Report to the General Assembly
January 2012

Public Act 93-0536

State of Illinois
Pat Quinn, Governor

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Legislative Mandate

Public Act 93-0536 (305 ILCS 5/5 – 5.23) was passed with the goal of improving birth outcomes for over 80,000 babies whose births are covered by HFS every year. The law states that HFS may provide reimbursement for all prenatal and perinatal health care services that are provided for the purpose of preventing low birth weight infants, reducing the need for neonatal intensive care hospital services, and promoting perinatal health. Additionally, HFS was required to develop a plan for prenatal and perinatal health care for presentation to the General Assembly by January 1, 2004. HFS is required to report to the General Assembly on the effectiveness of prenatal and perinatal health care services, on or before January 1, 2006, and every 2 years thereafter.

As required, this document is presented to the General Assembly in compliance with Public Act 93-0536 (305 ILCS 5/5 – 5/23) to report on the effectiveness of prenatal and perinatal health care services reimbursed by HFS in improving birth outcomes. This document, as well as the three previous reports from 2004, 2006 and 2008, are available on the HFS Web site at: http://www.hfs.illinois.gov/mch/report.html

Introduction

The Illinois Department of Healthcare and Family Services (HFS) is the largest insurer in Illinois, providing health insurance for over two million Illinoisans. In calendar year 2009, HFS covered 53.9% of the State's births and 93.6% of the teen births[1].

Reducing infant mortality (death during the first year of life), low birth weight (infants born less than 2,500 grams), and very low birth weight (infants born less than 1,500 grams) are health priorities in the United States, as well as in Illinois. Progress has been made in health care and medical technology that has contributed to steady overall declines in infant mortality in the United States. Although the U.S. infant mortality rate did not decline from 2000 to 2005, data for 2008 shows a statistically significant decline of 2.1% between 2007 and 2008. The 2008 U.S. infant mortality rate is 6.61 per 1,000 live births. The 2008 U.S. infant mortality rate for non-Hispanic white infants was 5.63, for non-Hispanic blacks the rate was 13.14, and for Hispanics the rate was 5.66 infant deaths per 1,000 live births. The infant mortality rate among non-Hispanic blacks is 2.3 times that of non-Hispanic whites. However, it was the only infant mortality rate that showed any statistically significant change in 2008, decreasing by 4.5 percent relative to 2007.[2]

In the United States, perinatal disparities persist for African Americans. The 2010 U.S. low birth weight rate was 8.15 percent which was relatively unchanged from 2009 (8.16%). From 2009 to 2010, the low birth weight rate decreased slightly among non-Hispanic whites (7.19% to 7.14%) and non-Hispanic blacks (13.61% to 13.53%). However, the non-Hispanic black rate is 1.9 times the non-Hispanic white rate. From 2009 to 2010, the very low birth weight rate remained unchanged for non-Hispanic whites and non-Hispanic blacks (1.16% and 3.06%, respectively). However, the very low birth weight rate among non-Hispanic blacks is 2.6 times the rate of non-Hispanic whites.[3] These low birth weight conditions place the infant at higher risk for multiple health problems, disability and death.

Illinois mirrors the nation with its experience in perinatal disparities among African Americans. In Illinois in 2008, the infant mortality rate among African Americans was more than double that for Whites (13.9 for African Americans compared to 5.8 for Whites).

This report will identify the steps HFS has taken with its partners (other State agencies, advocate groups, maternal and child health experts, local funding resources and others) to address the perinatal health care needs and racial health disparities in Illinois; detail the progress made in addressing the priority recommendations as outlined in the 2004 Report to the General Assembly as a result of Public Act 93-0536; review the available trend data on infant mortality, low birth weight and very low birth weight outcomes; identify the progress made to address poor birth outcomes through analysis of trend data; and identify next steps in improving birth outcomes.

The most recent data available at the time of this report is presented.

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[1] Department of Healthcare and Family Services, Enterprise Data Warehouse, 2011

[2] Minino, Arialdi M. MPH, Murphy, Sherry L., BS, Xu, Jiaquan, MD, Kochanek, Kenneth D., MA. Deaths: Final data for 2008. National Vital Statistics Reports Vol. 59, No 10. National Center for Health Statistics. 2011.

[3] Hamilton BE, Martin JA, Ventura SJ. Births: Preliminary data for 2010. National vital statistics reports web release; vol 60 no 2. Hyattsville, MD: National Center for Health Statistics. 2011.

Illinois Department of Healthcare and Family Services
Status of Priority Recommendations Chart
2012 Perinatal Report

The table below displays the status of recommendations made in the original 2004 Report.

All acronyms in the table below are also defined in Appendix II.

Planned Pregnancy

Initiative	Status
Family planning coverage is provided in HFS comprehensive medical programs (i.e., All Kids and Family Care). DHS Title X Family Planning is the safety net for those women who are not Medicaid eligible.	**Coverage continues.**
Provide coverage for family planning to the Title XXI 19-year old population who are leaving the program due to age or to female parents/relative caretakers under Illinois Family Care who no longer meet the income requirements for that program (high priority).	**Coverage continues.**
Expand coverage under the *Illinois Healthy Women* (IHW) program to women who would otherwise be eligible for HFS maternity coverage if pregnant, and whose income is at or below 200 percent of the federal poverty level, irrespective of whether they were previously enrolled in HFS or CHIP (high priority).	**Completed.** The expansion was implemented in May 2007. The *Illinois Healthy Women* waiver program was renewed in April 2009 for three years, through March 2012. On September 30, 2011, HFS submitted another renewal application to the Centers for Medicare & Medicaid Services (CMS), requesting renewal for an additional three years or for the maximum period allowed.
Include folic acid and vitamin supplementation in the package of covered services under *Illinois Healthy Women* (high priority)	**Completed.** Folic acid supplementation is available to all women enrolled in HFS' medical programs, including *Illinois Healthy Women*. HFS promotes their use to its women of childbearing age and recommends its providers prescribe folic acid supplementation. As a part of a cost cutting initiative, over-the-counter multi-vitamins are not covered by HFS.
Add coverage for a preconception visit and interconception care (between pregnancies) to address health issues and plan for a healthy birth (high priority).	**Completed.** An annual adult preventive visit is reimbursable which allows for annual assessment of preconception risk factors. A preconception risk screening tool was evaluated and validated through a Peer Review process completed by HFS' quality improvement organization (QIO). The Peer Review Process included a panel of physicians and/or stakeholders from *American College of Obstetricians and Gynecologists* (ACOG), *Centers for Disease Control and Prevention* (CDC), *American Academy of Family Physicians* (AAFP) *and the U.S. Preventive Services Task Force* (USPSTF). The panel made recommendations for each

