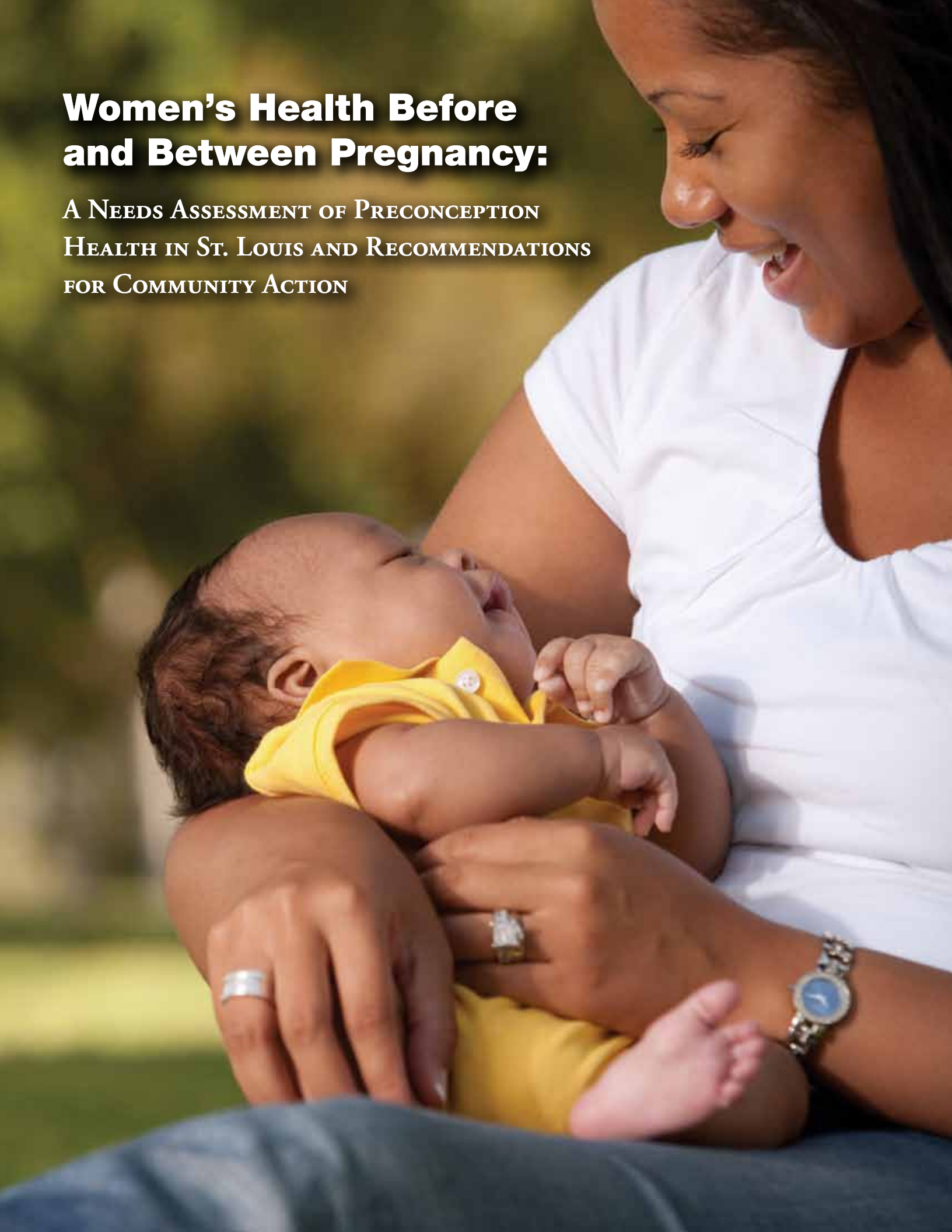

Women's Health Before and Between Pregnancy:

A Needs Assessment of Preconception Health in St. Louis and Recommendations for Community Action

Acknowledgements

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About the Maternal, Child and Family Health Coalition

The Maternal, Child and Family Health Coalition (MCFHC) is committed to improving birth outcomes, promoting healthy families and building healthy communities by uniting and mobilizing the St. Louis Region. As the leading convener of stakeholders that take action around priority health issues for vulnerable women and children, the MCFHC leverages pooled resources and expertise to solve problems in our region, attracts and focuses financial and human resources to enhance community services, and avoids duplication where resources are scarce.

Our top priorities include:

- Promoting the overall health of women before and between pregnancies.
- Encouraging early and regular prenatal care for all women.
- Ensuring access to mental health and social support services for women and children.
- Saving lives and improving health by eliminating vaccine preventable illness.
- Advocating access to quality and affordable health care for all parents and children.
- Improving the health of home environments.

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Executive Summary

Background

National recommendations for reducing infant mortality, pre-term birth, low-birth weight and other adverse pregnancy outcomes now advise that women enter pregnancy with less health risk. This shift from an exclusive focus on pregnancy-related health services (prenatal care) to improved comprehensive primary care and prevention for women of childbearing age is called "preconception care." Preconception health, more broadly, is defined as beginning a pregnancy in a state of optimal physical, emotional, and social well-being.

Key preconception health areas include healthy weight and nutrition, folic acid supplementation, treatment and management of hypertension and diabetes, immunizations, STD prevention, reproductive life planning, alcohol and tobacco consumption, and genetic history. Underlying the concept of preconception health is the fundamental understanding that it is not just a woman's health when she is pregnant that influences her birth outcome, but rather, it is a woman's health over her life course—childhood, adolescence, and on to adulthood—that influences her health during pregnancy and the health of her baby.

To more comprehensively address the high rates of infant mortality and other poor birth outcomes that affect St. Louis residents and disproportionately affect African-American residents, the Maternal, Child, and Family Health Coalition of Metropolitan St. Louis organized a task force of representatives from 25 organizations to plan and conduct a regional needs assessment of women's health and health care before pregnancy. This Partnership for Preconception Health met throughout 2011 to guide the completion of this preconception health assessment, review the results, and develop recommendations to improve preconception care, promote optimal health before pregnancy, and improve health equity. Seven distinct assessment pieces were completed: 1) a community health profile compiled from secondary data sources, 2) a Perinatal Periods of Risk analysis (PPOR), 3) a survey of OB/GYNs, family physicians and nurse practitioners, 4) a survey of community organizations, 5) a survey of women consumers, 6) focus groups of women of reproductive age, and 7) a public health and policy analysis. Findings from these assessment pieces were translated into 16 community recommendations.

Main Assessment Findings

Community Health Profile

- In St. Louis, 20.4% of all births to African-American women were pre-term. These pre-term delivery rates have remained relatively static over the past decade. Additionally, in 2009, while 6.3% of White births were of low birth weight in St. Louis City and County, more than twice as many African-American births were: 14.6%. During 2006-2008, there were 7.4 deaths for every 1,000 births overall in Missouri. In St. Louis County, there were 8 losses per 1000 births. But in St. Louis City, where 1 in 4 people lived in poverty, the rate was 10.4.

PPOR

- Analysis of Perinatal Periods of Risk shows that a woman's health going into pregnancy is indeed the area of opportunity most likely to reduce unnecessary fetal-infant deaths. This is in comparison with other periods during pregnancy or after birth.

Clinical Survey

- The majority of providers think of preconception care as something specific for women who are planning a pregnancy and not something that would benefit all women.
- Providers identified adequate time with patients as the most important factor in improving preconception services. Also important was more availability of referral sources and standardized health education material and risk assessments.
- About 3⁄4 of all provider respondents believe that women lack knowledge about preconception care and about half believe that women are embarrassed to discuss sensitive issues related to preconception health, such as substance abuse, psychosocial stressors or weight management.
- Providers identified significant institutional challenges to achieving health equity and delivering culturally proficient care. 58% of all clinician respondents thought that service providers frequently impose their own cultural values on minority clients, while another 37.8% do not believe that minorities have certain challenges in this society.

Community Agency Survey

- The vast majority of community agencies do not have preconception health targeted as part of their mission, and very few offer preconception information in educational classes or groups. Most preconception information is spread out by topic across many different organizations.
- Agencies were more likely to provide discrete services related to preconception health rather than having several preconception health services or a preconception health focus, making it unlikely for women to find a "one-stop-shop" for preconception health support or services.
- Only 22% of respondents reported using educational materials specifically for preconception health as a topic and only 25% of respondents reported that their agency provided educational sessions on preconception health topics. 11% of those doing education sessions provided information specifically on preconception care or Reproductive Life Plans (RLPs).
- Training and materials on preconception health is a need in community agencies. Fifty-one percent of respondents said they had an interest in receiving training, and 39% said that materials were needed in order to improve integration of preconception health into services.

Consumer Survey

- The majority of women in our community were not aware of the term "preconception care."
- Eighty-nine percent of women will listen to health care providers regarding pregnancy planning and will take planning advice from their physician. Books (35%) and the internet (39%) were also important potential channels of preconception information.
- Less than half of the women in our community have ever considered seeing a health care provider regarding preconception care.
- Family planning was the preconception topic that women were most interested in and most likely to use (79%), followed by nutrition and weight management (50%).

Women's Focus Groups

- Parent and teen education, peer counseling and incentives may increase preconception health behaviors. The schools were mentioned as an important potential source of education about sex and health for young women and men. Women also stated an interest in hearing other people's personal stories, and find this more engaging than hearing about research.
- Self-care and management, including coping with stress, were seen as important to preconception health. Awareness of community resources may increase self-efficacy in initiating and sustaining healthy behaviors. Women felt that preconception health impacts all life stages and that it was never too late for healthy choices and benefits to be gained as a result.

Public Health and Policy Analysis

- The access to care burden is disproportionately high for African-American women as evidenced by the disparity in the percentage of African-American and White Medicaid births in St. Louis City and St. Louis County. This burden persists for African-American women throughout the lifespan.
- Accessing preconception care is difficult and complex for low income uninsured women. Prior to pregnancy, or after delivery, low income uninsured women must locate free or sliding-fee scale preconception and preventive services on their own. Follow-up becomes sporadic for problems like hypertension and diabetes that are identified during preconception care or during pregnancy due to lack of insurance coverage for non-pregnant women.
- Many key preconception health services are provided and/or monitored by local public health. However, preconception health is not identified as a stand-alone priority for most local health departments.
- Funding mechanisms for low income uninsured women to access preconception care services are underfunded and/or under threat of budget cuts. These include Medicaid, Title X (family planning) and 330 Funds (FQHC start-up and expansion funds).

Community Recommendations

Clinical Care

- Expand medical provider knowledge and practice of preconception care by working with medical schools, health training and certifying organizations, and medical associations to include more emphasis on the importance and benefits of preconception care.
- Provide physicians and their staffs with standard preconception care materials/tools that can be adapted to local community needs and are used and distributed at offices and other health related venues.
- Incorporate preconception health education, assessment and screening into routine medical visits and medical record protocols. Key preconception health questions should be reviewed during each visit and should include family planning, nutrition and weight management.

Community Services

- Educate agencies on the integral nature of preconception health to their work and encourage them to incorporate preconception health outcomes into their missions, visions, values and/or organizational agendas.
- Facilitate preconception health collaboration among existing agencies and programs to reduce duplication of efforts; fill gaps in service; ensure better use of limited resources; and share best and promising practices.
- Create a repository of preconception health information, resources, policy development, and advocacy in the St. Louis region through the Partnership for Preconception Health.

Consumers

- Undertake a social marketing campaign that uses popular media, social media, and peer to peer education and outreach to educate women, men and youth on preconception health using positive, future-affirming messages. Use existing community education outlets/programs to the extent possible.
- Provide consumers with information and materials that are easy to read and use on family planning, nutrition and weight management along with other preconception health topics.
- Increase the community's knowledge of existing free or sliding scale health and social services by working with media, health centers, and state agencies.

Policy

- Seek greater insurance coverage for medical visits for women outside of prenatal care. Consider all visits pre-pregnancy visits, so preconception counseling is no longer targeted only to women planning a pregnancy.
- Advocate for state and national policy and systems changes that advance preconception health especially for those with limited financial resources.
- Advocate for state and local health departments to prioritize and integrate preconception health approaches.

Health Equity

- Cultivate trained, trusted, and empowered community-based health advocates to help promote preventive health messages, advance a health equity agenda at the grassroots level, and act as intermediaries between consumers and providers.
- Develop a regional protocol for conducting a health impact assessment for every major local or state policy or project (including transportation, housing, education, health care) that could affect health outcomes and health equity.
- Launch a multi-level communications campaign with targeted messaging and framing to raise the visibility of St. Louis' health status and its impacts on the viability of the region.
- Advance the education and empowerment of minority women as an effective means of improving health outcomes for families and the community at-large.

A Call to Action

The recommendations generated by this year-long needs assessment and community partnership process are just the first step to initiating community change. Collective action will bring these recommendations to fruition. Together we can improve health equity across the life course. If all institutions, agencies and individuals that provide clinical care, public health, community services, or advocate for policy change emphasize these recommendations in their organizations, we will raise the profile of preconception health in the community. In the coming year, the Partnership for Preconception Health will develop concrete strategies for addressing these recommendations. We invite you to join our efforts to eliminate unnecessary infant deaths and improve the health status of women prior to pregnancy.

Introduction: Infant Mortality, Health Equity, and the Case for Preconception Health in St. Louis

Infant Mortality, Health Equity and Women's Health Status

All women deserve to be healthy, have successful, positive pregnancies when they choose to have children, deliver healthy full-term babies, and feel confident about their children's future. While most of us would not hesitate to say we believed this, it is a vision we have not yet realized. Despite improvements in prenatal care attendance and advances in medical care and technology, preterm birth, low birth weight, and infant mortality remain significant problems in St. Louis, and include persistent racial disparities.[1]

In 2009, birth certificate data indicated 12.5% of all births in Missouri were preterm, with 19.0% of African-American births preterm and 11.3% of White births preterm. In St. Louis, the number was slightly higher, with 20.4% of all African-American births pre-term. The overall low birth weight rate in Missouri in 2009 was 7.0%, but the difference between African-American and White rates was drastic. While 6.3% of White births were of low birth weight in St. Louis City and County, more than twice as many African-American births were: 14.6%. Infant mortality rates also show that where an infant's mother resides has a lot to do with whether or not that infant survives. During 2006-2008, there were 7.4 deaths for every 1,000 births overall in Missouri. In St. Louis County, there were 8 losses per 1000 births. But in St. Louis City, where 1 in 4 people lived in poverty, the rate was 10.4.

According to national objectives, no more than 11.4% of births should be expected to be preterm, no more than 7.8% of births should be low birth weight, and no more than 6.0 babies per 1,000 births should be expected to die before their first birthday.[2] Clearly, the numbers in St. Louis show there is significant work that still needs to be done to approach national standards and improve health equity. Infant mortality has long been recognized as a marker for the overall health and well-being of a community. Preterm birth, low birth weight and infant mortality are associated with maternal health conditions that may be present before pregnancy like diabetes, hypertension and obesity,[3] and high risk health behaviors including alcohol, tobacco and other drug use.[4,5] There is a growing concern that infant and maternal morbidity and mortality rates may increase with the increasing prevalence of diabetes, hypertension and obesity in women of childbearing age and that low-income and minority women will be the most adversely affected group.[4,6,7,8,9,10] The St. Louis community should not accept these trends and should not accept these outcomes for women and children in our region. As we head into 2012, improving the chances of infant survival should be a priority, and one that leads us to better understand how this statistic impacts the lives of us all.

