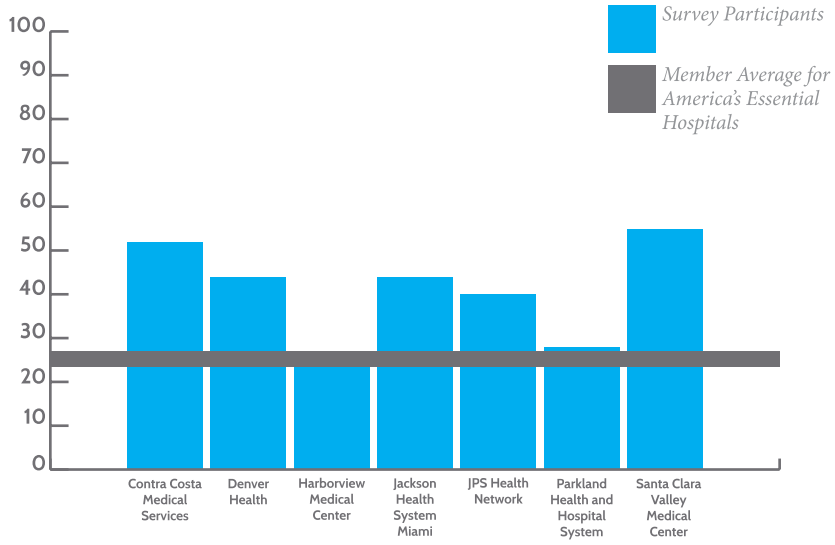
HEALTHY MOTHERS AND HEALTHY BABIES: IMPROVING PRENATAL CARE IN THE MEDICAID POPULATION

Prematurity—defined as birth before 39 weeks of gestation—brings severe health consequences for mother and baby, and drives health care costs up. Prematurity is an issue for hospitals that serve large volumes of Medicaid patients because many of these patients do not receive adequate prenatal care. Essential hospitals—those that fill a safety net role in their community—are addressing the unique barriers blocking their patients' access to these crucial preventive services and improving outcomes for their most vulnerable patients.

The Affordable Care Act has expanded preventive services and renewed the focus on prenatal care for Medicaid and low-income populations. In response, the Centers for Medicare & Medicaid Services launched a national set of initiatives to improve access to prenatal care.[1] The Essential Hospitals Institute (formerly the National Public Health and Hospital Institute) has joined these efforts by partnering

FIGURE 1: MEDICAID DISCHARGES BY PARTICIPATING HOSPITAL



Source: America's Safety Net Hospitals and Health Systems, 2010: Results of the Annual NAPH Hospital Characteristics Survey.

Research Methodology

Our research methodology comprises a literature review, member survey, and site visits. The literature we examined explores evidence-based prenatal care practices beginning with conception through the first three months of life, as well as state-based prenatal care programs for low-income and racial and ethnic minority patients. The literature investigates program barriers and their effects on Medicaid and uninsured patients, and provides background information on the disease burden and typical birth outcomes in Medicaid populations.

We then worked with seven members of America's Essential Hospitals, chosen based on their high proportion of Medicaid patients; strong track record of providing excellent prenatal care; and

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TABLE 1 PARTICIPATING HOSPITAL PROFILES

HOSPITAL	STATE	BEDS	ANNUAL BIRTHS	TOTAL OUTPATIENT VISITS	% OF UNINSURED OUTPATIENT VISITS
Contra Costa Medical Services (CCMS)	CA	118	2,318	470,870	22%
Denver Health (DH)	CO	404	3,469	1,038,724	33%
Harborview Medical Center [19] (HMC)	WA	413	1,948	330,444	23%
Jackson Health System Miami (JHSM)	FL	1,637	4,358	477,392	52%
JPS Health Network (JPS)	TX	547	6,194	1,088,648	56%
Parkland Health & Hospital System (PHHS)	TX	798	13,094	1,330,666	54%
Santa Clara Valley Medical Center (SCVMC)	CA	554	4,526	868,366	27%

Source: America's Safety Net Hospitals and Health Systems, 2010: Results of the Annual NAPH Hospital Characteristics Survey; America's Essential Hospitals prenatal care survey, 2013.

with Provider Resources, Inc., a research and improvement company addressing a variety of health care issues, to identify successful strategies for reducing premature births in safety net settings. Through a comprehensive literature review, interviews with members of America's Essential Hospitals (formerly the National Association of Public Hospitals and Health Systems), and site visits to two member hospitals, the Institute has uncovered several best practices for improving prenatal care in Medicaid populations.