	section of the preconception risk screening tool. These recommendations were used to develop clinical guidelines, the *Preconception Recommendations Guide* for providers to use in conjunction with the preconception risk screening tool. The *Preconception Recommendations Guide* is designed to help facilitate discussions about preconception health, as well as prompt providers to make the appropriate referrals and/or recommendations for women with lifestyle habits and/or health issues that may pose risk to a future pregnancy or birth outcome. **In Progress:** HFS is in the process of opening an adult risk assessment code for preconception screening to allow providers reimbursement for the preconception risk assessment screening tool.

Mental Health During Perinatal Period

Initiative	Status
Identify a mechanism to provide mental health screening and treatment to women beyond the current 60 days postpartum eligibility period and work with other agencies (e.g., Department of Human Services (DHS), Division of Mental Health (DMH)) to provide mental health services to these women (requires further study).	**Completed**. Perinatal depression screening is a covered service for women enrolled in HFS' medical assistance programs. **In Progress**. HFS continues to work with DHS and advocates to assure that women who screen positive for perinatal depression have access to mental health services.
Create a statewide Perinatal Mental Health Consultation Service for providers that includes a university-based Perinatal Mental Health Consultation Team charged with developing a model program template for addressing the specific needs of HFS-enrolled women of reproductive age, providing assistance to prenatal and primary care providers to help the clinics adapt and implement the model at their sites, and maintaining an ongoing telephone, fax or e-mail consultation service for HFS primary care providers (high priority).	**Under Review.** As previously reported, a comprehensive program for identification and treatment of perinatal depression was implemented, and is supported by Public Act 95-0469, Perinatal Mental Health Disorders Prevention and Treatment Act. The comprehensive perinatal depression program has been funded with private foundation grants for several years. HFS is reviewing this activity as provider participation has been low.
Provide information and training to HFS providers on how to use the depression screening tool (medium priority).	**Under Review.** This initiative is a component of the comprehensive perinatal depression program (see above). Although provider training and technical assistance on identification and treatment of perinatal depression are currently funded with private grants. HFS is reviewing this activity as provider participation has been low. In accordance with Public Act 95-0469, DHS is drafting rules to provide guidance to providers on issues such as staff training, educational materials, recording of screening results, and patient follow-up. The rules will provide guidance to providers on

	issues such as staff training, educational materials that can be utilized and dissemination of same, recording of screening results, and client follow-up.

Oral Health

Initiative	Status
Expand HFS coverage for prevention and treatment of oral disease in pregnant women, including measures to reduce colonization of S. mutans and to control periodontal infections (high priority).	**Not Completed.** Due to limited resources, this initiative was not pursued during the reporting period.

Smoking Cessation

Initiative	Status
Provide smoking cessation intervention with women in the public delivery of care system who are not currently pregnant as quitting during pregnancy is often temporary (requires further study).	**Coverage and intervention continues.** HFS encourages providers to assess smoking status and to counsel patients to quit. Providers are also encouraged to refer patients to the Illinois Tobacco Quitline for individual counseling and support.
Encourage providers to assess smoking status and update smoking status at each visit, providing advice to quit (high priority).	**Ongoing.** HFS encourages providers to assess smoking status, counsel, and make referrals to smoking cessation services for all patients. HFS sends annual notices to participants encouraging them to quit smoking and informing them of the Illinois Tobacco Quitline and the availability of smoking cessation products to help them quit. HFS' dental program also promotes smoking cessation with participants. Dentists are supplied with prescription pads that encourage patients to quit smoking and provide information on the Quitline.
Provide reimbursement for a more intensive smoking cessation program that includes one-on-one counseling, telephone support and cessation classes or support groups for pregnant women who smoke (high priority).	**Ongoing.** HFS provides reimbursement for smoking cessation products to assist all HFS participants in quitting smoking. The Illinois Tobacco Quitline provides motivational and educational materials, education, one-on-one counseling, telephone support and referral to smoking cessation classes or support groups. Currently, risk assessment and counseling for smoking cessation are part of an office visit, but are not separately reimbursable.