Life Course Model

A woman's health, her pregnancy, prenatal care and birth do not happen in a vacuum. We are all directly affected by our social, emotional, and physical environments throughout our lives. In other words, where we live, work, learn and play has a profound impact on our overall long-term health and well-being. Grason and Misra have posited that while those involved in the practice of public health recognize the importance of general health and wellness over the life course as it relates to maternal and child health, this knowledge is not translated into practice.[11] The life course model suggests that it is not just a woman's health when she is pregnant that influences the birth outcome, but rather, it is a woman's health over her life time—childhood, adolescence, and on to adulthood—that influences her health during pregnancy and the health of her baby. In this way, simply addressing prenatal care will not resolve health problems and risky health behaviors that develop earlier in life, before pregnancy occurs. The life course framework for maternal/child health targets factors across the life span including diseases and complications, health and functioning, well-being, and even the physical environment and social environment. Health care is then defined as a broad range of activities from primary prevention (societal level interventions) to medical interventions. Eliminating disparities in health care requires interventions and policies that are contextually integrated in communities, over time, to ameliorate the unacceptable disparities found in birth outcomes.[12]

The Case for Preconception Health

To improve the pervasive and unacceptable health issues mentioned above, national goals now recommend that women enter pregnancy with less health risk. This requires shifting from an exclusive focus on pregnancy-related health services to improved comprehensive primary care and prevention for women of childbearing age using strategies that change consumer and provider behaviors about health before pregnancy.[8,9,13,14] This paradigm shift is known as preconception care and includes care prior to a first pregnancy or between pregnancies. Nationally, preconception care has become a key strategy for improving birth outcomes within the Centers for Disease Control and Prevention (CDC). The CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care released important national recommendations in 2006[15] that have increased the visibility and legitimacy of preconception as a health concept. Key preconception health areas include healthy weight and nutrition, folic acid supplementation, treatment and management of hypertension and diabetes, immunizations, STD prevention, reproductive life planning, alcohol and tobacco consumption, and genetic history. Definitions of preconception health and preconception care are as follows:

Preconception Health:

> Beginning a pregnancy in a state of optimal physical, emotional, and social well-being. Optimal health before pregnancy gives the best chance for a good pregnancy outcome—whenever it is that a person decides to have a child.

Preconception Care:

> "A set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a woman's health or pregnancy outcome through prevention and management."[15]
>
> "Every woman of reproductive age who is capable of becoming pregnant is a candidate for preconception care, even if she is not planning to conceive."[16]

Studies show that preconception care is effective in improving outcomes[5] but is not fully integrated into clinical services due to lack of provider awareness, inadequate timing of visits, and high rates of unplanned and unintended pregnancy.[17] The public also lacks awareness about the importance of preconception health in optimizing perinatal outcomes.[5] These issues are amplified for low-income and minority women who often lack access to health services, lack health promotion strategies targeted to their specific needs and have not had a consistent voice in discussions concerning their health status.[10]

Partnership for Preconception Health

Creating a paradigm shift toward preconception health and a life course model requires strategies to change policies, systems and community environments to influence consumer and provider behaviors regarding health before pregnancy. Before interventions can be established to improve the preconception health status of the women in our region, identification of existing services and gaps in care is critical. Women's own perceptions of their health also need to be understood, especially those of low-income and minority women, who are most vulnerable to poor pregnancy outcomes.

Using a life course perspective to understand and address issues in maternal and child health requires the commitment and cooperation of institutions in multiple sectors of the community. Collaborative planning and action is key to facilitating community wide improvements in infant mortality, low-weight, and premature birth. In this respect, introducing the model of preconception health to the St. Louis community could only be done through the mobilization of a community partnership.

To begin the work of understanding preconception health in St. Louis, the Maternal, Child and Family Health Coalition of Metropolitan St. Louis (MCFHC) recruited members of its broader Coalition as well as other professionals working in health care, social service, research or policy organizations to participate in developing and implementing a needs assessment and gap analysis of current preconception services and health promotion activities in the MCFHC catchment area. A task force was established in late 2010 and has since grown to a partnership of 25 representatives from local, regional, and state community organizations, public health agencies, and health centers.

Through funding from the St. Louis Community University Health Research Partnership and from the Centers for Disease Control and Prevention's Racial and Ethnic Approaches to Community Health (REACH) program, this Partnership for Preconception Health (Partnership) met bi-monthly through 2011. The Partnership guided completion of the preconception health needs assessment and employed those findings to issue recommendations to enhance the capacity of the community to address the systemic changes necessary to eliminate health inequities experienced by African-American women before pregnancy and improve maternal and child health outcomes. To accommodate the comprehensive nature of addressing women's health 'before, between and beyond pregnancy', the Partnership organized its work around three domains: clinical

practice, community-based services, and public health and policy. The Partnership also developed a vision and goals to guide the Partnership's work of addressing the high African-American infant mortality rate through the lens of preconception health.

The primary objectives of the Partnership during its first year were to:

- Review and refine assessment survey instruments,
- Discuss the challenges and opportunities in preconception health,
- Share ideas about trends, factors and events that may influence progress,
- Digest and prioritize the collected and analyzed data,
- Establish a vision for success, and
- Identify recommendations for improving preconception health in the St. Louis community.

Partnership for Preconception Health Vision:

All women and their partners in the St. Louis region are healthy and able to deliver and rear a healthy, happy baby if and when a pregnancy occurs.

Assessment Approach

In order to understand the current status of preconception health for women in St. Louis, the MCFHC partnered with St. Louis University and the University of Missouri St. Louis, along with the participants in the Partnership for Preconception Health, to conduct a comprehensive needs assessment.

The goals of the needs assessment project were to determine the scope of preconception care services and health promotion activities available in the St. Louis area and identify what low-income minority women know about preconception health and how they perceive their preconception and interconception health status. Goals of the project were accomplished through seven separate assessment pieces.

I. Community Health Profile

The Community Health Profile involved systematic collection and assessment of secondary data to provide a background of the St. Louis region's community health status for the Partnership for Preconception Health. Demographic, socioeconomic, and health status indicators were compiled into a Community Health Profile in three phases:

1. A data collection method was adapted based on two health indicator frameworks: the MAPP CHSA Core Indicator List[18] and Core State Preconception Health Indicators[19].
2. Local, state, and national surveillance systems and data sources were identified based on relevant indicators.
3. Data were gathered and a Community Health Profile was prepared for the Partnership for Preconception Health to review.

II. Perinatal Periods of Risk Analysis (PPOR)

Another assessment piece was to conduct a Phase I and Phase II Perinatal Periods of Risk (PPOR) analyses for the St. Louis County and St. Louis City regions (2000-2009). The overall goal of PPOR is to provide the community a way to identify areas of prevention with the greatest opportunities for local impact. Phase I analysis intended to identify gaps in the local maternal-fetal-infant health care spectrum while the Phase 2 analysis intended to investigate those gaps to determine the likely causes of fetal-infant mortality and to suggest appropriate actions.[20,21]

In Phase I of the analyses, fetal-infant mortality data is mapped to four categories that suggest the direction for prevention/intervention programs, based on the age at death and birth weight of the child[22]. The four categories or perinatal periods of risk are:

1) **Maternal Health and Prematurity,**
2) **Maternal Care,**
3) **Infant Health, and**
4) **Infant Care.**

The **Maternal Health and Prematurity** category represents all the deaths for extremely low birth weight babies (500 – 1,499 grams). If a baby is extremely small and dies, regardless of age at death, the critical period of risk may be the mother's health before pregnancy (e.g., maternal preconception health and perinatal conditions and care). The **Maternal Care** category represents fetal deaths (above 1,500 grams), and suggests the period during pregnancy may be the critical period of risk (e.g., prenatal care). The **Newborn Care** category represents all deaths within the first month of life, and suggests that the

period immediately following birth is the critical period of risk (e.g., perinatal systems). Finally, the Infant Care category represents all infant deaths between 1 month and 1 year, and suggest that the period after the first month, but before their first birthday is the critical period of risk (e.g., environmental factors such as sleep position).

After the fetal-infant mortality data was mapped to these prevention categories, the next step was to determine ***excess* mortality** by comparing mortality rates of the study population with the rates of an optimal reference group with low fetal-infant mortality rates[23]. The amount of excess mortality in each category suggests the extent to which the fetal-infant mortality rate can be reduced for each period of risk. Should excess death be found in any of these critical periods, communities should consider types of interventions that would focus on that period of risk in the maternal-child health spectrum.

Phase II analyses attempt to ascertain potential reasons for the excess mortality in the categories with the highest excess rates. From the PPOR I Analysis, the largest contributor to excess deaths is the Maternal Health/ Prematurity category, with approximately 50% of excess deaths due to this perinatal risk period. Thus, this category was further inspected in Phase II. This analysis helps explain differences in fetal-infant mortality rates for St. Louis, compared to the US reference groups, in terms of **birth weight distribution** and **birth weight specific mortality.**

III. Clinical Provider Survey

A survey for clinical providers was developed in conjunction with the Partnership to identify preconception care practices employed by women's health physicians and advanced practice nurses and to ascertain perceived barriers to providing/ implementing preconception care services. This survey was distributed to 403 Obstetrician/Gynecologists and Family Physicians and 88 women's health care nurse practitioners practicing in the MCFHC catchment area. The survey assessed practices identified by the American Congress of Obstetrics and Gynecology (ACOG) regarding preconception care and assessed for barriers to implementing that care. Potential survey respondents were identified from area ACOG members and the State Board of Nursing. Ninety-five surveys were completed and returned.

IV. Community Agency Survey

A web-based survey was designed in conjunction with the Partnership to identify community-based health promotion activities that build awareness of the importance of preconception health for consumers. A link to the survey was distributed via email to agencies, school nurses, and public health departments in the St. Louis region. The survey assessed two domains, the content of the health promotion activities and the method of engagement (e.g., brochures, self-assessments, events and social gatherings). ACOG components of preconception care were used as the supporting document in developing the content items of the survey. A group of 166 agencies received the survey. Completed surveys were submitted by 69 individuals.

V. Women's Consumer Survey

To capture the opinions of women in the community, a survey was developed to determine the general public's perspectives on preconception health. Anonymous surveys were collected from a convenience sample of 501 women throughout St. Louis City and County between April and June of 2011. Women received a $10 gift card for completing the survey. The targeted age for the survey was 18- 44, and thus 44 surveys were removed from the sample that did not meet the age criteria, leaving 457 surveys in the analysis. Survey questions focused on health behaviors, preconception health care needs and barriers, gaps in health services, and best ways of filling those gaps. Sixty percent of the respondents were African-American, 30 percent were white, and 10 percent were other ethnicities or Latina.

VI. Women's Focus Groups

To better understand and more thoroughly capture the thoughts, opinions, and perspectives of women in the St. Louis community, a series of 12 focus groups were held with female volunteers who were of reproductive age (between 18-44). Women from the general public who completed the survey were recruited, as well as those new moms participating in the St. Louis Healthy Start program, and those temporarily residing at a local homeless shelter. Healthy Start participants are typically young African-American expectant and new mothers who receive frequent home visits from a nurse and community outreach worker throughout pregnancy and two years following birth. A small incentive was provided for those who participated. A total of 89 women attended the focus groups and shared their experiences with health, mental health, pregnancy, and medical care.

VII. Public Health Interviews and Health Policy Analysis

In order to identify current state and local public health initiatives to promote preconception health, a set of 15 interviews were conducted with 18 individuals from the Missouri Department of Health and Senior Services, and St. Louis City and St. Louis County Departments of Health leadership. The assessment encompassed the three functions of public health: assessment, policy development and assurance. A standardized interview tool was developed to guide the discussion with each respondent. Results were aggregated and themes were identified through qualitative analysis.

In addition, a policy analysis was conducted to better understand access to preconception health services for low income women in St. Louis City and St. Louis County, and to determine if low income women relying on Medicaid have access to the services and care recommended by the CDC/ASTDR, the Institute of Medicine (IOM), ACOG and American Academy of Pediatrics (AAP). This analysis included five components:

- Demographic and health characteristics of women delivering live births stratified by Medicaid status when available.
- Medicaid coverage policies for eligible women before, during and after pregnancy.
- Comparison of current Medicaid policies with current IOM, CDC, ACOG and AAP recommendations for preconception care.
- Identification of other funding mechanisms for low income women to access preconception care services.
- Identification of additional health indicators needed to monitor preconception health status of women.

Data sources for the health and demographic characteristics of women delivering live births were Missouri MICA (Missouri Information for Community Assessment) and the Midwest Health Initiative.

Key Findings

Assessment I: Community Health Profile

The following tables and graphs reveal an urban region divided in its health status by both race and residence. While there have been a few notable and minor successes in some maternal health indicators in the St. Louis region, many outcomes have remained stagnant or have worsened over time. In particular, African-Americans carry a substantially disproportionate burden of poor health outcomes, which echo the specific concerns for the continuously high infant mortality and morbidity rates in our community.

STATE RANKING

Out of 114 Missouri Counties, the City of St. Louis fares worse than St. Louis County in five out of six categories, and ranks last in the State of Missouri for health behaviors and social and economic factors, and nearly last in mortality and morbidity.

Table I.1: St. Louis Health Ranking by County

Category Examples	**City of St. Louis**	**St. Louis County**
Mortality Premature death – Years of potential life lost before age 75	**105**	**13**
Morbidity Poor or fair health, Poor physical health days, Poor mental health days, Low birthweight	**107**	**34**
Health Behaviors Adult smoking, Adult obesity, Excessive drinking, Sexually Transmitted Infections, Teen birth rate	**114**	**7**
Clinical Care Uninsured adults, Primary care physicians	**8**	**1**
Social & Economic Factors High school graduation, Some college, Unemployment, Children in Poverty, Inadequate social support, Children in single-parent households, Violent crime rate	**114**	**14**
Physical Environment Air pollution particulate matter days, Air pollution ozone days, Access to healthy foods, Access to recreational facilities	**62**	**95**

(Adapted from County Health Rankings, 2011)[24]

POPULATION

During the last decade, between 2000 and 2010, the overall regional population declined by 46,467.

Table I.2: St. Louis Population Change.

	2000 Population	**2010 Population**	**Population change**
St. Louis County	**1,016,315**	**998,881**	**-17,434**
St. Louis City	**348,189**	**319,156**	**-29,033**
Total (Combined)	**1,364,504**	**1,318,037**	**-46,467**

Adapted from MODHSS, Population MICA[25] and U.S. Census (factfinder2.census.gov)

POPULATION BY RACE

St. Louis City has a much larger African-American population as compared to St. Louis County and the State of Missouri. The percentage of African-American and White populations in St. Louis City are nearly equivalent. Thus, disparities in health affect our entire region because they are present in such a large percentage of our overall population.