LACK OF PRENATAL CARE DRIVES PREMATURITY, NEGATIVE OUTCOMES

Prematurity is the leading cause of newborn death in the United States.[2] In fact, premature babies are born at a higher rate in the United States than in 130 other countries of the world. In 2010, nearly 12 out of every 100 babies born in the United States were premature, an increase of 30 percent from 1981 and the equivalent of more than half a million annual premature births.[3] According to the Institute of Medicine (IOM), in 2005 premature births cost the United States more than $26 billion.

For essential hospitals, these trends are clearly evident. Members of America's Essential Hospitals, for example, serve large volumes of Medicaid patients (see Figure 1). And childbirth-related costs represent an ever-larger portion of Medicaid bills. In fact, maternal and newborn charges now account for 27 percent to 29 percent of all Medicaid

Research Methodology, continued

varied geography, patient populations, and number of births (see Table 1 for hospital profiles). We surveyed the hospitals from December 2012 to February 2013, interviewing physicians, nurses, nurse practitioners (NPs), and other medical professionals with direct involvement in the hospital's prenatal care program. Respondents subsequently reviewed our interview notes for accuracy and depth of data. Survey topics included population characteristics and disease burden, common barriers to receiving prenatal care, community engagement and partnership opportunities, prenatal care delivery models, hospital infrastructure, and patient assessment and tracking.

We also visited two members of America's Essential Hospitals, both of which have a distinguished and longstanding history of providing cutting-edge prenatal care to large Medicaid populations: Parkland Health and Hospital System in Dallas and Santa Clara Valley Medical Center in San Jose, California. We observed patients and families during pregnancy and follow-up visits, which greatly enhanced the depth and meaning of survey results.

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inpatient charges, and maternity procedures account for six of the top ten inpatient procedures billed to Medicaid.[4] In larger hospital systems such as Parkland Health and Hospital System and Denver Health, Medicaid births account for at least 85 percent of births annually.[5]

But Medicaid populations lack a number of important social and financial resources that place some pregnant mothers at higher risk for complications during pregnancy.[6] These barriers also prevent many from seeking consistent prenatal care,[7] thus leading to dangerous consequences.

Mothers who do not receive prenatal care are three times more likely to deliver low-birthweight babies, and their babies are five times more likely not to survive delivery.[8] What's more, research shows that low-income women who did not receive prenatal care services through Medicaid had a 21 percent higher rate of delivering low-birthweight babies and a 23 percent higher infant mortality rate compared with those who received care coordination through Medicaid.[9]

In addition to the health risks, premature births generate significant health care costs. For instance, a baby born between 32 and 36 weeks costs more than $13,000 in the birth year alone, while a baby born earlier than 28 weeks costs $190,000 in the birth year. High costs persist after the birth year, as treatment continues throughout childhood for issues related to prematurity.[10]

TABLE 2 CHRONIC DISEASE FOUND IN MATERNAL POPULATION

CHRONIC DISEASE	NUMBER OF HOSPITALS TREATING THIS CONDITION IN MATERNAL POPULATION (OUT OF 7 SURVEYED)
Asthma	3
Diabetes	7
Hypertension	5
Obesity	7

Other diseases treated: Psychiatric disorders, tropical illnesses, HIV/AIDS, previous poor prenatal outcomes/surgical interventions, major substance abuse

Source: America's Essential Hospitals prenatal care survey, 2013

Research Methodology, continued

We conducted interviews at each site with hospital and clinic prenatal care staff, the labor and delivery team, neonatal intensive care unit (NICU) staff, follow-up and interconception (or between pregnancy) care staff, and patients and/or family members. ■

MEDICAID POPULATIONS FACE INCREASED DISEASE, BARRIERS TO PRENATAL CARE

Research shows that certain factors that disproportionately affect Medicaid populations—e.g., chronic disease, obesity, mental disorders, and substance use—increase the risk of maternal complications and adverse birth outcomes.