Perinatal Addiction

Initiative	Status
Provide training for physicians on the signs, symptoms and screenings for addictions (high priority).	**In Progress.** The Illinois Department of Human Services, Division of Alcoholism and Substance Abuse (DASA) was the recipient of a five-year Center for Substance Abuse Treatment (CSAT) and Screening, Brief Intervention, and Referral to Treatment (SBIRT) cooperative agreement award in 2003. Services started at Stroger Hospital. The Illinois SBIRT II Initiative (*ISI*) was recently awarded in September, 2012. The SBIRT II award represents a change from the 2003 award in terms of the generalist health care settings in which SBIRT services will be expanded. Screening and brief intervention and referral services will continue to be provided. As part of SBIRT II, training is a core aspect that will continue to be given to medical assistants, physicians and physician assistants at six Access Health Network sites that are a part of SBIRT II. This will be an on-going process.
Convene a subcommittee on data and evaluation to recommend strategies to improve capturing birth outcomes of addicted women (high priority).	**In Progress.** DASA is continuing to develop data strategies and a framework for quality improvement in substance abuse and addictions health care. These strategies are designed to inform policy, provider performance improvement, measure program impact, and lead to improved quality of services and outcomes for individuals, families and communities. To this end, DASA will implement the following in 2012: • Web Portal for providers to have access to service data • Data Automated Recording and Tracking Systems (DARTS) modifications to bring DARTS and provider reports in line with the TEDS/ GPRA data elements.
Include a substance abuse specialist in the Targeted Intensive Prenatal Case Management (TIPCM) and Healthy Start programs (high priority).	At the time of intake in E-Cornerstone into the Family Case Management (FCM), Healthy Start, Healthy Families Illinois, TIPCM, Women Infant and Children (WIC) and High Risk Infant Follow-up programs, pregnant and parenting women are screened for alcohol and other substance use disorders (SUDs). Women who admit to use are referred to a licensed treatment provider for further assessment and diagnostic treatment as indicated. Pregnant incarcerated women are also recipients of assessment and treatment at licensed and funded, gender specialized treatment providers throughout Illinois.

Establish a formal network for consultation as needed by primary care providers (high priority).	**Planning/implementation in progress.** Illinois DASA has been delegated responsibility for administrative and fiscal management of the Illinois SBIRT II Initiative. The majority of expanded SBIRT II services will be provided to adult patients at federally qualified health centers (FQHC) located in the Chicago metropolitan area that are operated by Access Community Health Network (Access). A Policy Steering Committee consisting of key state-level government representatives, the healthcare and substance abuse treatment sectors, professional organizations, and local communities will advise the project and will provide leadership for reframing the financing and delivery of intervention and SUD services in Illinois.
Identify existing resources needed to establish a Maternal Child Health team with a substance abuse treatment specialist (requires further study).	**Planning for 2013.** The Women's Committee of the Illinois Alcoholism and Other Drug Abuse Advisory Council will plan and include within the legislatively mandated 2013 Illinois Women's Plan, a Maternal and Child Health (MCH) goal that will be part of the Family Centered Services standing work group. The goal will include priority objectives to support, increase and enhance resources for MCH. The "team" will be comprised of the current Inter-agency work group members and will add other appropriate DHS division and HFS staff.
Increase the number of outreach workers and treatment slots for pregnant women (requires further study).	**On-going.** In spite of treatment budgetary reductions, DASA continues to fund specialized services for pregnant women within its statewide service delivery system. Child Care residential and child domiciliary services are funded at provider sites that offer specialized services to pregnant women and women with children. Federal block grant dollars assure the sustainability of services for perinatal/prenatal services. State funding reductions however, continue to prohibit further expansion of these services at this time.
Fund a smoking cessation specialist position in DASA to review and recommend smoking cessation programs and provide smoking cessation training (requires further study).	**Partially Initiated.** As part of SBIRT II, pregnant women screened for tobacco use are referred for smoke cessation classes. In addition, DASA coordinates and works collaboratively with the former division of Community Health and Prevention's Alcohol tobacco and other drugs (ATOD) Comprehensive Community-based Prevention initiatives/Campaigns upon request.

HIV Counseling

Initiative	Status
Cover HIV counseling and testing under IHW (high priority).	**Coverage continues.**
Refer pregnant women who are HIV-positive to TIPCM (high priority).	**Ongoing.** HIV positive women who are screened for case management services and reside in a TIPCM or Healthy Start service area are referred to those programs for care during pregnancy. Work is underway through the HIV Fetal Infant Mortality Reduction (FIMR) project to improve communication between the CORE Center, Prenatal HIV Case Management services, TIPCM and Healthy Start. The goal is to provide education, training for all workers on all services available, and develop referral linkages and agreements over the next six months. The Healthy Start Program Administrator and Chief, Bureau of Maternal and Infant Health both are members of the HIV FIMR Team.
Look for ways to assure compliance with the requirement that providers of prenatal health care services routinely provide HIV counseling to all pregnant women; routinely discuss the importance of HIV testing; and routinely offer HIV testing on a voluntary basis, as well as compliance with the requirement that every health care professional or facility that cares for a newborn, upon delivery or within 48 hours after the infant's birth, provide counseling and automatically perform HIV testing when the HIV status of the infant's mother is unknown, if the parent or guardian does not refuse (high priority).	**Ongoing.** Illinois has been tracking and monitoring providers' compliance with the Illinois Perinatal Prevention Act. In 2010, of the 159,685 women delivered at birthing and non birthing hospitals, 95.4% had documentation of their HIV status. Of the 4.6% that did not have evidence of their status, 99.4% were rapid tested at labor and delivery. Rapid testing is occurring in all ten perinatal networks and the Department of Public Health (DPH) maintains a relationship with each network through their network administrators.

Lactation Counseling

Initiative	Status
Provide updated breastfeeding information to physicians who serve HFS participants (requires further study).	**Ongoing.** Periodic updates are provided through webinars and provider notices.
Use the task force model to develop an awareness and outreach campaign to more effectively utilize services across agencies (high priority).	**In Progress.** Currently there is a State breastfeeding task force that includes representation from regional breastfeeding task forces (8) across the state. The mission of the task force is to support and promote breastfeeding statewide through a variety of settings including hospitals, clinics, health departments, FQHCs, local WIC agencies, doctor's offices, etc.
Provide reimbursement for lactation counseling/support for breastfeeding women during the first weeks after birth (requires further study).	**In Progress.** The Illinois WIC Program promotes breastfeeding as the normal method for infant feeding. WIC provides nutrition education, supplemental foods, breastfeeding counseling and support for eligible pregnant and

	breastfeeding women and their infants. Referrals are made to lactation consultants in the community if the WIC agency does not have qualified staff to address breastfeeding problems. Breast pumps are provided or referrals are made to access breast pumps. Seventy WIC agencies have breastfeeding peer counselor programs. These programs have trained peers from the community who provide direct education and support to pregnant and breastfeeding women in the WIC Program.