Figure I.1: 2009 Estimated population by race: Adapted from MODHSS, Population MICA24

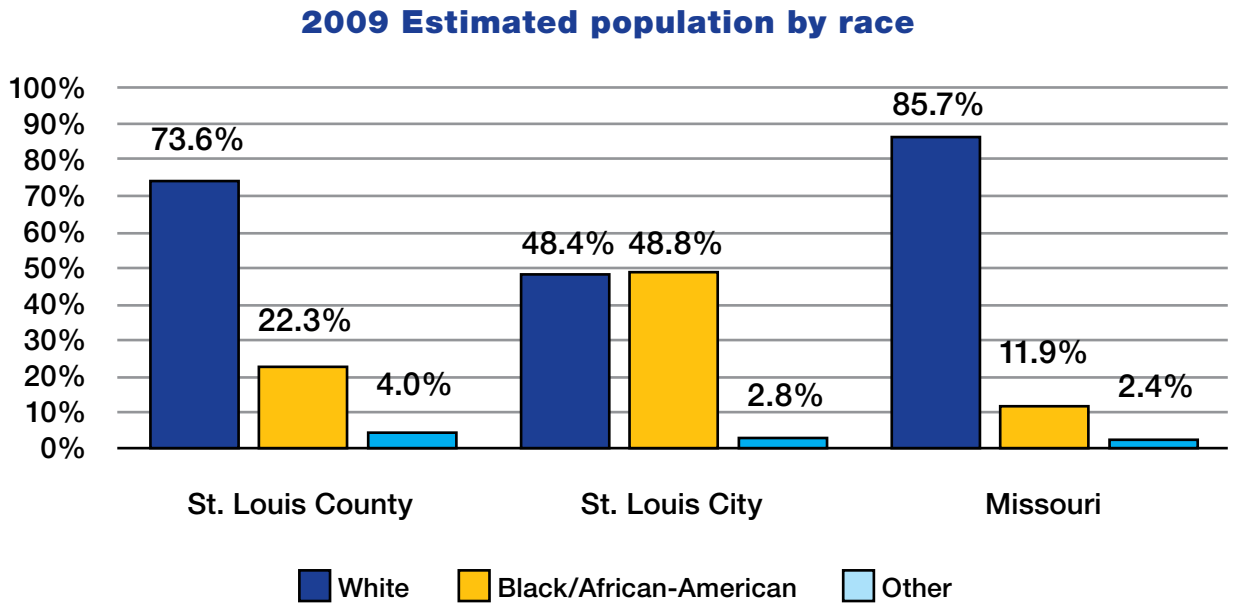

Figure I.1: 2009 Estimated population by race: Adapted from MODHSS, Population MICA[24]

LIFE EXPECTANCY

Life expectancy in St. Louis City is 6.6 years less than St. Louis County and 5.7 years less than the median for all US Counties.

Table I.3: St. Louis Life Expectancy.

	Average life expectancy (2009)
St. Louis County	77.4
St. Louis City	70.8
Median for all US Counties	76.5

(Adapted from US Department of Health and Human Services, Community Health Status Report) [26,27]

SOCIOECONOMIC PROFILE

In St. Louis City, more than one in four people (27.8%) live in poverty, higher than the national poverty level of 15.1%[28]. Unemployment is 1.8 times higher in St. Louis City than St. Louis County and nearly one in five people in St. Louis City do not have health insurance coverage. Additionally, income levels and high school graduation rates are lower in St. Louis City than St. Louis County and more people rely on public transportation to get to work.

Table I.4: St. Louis Socioeconomic Profile, 2010.

2010 estimate	St. Louis County	St. Louis City
% unemployed	**9.5%** (up from 5.5% in 2008)	**9.5%** (up from 10.1% in 2008)
% commute to work **using public transportation**	**2.4%**	**11.0%**
Mean household **income**	**$78,555**	**$46,209**
% No **health insurance** coverage	**9.6%**	**19.0%**
% all people whose income in the past 12 months is **below the poverty level**	**10.6%** (up from 8.6% in 2007)	**27.8%** (up from 22.4% in 2007)
% **high school graduate** or higher (ACS)	**91.5%**	**81.5%**

Adapted from US Department of Health and Human Services, American Community Survey 2010[29]

EMERGENCY ROOM VISITS, BY RACE AND COUNTY

African-Americans in St. Louis City are more likely than their white counterparts to visit the Emergency Room for health problems such as alcohol and drug abuse, as well as common chronic health conditions like asthma, hypertension, and diabetes.

Table I.5: 2006-2008 ER visits

Rate per 1,000 residents	St. Louis County White	St. Louis County African-American	St. Louis City White	St. Louis City African-American
Alcohol/Drug Abuse[30]	**2.1**	**3.7**	**2.7**	**6.7**
Asthma[30]	**2.6**	**17**	**2.8**	**19.8**
Hypertension[30]	**0.7**	**5.3**	**0.8**	**5.5**
Diabetes[30]	**0.8**	**4.4**	**0.9**	**4.5**

SEXUALLY TRANSMITTED INFECTIONS

In 2009, St. Louis City ranked 2nd out of 54 counties and independent cities for Chlamydia rate per 100,000 population, ahead of Baltimore, Maryland, and Bronx County, New York.[31] African-American women age 15-19 are often at risk for new cases of these diseases.

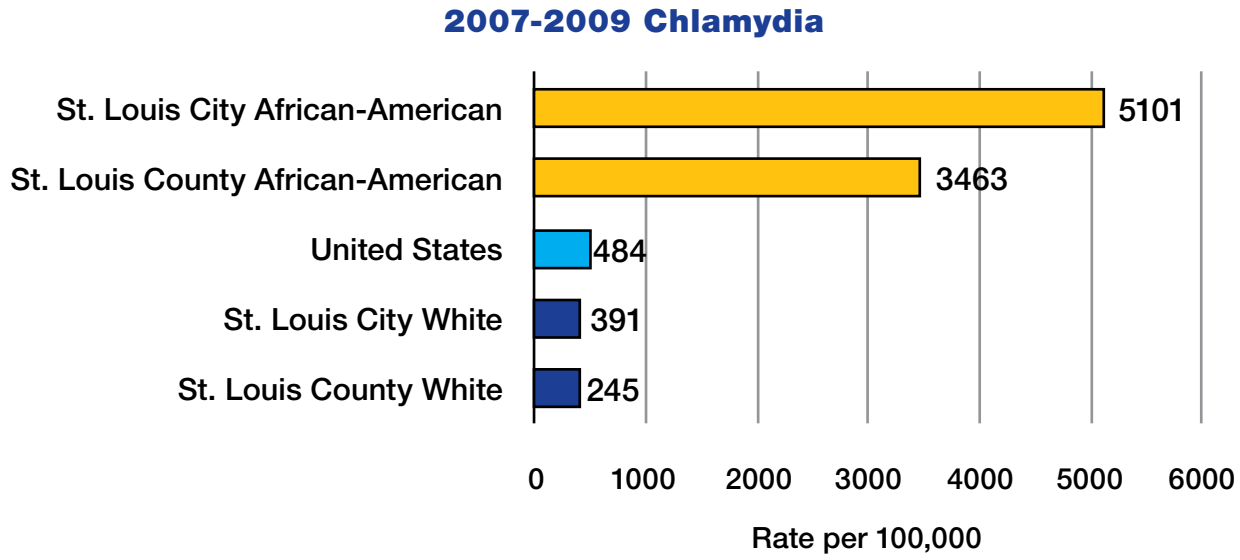

Figure I.2: Chlamydia, three year moving average, 2007-2009.

Adapted from MODHSS, Preconception/Family Planning Profile & NCHSTP [32,33]

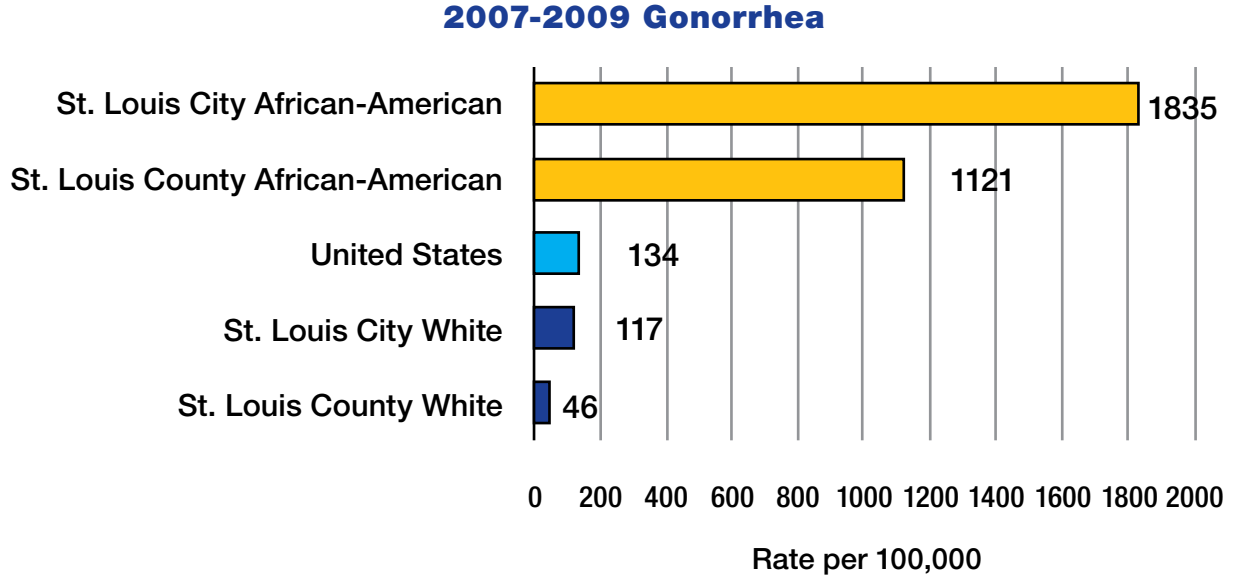

Figure I.3: Gonorrhea, three year moving average, 2007-2009.

Adapted from MODHSS, Preconception/Family Planning Profile & NCHSTP [32 33]

MATERNAL AND INFANT HEALTH

African-American mothers in the St. Louis region have higher rates of inadequate prenatal care, preterm births, and low birth weight than white mothers. Infant mortality is higher in the City, at 10.4 per 1000, than in the County. Other risk factors, like mothers being overweight during their pregnancies, has been climbing statewide.

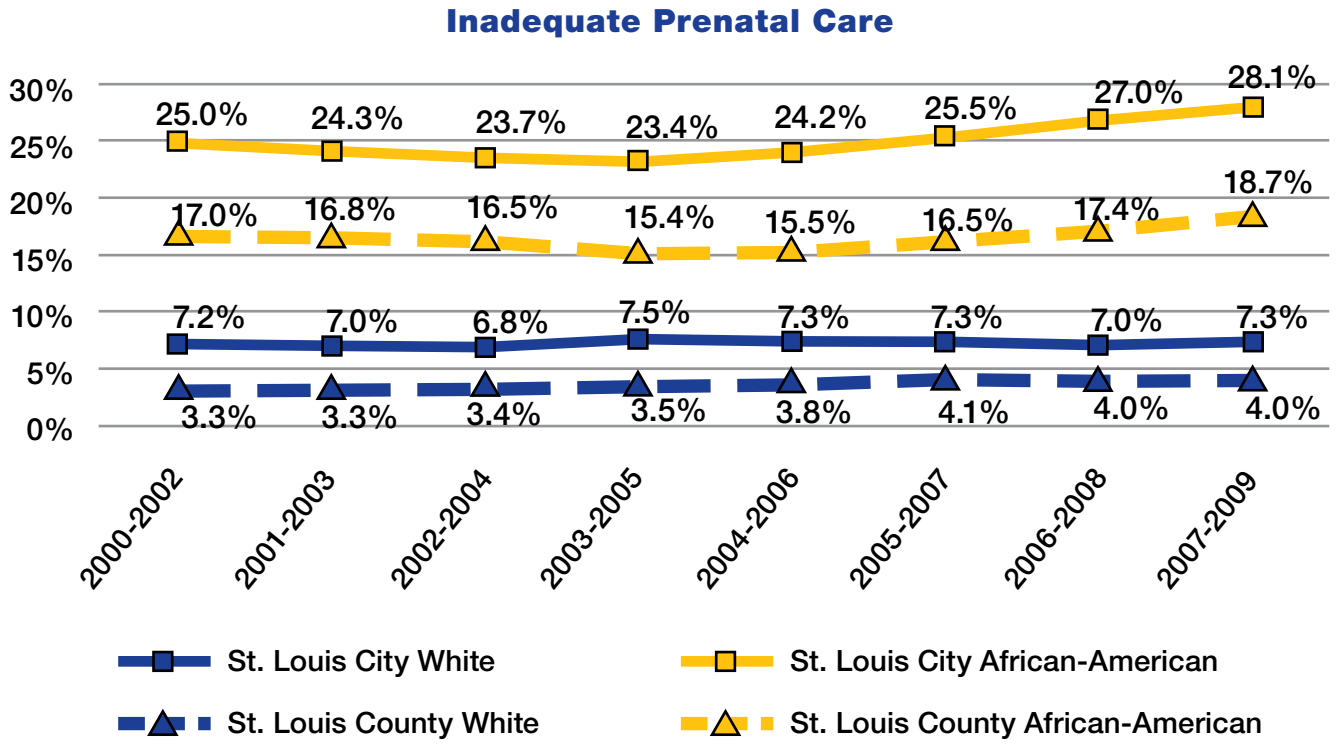

Figure I.4: Inadequate Prenatal Care, three year moving average. Adapted from MODHSS, Prenatal Care Profile [34]

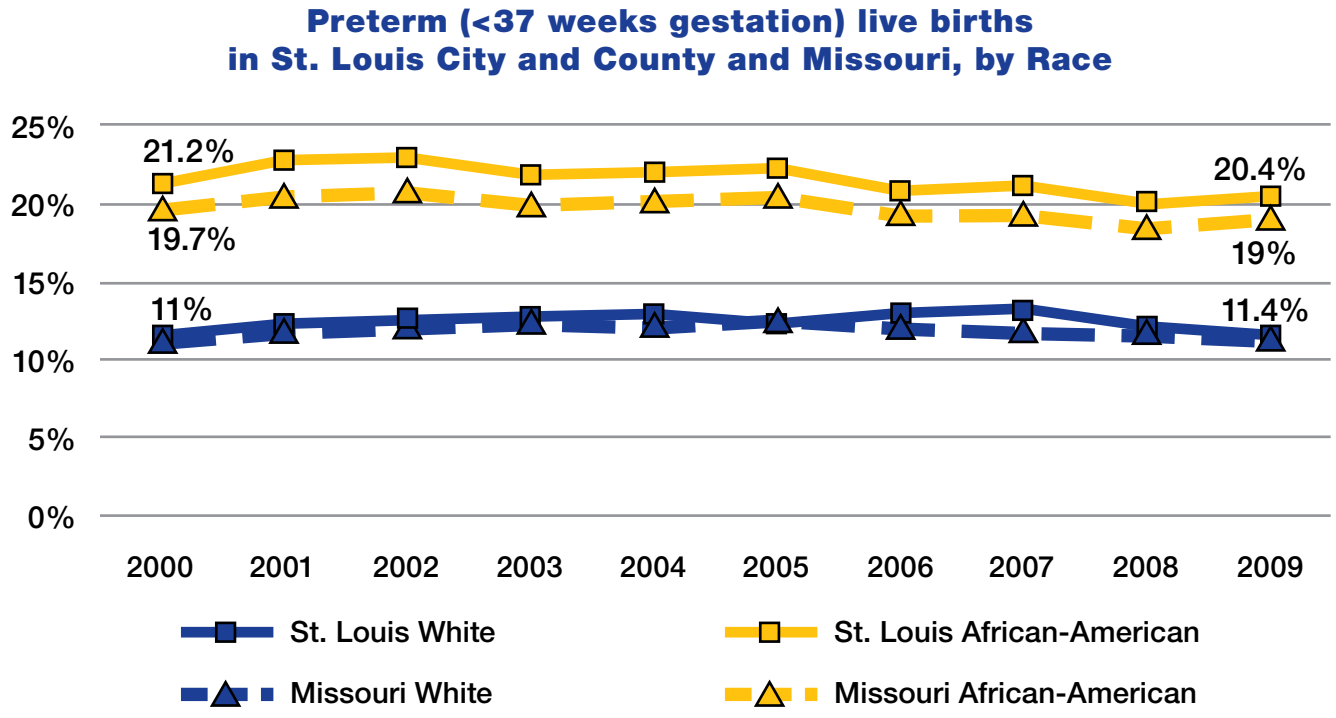

Figure I.5: Preterm delivery rate (<37 weeks). Adapted from MODHSS, Birth MICA[35]

