opportunities for improvement, identifies barriers to evidence-based maternity care

Timely for use by advocates and others in health care reform and health care quality improvement discussions

Examples of Overuse in Maternity Care

- Labor induction
- Epidural analgesia
- Cesarean section
- Continuous electronic fetal monitoring
- Rupturing membranes
- Episiotomy

Examples of Underuse in Maternity Care

- Smoking cessation interventions
- External version
- Continuous labor support
- Measures to bring comfort and promote labor progress
- Delayed and spontaneous pushing
- Non-supine positions for giving birth
- Delayed cord clamping
- Early skin-to-skin contact
- Interventions for breastfeeding initiation, duration
- Interventions for postpartum depression

Unwarranted Practice Variation

- Manyfold variation is common
- Across regions, hospitals, caregivers
- Across very narrow classes of women (Robson mode of birth categories)
- 124 Hospital Corporation of America facilities: almost “random” pattern of operative delivery
- Baicker and colleagues: higher rates of cesarean involve use in healthier women, with greater expense, inevitable excess morbidity, and no mortality gains

Charting a Pathway to Maternity Care Quality Improvement



What Do We Need to Do to Reliably Deliver Right Maternity Care at Right Time?

- Every system is perfectly designed to get the results it gets
- “The definition of insanity is continuing to do the same thing over and over again and expecting a different result.” Albert Einstein

The solution is to change the system in which maternity care is delivered

Transforming Maternity Care Project Steps

- Vision: figure out where we want to go
- Blueprint: figure out how to get there
- Implementation: head off in that direction

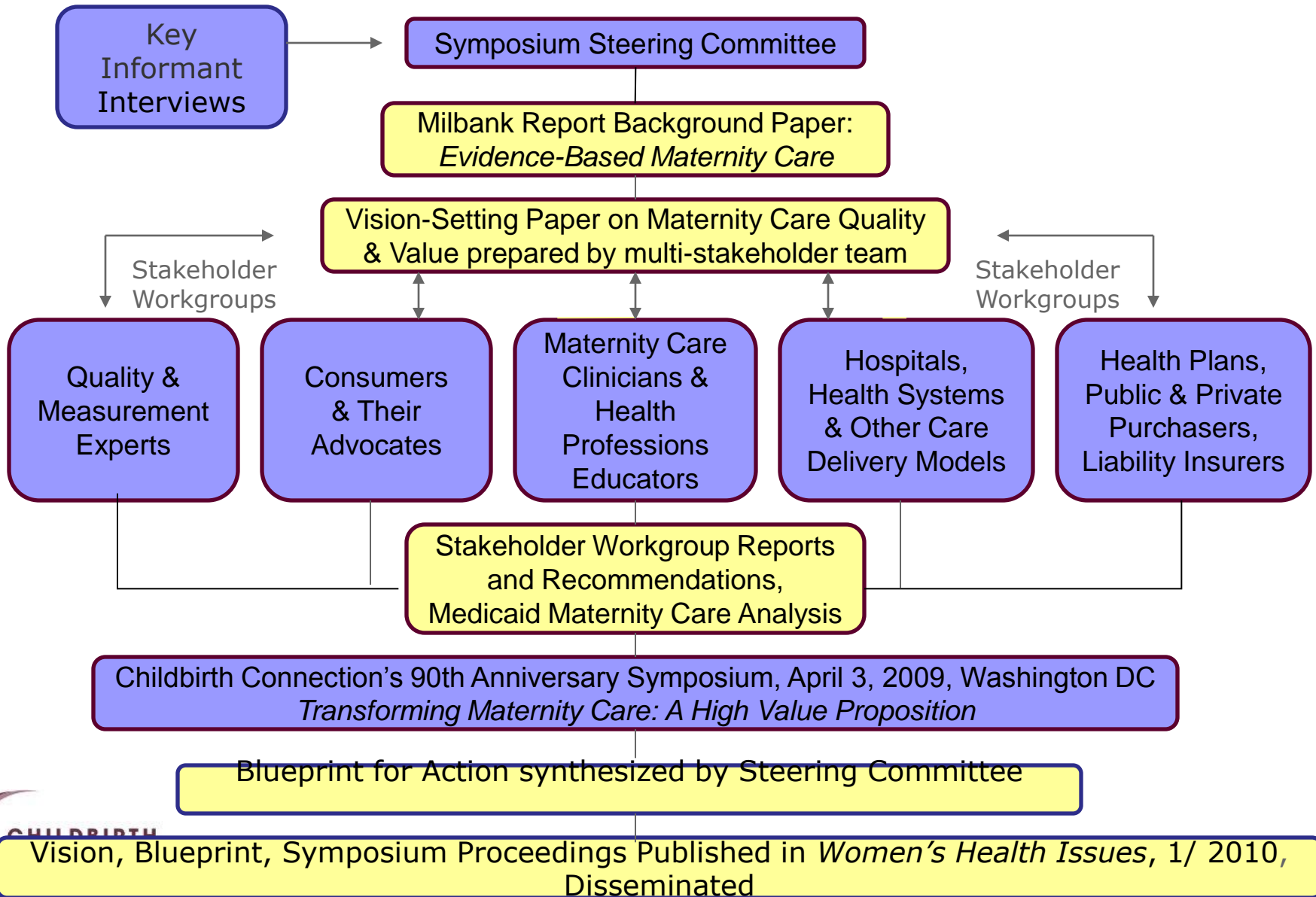
Transforming Maternity Care Project Process