Labor Support During Perinatal Period

Initiative	Status
Conduct research to determine the cost and benefits associated with continuous labor support provided through a doula or monitrice (low priority).	**In Progress.** DHS continues to fund Doula services through the Ounce of Prevention Fund. There are Doulas at four provider sites in the Chicago area that work with pregnant teens. As previously reported, studies have demonstrated higher initiation of breastfeeding among the teens who have received Doula services. These teens also continue to delay subsequent pregnancies for longer periods. Illinois was awarded funds in September 2011 to evaluate the effect of adding Doula services to select *Maternal Infant Early Childhood Home Visiting* (MIECHV) sites over the next several years. The expectation is that findings will demonstrate that the enhancement of Doula services produces better client outcomes than home visiting alone.

Case Management and Home Visiting

Initiative	Status
Expand the existing case management program to target high–risk areas.	**In Progress.** FCM and TIPCM both experienced funding cuts for State Fiscal Year 2012, resulting in a decrease in assigned caseloads across the state. This is significant given the increasing numbers of individuals who have lost jobs, health insurance and have limited access to care. The model used for delivery of care within FCM is 20 years old. Ad Hoc workgroups will be formed to re-design care delivery and provide information that will guide development of a request for proposal (RFP) process for future funding of agencies. Participants will have an opportunity to study what other states are doing, incorporate relevant best practices, look at other programs in Illinois and identify ways to partner, such as, with the MIECHV

	project sites, *Race To The Top* and *Community Transformation* grants, and develop a model that uses shrinking resources in a manner that produces the best outcomes possible.
Expand outreach efforts (especially in Chicago) to locate "hard-to-reach" pregnant women and get them into care (high priority).	**Completed.** The *Healthy Births for Healthy Communities* (HBHC) project ended in 2010. While the project results did show intensive street level outreach and enabled workers to locate the hardest to find pregnant women, it is extremely costly and labor intensive to use this approach on any large scale. Lessons learned from this project are being used to guide work of other projects, such as *Project Launch*, which is a community capacity building project underway in the East and West Garfield and North and South Lawndale areas on the west side of Chicago, as well as HFS' planning to improve birth outcomes. Information from this project will also be provided to members of the FCM Ad Hoc workgroups that are forming.
Pilot more intensive models of case management, such as a program that covers six home visits during the prenatal period and 21 follow-up visits during the first 2 years of life (low priority).	**In Progress.** HFS and DHS are partnering to develop high-risk interconceptional case management models of care, and a high-risk prenatal case management program.

Other Priority Recommendations

Initiative	Status
Consider performing a focused quality study that assesses the extent to which providers are performing medical services according to ACOG guidelines.	**Completed.** The Closing the Cap Prenatal Record Review study results are being used to inform the development of prenatal guidelines, education, referral protocol, and provider education.
Disseminate information to the provider community concerning standards of care.	**In Progress.** Through the Children's Health Insurance Program Reauthorization Act (CHIPRA) Child Health Quality Demonstration grant, HFS is working with its QIO, eQHealth Solutions, and the provider community to develop guidelines for prenatal care for low-income women. The guidelines include a patient education component. In addition to the guidelines, a referral protocol is being developed to provide guidance to providers in referring high-risk women to perinatal specialists as appropriate.
Work with the provider community to educate their colleagues about the standards of care.	**In Progress**. Through the CHIPRA Child Health Quality Demonstration grant, HFS is working with its QIO, eQHealth Solutions, to develop provider education about the guidelines for prenatal care for low-income women, including patient education and referral protocols. Under the CHIPRA Demonstration, HFS will work with the Perinatal Network to develop and implement a quality

	improvement initiative for a statewide education plan.
Provide an educational campaign to encourage pregnant women to be active in their reproductive health care.	**In Progress.** HFS is working on an educational campaign to teach women about the importance of prenatal and interconception care.
Compare the cost and outcomes of care provided by MCH and non-MCH enrolled physicians and also look at outcomes in different care settings, e.g., community health centers and private physician settings.	**Not Completed**. HFS is working on the design of an initiative to improve birth outcomes by targeting high risk women, prenatally and interconceptionally.
Analyze birth outcomes utilizing predictive analytics to better understand factors affecting the health of births.	**In Progress.** HFS' Enterprise Data Warehouse (EDW) includes a data mart that uniquely links the mother's and the infant's records. The data mart aggregates HFS' claims, DPH's Vital Records and Adverse Pregnancy Outcomes Reporting System (APORS) data, and DHS' FCM and WIC data. Through the data mart, information about the birth mother, including services she received during pre- and post-natal periods or pre-existing conditions recorded through claims data, and the birth outcome of the infant are linked. For planning purposes, analyses were conducted to identify the number and location of women with a previous adverse birth outcome. Analysis included identifying the risk factors associated with the adverse birth outcome that may be amenable to intervention prenatally or interconceptionally. HFS recently re-procured the EDW administrator and that contract includes software for predictive analytics.
Look at the effects of nutritional support from WIC and food stamps, now known as Supplemental Nutrition Assistance Program (SNAP), participation on birth outcomes.	**Not Completed.**