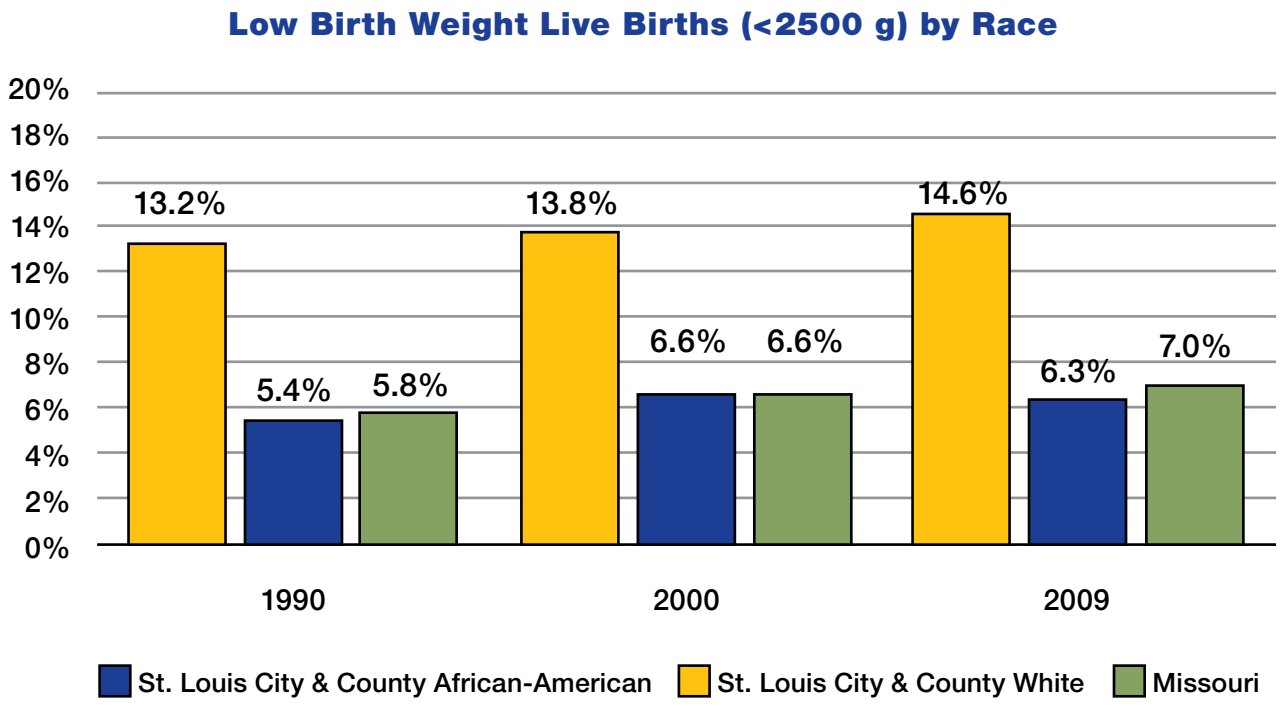

Figure I.6: Low Birth Weight Live Births (<2500 g). Adapted from MODHSS, Infant health Profile[36]

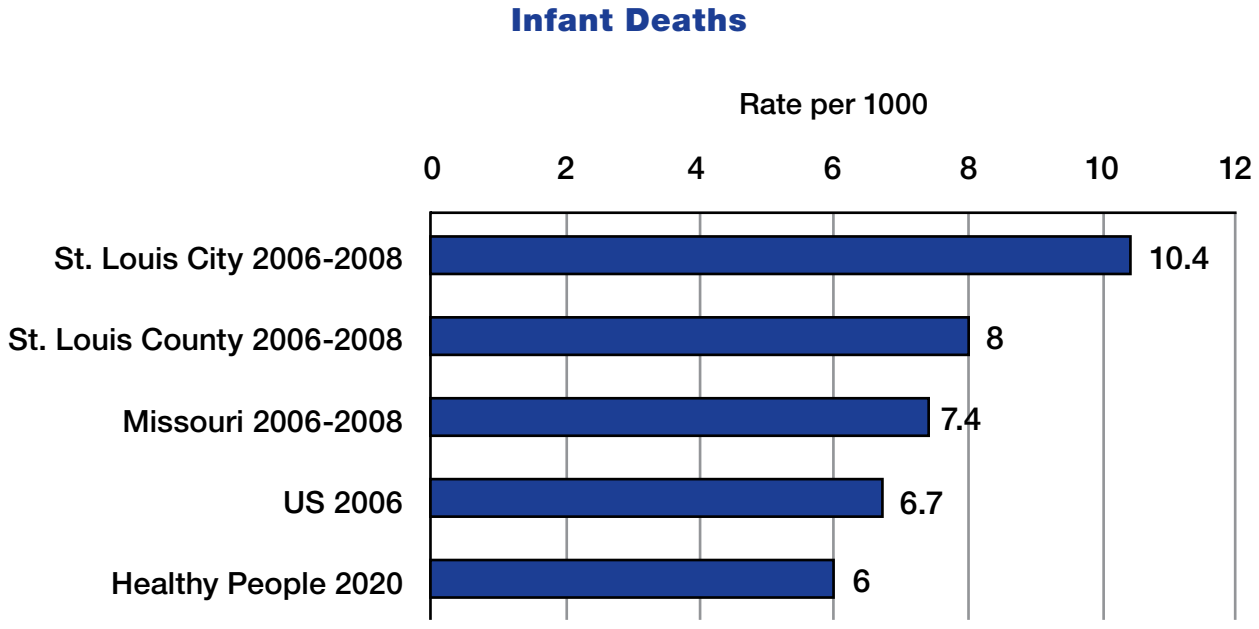

Figure I.7: Infant Deaths, three year moving average for St. Louis City & County.[37, 38]

Adapted from MODHSS, Infant Health Profile & Healthy People 2020

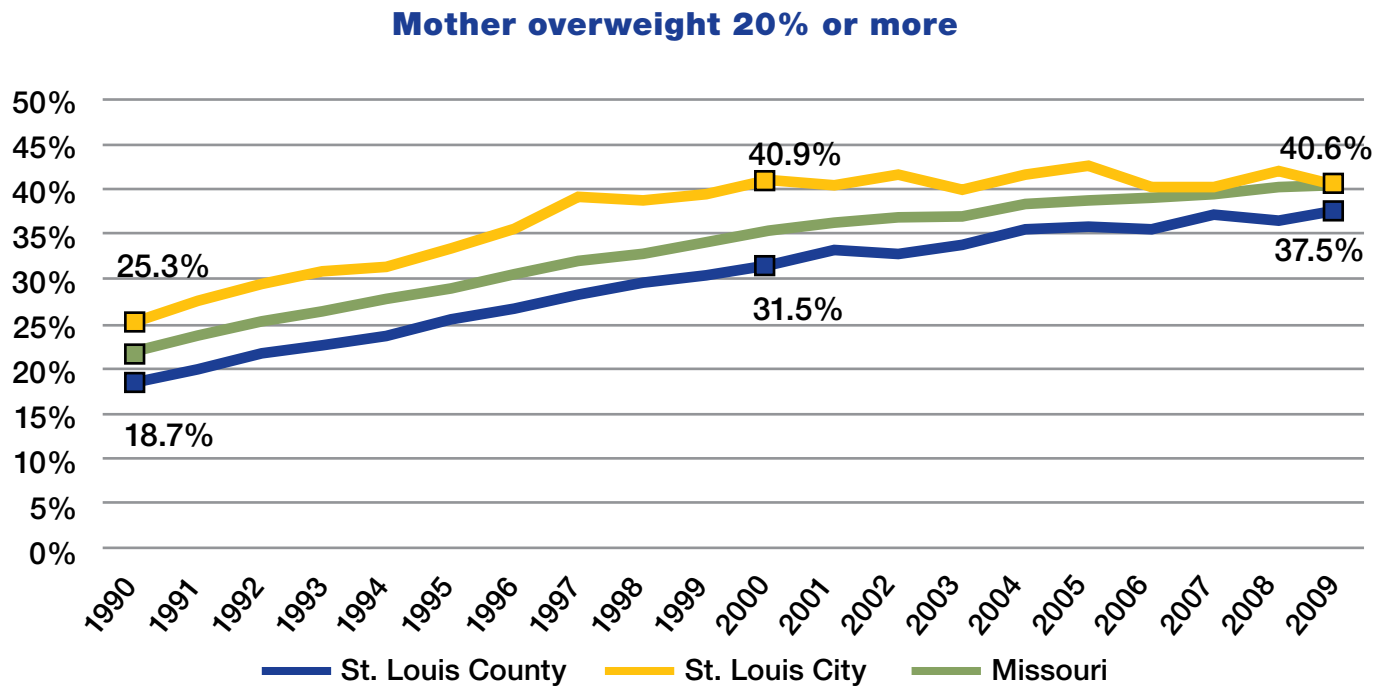

Figure I.8: Mother overweight 20% or more. Adapted from MODHSS, Birth MICA[39]

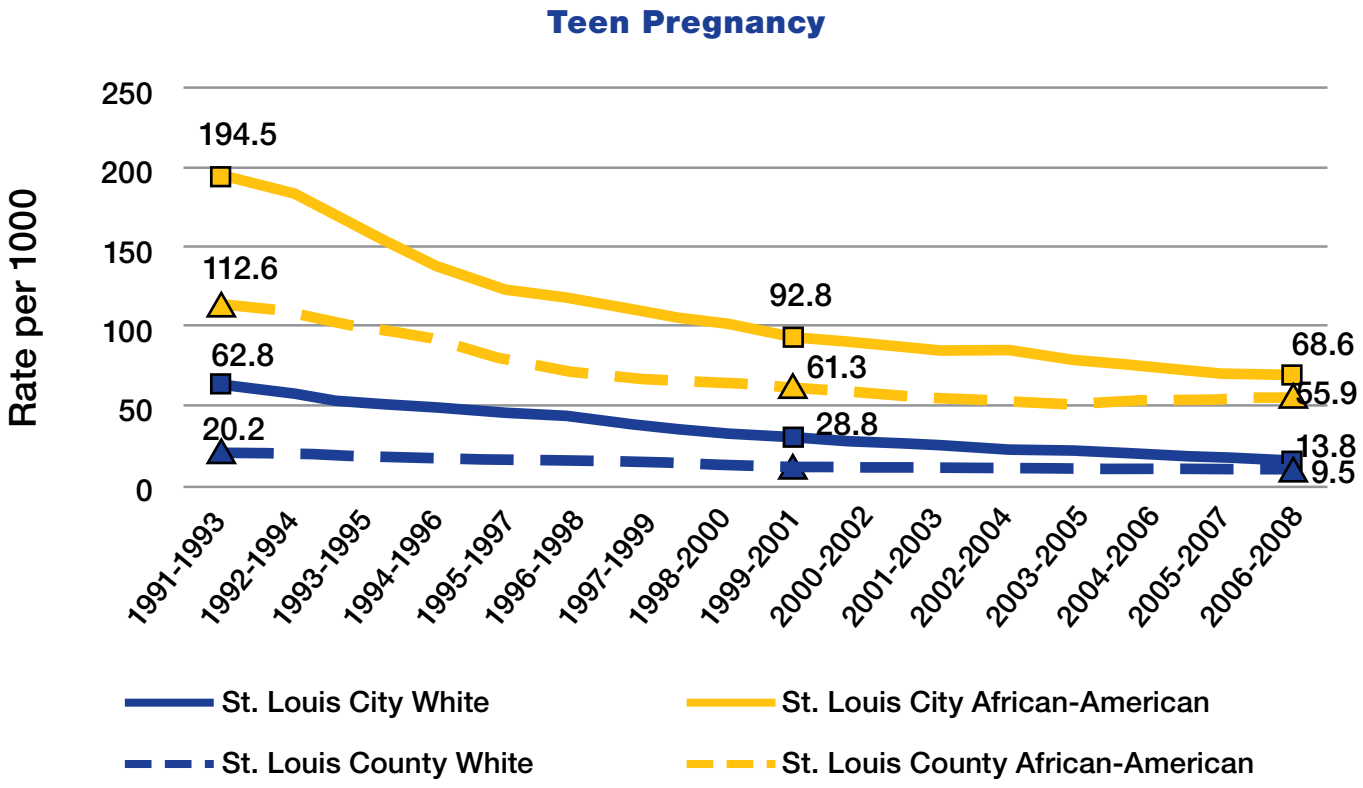

Figure I.9: Teen pregnancies (i.e. live births plus fetal deaths plus abortions) to females ages 15-17 three year moving average. Adapted from MODHSS, Preconcpetion/Famly Planning Profile[40]

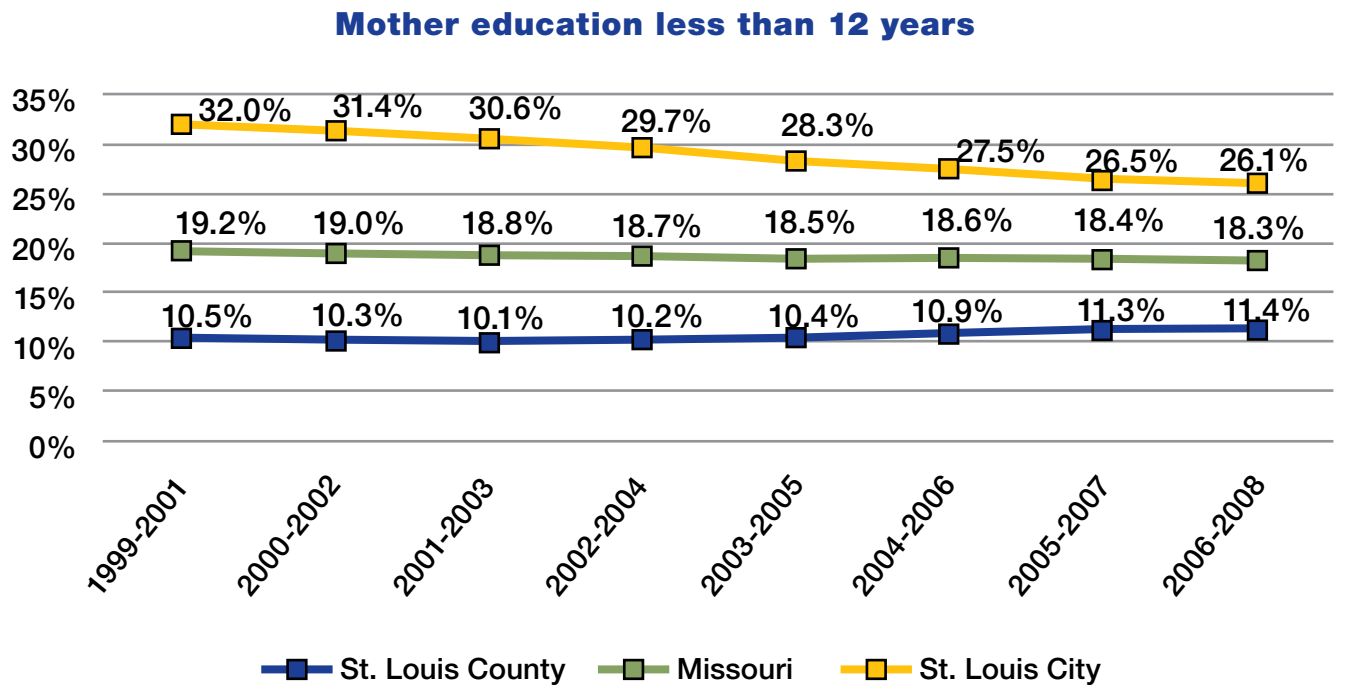

Figure I.10: Mother education <12 years, three year moving average. Adapted from MODHSS, Preconception/Family Planning Profile[41]

Assessment II: PPOR

Phase 1: Results

Table II.1 shows the distribution of fetal-infant mortality rates, for St. Louis City and County between 2000 and 2009. Included are the fetal-infant rates for 'All', as well as temporal comparisons (2000-2004 and 2005-2009), geographical comparisons (St. Louis City and St. Louis County), and race (African-American and White). ***For all categories, the Maternal Health/Prematurity category has the greatest proportion of deaths.*** Furthermore, while the rate seems to have dropped slightly in more recent years, St. Louis City and the African-American race have the highest Maternal Health/Prematurity rates when compared with St. Louis County or the White race, respectively. ***These results demonstrate that focusing on the preconception period is indeed the area most likely to affect fetal-infant mortality rates.***

Table II.1. Fetal-infant mortality rates for St. Louis City and County between 2000 and 2009.