For instance, low-income women are 6.2 percent more likely to be obese, increasing the risk of diabetes and other illnesses that can lead to complications for both the mother and fetus. For example, macrosomia is an oversized fetus, which can cause trauma during birth and a greater chance of cesarean delivery. Preeclampsia is high blood pressure and high protein content in the mother's urine, which can lead to seizures during pregnancy.[11] Similarly, women with mental health issues such as depression, a condition more prevalent in Medicaid

populations,[12] are almost twice as likely as women without these issues to give birth to low-birthweight infants.[13]

Five major barriers to adequate prenatal care exacerbate this increased disease burden in Medicaid populations. Some of these barriers are logistical. For instance, a California study indicated that of the 25 percent of women who did not begin prenatal care in the first trimester, 7.9 percent reported a **lack of transportation** and 10.4 percent identified **lack of child care services** as obstacles.[14] Affordability is another issue. Of respondents in one study, 23.8 percent cited the **high cost of care** as a barrier to receiving timely prenatal care.

Other hurdles are sociological. For example, among Hispanics, **language and communication barriers** are among the most prominent reasons for delaying or skipping prenatal care visits.[15] **Cultural differences** also hinder successful prenatal care. For example, some minorities are disproportionately affected by certain health issues, including substance abuse[16] and incidence of sexually transmitted disease,[17] and thus need prenatal care programs designed with these factors in mind. Other challenges include **lack of access to healthy foods** and lack of access to progesterone, which has been shown to reduce the number of uterine contractions that typically precede a premature birth—a helpful resource for mothers with a history of premature delivery.[18]

ESSENTIAL HOSPITALS TAILOR PRENATAL CARE TO POPULATIONS IN NEED

In 2001, the IOM released *Crossing the Quality Chasm: A New Health System for the 21st Century*, which, as the IOM explains, calls for fundamental change to close the quality gap, recommends a redesign of the American health care system, and provides overarching principles for specific direction for policymakers, health care leaders, clinicians, regulators, purchasers, and others. The report includes six aims for health care improvement: safe, effective, patient-centered, timely, efficient, and equitable.[20] Not only do all of the hospitals in this study address these aims, but they remain committed to providing essential, effective, and high-quality care despite financial constraints and a high percentage of medically and socially complex patients.

To address their population-specific challenges in a resource-scarce environment, members of America's Essential Hospitals combine innovative solutions and key best practices to tailor care to their patients. For instance, to maximize their resources while still providing the best care possible, several organizations group patients according to risk, referring low-risk patients to NPs and midwives and high-risk patients to physicians. Others observe local community trends and organize services for pregnant patients who will likely need treatment for specific conditions, such as comorbidities or frequent pregnancies that occur too close together. For example, clinics that see a significant number of women with previous caesarean section will offer vaginal birth after caesarean (VBAC) services. Other clinics offer women who

TABLE 3 SURVEY RESPONDENTS WITH ENHANCED PROGRAMS TO ADDRESS BARRIERS TO PRENATAL CARE

BARRIER	# OF HOSPITALS ENCOUNTERING BARRIER	CCMS	DH	HMC	JHSM	JPS	PHHS	SCVMC
Lack Of Transportation	7				■		■	■
Lack of Child Care	6					■		
Lack of Healthy Foods	4		■	■		■		■
Substance Abuse	7	■	■	■		■	■	■
Primary Language Other than English	4		■	■		■	■	
Unplanned Pregnancy	4	■					■	■

Note: Box indicates the existence of a program that was enhanced to address the barrier specifically for the maternal population.
Source: America's Essential Hospitals prenatal care survey, 2013

have children in quick succession education regarding the importance of spacing their pregnancies and the role of birth control in this process, as well as access to birth control, should they choose to use it. Specialty services, such as counseling and self-management for chronic diseases, are also extended to complex prenatal patients with comorbidities such as mental health disorders or diabetes. All of the hospitals surveyed practice patient-centered care and adjust organizational practices based on feedback. For example, one organization hires individuals with similar cultural and linguistic backgrounds as its patients to improve communication and cultural competence.