New Initiatives

Initiative	**Status**
CHIPRA Child Health Quality Demonstration Grant	**In Progress**. Illinois, in partnership with Florida, was awarded one of ten federal grants to improve the quality of children's health care. The CHIPRA Demonstration includes a goal of improving birth outcomes, specifically reducing pre-term births. Activities planned under CHIPRA include: • Developing a prenatal electronic data set of information to be made available to delivery hospitals • Developing at least one health quality measure related to perinatal health • Recommending prenatal guidelines, referral protocols, and education • Implementing and testing

	prenatal/interconceptional care interventions (such as Centering Pregnancy©) • Engaging the Perinatal Network in quality improvement initiatives (such as educating providers about prenatal guidelines, referral protocols and education) Recommending protocols for care coordination
High-Risk Maternity and Interconceptional Care Initiative	**In Progress.** Because of the high costs of adverse birth outcomes (defined as low and very-low birth weight, and infant demise), birth outcomes could be improved by early identification and management of risk factors prenatally, and continued chronic disease management and birth spacing interconceptionally. HFS is working on the design of an initiative to improve birth outcomes by targeting high risk women, prenatally and interconceptionally.
FIMR Case Management Initiative	**In Progress.** DHS was awarded a 3 year federal grant in 2010 that supports a Case Manager to work with Chicago women who have experienced a recent pregnancy loss, and were reported through APORS to FIMR. The case manager will work with the woman for up to 18 months, assisting her with referral and linkage to needed services such as genetic testing and screening, primary and specialty care, bereavement counseling, and family planning. Women will be encouraged to delay subsequent pregnancy at least 18 months, to establish reproductive and life goals, and to obtain health services that will support a healthier pregnancy when she does become pregnant again. Should pregnancy occur while in the project, the woman will be referred to a Healthy Start provider. As part of the project, all Chicago Healthy Start providers received training on motivational interviewing and counseling techniques, as did the project staff and others likely to work with the participants. All have also received training on current contraceptive methods and use of reproductive life plans.
Developing robust predictive analytics to identify women with risk factors for an adverse birth outcome with notification to the assigned primary care provider (PCP).	**In Progress**. HFS recently re-procured the EDW administrator and that contract includes software for predictive analytics. Using existing claims, APORS and Vital Records data, providers will be notified when selected risk factors are identified among the provider's patient population. Analytics will

	advance as Vital Records data are received on a timely basis and by developing additional predictive analytics in the EDW data mart.
Notifying the hospital of delivery about prenatal care provided.	**In Progress**. Through the CHIPRA Quality Demonstration grant, a minimum data set of prenatal care information is being developed that will be shared electronically with the hospital of delivery. A pilot of this will be investigated using electronic health records (EHRs) or other electronic data exchanges. The outcome is to have a system whereby prenatal care delivered by any provider (e.g., PCP, OB/GYNE) will be available 24/7 to the delivery hospital and other providers involved in the woman's care.
Expanding HFS' efforts to educate health care providers on the importance of oral health as a part of perinatal care by encouraging providers to assess the woman's oral health status, oral health practices, and access to a dental home. Education on the effects of pregnancy on oral health, as well as the importance of healthy diet and oral hygiene for infants and children should also be provided.	**In Progress.** HFS works in partnership with the Illinois Chapter of the American Academy of Pediatrics' (ICAAP) *Bright Smiles from Birth* program to provide guidelines and support to PCPs on the importance of oral health care from pregnancy through early childhood. The program links PCPs to dentists and dental hygienists, both as trainers/consultants and as service providers.

Current Status of Perinatal Health for
Illinois Department of Healthcare and Family Services' Participants

The following information, based on the most currently available State data (HFS paid claims matched with shared data from DHS' Cornerstone system and DPH's Vital Records) for 2009, shows what is currently known about HFS births, including demographics, health care, outcomes and costs of services. Information from the combined data is presented in the summary to follow.

Birth Demographics

- HFS covers more than half of the live births in Illinois each year. HFS paid for 89,621 births in calendar year 2009. (Appendix I, Charts 1 and 2)

- Teenagers make up 9.6% of all births in Illinois, although the number of teenage births in the State is on the decline**.** HFS covers over 16,000 births to teens each year. In 2009, this number represented 93.6% of the total teen births in the State. (Appendix I, Charts 3 and 4)

- According to the 2009 Pregnancy Risk Assessment Monitoring System (PRAMS) data, approximately 59.6% of HFS births were unintended. This represents an increase from 57.3 in 2006. Women eligible for HFS' medical programs (or low-income women) are more likely to have an unintended birth than women not eligible for HFS' medical programs. (Appendix I, Chart 5)

- Sixty-five percent of HFS births were subsequent births (2nd or higher). (Appendix I, Chart 6) Seven percent (7%) had a birth interval of less than 18 months, 15% had a birth interval of less than 24 months, and 29.2% had an unknown birth interval. This presents an opportunity to address the health care needs of these women, including reproductive health, during the interconception period. Research concludes that birth intervals of between 18 and 24 months are optimal for better birth outcomes. (Appendix I, Chart 7)

Delivery

- Seventy-one (71) percent of the HFS births were delivered vaginally, while 29% were delivered by a cesarean section in calendar year 2009. Vaginal deliveries decreased from 73% to 71%, and cesarean section deliveries increased from 27% to 29%from 2007 to 2009. The rate of HFS vaginal and cesarean section deliveries is consistent with the rate of the overall population in Illinois and nationally. (Appendix I, Chart 8)

Birth Outcomes

- Approximately 40% of total births covered by HFS were considered non-normal in 2009. Non-normal births include infant mortality, low birth weight, very low birth weight, and Non-normal Diagnosis Related Groupings (DRGs) of 385, 386, 387, 388, 389, 390, 985, 986, 987, and 989.[4] (Appendix I, Chart 9)

- Among HFS' total births, 9.2% are attributed to infant mortality, very low birth weight and low birth weight (Appendix I, Chart 10)

- The rate of low birth weight (LBW) babies in Illinois for calendar year 2009 was 8.2%, with the rate for HFS covered births at 8.9%. (Appendix I, Chart 11)

- The very low birth weight (VLBW) rate for Illinois was 1.5% for calendar year 2009, and has remained relatively unchanged since 2003. The VLBW rate for HFS covered births is also 1.5%. (Appendix I, Chart 12)

