

KENT COUNTY INFANT HEALTH INITIATIVE

2009 Annual Report

Interconception Care Program



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Overview & Background

History of the Kent County Infant Health Initiative

In the spring of 2005, the Kent County Health Department (KCHD) received a grant from the Michigan Department of Community Health. The grant funded the development of an infant mortality coalition, a community action plan to reduce infant mortality, particularly for African Americans, and implementation of an evidence-based Interconception Care Program. Kent County was one of eleven Michigan counties who received funding based on high disparities between African American and white infant survival.

Healthy Kent 2010 - Infant Health Implementation Team serves as the Kent County infant mortality support coalition for the Interconception Care Program. Healthy Kent is a collaborative effort between 31 agencies that seeks to improve the health and well being of Kent County residents through assessing community health needs and assets, activating a community health plan, and following progress of community action, change, and outcomes of the plan.

The Interconception Care Program aligns with Kent County data from the Perinatal Periods of Risk (PPOR) and targets all of the following outcome areas:

- Fewer preterm births
- Fewer low birth weight babies
- More planned pregnancies
- More pregnancies with a 12-18 month pregnancy interval.

The Kent County Infant Health Initiative (KCIHI) includes a variety of projects all aimed at reducing infant mortality and eliminating racial and ethnic health disparities. The projects included in this report include the Interconception Care Program, Brush Up for Baby and Family Planning Program.

Please direct questions or feedback regarding this report to Karyn Pelon, Health Educator at the Kent County Health Department at 616/632.7122 or karyn.pelon@kentcountymi.gov.

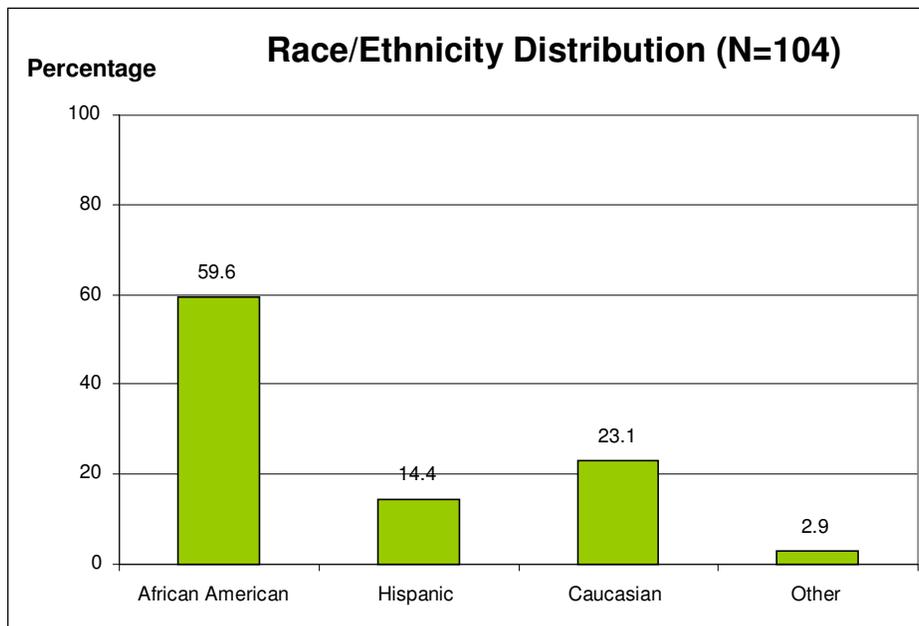
Interconception Care Program

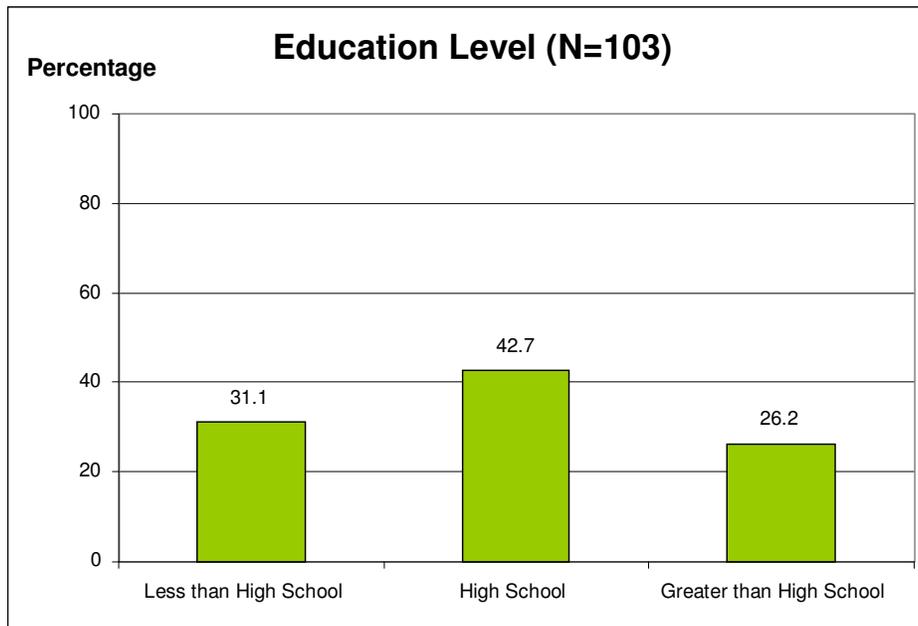
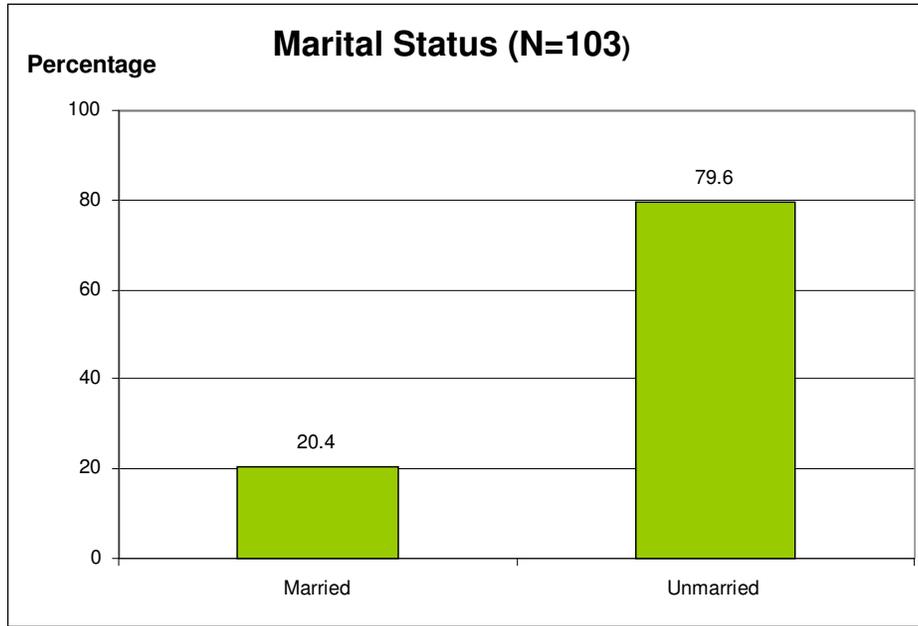
The goal of the Interconception Care (IC) Program is to provide comprehensive interconception care targeting but not limited to African American women with poor pregnancy outcomes. A poor pregnancy outcome is defined as a preterm birth (a birth that takes place before 37 weeks gestation), low birth weight baby (an infant weighing less than 5.5 pounds), infant death, stillbirth or miscarriage after the fourth month of pregnancy. As of September 30th, 2009, 104 women had been enrolled in the program.