- Consider best evidence about safe and effective care and about quality improvement
- Engage stakeholders from across the health care system and from all of the involved disciplines
- Foster sharing, deliberation, feedback, transparency, consensus

In the process, help put maternity care on the national quality, policy, and health care reform agenda

Transforming Maternity Care Project

Childbirth Connection's Multi-Year Multi-Stakeholder Collaboration



Key Informants

- 42 national quality improvement leaders and innovators with diverse experiences, perspectives
- Maternity care system performance?
- Priority strategies for system change?
- *Transforming Maternity Care* project design?

Steering Committee

- 23 national leaders from diverse sectors and diverse disciplines
- Extraordinary commitment over 2-year period
- Planning meeting and continued work by phone and email
- Synthesized workgroup reports and issued Blueprint for Action

Milbank Report: *Evidence-Based Maternity Care*

- Designated by Steering Committee as background document
- Takes stock of U.S. maternity care system
- Identifies opportunities and great potential for improvement
- Summarizes key barriers

“2020 Vision for a High-Quality, High-Value Maternity Care System”

- Developed collaboratively over several months by multi-stakeholder, multi-disciplinary team of 12
- Framework for quality and value in maternity care and goals for system meeting these criteria
- Process: facilitated meeting followed by continued dialogue and refinement
- Input from Steering Committee, Stakeholder Workgroup Chairs
- Focal point for sector-specific recommendations for change

Allegory Illustrating Vision

- Common response: We are providing woman-centered, high-quality, evidence-based, [fill in] maternity care now
- Allegory developed to compare a woman experiencing common elements of care within present system and her friend experiencing care within envisioned system
- Author: Rima Jolivet, *Transforming Maternity Care Project* direct
- Available at www.childbirthconnection.org/vision/
- Brings to life implications of proposed vision for women, newborns and families

Five Stakeholder Workgroup Reports

Sectors and Workgroup Chairs

- Clinicians and Health Professions Educators

Ned Calogne, MD, MPH

CO Dept. Public Health & Environ., US Preventive Services Task Force

- Consumers and their Advocates

Judy Norsigian

Our Bodies, Ourselves

- Health Plans, Private and Public Payers, Liability Insurers

Lisa Latts, MD, MPH

Wellpoint, Inc.

Five Stakeholder Workgroup Reports

Sectors and Workgroup Chairs

- Hospitals, Health Systems, and Other Care Delivery Systems
Frank Mazza, MD
Seton Family of Hospitals
- Measurement and Quality Research Experts
Barbara Rudolph, PhD, MSSW
The Leapfrog Group

Five Stakeholder Workgroup Reports

Process for Developing Reports and Recommendations

- Developed collaboratively over several months by multi-stakeholder, multi-disciplinary teams of 10
- Emphasis on diversity within each sector
- Describe concerns and priority recommendations in 4 common areas, and in 2 to 3 others of special import to sector
- Emphasis on sharing, deliberation and consensus
- Feedback from Steering Committee

Four Common Topics for All Reports

- Performance measurement and leverage of results
- Payment reform to align incentives with quality
- Disparities in access and outcomes of maternity care
- Improved functioning of the liability system

Additional Topics Chosen by One or More Workgroups

- Scope of covered services for maternity care
- Coordination of maternity care across time, settings and disciplines
- Clinical controversies
- Decision making and consumer choice
- Scope, content, availability of health professions education
- Workforce composition and distribution
- Development and use of health information technology

Commissioned Medicaid Maternity Care Access and Quality Paper

- Medicaid pays for 42% of births in U.S. and offers opportunities for policy intervention to improve quality
- Current Medicaid maternity care quality improvement initiatives limited and weak
- Vision: Medicaid can be a leader in maternity care QI

Transforming Maternity Care Symposium

- Invitational meeting bringing together leaders from across the health care system
- Georgetown University, Washington DC, April 2009
- Presentation of Vision paper, 5 workgroup reports and Medicaid paper
- Feedback from invited discussants and audience members
- Inaugural Maternity Quality Matters Award given to Seton Family of Hospitals
- Commemorated Childbirth Connection's 90th anniversary

Post-Symposium Work

- Summarize feedback from meeting and continuing comment period following meeting
- Workgroups revise reports in consideration of feedback
- Medicaid authors revise article in consideration of feedback
- Steering Committee synthesizes workgroup reports into Blueprint for Action
- Guest Reviewer Panel provides feedback to strengthen the quality of core documents prior to publication