- Illinois' infant mortality rate has decreased from 10.7 in 1990, to 7.2 in 2009. Although the infant mortality rate for African Americans has continued to decrease, the racial disparity in the infant mortality rate continues to be dramatic, with the African American rate 2.4, or almost two and a half times higher than the White rate (13.9 compared to 5.8, 2008). (Appendix I, Chart 13)

- The infant mortality rate for Illinois for calendar year 2009 was 6.6; the rate for HFS covered infants was 7.6. The infant mortality rate for HFS infants decreased from 8.3 per 1,000 live births in calendar year 2003, to 7.6 per 1,000 live births in calendar year 2009, although the infant mortality rate for HFS covered infants continues to be higher than the statewide rate. (Appendix I, Chart 14)

- Only 83.4% of HFS-eligible women participate in WIC or FCM. (Appendix I, Chart 15):

A significant opportunity exists in FCM/WIC for improving birth outcomes, but all women needing those services are not engaged in receiving them, pointing to the need for additional funding for outreach, case finding and program engagement. Additionally, the data analyzed shows the highest risk women with chronic conditions require more intense medical management and follow-up.

As described below, improving birth outcomes presents a significant opportunity for cost savings.

[4] DRGs: 385, 985=Neonate, Died or Transferred to Another Acute Care Facility
386, 986= Extreme Immaturity or Respiratory Distress Syndrome, Neonate
387, 987=Prematurity with Major Problems
388=Prematurity without Major Problems
389, 989=Full Term Neonate with Major Problems
390= Neonate with Other Significant Problems

Prenatal and Postpartum Care

- HFS uses HEDIS measures to monitor the frequency and timing of prenatal care. The percentage of pregnant HFS-eligible women receiving less than 21% of recommended prenatal care visits has remained consistent between 2008 (11.3%) and 2010 (11.2%). The percentage of pregnant HFS women receiving more than 81% of recommended prenatal care visits increased slightly between 2008 (47.0%) and 2010 (50.3%). (Appendix I, Chart 16)

- The percentage of pregnant HFS women who received timely prenatal care visits increased between 2008 and 2010, from 53.6% to 55.5%. Timely prenatal care visits are defined as visits occurring within the first trimester of the pregnancy, or within 42 days of enrollment in one of the HFS medical programs. (Appendix I, Chart 17)

- DPH administers the Illinois Perinatal System, which is a statewide system that provides services targeted to pregnant women with high-risk conditions and newborns requiring neonatal intensive care. There are ten regions throughout the state, each lead by an Administrative Perinatal Center, which must be part of a university or university affiliated hospital. The Perinatal System is being underutilized for high-risk births. Out of all the non-normal births, only 56% of VLBW, 35% of LBW, 39% of infant mortality, and 32% of all other non-normal births were receiving prenatal care at a Perinatal Level III facility. This represents an opportunity for improvement to assure that high-risk women receive appropriate referral to the Perinatal System with coordination between the primary care physician, the women's health care provider, and the Perinatal System. (Appendix, I, Chart 18)

- The percentage of women whose delivery was paid for by HFS and who received postpartum care increased from 57.1% to 58.8% between 2008 and 2010. This represents an opportunity for improvement to ensure postpartum care is received and reproductive health services, including family planning to promote planned pregnancies, is obtained interconceptionally. (Appendix I, Chart 19)

Risk Factors

According to 2009 PRAMS data:

- HFS-eligible women reported higher rates of abuse when compared to other women. Almost 3% of HFS women reported abuse before pregnancy compared to 1% of other women. More than 3% of HFS women reported abuse during pregnancy, compared to 0% for other women. Women who had given birth to low birth weight babies reported significantly higher rates of abuse from ex-husbands or ex-partners during pregnancy when compared with women who had given birth to normal birth weight babies. (Appendix I, Chart 20)

- HFS-eligible women are less likely to use alcohol before and during pregnancy than other women. About 41% of HFS women reported using alcohol before pregnancy compared to 68% of other women. During pregnancy, 4.4% of HFS women reported using alcohol, compared to 9.6% of other women. (Appendix I, Chart 21)

- HFS-eligible women are considerably more likely to smoke than other women before, during, and after pregnancy. Twenty-six percent (26%) of HFS women smoked before pregnancy, and 12.5% during pregnancy, compared to 16% of other women who smoked before pregnancy, and 5.3% who smoked during pregnancy. (Appendix I, Chart 22)

- There were over 11,000 calls to the Illinois Tobacco Quitline during SFY2010. The majority of these calls were from females (64.3%). There were a total of 126 callers who attributed their call to an HFS mailing. (Appendix I, Chart 23)

- HFS-eligible women reported being diagnosed with postpartum depression at a higher rate than other women. Among HFS women 11.2% reported a postpartum depression diagnosis compared with 6.6% of other women. (Appendix I, Chart 24)

- According to HFS claims data, the number of perinatal depression screenings has continued to increase from 2008 to 2009. Women who received only prenatal screenings increased from 28% to 33%; women who received only postpartum screenings increased from 21% to 28%; and women who received both prenatal and postpartum depression screenings increased from14% to18%. (Appendix I, Chart 25)

- According to DHS data, the number of women receiving DASA supported substance abuse treatment and recovery services has slightly increased from 28,376 in FY 2007 to 28,756 in FY 2010. This presents an opportunity for improvement since studies have shown reduced rates of adverse birth outcomes for women actively engaged in residential rehabilitation and significantly reduced costs for infants born drug free compared to drug exposed infants. (Appendix I, Chart 26)

- Of the 6,377 women with children who received DASA Supported substance abuse services in FY 2010, 4,158 or 65.2% were HFS-enrolled. (Appendix I, Chart 27 and 28)

- Using a predictive analytics approach, HFS developed an odds ratio to determine whether HFS-eligible women who delivered in 2007 with a pre-existing situation were more likely to have an adverse birth outcome than average. The results, (Appendix I, Chart 29), show that the following conditions are likely to result in an adverse outcome: low birth weight, very low birth weight or infant mortality:
  - Previous delivery of a moderately low birth weight infant
  - Previous multiple births
  - Mental health disorder
  - Third trimester premature labor
  - Previous delivery of a very low birth weight infant
  - Uterine bleed

  Note in Appendix I, Chart 31, that an odds ratio of greater than one indicates a higher probability of an adverse outcome. Only women who have previously given birth were used for the analysis. Women may be counted in more than one pre-existing situation. HFS continues to consider both the odds ratio and the confidence interval to determine whether the risk factor is one that would be appropriate to target with a "population-based" intervention. This information provides an opportunity for HFS to target women with these previous outcomes and health conditions for more intensive interventions designed to improve subsequent birth outcomes.