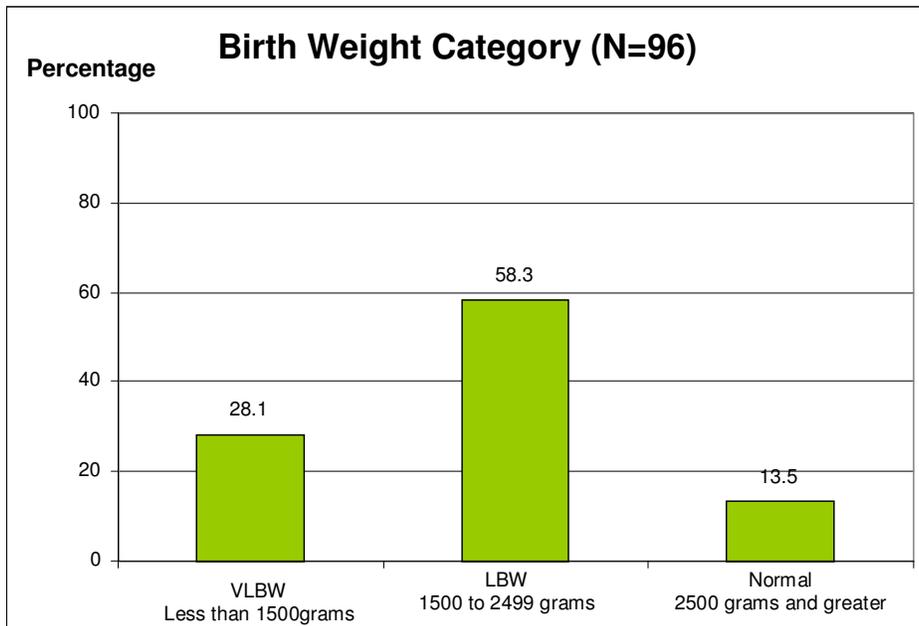
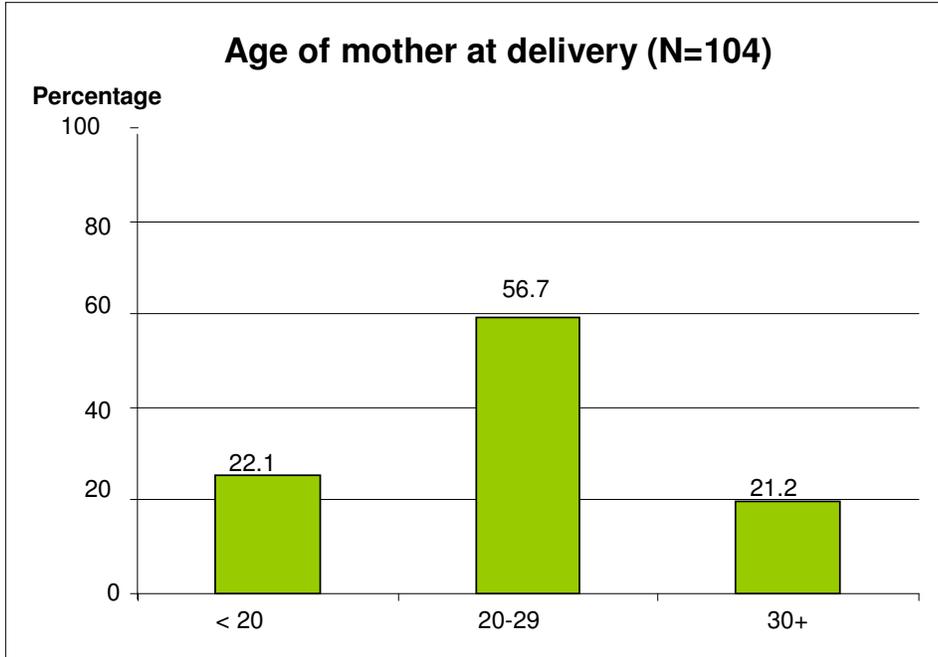
Eligible women are recruited into the program by the Kent County Health Department, Maternal Infant Health Program and by Spectrum Health Mom's Program. Women are seen by a nurse or other health professional and receive enhanced case management for up to 18 months post partum.