Special Issue, Release of Vision and Blueprint, Launch of Partnership

- January 2010 *Transforming Maternity Care* supplement to *Women's Health Issues*, freely available at:
<http://www.sciencedirect.com/science/issue/5192-2010-999799998.8998-1591119>
- Release event in Washington DC with brief presentations from project leaders and discussion panel
- Public-private Partnership announced to implement Blueprint
- Beginning of media and other outreach

- *Transforming Maternity Care* web section with stakeholder workgroup papers: <http://www.childbirthconnection.org/tmc/>

Transforming Maternity Care Partnership

- Childbirth Connection is inviting all maternity care stakeholders to become familiar with the Blueprint and join in the work to improve maternity care quality
- Childbirth Connection is pursuing collaborative Partnership projects
- Childbirth Connection offers technical assistance for independent Blueprint implementation projects

Selected Examples of Blueprint Recommendations

Create and Implement National System of Public Reporting of Maternity Performance Performance Measurement

“Transparent” performance results can be used by

- Health professionals and facilities to understand and improve own practice
- Childbearing women to make crucial informed choices about caregiver and birth setting
- Certifying and accrediting bodies to help assure quality
- Purchasers to help assure and reward quality

Policy makers to provide oversight, create needed policies

Design and Pilot Restructured Model that Bundles Payment for Full Episode of Care

Payment Reform

Growing consensus about moving “From Volume to Value”:

- rewards use of needed beneficial care (versus current rewards for high-volume)
- can give bonuses to reward good outcomes — rarely done at present!
- need research to know how to set payments, how to adjust for fair payments, how to deal with extreme outliers

Increase Caregivers from Underserved Communities; Improve Cultural Competence

Disparities in Access and Outcome

- Develop early outreach health professions programs to middle and high school students in disparity communities
- Create assistance programs to support participation of disparity community students in maternity education programs
- Expand scope and eligibility of National Health Service Corps to increase cultural competency capacity
- Establish community-based doula, CBE and peer breast-feeding support programs in disparity communities

Implement Quality Improvement Programs

Improved Functioning of Liability System

Despite repeated calls for tort reform, at best it fails to achieve many crucial goals of liability system

Good evidence that “caps on non-economic damages” have limited impact or none at all in maternity care

Growing number of impressive reports that effective quality improvement programs can dramatically and fairly rapidly reduce claims, payouts, liability insurance premiums

Identify and Provide Coverage for Essential Evidence-Based Maternity Care Services

Scope of Covered Services

- Convene independent multi-stakeholder panel to specify essential package of evidence-based maternity services for healthy women/newborns and for those with special needs
- Require high standard of evidence, and consider benefits, harms and alternatives
- Include mental health and support services
- Use supported practice to make coverage decisions and put interventions of unproven benefit on Do Not Pay list

Extend the Health Care Home Model to the Full Episode of Maternity Care

Care Coordination

- Encourage National Committee for Quality Assurance to develop standards for Woman- and Family-Centered Maternity Care Home
- Implement pilots that restructure health system relationships and financing to to foster improved care coordination, including *From Volume to Value* model

Implement Clinical Policies and Practices that Foster Safe Physiologic Childbirth

Clinical Controversies

- Carry out routine multidisciplinary peer review of select procedures to promote accountability and align evidence and practice
- Implement multi-disciplinary team training to safely provide practices such as VBAC, vaginal breech and twin births, intermittent auscultation
- Institute quality improvement programs with benchmarking, education, lessons from successful models to increase access to declining practices supported by best evidence

Expand Opportunities and Capacity for Shared Decision Making

Decision Making and Consumer Choice

- Fill priority gaps in decision tools and resources for informed decision making
- Experiment with and evaluate innovative models and modalities for childbirth education
- Promote a cultural shift in attitudes toward childbearing through childbirth literacy campaigns, partnership to improve images of childbearing in the mass media, and regular surveys to capture experiences of childbearing women

Develop Common Core Curriculum for all Maternity Care Provider Disciplines

Health Professions Education

- Convene summit of relevant stakeholders
- Model on Duke University's universal women's health curriculum across 6 disciplines
- Emphasize primary maternity care: health promotion, disease prevention, skills and knowledge for facilitating innate capacities for birth, breastfeeding, attachment
- Create crosswalks between national standardized performance measures and trainee competencies

Carry Out Independent Workforce Needs and Capacity Assessment

Workforce Composition and Distribution

- Engage independent entity in assessing childbearing population and workforce trends, optimal workforce, and strategies for attaining optimal workforce
- Consider roles of respective disciplines, trends in composition of childbearing population, and geographic distribution
- Develop and disseminate credible workforce analysis report
- Carry out implementation strategies

Create Model Maternity Care Electronic Health Record

Development and Use of Health Information Technology

Create standardized data elements for full episode of maternity care to

- foster meaningful data sharing and high-quality care across settings, providers
- enable consistent, routine performance measurement without collection burdens, including all-important outcomes
- provide ability to understand and measure disparities of race/ethnicity, language

To Learn More

- Learn about project and get access to all of the core documents via www.childbirthconnection.org/tmc/
- “2020 Vision” and “Blueprint for Action” freely available on *Women’s Health Issues* website (get there via above link)

Thank You

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