The following examples more specifically highlight this work:

Contra Costa Health Services in Martinez, California employs standardized order sets through its electronic health record (EHR) system and stratifies differences in breastfeeding rates according to race to identify specific populations that may need additional postdischarge care. For example, those with statistically high rates of infant morbidity or low rates of breastfeeding receive counseling support and other appropriate resources. Contra Costa also developed the first Institute for Healthcare Improvement (IHI)–approved clinical care bundle for VBAC, which ensures evidence-based care delivery.

Denver Health collects a full range of data that include clinical results, medications, physiological and immunization history, patient satisfaction scores, and financial and billing information, and uses them for research and quality improvement. Data from all sites are captured and housed in a comprehensive EHR system that supports point-of-care decision-making for clinicians.

Harborview Medical Center in Seattle provides wraparound services through a program called Maternity Support Systems (MSS). MSS ranks patients' risk levels using an ABC system. Patients with a C-rank (i.e., high risk) receive 30 additional hours of prenatal care services. Due to supplemental state-based funding, 99 percent of female patients qualify for this program.

Jackson Health System in Miami trains physicians, NPs, and other prenatal care staff in a simulation lab to improve patient safety and quality when caring for a large volume of high-risk patients.

JPS Health Network in Fort Worth, Texas integrates nurses, physicians, and residents in the caregiving process through corounding, departmental meetings, and annual celebrations such as resident graduations. These types of activities increase communication and build teams among clinicians to ensure effective patient planning.

NPs deliver prenatal care programs to all patients—those with simple and those with more complex pregnancies—at Parkland Health and Hospital System. This practice ensures continuity of care, effective interdisciplinary team management, and enhanced culturally and linguistically appropriate care.

After working with patients unaware of their babies' susceptibility to genetic conditions, Santa Clara Valley Medical Center developed a robust genetics testing and counseling department that begins early and proactive disease management with families who have babies at risk for complex diseases such as spina bifida. Santa Clara also offers a comprehensive lactation program and uses a nearby breast milk bank for infants in the NICU whose mothers cannot breastfeed them to ensure premature babies have the best possible nourishment.

KEY ATTRIBUTES BUILD THE FOUNDATION FOR QUALITY IMPROVEMENT

Adequate and timely prenatal care has been demonstrated to reduce premature births and improve outcomes for both the baby and the mother.

Improving prenatal care for Medicaid patients is an important opportunity to optimize health system performance according to the goals set forth in the IHI's Triple Aim: better care, lower costs, and improved population health. Members of America's Essential Hospitals are embracing this opportunity and developing innovative and effective strategies to overcome the complex challenges Medicaid patients face in accessing prenatal care.

The success of these strategies rests on a foundation built upon several key attributes. The organizational features highlighted in Table 4 facilitate adoption of the prenatal care delivery models described in this research brief and should serve as a guide to other providers working to improve the quality of care they deliver to all patients, prenatal and beyond.

TABLE 4 ORGANIZATIONAL FEATURES THAT FACILITATE QUALITY IMPROVEMENT

ORGANIZATIONAL FEATURE	EXAMPLE FROM SURVEYED HOSPITAL
Committed Leadership	Engaged and supportive hospital and health care executive leadership Visionary leadership, including a population health perspective, from the chairman of obstetrics and gynecology Commitment to recognizing and encouraging staff
Effective Operations	Effective use of midlevel providers, such as NPs, for healthy women Continuity of care for complex patient populations and during resident transitions Consistent use of evidence-based care, with protocols to minimize variations in practice techniques among clinicians Effective medical, nursing, and operations partnerships across the care continuum
Continuous Learning and Improvement	Commitment to data collection and analysis to support improvements in care and service delivery Commitment to performance improvement activities Interest in learning how other successful organizations are providing care and a willingness to share experiences
Patient, Family, and Community Engagement	Commitment to the patient experience Commitment to providing communities with high-quality, culturally competent care and identifying and eliminating barriers to care Development of strong community partnerships Commitment to cultural awareness and development of robust interpreter services

Source: America's Essential Hospitals prenatal care survey, 2013

Notes

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