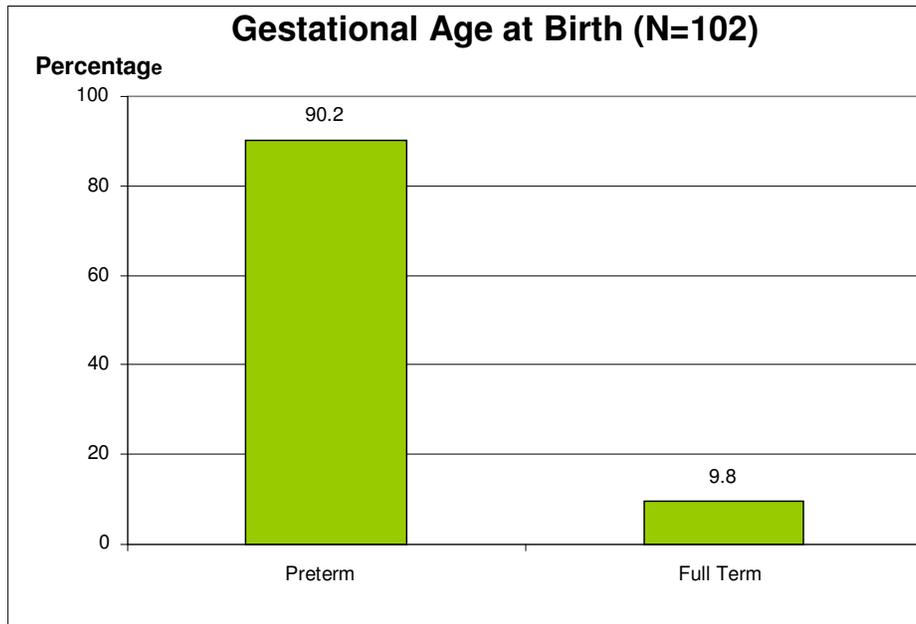
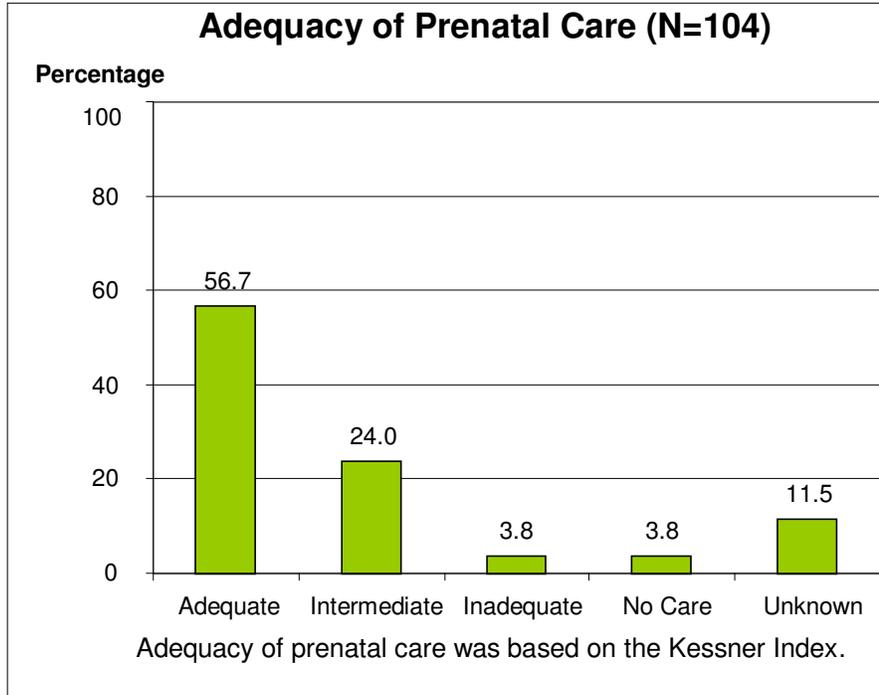
The March of Dimes states that pregnant women should avoid the dangers to the fetus of smoking, as maternal smoking is associated with higher infant mortality rates and increased risk of preterm and low birth weight births. The March of Dimes also urges women to take a multivitamin containing folic acid prior to and during early pregnancy to reduce the risk of serious birth defects, abstain from drinking alcohol during pregnancy and see their doctors to help manage chronic health conditions such as diabetes, hypertension and obesity.

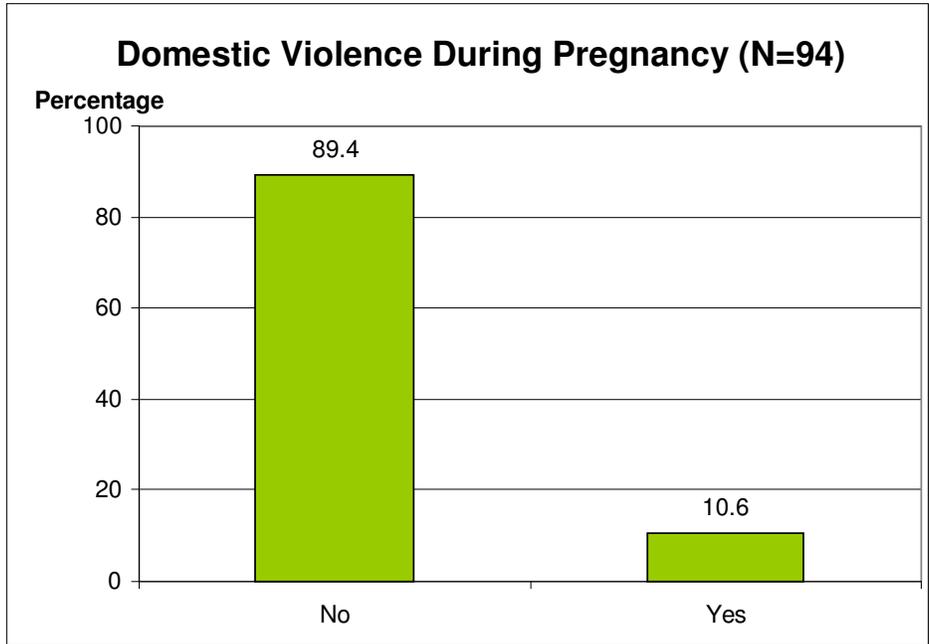
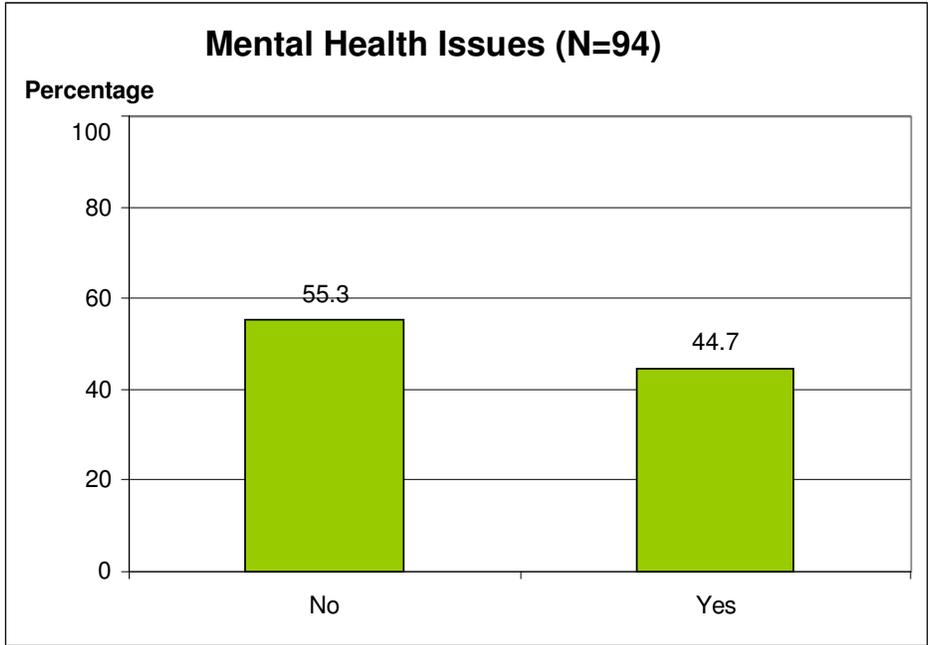
The information below includes demographic information on the 104 IC women as well as glimpses into various health risks that are tracked.