	Fetal-Infant Mortality Rates					Numbers	
	Maternal Health/ Prematurity	Maternal Care	Newborn Care	Infant Health	Total	Fetal-Infant deaths	Fetal deaths-live births
All	4.5	2.4	1.2	2.2	10.3	1,644	160,189
Time							
2000 - 2004	4.6	2.7	1.3	2.2	10.8	880	81,529
2005 - 2009	4.3	2.0	1.2	2.2	9.7	764	78,660
County							
St. Louis County	4.0	2.0	1.1	1.9	9.1	1,009	111,462
St. Louis City	5.5	3.1	1.4	3.0	13.0	635	48,727
Race							
White	2.3	1.4	0.9	1.2	5.8	536	92,696
African-American	7.4	3.7	1.7	3.6	16.4	1,108	67,493

When overall rates in St. Louis City and County combined were compared with the national reference groups, the optimal referent group, it was found that 731 babies would have survived, if we had the same fetal-infant mortality rates as the optimal group (see Figure II.1). The greatest excess of fetal-infant deaths was in the Maternal Health and Prematurity category, where 364 babies would not have died between 2000 and 2009 if we had the same fetal-infant mortality rate as the optimal group.

Figure II.1. Fetal-Infant Mortality Rates for St. Louis City/County, between 2000-2009, compared with the US Optimal Referent group from 2000-2002.

Fetal-Infant Mortality Rate (FIMR), St. Louis City/County, 2000-2009 (FIMR=10.3)			National Reference - Fetal-Infant Mortality Rate (FIMR=5.7)			EXCESS (EXC) - Fetal-Infant Mortality Rate (FIMR EXC=4.6, EXC TOTAL=731)		
Maternal Health & Prematurity 716 deaths FIMR=4.5			**Maternal Health & Prematurity** FIMR=2.2			**Maternal Health & Prematurity** EXC=2.3 (n=364)		
Maternal Care 380 deaths FIMR=2.4	**Newborn Care** 196 deaths FIMR=1.2	**Infant Care** 352 deaths FIMR=2.2	**Maternal Care** FIMR=1.5	**Newborn Care** FIMR=1.1	**Infant Care** FIMR=0.9	**Maternal Care** EXC=0.9 (n=140)	**Newborn Care** EXC=0.1 (n=20)	**Infant Care** EXC=1.9 (n=208)

Similar results were found when comparing fetal-infant mortality rates for African-American and White groups with the optimal referent group. It was found that 723 babies would have survived within the African-American population (see Figure II.2), and 8 babies would have survived within the White population (see Figure II.3). The greatest excess of fetal-infant deaths was in the Maternal Health and Prematurity category, for both African-American women and White women, where 353 and 11 babies would have survived, respectively, if we had the same fetal-infant mortality rates as the optimal referent group.

Figure II.2. Fetal-Infant Mortality Rates for African-American women, between 2000-2009, compared with the US Optimal Referent group from 2000-2002.

Fetal-Infant Mortality Rate (FIMR), St. Louis City/County, African-American 2000-2009 (FIMR=16.4)			National Reference - Fetal-Infant Mortality Rate (FIMR=5.7)			EXCESS (EXC) - Fetal-Infant Mortality Rate (FIMR EXC=10.7, EXC TOTAL=723)		
Maternal Health & Prematurity 501 deaths FIMR=7.4			**Maternal Health & Prematurity** FIMR=2.2			**Maternal Health & Prematurity** EXC=5.2 (n=353)		
Maternal Care 249 deaths FIMR=3.7	**Newborn Care** 114 deaths FIMR=1.7	**Infant Care** 244 deaths FIMR=3.6	**Maternal Care** FIMR=1.5	**Newborn Care** FIMR=1.1	**Infant Care** FIMR=0.9	**Maternal Care** EXC=2.2 (n=148)	**Newborn Care** EXC=0.6 (n=40)	**Infant Care** EXC=2.7 (n=183)

Figure II.3. Fetal-Infant Mortality Rates for White women, between 2000-2009, compared with the US Optimal Referent group from 2000-2002.

Fetal-Infant Mortality Rate (FIMR), St. Louis City/County, White 2000-2009 (FIMR=5.8)			National Reference - Fetal-Infant Mortality Rate (FIMR=5.7)			EXCESS (EXC) - Fetal-Infant Mortality Rate (FIMR EXC=0.1, EXC TOTAL=**8**)		
Maternal Health & Prematurity 215 deaths FIMR=2.3			**Maternal Health & Prematurity** FIMR=2.2			**Maternal Health & Prematurity** EXC=0.1 (n=11)		
Maternal Care 131 deaths FIMR=1.4	**Newborn Care** 82 deaths FIMR=0.9	**Infant Care** 108 deaths FIMR=1.2	**Maternal Care** FIMR=1.5	**Newborn Care** FIMR=1.1	**Infant Care** FIMR=0.9	**Maternal Care** EXC=-.01 (n=-8)	**Newborn Care** EXC=-0.2 (n=-20)	**Infant Care** EXC=0.3 (n=25)

Phase 2: Results

Birth weight distribution accounts for 63.6% of the overall fetal-infant mortality rate for the St. Louis area when compared to the US reference group. Among very low birth weight infants (born at less than 1500 grams), 48.3% of the mortality can be attributed to birth weight distribution. There were also significant racial and geographic disparities in risk factors for very low birth weight. Of several risk factors that could be associated with very low birth weight in St. Louis City and County, risk factors associated with fetal-infant mortality for very low birth weight included: African-American race, under the age of 34, inadequate prenatal care, smoking, chronic hypertension, pregnancy induced hypertension, and eclampsia. Being on Medicaid was actually a protective factor, reducing the risk by 15%.

Assessment III: Clinical Survey

Key Finding 1: The majority of providers think of preconception care (PCC) as something specific for women who are planning a pregnancy and not something that would benefit all women.

- More than half of all physicians responding to the survey (58%) think of preconception care as specialty care.
- Only 40% of providers report performing Preconception Risk Assessments on women who are sexually active, while 93% report performing Preconception Risk Assessments on women planning a pregnancy within the next year.

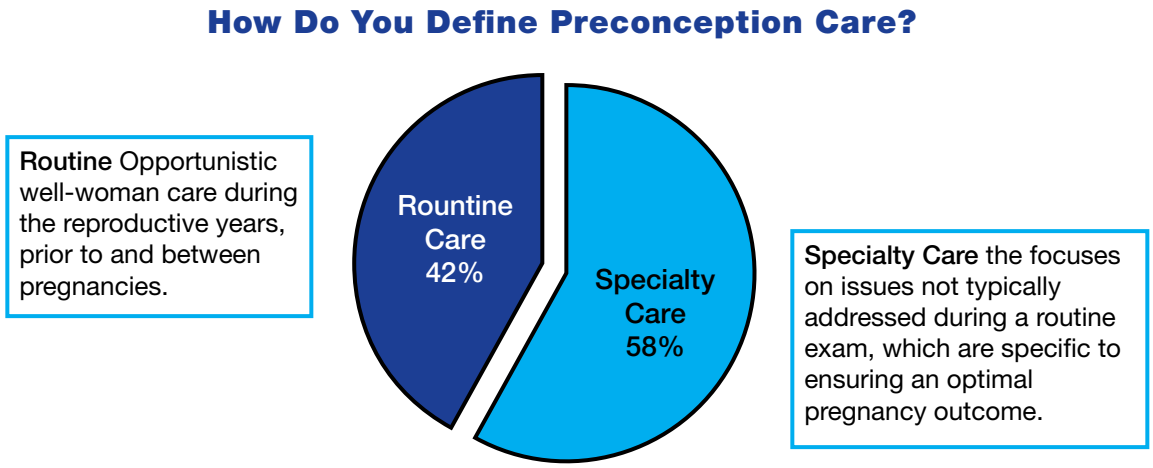

Figure III.1. Percent of clinical providers stating that preconception care is 'routine' or 'specialty' care

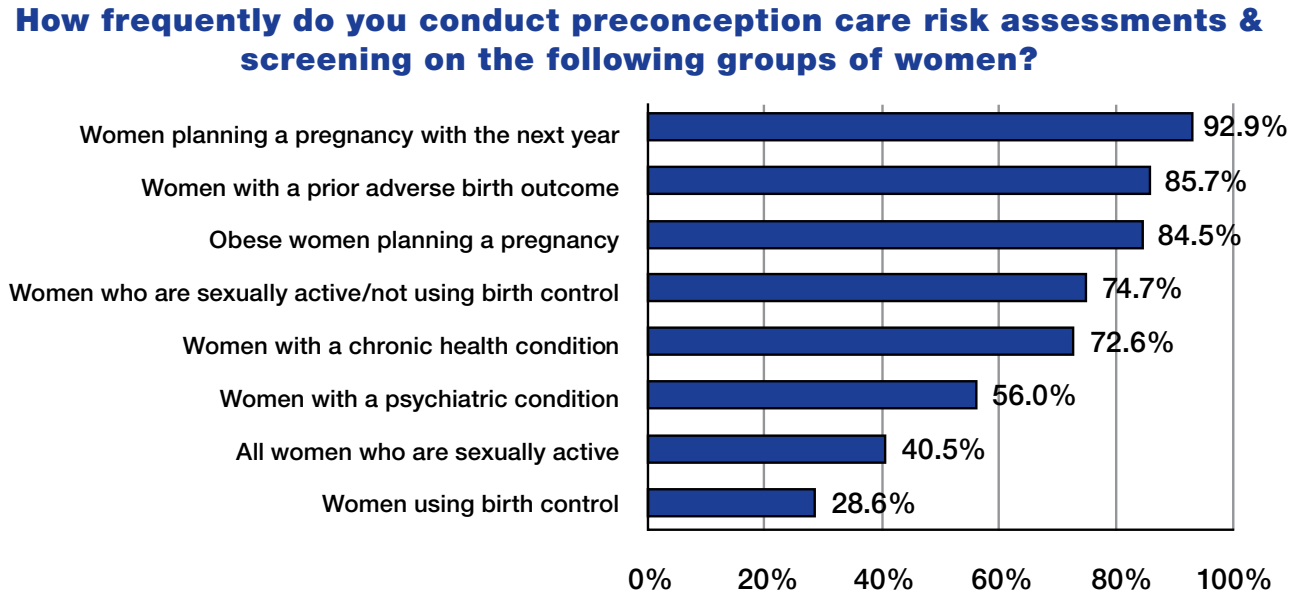

Figure III.2. Percent of clinical providers responding that they 'always' or 'usually' conduct preconception care risk assessments

Key Finding 2: Women are more likely to be screened for immunity to rubella, varicella and hepatitis B and certain sexually transmitted diseases if they are planning a pregnancy than on a routine well woman exam. This is also true for issues such as alcohol, drug use and folic acid intake.

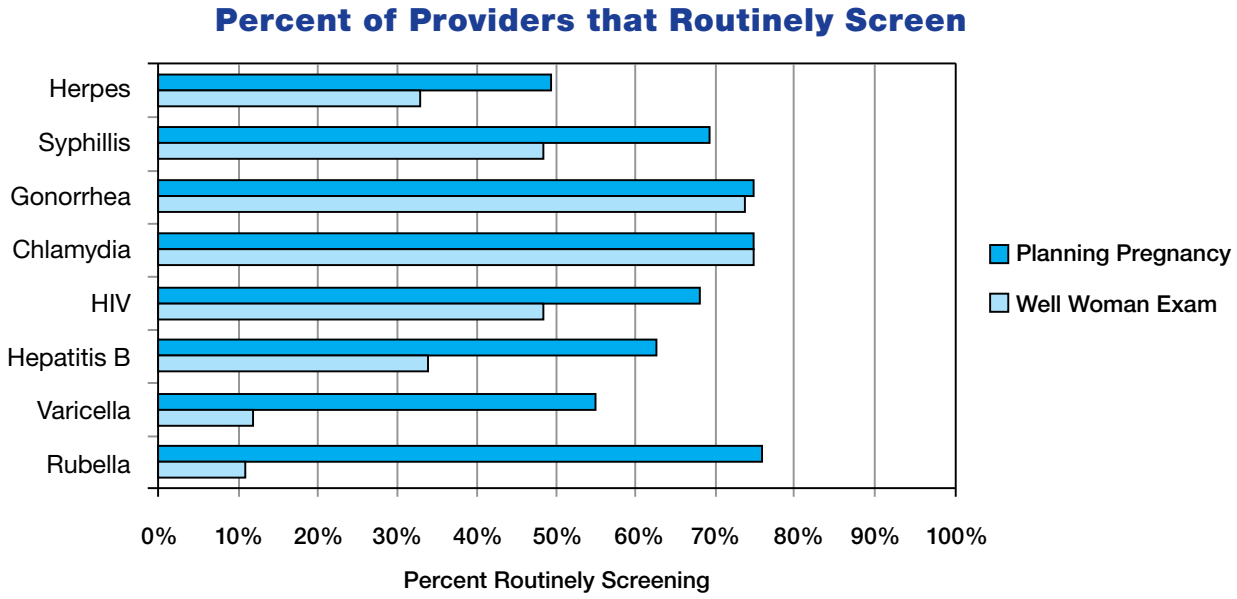

Figure III.3. Percent of clinical providers 'routinely screening' for certain diseases during a well-woman exam or for women planning pregnancies.