Family Planning

- Just over half of HFS-eligible women who gave birth in 2009 were using family planning services (birth control) within six months after delivery. (Appendix I, Chart 30)
- HFS' Family Planning Waiver, *Illinois Healthy Women,* shows promise in reducing unplanned pregnancies. The following highlights some of successes reported in the interim evaluation:
  - **Decrease in HFS births** – an estimated 19,193 births were averted.
  - **Decrease in fertility rates** –the fertility rate for IHW women was less the 2.5% compared with 10.6% for low-income women (2009).
  - **More low-income women are using family planning services** – HFS data shows 80.4% of the women in IHW utilized family planning services.
  - **IHW is reaching the target population** – 57% of women who apply for IHW are 19-24 years of age and 75% have not previously been pregnant.
  - **Access to care has improved** – From waiver year 1 to waiver year 6, the number of HFS family planning providers increased by 45%; and, approximately 74% of respondents on the IHW Customer Satisfaction Survey reported the ability to access primary care services, if they needed them.
  - **IHW is cost effective** – HFS spent an average of $350 per year, per IHW enrollee for family planning services as compared to the average cost of pregnancy, delivery and the first year of an infant's life of $11,900 (waiver year 6). An estimated total cost savings of approximately $153.4 million in medical services has resulted from IHW to date.

HFS Eligibility

- Of all HFS-eligible women who gave birth in 2009, 47% were eligible nine or more months before delivery and 68% were eligible nine or more months after delivery. (Appendix I, Chart 31)

- Of HFS-eligible women who experienced a poor birth outcome in 2009, 48% were eligible nine or more months prior to delivery, and nearly 69% were eligible nine or more months after delivery. This represents a significant opportunity to engage the majority of these women in interconception care aimed at improving the outcome of any subsequent pregnancies. (Appendix I, Chart 32)

Birth Costs

- About 40% of HFS-covered births are non-normal, but they account for 70% of total birth costs covered. (Appendix I, Chart 33)

- While normal births cost nearly $264 million in 2009, averaging $5,324 per birth, non-normal births cost $627 million the same year, for an average cost of $19,636 per birth. HFS can realize cost savings while improving health outcomes by reducing the number of women experiencing non-normal births, (including low birth weight and very low birth weight infants, and infant mortality). (Appendix I, Chart 33)

- While VLBW infants represent just over 1% of birth outcomes, they account for almost 59% of the average costs of births (prenatal care, delivery, postpartum, and infant's first year of life in 2009). (Appendix I, Chart 34)

Future Direction for 2012 - 2014: Preconception Care for All Women, Maternity Care and Interconception Care for High-Risk Women

The data presented herein show that while birth outcomes are improving, there is still much to be accomplished. HFS has been exploring models of care, including preconception care for all women and prenatal and interconception care for high-risk women. This plan is consistent with Public Act 96-0799, effective October 2009, which allows HFS to undertake a pilot project to study patient outcomes for patients at risk of low birth weight or premature birth, which includes all medical and other conditions that lead to poor birth outcomes or problematic pregnancies.

While early and adequate prenatal care is an important part of a healthy pregnancy, there are other factors to consider as well. A healthy pregnancy also depends on a number of factors before pregnancy, such as a woman's health status, preventive care, and eliminating risk-taking behaviors. A good example of preventive care is folic acid, which taken before and early in a pregnancy, can reduce the risk of neural tube defects. Quitting smoking can reduce the risk of a premature birth and subsequent infant health issues. Stopping alcohol use can eliminate the risk of fetal alcohol syndrome. Prenatal care is only part of the equation – addressing issues that contribute to poor birth outcomes preconceptionally or interconceptionally is the other part. In addition, indicators of chronic conditions, which lead to adverse birth outcomes that need to be addressed, such as mental health, should be identified on an ongoing basis through predictive analytics of claims and other data, e.g., Vital Records match.

Extensive research has been accomplished on preconception and interconception care. HFS conducted a literature review to identify evidence-based best practices and proven interventions. HFS considered information gleaned from the literature review and from HFS claims data and Vital Records. Recommendations from a "Peer Review" session with experts in the field of perinatal health, including physicians, advanced practice nurses, provider organizations, academia, researchers, advocacy groups, and sister State agencies have also been incorporated into the models. The models are targeted to different groups of women, but have the same objectives: improving the overall health of women, reducing unintended pregnancies, increasing the use of family planning services/birth control, increasing interpregnancy spacing intervals and reducing risk factors, all of which will improve birth outcomes.