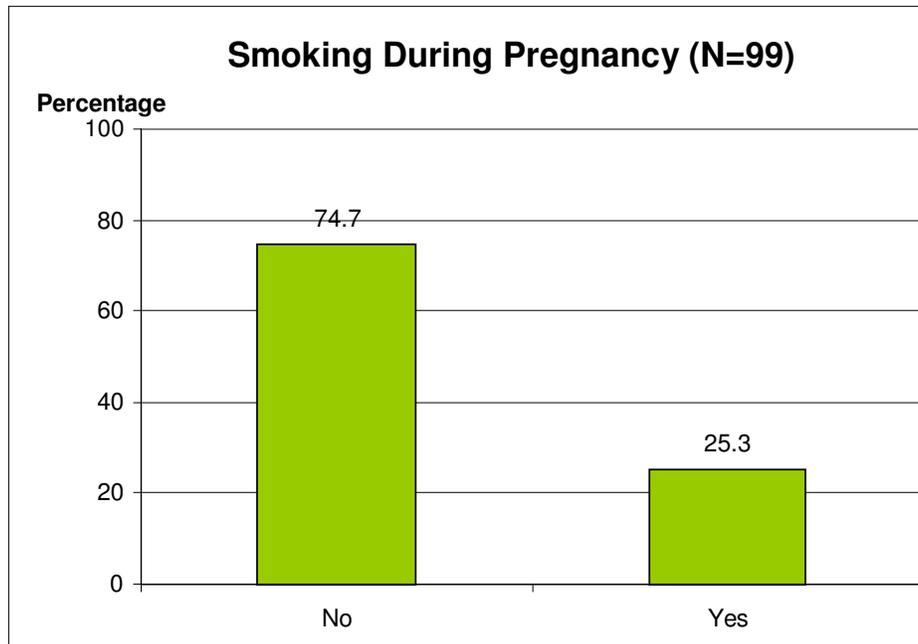
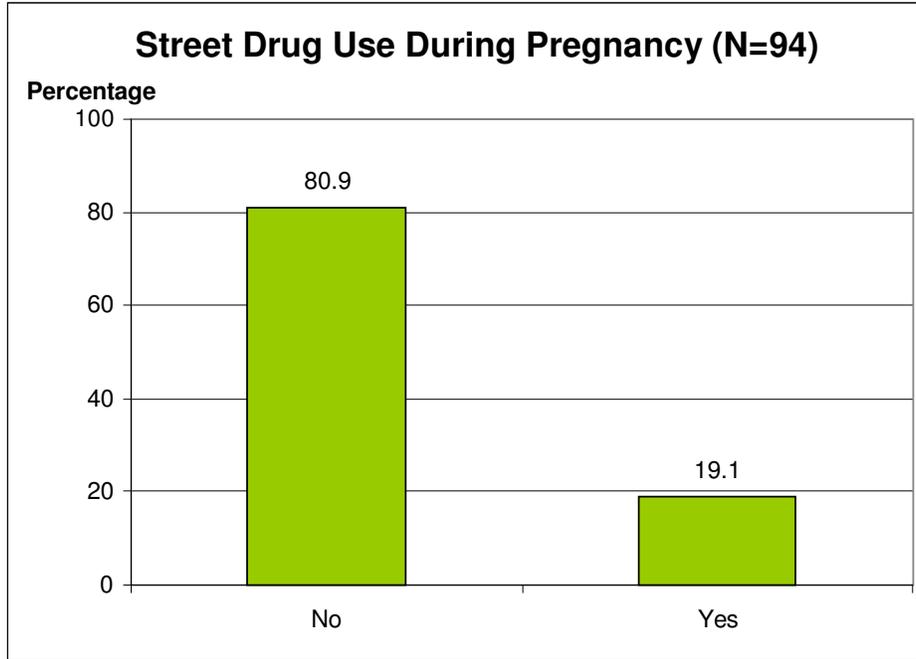


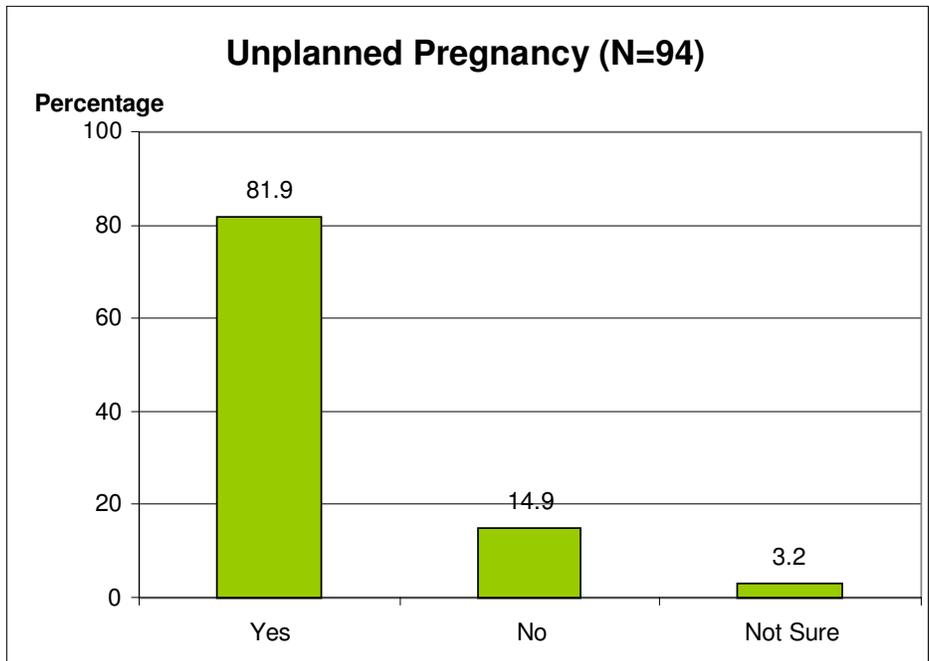
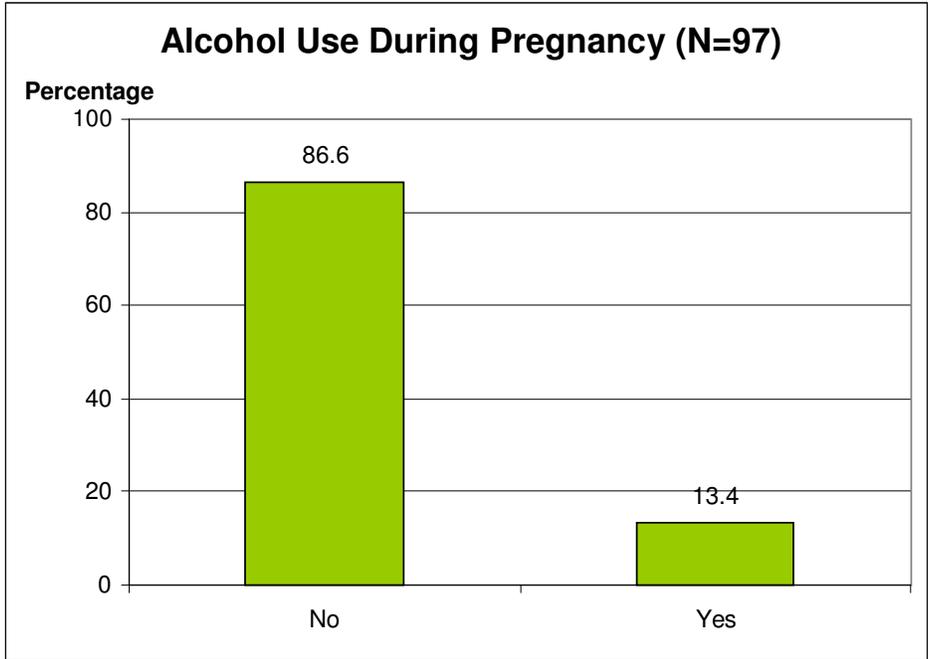