Key Finding 3: Too few providers believe that preconception health information should be targeted to adolescents, even though teens may be sexually active.

- More than 90% of providers thought that non-pregnant women of childbearing age should be targeted for preconception care, however only half (49.5 %) indicated that adolescents should be targeted.

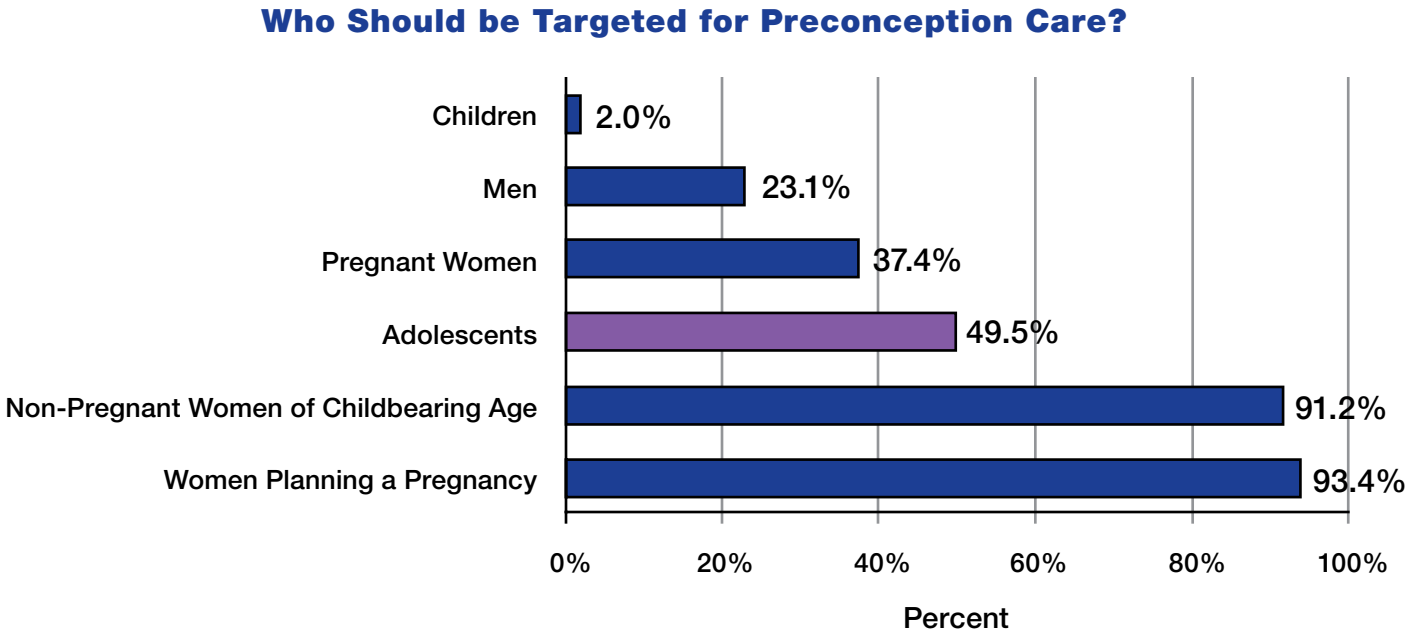

Figure III.4. Percent of clinical providers identifying certain populations for preconception care

Key Finding 4: Providers identified adequate time with patients as the most important factor in improving preconception services. Also important was more availability of referral sources and standardized health education material and risk assessments.

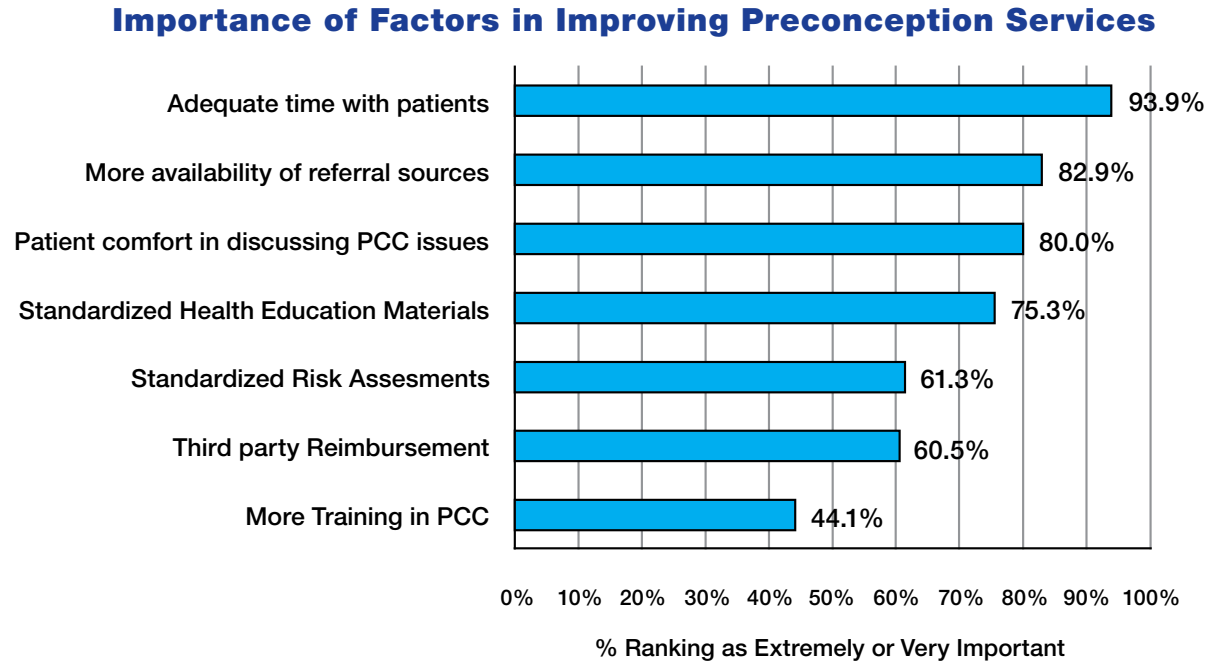

Figure III.5. Percent of clinical providers ranking certain factors as extremely or very important to improving preconception services

Key Finding 5: About 3⁄4 of all provider respondents believe that women lack knowledge about preconception care and about half believe that women are embarrassed to discuss sensitive issues related to preconception health, such as substance abuse or psychosocial stressors or weight management.

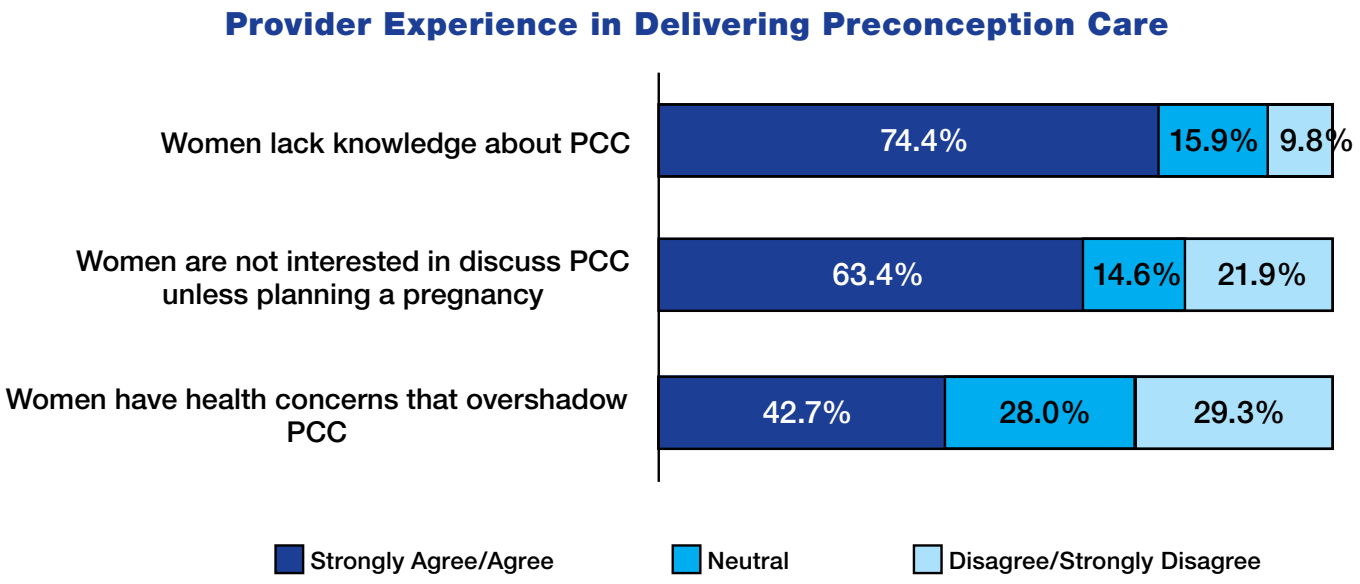

Figure III.6. Clinical providers' experiences with women's knowledge and desire for preconception care

Key Finding 6: Providers identified significant institutional challenges to achieving health equity and delivering culturally proficient care. 58% of all clinician respondents thought that service providers frequently impose their own cultural values on minority clients, while another 37.8% do not believe that minorities have certain challenges in this society.

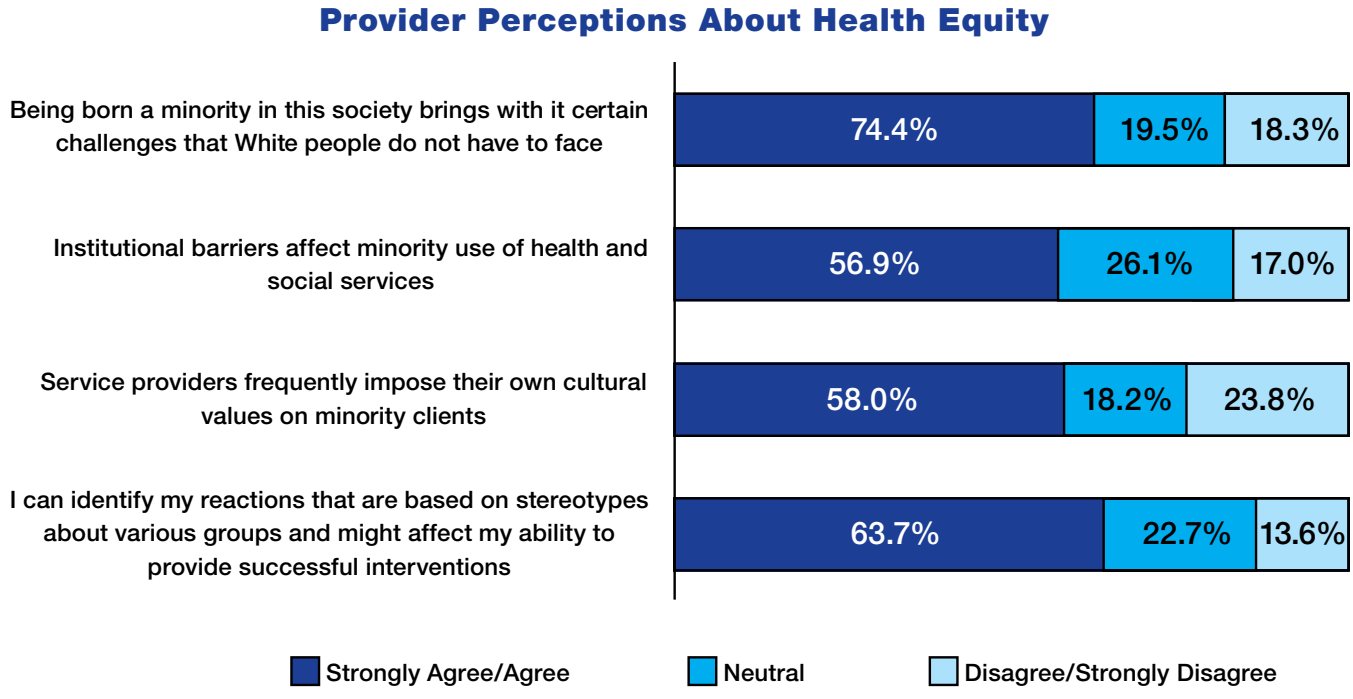

Figure III.7. Percent of clinical providers agreeing or disagreeing with health equity statements.

Conclusions:

Most physicians still see preconception care as something that is delivered to the small group of women that are planning pregnancies and are seeking the advice of their physician ahead of time. It is not yet a type of care that is delivered consistently to all women, even though approximately half of all pregnancies in the nation are unintended. Therefore, many women are not receiving or benefiting from preconception care, as they are not aware they should be requesting medical advice before conceiving. If preconception counseling was given more routinely, more women would receive the benefits of guidance of a physician should a pregnancy occur. Among clinicians, however, there is no consensus on exactly how to deliver preconception care[42]. A single office visit is often not sufficient to address all of a particular patient's preconception care issues, and many women do not receive or benefit from preconception care services that could be delivered in well-women visits. To address the issue of when preconception care should be delivered, ACOG has issued the following recommendations for implementing preconception care in the clinical setting[43]. 1) Each woman should have a Reproductive Life Plan (RLP) and this RLP should be updated at every visit. 2) If pregnancy is planned within the next 2 years, a return visit should be scheduled with the patient and her partner for a full preconception care assessment and follow up care should be scheduled based on identified individual risks. 3) If pregnancy is not planned within the next 2 years, continue routine well woman exams and routinely address family planning needs and update the reproductive life plan.

Assessment IV: Community Agency Survey

Key Finding 1: The vast majority of community agencies do not have preconception health targeted as part of their mission, and very few offer preconception information in educational classes or groups. Most preconception information is spread out by topic across many different organizations.

Is Preconception Care Specifically Identified as Part of Your Agency's Mission?

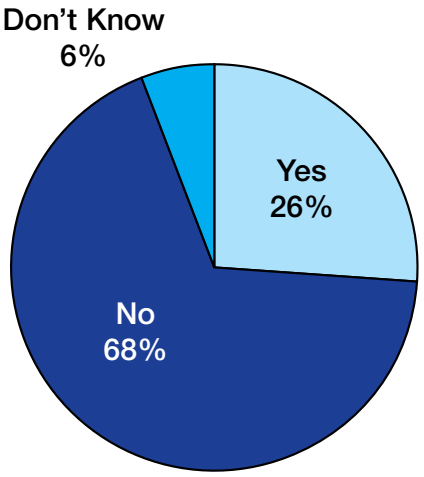

Figure IV.1. Percent of community providers identifying preconception care as part of their agency's mission.

Key Finding 2: Agencies were more likely to provide discrete services related to preconception health rather than having several preconception health services or a preconception health focus, making it unlikely for women to find a "one-stop-shop" for preconception health services.

- Discrete services provided by organizations varied widely, but mental health, nutrition, domestic violence, and drug abuse were listed most frequently (35%, 33%, 30%, 27% respectively).
- Nearly half of the agencies responding use educational materials related to preconception health topics. A broad range of preconception health topics are covered, with alcohol use, drug use, and smoking cessation being the most frequently cited.

Key Finding 3: Only 22% of respondents reported using educational materials specifically for preconception health as a topic and only 25% of respondents reported that their agency provided educational sessions on preconception care topics. 11% of those doing education sessions provided information specifically on preconception care or Reproductive Life Plans (RLPs).

Key Finding 4: Social marketing efforts related directly to preconception health or RLPs is nearly nonexistent in St. Louis. Only 1.4% of respondents reported conducting social marketing activities specific to preconception health.