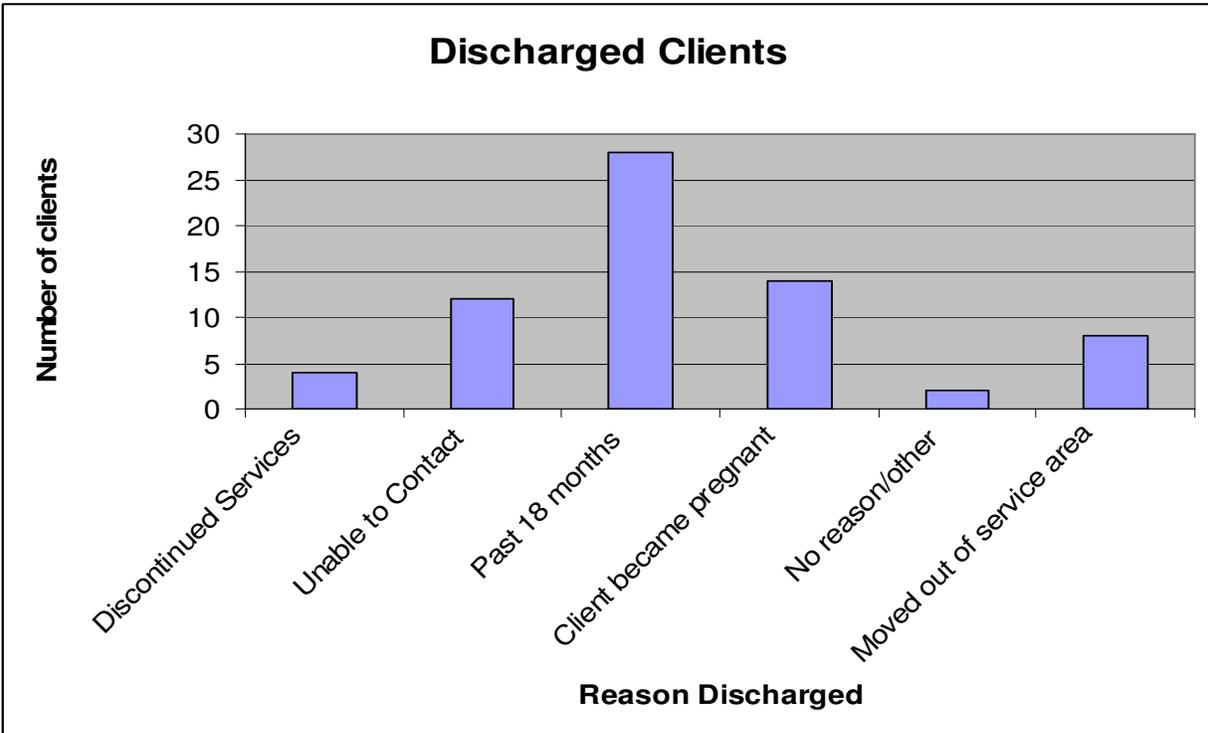












Other Participant Characteristics:

Average Birth Weight (Grams) – 1811.1

Average Gestational age (weeks) – 30.9

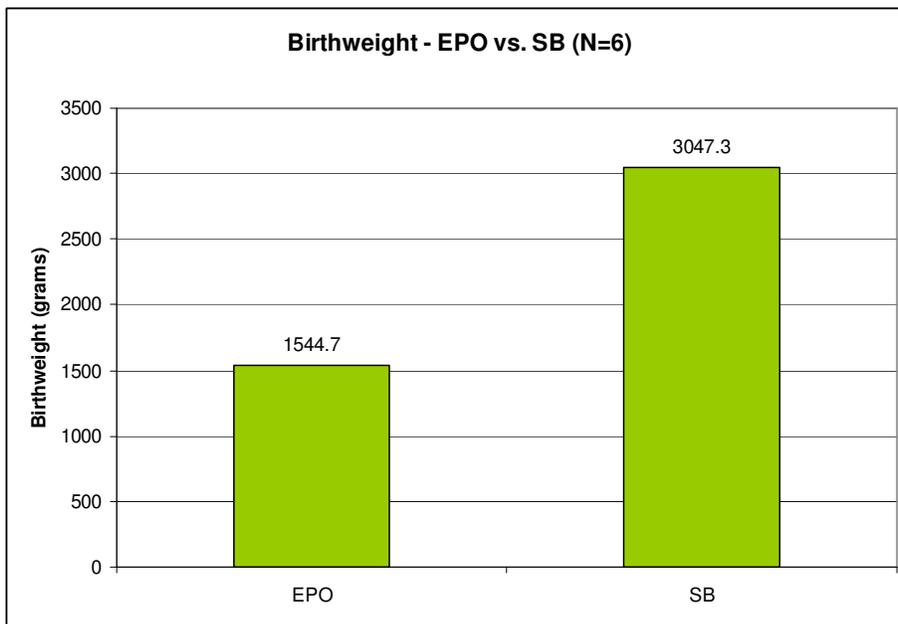
IC Program Outcomes

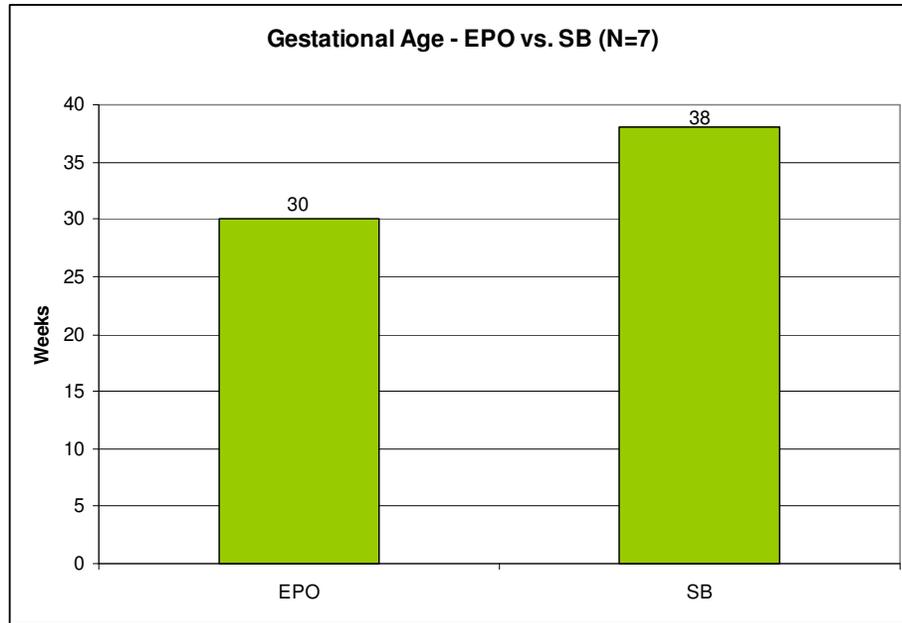
One of the main goals of the IC Program is to increase birth spacing. The graph above demonstrates that the largest percentage of clients in the IC Program are discharged because they have achieved ideal birth spacing of at least 18 months post delivery. These results are extremely positive considering that most of the clients are very transient and have had unplanned pregnancies in the past.

KCHD staff captures client subsequent birth outcome information from vital birth records. This information is especially important when looking at the outcomes of this program. Subsequent birth data was available for seven of the 104 women that were enrolled from March 2007 through September 30th, 2009. 100% had full term and healthy birth weight babies. In conducting the analysis of subsequent birth outcomes, the KCHD relied solely on variables available in the birth certificate registry (i.e. Medicaid status, number of prenatal care visits). Although it is understood that multiple factors in a woman's life contribute to positive birth outcomes (i.e. mental health, social support), our methods did not allow for the collection of this information. Consequently, our ability to draw conclusions on the relationship between participation in the IC Program and positive subsequent birth outcomes is limited. Despite this limitation, the analysis of this small sample of births to IC Program participants reflects positive anticipated outcomes based on the IC Program Model and adhering to program fidelity.

Eligible Pregnancy Outcome = EPO Subsequent Birth = SB	Client	Pregnancy Outcome	Birth Weight (grams)	Gestational Age (weeks)	NICU Admission (Y/N)	Approximate time between deliveries
EPO	1	LBW	2296	38 weeks	N	
SB	1	Full term	2723	38 weeks	N	23 months
EPO	2	LBW/PTB	765	24weeks	Y	
SB	2	Full term	2693	37 weeks	Y	19 months
EPO	3	Stillbirth	n/a	21 weeks	N	
SB	3	Full term	3459	38 weeks	N	22 months
EPO	4	LBW/PTB	1899	34 weeks	Y	
SB	4	Full term	2807	39 weeks	N	15 months
EPO	5	LBW/PTB	1077	30 weeks	Y	
SB	5	Full term	3317	39 weeks	N	20 months
EPO	6	PTB	2551	36 weeks	N	
SB	6	Full term	3232	37 weeks	N	15 months
EPO	7	LBW/PTB	680	27 weeks	Y	
SB	7	Full term	3100	38 weeks	N	13 months

In order to determine whether there were statistically significant changes in birth outcomes among IC program participants with a subsequent birth, a paired t-test analysis was performed using SPSS 16.0 software. Data comparing average values for selected birth outcomes for the seven participants who have since had a subsequent birth are presented in the following charts. Among the six participants for whom birth weight was available for both births, there was a statistically significant increase ($p < 0.05$) in mean birth weight from 1544.7 grams to 3047.3 grams. The second chart presents a statistically significant increase ($p < 0.05$) in mean gestational age among IC participants from 30 weeks during their EPO to 38 weeks during their SB.





Support Services

The IC Program also implemented a wellness program and a support group event. The support group event focused on nutrition and physical activity. Research indicates that obesity increases the risk of a poor pregnancy outcome. According to the CDC, maternal obesity during pregnancy is associated with many complications such as cesarean delivery, macrosomia (a newborn with an excessive birth weight), preeclampsia (high blood pressure during pregnancy), gestational diabetes mellitus, fetal death, and possible birth defects. The support group event was held at the United Methodist Community House. Women that attended were offered free child care during the event and dinner and transportation were provided. Eight IC clients attended the event. The educational piece featured a speaker from the YMCA and a nutritionist from the KCHD. At the conclusion of the event the women completed a survey.

Support group findings:

- All 8 clients either agreed or strongly agreed that the event was excellent, they learned something new and would recommend this type of event to others.
- Many of the women also provided comments stating their satisfaction with the event and being together. An example of a client comment: “Every female coming together and having a good conversation.”
- Staff at the event observed the women talking about their babies and pregnancies while eating. Other observations include: clients providing support to each other, getting to know each other and having a lot of laughs together.

Women in the wellness program received a step pedometer and tracked their steps daily as a reminder to be physically active. Women received encouragement from their case manager as well as an incentive for completing their step log. Women in the wellness program also received coupons for the South East Area Farmer’s Market with corresponding recipes that featured in season produce. This program was well received by clients. Women that completed a survey reported that they walked more because of the pedometer program and it made them aware that they should fit more exercise into their lives.

Brush Up for Baby

The American Dental Association states that premature delivery and low birth weight are closely associated with infant morbidity, mortality, and long-term health complications. In recent years, researchers have suggested that maternal bacterial infections, such as those caused by periodontal diseases, may be potential risk factors for preterm birth and low birth weight infants.

As part of the IC Program clients are also potentially eligible for the Brush Up for Baby (BUFB) Program. Women in need of dental services can be enrolled into the BUFB Program through their nurse case manager. The BUFB Program takes place at Baxter Health Center. Women receive multiple visits for their dental cleanings as well as appointments for extractions, restorations and root canals. The women receive one on one attention from a dental hygienist that is focused on the importance of caring for your teeth and gums. This program is done in partnership with Strong Beginnings (Federal Healthy Start Program).

Dental care for eligible women started in 2007. Women are eligible if:

- They are in the IC Program or Strong Beginnings
- Have signs of periodontal disease
- Have not seen a dentist in > 1 year and
- Do not currently have access to a dentist

Long-term goal:

- Reduce African American prematurity, low birth-weight and infant mortality.

Short-term objectives:

- Reduce the rate of periodontal disease.
- Empower women to care for their own dental health and that of their children.

Since the beginning of the Brush Up for Baby Program, eighty-eight women have received intake appointments at Baxter for the Brush Up For Baby program.

Of the 88 referred and scheduled women:

- 68 Women presented for intake and were enrolled in the program (20 no-shows)
- 29 Pregnant
- 39 Interconception
- 64 African American
- 2 Hispanic
- 2 Caucasian

The next group of statistics refers to the 26 new women of the 2008-2009 intake groups.

- 26 women were enrolled from Oct.1, 2008- Sept. 30, 2009
- The women ranged in age from 16-33 years old.
- 96% (25) women receive Medicaid, 1 had no insurance

Time since last dental appointment:

- 31% (8) had seen a dentist w/in a year
- 27% (7) 2yrs.
- 23% (6) more than 5 years
- 12% (3) more than 10 years
- 8% (2) had never been to the dentist

At-Risk Status:

- 42 % had poor birth outcomes in **last** pregnancy
- 57 % had previous preterm or low birth weight infants

The total BUFB client list, including patients from previous groups who were finishing treatment in the past year received: 81 restorations, 16 extractions, 2 root canals and 56 hours of hygiene time for prophylaxis/education appointments. While the BUFB program has experienced success, there continues to be challenges.