Key Finding 5: Accessing care and services is still a major issue for clients and consumers. Lack of insurance coverage, and support services such as childcare and transportation creates barriers to accessing needed services.

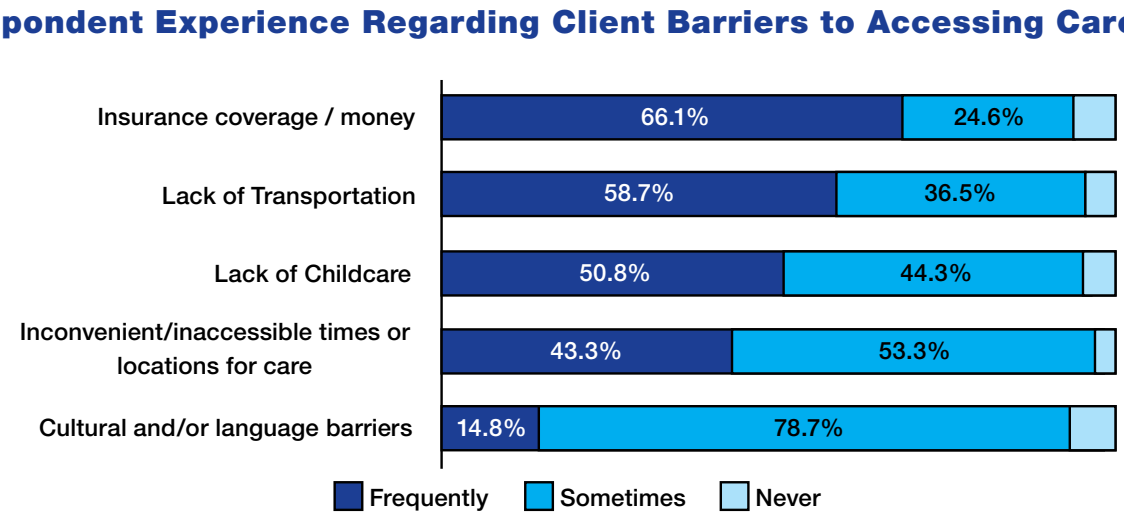

Figure IV.2. Percent of community providers observing certain barriers for service consumers

Key Finding 6: Respondents indicated that more availability of referral sources was the most important factor in improving preconception care services in community agencies. Adequate time to address issues with clients was also important. The most frequently made service referrals were for alcohol and drug problems as well as financial assistance (65%).

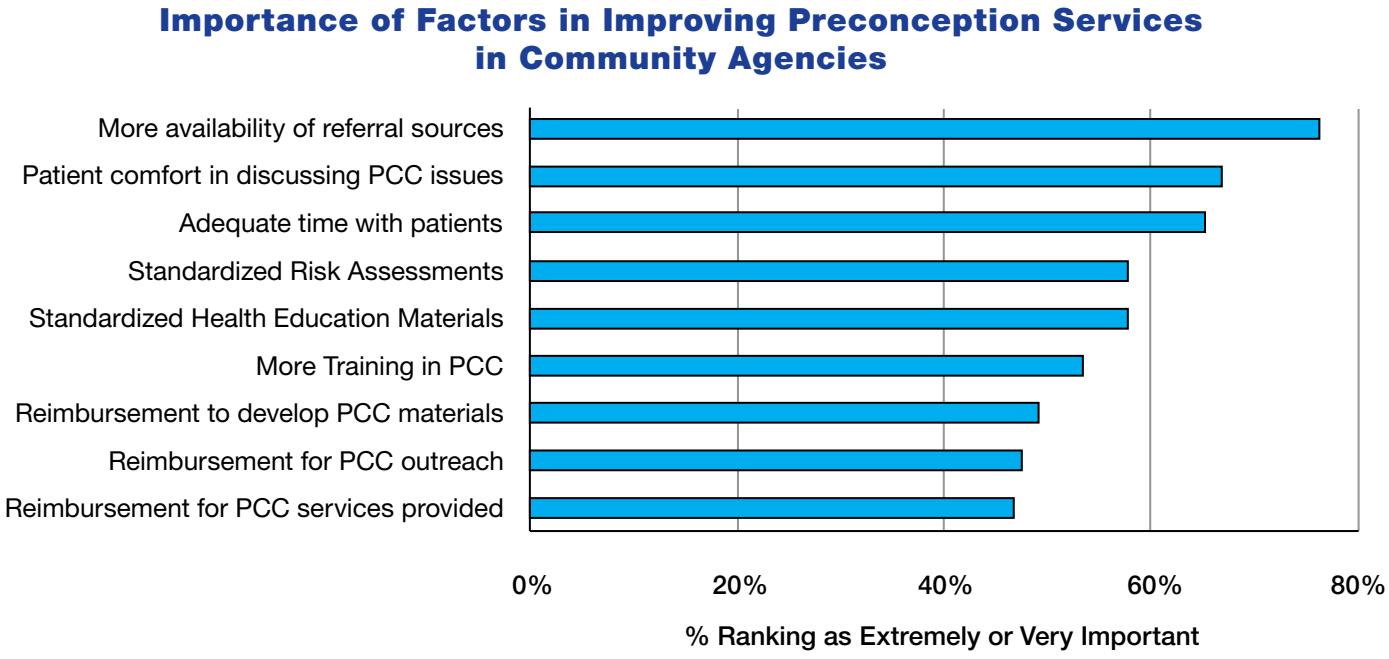

Figure IV.3. Percent of community providers ranking certain factors as 'extremely' or 'very important' to improving preconception health services in agencies

Key Finding 7: Respondents identified significant institutional challenges to achieving health equity and delivering culturally proficient care.

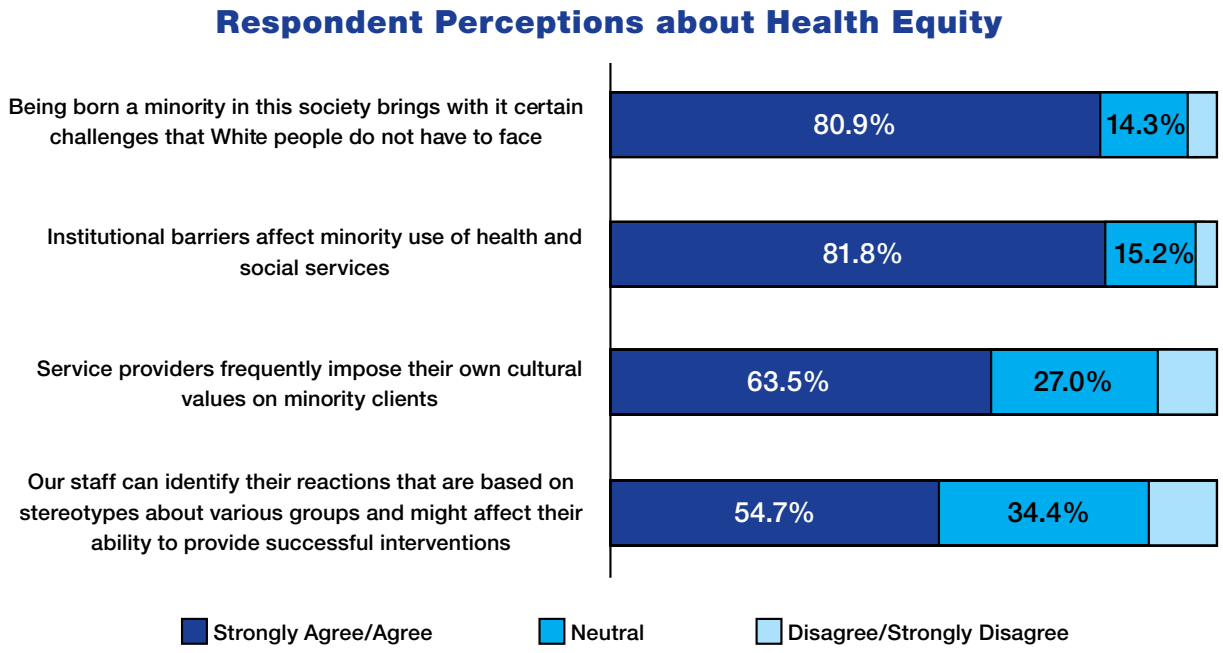

Figure IV.4. Percent of community providers agreeing or disagreeing with health equity statements

Key Finding 8: Training and materials on preconception health is a need in community agencies. Fifty-one percent of respondents said they had an interest in receiving training, and 39% said that materials were needed in order to improve integration of preconception health into services.

Conclusions:

Community agencies responding to the survey offer a wide range of discrete preconception care services as part of their scope and mission, but only 26% indicated that preconception care was specifically identified as part of their agency's mission and scope of services. Likewise, preconception health specific materials and Reproductive Life Plan tools are less common among agencies surveyed. There is interest in preconception health training among respondents. Increased availability of referral sources along with more time to spend with clients and client comfort in discussing preconception health issues would improve preconception health service provision within community agencies. Consumer barriers to accessing services are well known among community service providers and the prominent role of institutional and structural racism are acknowledged by respondents.

Assessment V: Consumer Survey

Key Finding 1: The majority of women in our community are not aware of the term "preconception care."

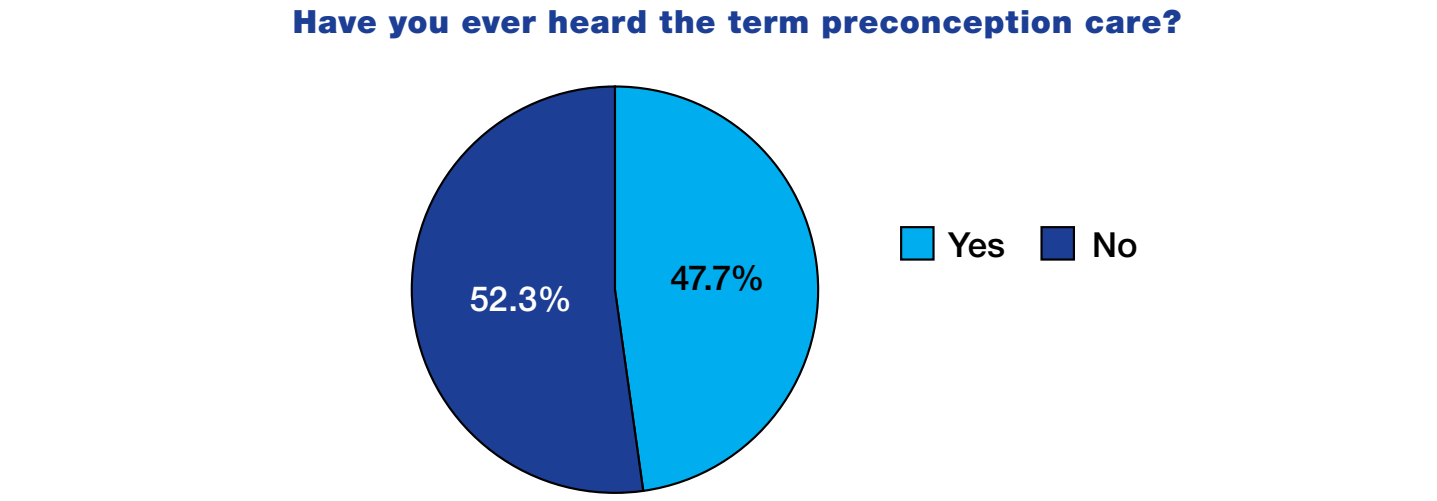

Figure V.1. Percent of women who are aware of the term 'preconception' care

Key Finding 2: Eighty-nine percent of women will listen to health care providers regarding pregnancy planning and will take planning advice from their physician. Books (35%) and the internet (39%) are also important potential channels of preconception information.

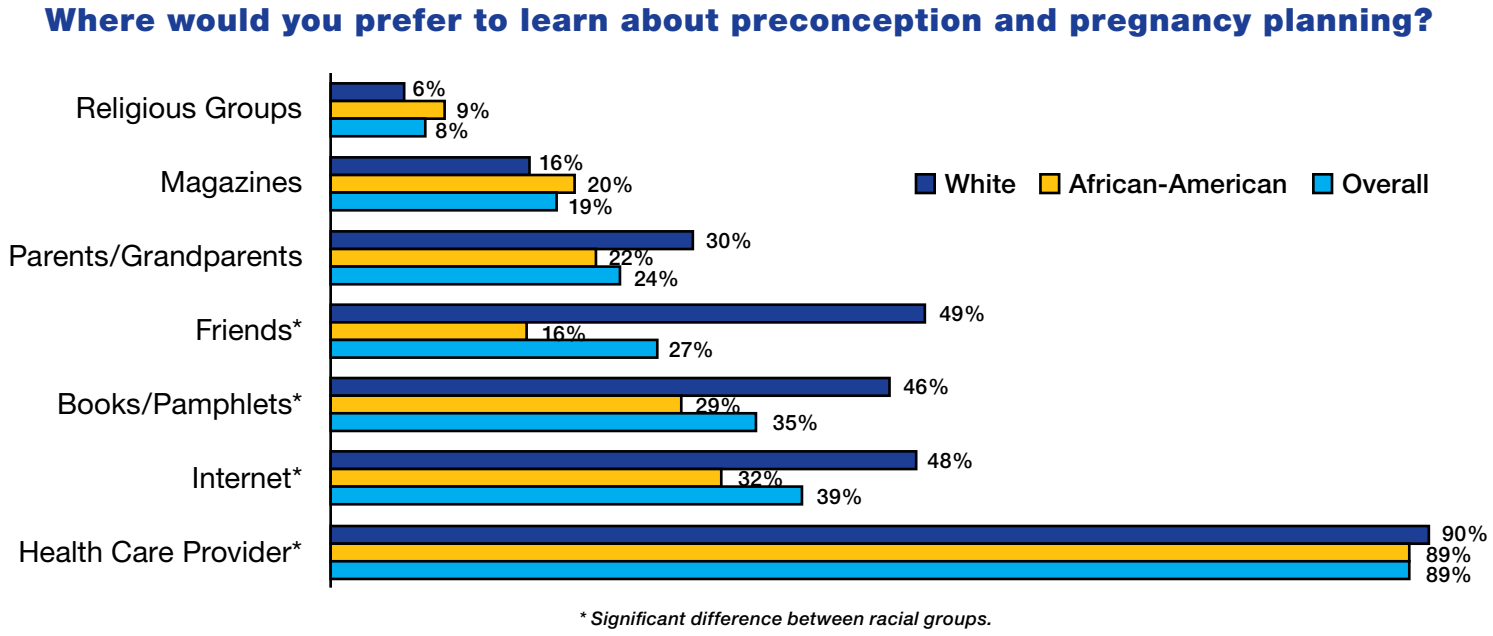

Figure V. 2. Percent of African-American and White women with preferences for preconception and pregnancy planning information sources

Key Finding 3: Less than half of the women in our community have ever considered seeing a health care provider regarding preconception care.

Table V.1. Percent of Woman Responding 'yes' to Preconception Health Behavior Questions.

Current preconception health behaviors.	n=460
Have you ever considered seeing a health care provider regarding preconception care?	**43.3%**
About how long has it been since you last visited a doctor for a routine check-up? (Less than 12 months ago)	**76.2%**
Current smoker	**20.5%**
Any alcohol use	**63.7%**
Current multivitamin use	**45.4%**
Physical activity (during the past month)	**78.1%**
Flu vaccination (during the past year)	**35.8%**

Key Finding 3: Family planning was the preconception topic that women were most interested in and most likely to use (79%), followed by nutrition and weight management (50%).

Key Finding 4: African-American women have less social and emotional support than White women in our community.

Table V.2. Percent of African-American and White Women Responding Positively to Social/Emotional Support Questions.

Social Relationship/Conditions	**African-American** (n=270)	**White** (n=135)	p-value
I am able to change things in my life that are not healthy for me? *Agree or Strongly agree*	53.0%	52.6%	0.484
People of my racial group receive the same medical care from doctors and health care works as people from other groups. *Agree or Strongly agree*	9.7%	15.6%	0.060[P]
I have personally been treated poorly or unfairly by doctors or health care workers because of my race. *Agree or Strongly agree*	3.7%	0.7%	0.072[P]
General Life Satisfaction. *Satisfied or Very satisfied.*	94.7%	91.8%	0.185
Has a doctor ever told you that you have an anxiety disorder or depression? *Yes*	15.9%	33.3%	0.000[TT]
How often do you get the social and emotional support you need? *Always or Usually*	62.4%	84.3%	0.000[TT]

[TT] Significant difference between African-American and White respondents.
[P] Nearing significance.

Conclusions:

Women in our community are not likely to have heard of the term 'preconception' and are even less likely to have seen a physician for the purpose of receiving preconception care. However, women would be open to receiving pregnancy planning and preconception information from their doctors, as well as through other media. In addition, African-American women are less likely to have adequate social and emotional support which is an important aspect of overall health.

Assessment VI: Women's Focus Groups

Key Finding 1: Although a few of the focus group participants recognized the term "preconception," most had not heard the term and were not sure about its meaning. The community may need to be introduced to the term or need other language used in its place.

Key Finding 2: Parent and teen education, peer counseling and incentives may increase preconception health behaviors. The schools were mentioned as an important potential source of education about sex and health for young women and men. Women also stated an interest in hearing other people's personal stories, and find this more engaging than hearing about research.

Key Finding 3: Women said that the idea of "planning" a pregnancy has different meanings to different people. Women may deliberately become pregnant but not really plan for the pregnancy, or they may not intend to become pregnant but very much desire the child. Motivations involved in becoming pregnant or intending a pregnancy are complicated and varied. Safe-sex was seen as important behavior in a healthy lifestyle, along with good nutrition and regular doctor visits.

Key Finding 4: Self-care and management, including coping with stress, were seen as important to preconception health. Awareness of community resources may increase self-efficacy in initiating and sustaining healthy behaviors. Women felt that preconception health impacts all life stages and that it was never too late for healthy choices and benefits to be gained as a result.

Assessment VII: Public Health and Policy Analysis

Key Finding 1: The access to care burden is disproportionately high for African-American women as evidenced by the disparity in the percentage of African-American and White Medicaid births in St. Louis City and St. Louis County. This burden persists for African-American women throughout the lifespan.

- Highest percentage of Medicaid births for all age groups occurs at 18-19 for White women and between 18 and 24 for African-American women.
- **71% of births for African-American women are covered by Medicaid and 24% of births for White women are covered by Medicaid.**

Table VII.1. Medicaid Births by Age Group: St. Louis City and St. Louis County Missouri, 2005-2009 (5 year average)

Age	White %*	African-American %*	Both %*
10-14	##	92	70
15-17	69	74	73
18-19	76	82	80
20-24	57	82	72
25-29	22	68	38
30-34	9	54	20
35-39	8	44	16
40 plus	8	46	18
All ages	24	71	43

Source: Missouri MICA
*% = Percent of Medicaid births for that age group and race

Key Finding 2: Low income women on Medicaid have a higher incidence of risk factors and complications of pregnancy than women not on Medicaid:

- Rates of smoking during pregnancy are higher for Medicaid recipients of both races, but it is twice as high for White women on Medicaid compared to African-American women on Medicaid.
- Women on Medicaid have higher rates of excess gestational weight gain than women not on Medicaid.
- Prevalence of pregnancy induced hypertension and depression in pregnancy are both higher for women on Medicaid.
- These risk factors and complications of pregnancy can lead to adverse outcomes for the mother and infant during pregnancy and delivery and can also lead to health issues such as type II diabetes and hypertension which would require medical intervention for years following delivery.

Table VII. 2. Selected Preconception Care Risk Factors & Complications of Pregnancy: St. Louis City and County

	Medicaid		Non-Medicaid	
	White	African-American	White	African-American
Risk Factor				
Smoking During Pregnancy*	27.2	14.1	4.7	6.1
Gestational Weight Gain More than 44 Pounds*	23.2	21.7	16.4	18.9
Mother Overweight by 20% or More of Body Weight*	38.4	47.4	30.1	51.4
Complication of Pregnancy				
Gestational Diabetes**	4.5		5.5	
Pregnancy Induced Hypertension**	8.2		6.2	
Depression During Pregnancy**	8.0		5.8	

*Rate calculated from 5 year average, 2005-2009, Source, Missouri MICA
**Prevalence (%): Source, Midwest Health Initiative

Key Finding 3: For low income, uninsured women access to preconception care services are fragmented and the comprehensiveness of services provided is dependent on pregnancy status and/or finding specific service providers with funding for sliding fee scale services. (See Table VII.3)

- Accessing preconception care is difficult and complex for low income uninsured women. Prior to pregnancy, or after delivery, low income uninsured women must locate free or sliding-fee scale preconception and preventive services on their own. Follow-up for problems like hypertension and diabetes that are identified during preconception care services or during pregnancy becomes sporadic due to lack of insurance coverage for non-pregnant women.

Key Finding 4: Current funding sources for non-pregnant low income women do not cover all of the preconception care services recommended by CDC, ACOG and AAP. Most of the services available to women prior to or after pregnancy are limited to contraception and sexually transmitted disease. Uninsured women needing care for problems identified during preconception health risk assessment (diabetes, hypertension, mental health or substance abuse) have few resources available to them.

Key Finding 5: We have inadequate surveillance data on many of the risk assessment parameters identified in the CDC guidelines. We lack readily accessible surveillance data for many of the preconception health risk assessment parameters, including substance abuse, psychosocial stressors, domestic violence, and chronic disease prevalence and management. This makes it difficult to assess and track preventive care for women in our community as we are unable to establish baseline data and monitor progress toward goals set.

Table VII.3. Preconception Care Services Funding for Low Income Uninsured Women

Source	Description	Eligibility	Services Provided
Mo HealthNet for Pregnant Women (Medicaid Coverage)	Jointly financed by the State of Missouri and the federal government. Administered by the Missouri Department of Social Services	- Verified pregnancy - SSN - Missouri Resident US Citizen/Eligible Qualified Non-Citizen - Net family income at or below 185% federal poverty level (FPL) for household size (including unborn child)	- Comprehensive prenatal care services - 60 days of comprehensive postpartum care
Extended Women's Health Services (Medicaid Coverage)	Part of the 1115 waiver group of Missouri Medicaid Administered by the Missouri Department of Social Services	- Received Mo HealthNet for Pregnant Women - Uninsured - Limited to 12 months of coverage after Mo HealthNet for Pregnant Women Coverage	- Approved methods of birth control - Sexually transmitted disease testing and treatment - Pap test - Pelvic exam - Counseling and education on various methods of birth control - Drugs, supplies or devices related to the above services prescribed by a physician or advanced practice nurse
Uninsured Women's Health Services (Medicaid Coverage)	Part of the 1115 waiver group of Missouri Medicaid Administered by the Missouri Department of Social Services	- Women 18 -55 years of age - SSN - Missouri Resident US Citizen/Eligible Qualified Non-Citizen - Net family income at or below 185% federal poverty level for household size - Available resources that do not exceed $250,000 - No access to employer-sponsored insurance	- Approved methods of birth control - Sexually transmitted disease testing and treatment - Pap test - Pelvic exam - Counseling and education on various methods of birth control - Drugs, supplies or devices related to the above services prescribed by a physician or advanced practice nurse
Title X Funds	- Federal grant program administered by the Office of Family Planning within the DHSS - Funds are specifically for family planning services - Funds are distributed to a diverse group of local agencies such as state, county and local health departments, Planned Parenthood and FQHCs	- Open to all women regardless of age, marital status, income or health insurance - Women may be charged fees based on income. - Women with incomes at or below federal poverty level (FPL) are seen free of charge - Women with incomes between 100% and 250% FPL may be charged according to a sliding fee scale - Women with incomes over 250% FPL pay the full cost of care	- Contraceptive methods, counseling and education - Breast and cervical cancer screening - Pap tests - Sexually transmitted disease testing and treatment - Blood pressure screening
330: FQHC Funding	- Agencies receiving grants under Section 330 of the Public Health Service Act or an organization that meets the eligibility requirements of a 330 grantee that provide care to underserved populations - The agencies are governed by a board of directors comprised of at least 51% of active registered clients of the health center	- Open to all clients regardless of ability to pay - Agencies must use a sliding fee scale based on FPL - Varies by county and program participation	- Primary care services for all age groups - Preventive services must be offered either on-site or by arrangement with another provider - In addition to primary care, the following services must be provided directly by the FQHC or by arrangement with another provider: 1. Dental services 2. Mental health and substance abuse services 3. Transportation for adequate patient care 4. Hospital and specialty care
Local Public Health Support	- Varies by county. - Many local public health departments receive Title X funds or provide services to Medicaid recipients. Participation in these programs requires that services are offered in accordance with the standards set by those programs.	- Varies by county and program participation	- Primary care services for all age - Varies by county and program participation

Key Finding 6: Many of the preconception health preventive services identified by CDC, ACOG and AAP are provided and/or monitored by local public health. However, preconception health is not identified as a stand-alone priority for most local health departments.

Key Finding 7: Funding mechanisms for low income uninsured women to access maternal/child health (MCH) and preconception care services are underfunded and/or under threat of budget cuts. These include Medicaid, Title X (family planning) and 330 Funds (FQHC start-up and expansion funds).

Key Finding 8: Funding for maternal and child health policy and infrastructure building is also underfunded and under continuous threat of budget cuts (Title V - Federal Maternal Child Health Block Grant).

Conclusions:

1. Low income women have access to contraception and sexually transmitted disease services, but these services are fragmented and eligibility varies. This fragmentation requires that a woman know which services she is eligible for and where those services are provided. There is no good roadmap for women to follow to receive basic care, let alone preconception care services.
2. Follow-up for problems identified through preconception health risk assessment is very difficult as there are few resources that provide these services for women on a sliding fee scale.
3. Funding for contraceptive services, sexually transmitted disease services and MCH infrastructure is underfunded and continually under threat of budget cuts.
4. The community spends a large amount of time and energy fighting to maintaining current funding levels for women's health services and this constant struggle depletes the resources needed to procure additional funds to enhance services for our most vulnerable women.
5. There is an opportunity to improve coordination and integration of preconception health prevention and services in local and state health departments.

Community Recommendations to Reduce Infant Mortality, Increase Health Equity, and Improve Preconception Health

Partnership Process

As data collection concluded in September 2011, the Partnership for Preconception Health and MCFHC organized a set of four meetings during September, October and November to allow the Partnership an opportunity to review the results of each of the assessment pieces and begin to formulate recommendations. These meetings were facilitated by Vector Communications, Inc. and geared toward assembling the large volume of information collected during the assessment phase into main findings and priorities. For each of the four meetings, attendees from at least 18 organizations were present in addition to MCFHC staff. They represented community social service organizations that work with women or teens, health centers, public health agencies, managed care organizations, and universities.

Meetings were structured to emphasize community input and allow the many different perspectives in the room to be heard. At the first meeting, participants explored their own organization's role and potential impact in the life course of a woman and discussed the trends, factors or events which were occurring the in the community that could influence the health and quality of life of St. Louis residents.

Meeting two involved a review and discussion of the main findings of the provider, community agency, public health, consumer and policy assessments. Partnership members organized themselves by topic area (Provider, Consumer and Policy) and participated in a facilitated process to rank each main finding in those areas by the potential impact and effort of addressing them.

The third and fourth meetings were devoted to brainstorming recommendations for each prioritized finding and voting on a set of recommendations for improving Preconception and reducing disparities in health and pregnancy outcomes in the region.

In order to ensure input from the community, two additional meetings were held with 10 women who had participated in the focus groups earlier in the summer. In these sessions, the main findings from each assessment were presented and the women were asked to give their impressions of the importance of finding and their ideas for how to address them. Recommendations from consumers were thus integrated into the overall recommendations of the Partnership for Preconception Health. These recommendations will serve as the strategic areas where interventions will be targeted.

Recommendations

Clinical Care:

- Expand medical provider knowledge and practice of preconception care by working with medical schools, health training and certifying organizations, and medical associations to include more emphasis on the importance and benefits of preconception care.
- Provide physicians and their staffs with standard preconception health materials/tools that can be adapted to local community needs and are used and distributed at offices and other health related venues.
- Incorporate preconception health education, assessment and screening into routine medical visits and medical record protocols. Key preconception health questions should be reviewed during each visit and should include family planning, nutrition and weight management.

Community Services:

- Educate agencies on the integral nature of preconception health to their work and encourage them to incorporate preconception health outcomes into their missions, visions, values and/or organizational agendas.
- Facilitate preconception health collaboration among existing agencies and programs to reduce duplication of efforts; fill gaps in service; ensure better use of limited resources; and share best and promising practices.
- Create a repository of preconception health information, resources, policy development, and advocacy in the St. Louis region through the Partnership for Preconception Health.

Consumers:

- Undertake a social marketing campaign that uses popular media, social media, and peer to peer education and outreach to educate women, men and youth on preconception health using positive, future-affirming messages. Use existing community education outlets/ programs to the extent possible.
- Provide consumers with information and materials that are easy to read and use on family planning, nutrition and weight management along with other preconception health topics.
- Increase the community's knowledge of existing free or sliding scale health and social services by working with media, health centers, and state agencies.

Policy:

- Seek greater insurance coverage for medical visits for women outside of prenatal care. Consider all visits pre-pregnancy visits, so preconception counseling is no longer targeted only to women planning a pregnancy.
- Advocate for state and national policy and systems changes that advance preconception health especially for those with limited financial resources.
- Advocate for state and local health departments to prioritize and integrate preconception health approaches.

Health Equity:

- Cultivate trained, trusted, and empowered community-based health advocates to help promote preventive health messages, advance a health equity agenda at the grassroots level, and act as intermediaries between consumers and providers.
- Develop a regional protocol for conducting a health impact assessment for every major local or state policy or project (including transportation, housing, education, health care etc.) that could affect health outcomes and health equity.
- Launch a multi-level communications campaign with targeted messaging and framing to raise the visibility of St. Louis' health status and its impacts on the viability of the region.
- Advance the education and empowerment of minority women as an effective means of improving health outcomes for families and the community at-large.

A Call to Action

The recommendations generated by this year-long needs assessment and community partnership process are just the first step to initiating community change. Collective action will bring these recommendations to fruition. Together we can improve health equity across the life course. If all institutions, agencies and individuals that provide clinical care, public health, community services, or advocate for policy change emphasize these recommendations in their organizations, we will raise the profile of preconception health in the community. In the coming year, the Partnership for Preconception Health will develop concrete strategies for addressing these recommendations. We invite you to join our efforts to eliminate unnecessary infant deaths and improve the health status of women prior to pregnancy.

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