Gingival Health of the 26 at the time of intake:

- 34% (9) Healthy
- 57.6% (15) Gingivitis
- 7.6% (2) Slight Periodontitis

Compared to the entire 68:

- 19% (13) Healthy
- 44% (30) Gingivitis
- 22% (15) Slight Periodontitis
- 13% (9) Moderate Periodontitis
- 1.4% (1) Advanced Periodontitis

The diagnosis of disease is determined from the observation of tissue color, shape, bleeding on probing, x-ray and pocket depth resulting from infectious assault on the tissues. With treatment there is some pocket resolution but the tissue does not grow back, nor does the bone supporting the teeth. Therefore, dental staff document improvement in health by noting changes in tissue color and bleeding on probing. Dental staff also document success in education and interest by noting changes in plaque levels, oral hygiene habits and the patients' own comments at completion of program.

Of the 6 women who completed surveys:

- 100% reported increased oral health knowledge including the effect of oral health to general health, how to prevent decay with diet and improved hygiene, parents' role in infant and toddler oral health.
- 83% felt their anxiety concerning dental appointments had decreased.
- 100% were pleased with the program.

The following illustration and client comments further demonstrate client satisfaction with services received.



Before dental cleaning visits



After

“I never had a reason to smile before. I hated my teeth, but look at me now! I can’t wait to smile!”

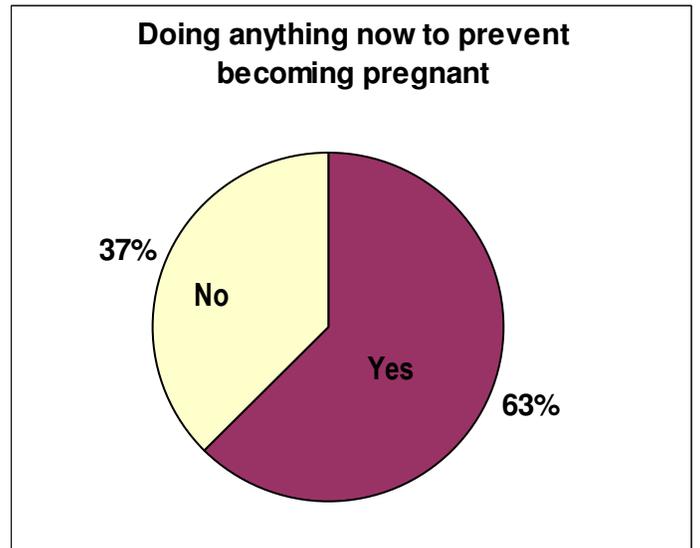
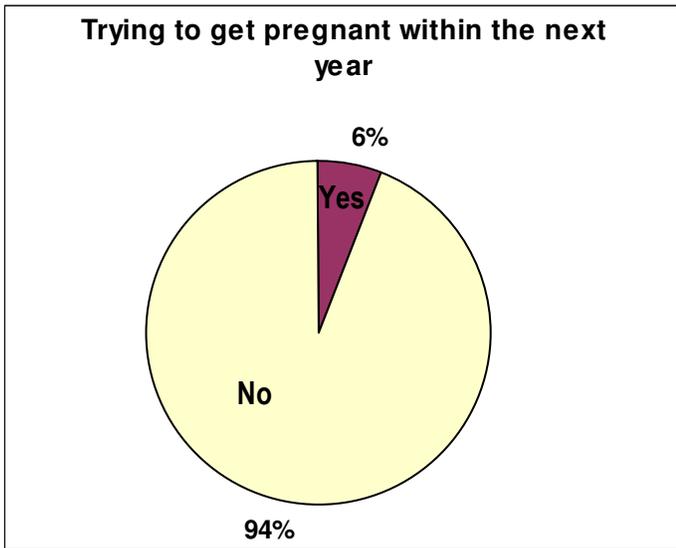
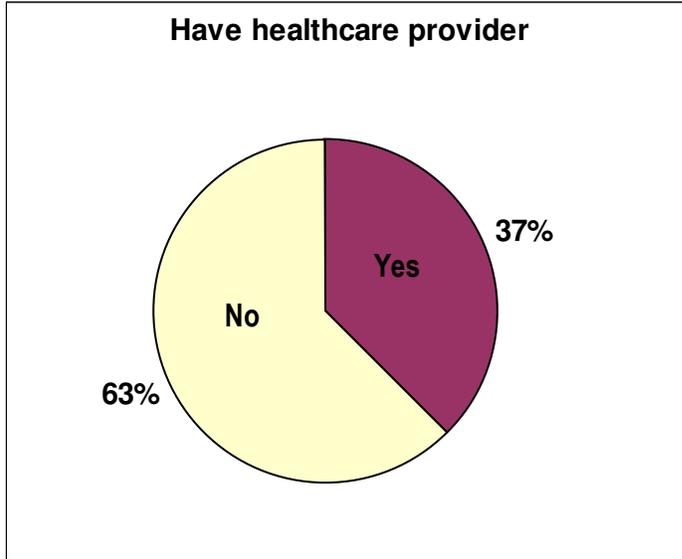
“I can’t believe the difference. My mouth doesn’t hurt anymore. It feels so clean!”

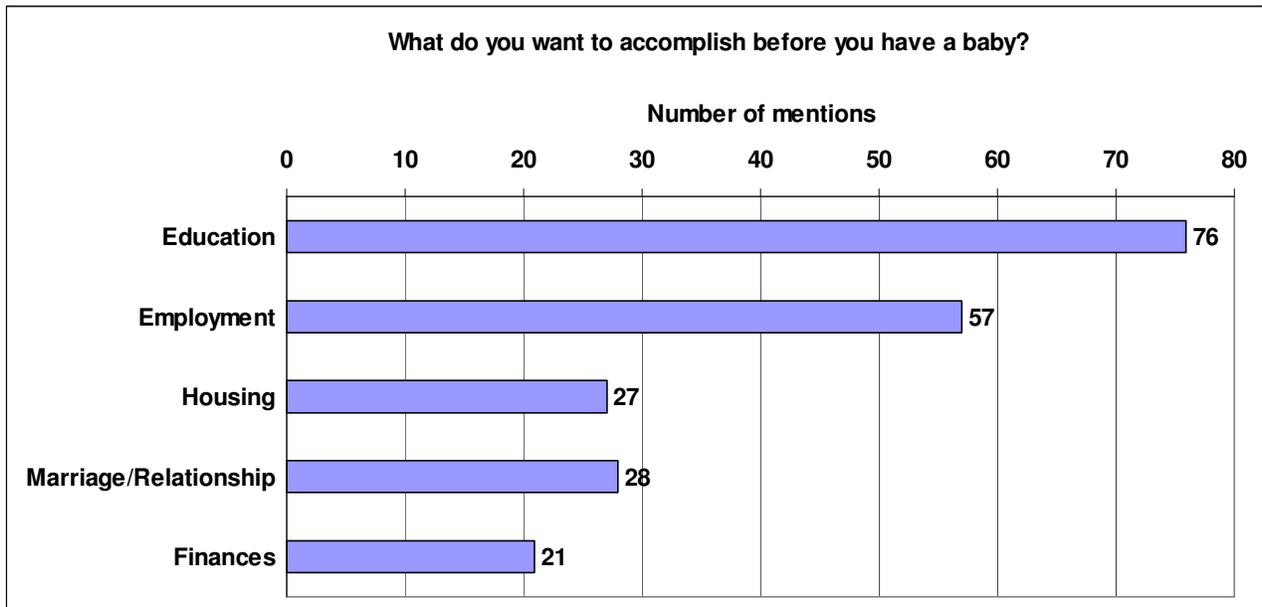
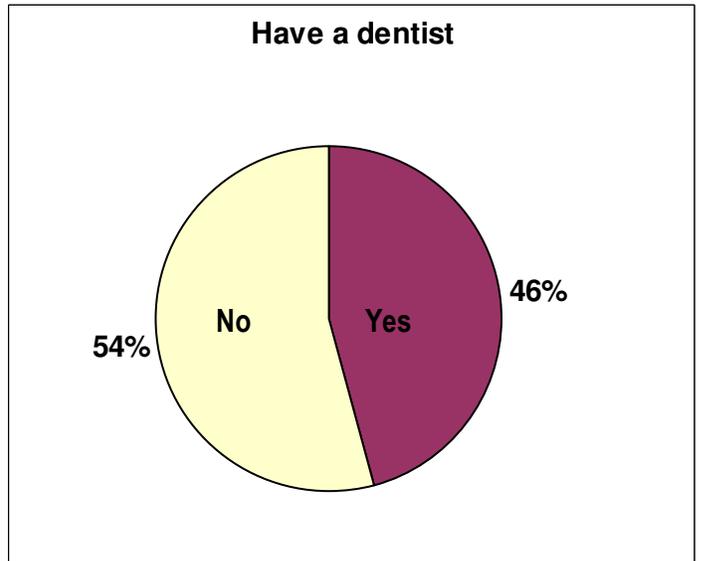
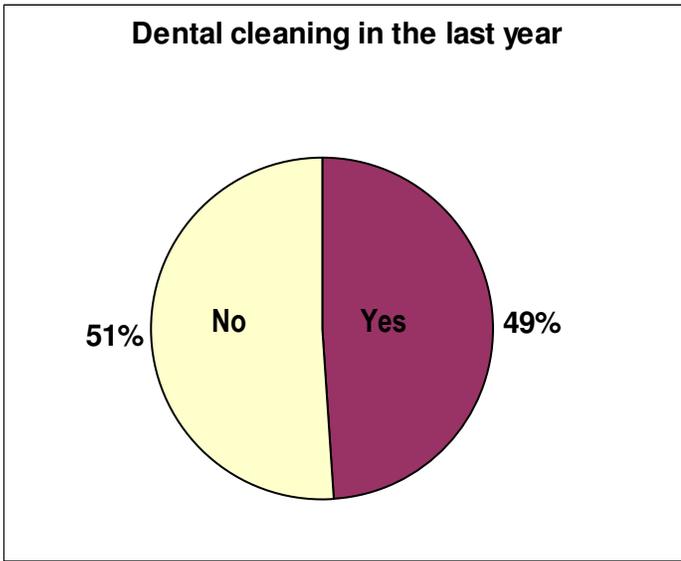
The most difficult issue continues to be maintaining contact with the clients for several months in order to complete the program. This year 31 appointments resulted in no-shows. This number is significant. With limited clinic time no shows account for a smaller than possible number of completed patients. The women who have entered this program are at-risk for a number of reasons, including inadequate marriage or family support as well as substance and physical abuse. This year’s group also included a mother of twins as well as mothers with children suffering from a burn accident and spina bifida, all of which made scheduling consistent appointments difficult. One of the mothers retreated to a safe house for several weeks after spousal abuse.

Family Planning

The Kent County Infant Health Initiative partners with Planned Parenthood of West and Northern Michigan (PPWNM) to provide family planning services to Interconception clients and other high risk women. Typically these are women that often fall between the cracks of various family planning support programs (including Plan First! and Title X) and lack a medical home. Family planning prevents sexually transmitted infections and unintended pregnancy and reduces the number of abortions, low birth weight babies and infant deaths. Family Planning allows women to make informed choices about the number, spacing and timing of their pregnancies and maintain their reproductive health. Women receiving family planning services at PPWNM are given a pre/interconception screening tool, risk assessment and a pre/interconception care kit filled with important health tools and information. The Centers for Disease Control and Prevention state that preconception care is recognized as a critical component of health care for women of reproductive age. The main goal of preconception care is to provide health promotion, screening and interventions for women of reproductive age to reduce risk factors that might affect future pregnancies.

During the 2008/2009 fiscal year 200 women were screened for risk and compiled results are listed below.





Women in the Family Planning Program (previously called the Refer-A-Friend Program) receive a comprehensive annual exam and one year of a birth control method. In fiscal year 08/09, 93 women were in the program. There is a huge need for this program but 93 was the maximum number PPWNM could enroll due to an overall budget reduction to the KCIHI.

Of these 93 women:

AGE

- 2 were under the age of 15
- 47 were 15-19
- 32 were 20-29
- 12 were 30 and over

Ethnicity

- 38 were Hispanic
- 36 were white
- 14 were black
- 4 were multiracial
- 1 was Asian

Birth Control Method

- 48 women chose to use oral contraceptives
- 18 women chose Depo Provera
- 7 women chose to use condoms, foam, jelly or cream
- 6 women chose to get an IUD
- 5 women chose the Patch (Ortho-Evra)
- 8 women chose the Ring (NuvaRing)

Planned Parenthood reports show that as many as 57% of women return for family planning services after 12 months. This percentage varied depending on the women enrolled each month.

Program Direction

Despite loss of state funding in 2009, the Kent County Infant Health Initiative was able to proceed in delivering service and is able to start tracking program outcomes related to client subsequent births. In 2010, the IC Program will enroll 50 more high risk women, enroll 30 more women into the Brush Up for Baby Program and enroll 50 more women into family planning services at Planned Parenthood Centers of West and Northern Michigan. The IC Program will expand services to other MIHP providers through a partnership with Cherry Street Health Services.

Cost Benefit:

The cost benefit of preventing preterm and low birth weight babies bodes very strongly for the economic savings for a community. The average first-year medical costs, including both inpatient and outpatient care, were about 10 times greater for preterm infants (\$32,325) than for full-term infants (\$3,325). (Preterm Birth: Causes, Consequences and Prevention, a report published by the Institute of Medicine in 2006.) In Fiscal Year 2010-2011, KCHD program staff proposes the development of an in-depth cost-benefit analysis of providing interconception care to high-risk women with adverse pregnancy outcomes. The purpose of the analysis is to demonstrate the amount of direct savings for resources invested, and to demonstrate program value to clients and key stakeholders.

Kent County Infant Health Initiative: Interconception Care Program
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Kent County Health Department
700 Fuller NE
Grand Rapids, MI 49503
(616) 632-7100