Preconception Care for All Women

This model is targeted to all women of childbearing age and is intended to promote preconception care at every opportunity. Preconception care could be integrated into existing delivery systems of care – fee-for-service, PCCM, and MCOs working with the provider organizations representing primary care providers serving adolescents and women of childbearing age, preconception care would focus on promotion, provider training and technical assistance. Care guidelines address:

- Annual preconception/preventive visit
- Planned pregnancies: family planning and reproductive life planning a component part of every health care visit
- Folic acid
- Preconception risk assessment; address all risk factors; counseling on healthy lifestyle; appropriate referrals
  - HFS has finalized a preconception care risk assessment tool and beginning early in 2012 will reimburse this service.
- Mental health screening, assessment and treatment, or referral, as needed
- Smoking cessation counseling, as needed
- Postpartum care
- Life stressors (homelessness, unemployment, domestic violence)

Preconception care is an important strategy in promoting planned pregnancies and thus, improving birth outcomes. Physicians would be encouraged to educate women to take the necessary steps to lead healthy lives, to eliminate risks (take folic acid, stop smoking, alcohol and drug use, eliminate environmental risks) and address chronic conditions, resulting in improved health outcomes.

High-Risk Women

Of the women who had a delivery paid for in 2009, HFS data shows that about two-thirds of eligible women were delivering their second, third or high order birth. This means that HFS has claims data regarding their previous pregnancy(ies) and information about chronic health conditions or other risk factors that may contribute to poor birth outcomes. This data, coupled with Vital Records, is a valuable tool to identify women who are at risk for a poor birth outcome, since a previous poor birth outcome is the single biggest predictor of a subsequent poor birth outcome.

HFS would use claims data and matched birth file data to identify high-risk women. Two separate populations of high-risk women would be targeted. The first is pregnant women who have had a previous poor birth outcome or who have risk factors that contribute to poor birth outcomes. A high-risk prenatal care model would be employed for these women. The second population consists of women who are not pregnant, who have a recent poor birth outcome or who have risk factors that contribute to poor birth outcomes. A high-risk interconception care model would be developed for these women.

HFS proposes to use a predictive analytics approach to identify high-risk women. This approach will use claims data and matched birth files to analyze birth outcomes and health information of HFS women to identify risk factors. Logistic regression will be used to identify risk factors that may lead to poor birth outcomes, with an odds ratio used to predict the likelihood of a poor birth outcome attributable to certain risk factors. Once the high-risk women are identified, they would be flagged and targeted for the more intensive interventions of the high-risk models.

This would require a reimbursement strategy that compensates providers for the high-risk coordination required in medical management of these high-risk women. In

addition, a number of components currently included in the PCCM model could be adapted for providers of high-risk women. Clinical indicators would be developed and incentives would be considered for payment to providers who meet the indicators – an expansion of the pay-for-performance model from primary care to prenatal and interconception care. Providers would receive feedback on their performance in relation to expectations and how they compare to other providers.

Client education and engagement would be another important part of the strategy for caring for high-risk women. A case management component would be required to help women understand the importance of compliance with their care regimen, to provide assistance with barriers, and to encourage them to establish life planning goals related to health, reproductive and family planning, and life goals. Coordination with the FCM program for outreach of these high-risk women and integration of the Perinatal Network into the strategy has promise to improve care and compliance.

High-Risk Prenatal Care

This model would be targeted at pregnant women who have had a previous poor birth outcome or who have risk factors that contribute to poor birth outcomes. An important part of this model would be early identification of women as soon as they become pregnant. A mechanism would be developed for providers to notify HFS immediately when determining that a woman was pregnant. Based on the predictive analytics approach described above, women who were at-risk would be flagged on HFS' files. HFS could then alert the provider that the woman was considered high-risk and provide a profile that detailed the high-risk factors. High-risk prenatal care could be integrated into the existing delivery systems of care – fee-for-service, PCCM, and managed care organizations or a new mechanism could be employed. Care guidelines would address:

- Prenatal care for high-risk women
- Risk assessment; address all risk factors; counseling and guidance; appropriate referrals
- Care related to other chronic conditions
- Appropriate referrals to perinatal specialty care through the Perinatal Network; feedback from specialist to the referring provider; eventual transfer of the patient back to the referring provider
- Prenatal Electronic Data Set (PEDS) for delivery – providers required to submit certain information to HFS pertaining to the woman's pregnancy, including test results and problems; providers could be reimbursed for submitting the information and the information would be available to delivery hospitals, electronically (CHIPRA Category E working to identify data elements for PEDS)
- Postpartum care – postpartum care would be the first step to a continuum of care for women, providing an opportunity to reinforce messages about healthy lifestyles and family planning/birth control
- Transfer of high-risk women to the interconception care model to promote 24 months or more spacing between pregnancies, address chronic conditions, and promote planned pregnancies, if and when the women wish to conceive

This model attempts to address problems with the current system of care. Anecdotal information from the provider community indicates that many prenatal care providers resist making referrals to the Perinatal Network for perinatal specialty care because they do not receive feedback from the specialty providers about the women's condition/progress and the women are not transferred back to the referring provider for ongoing care. This needs to be addressed.

An ongoing problem for delivery hospitals is that women present in labor and the hospital has no knowledge of the women. It is critical for the hospital to have immediate access to information related to the woman's pregnancy, including results of lab tests and identification of problems with the pregnancy. When the hospital has no knowledge of a woman, they must repeat lab tests to assess the woman's status and identify problems so that the woman can be treated appropriately (an example is HIV testing). This often results in duplication of services and additional costs, which can be avoided. Addressing problems with the current health care system, early identification, and a more intensive level of care for these women are expected to result in improved birth outcomes.

High-Risk Interconception Care

This model is targeted to women who have had a recent poor birth outcome. An important part of this model would be early identification of women as soon as they delivered or of those who delivered in the past year with results of an adverse pregnancy outcome. A mechanism would be developed for hospitals to notify HFS or its QIO immediately upon delivery by HFS-eligible women, with information about the outcome. These women would be flagged on HFS' files and, based on the predictive analytics approach described above; any who are at-risk due to health status would also be flagged. HFS could then alert the provider and the case manager to engage these women in more intensive interconception intervention. Providers would receive a profile that detailed the high-risk factors. High-risk interconception care could be integrated into the existing delivery systems of care – fee-for-service, PCCM, and managed care organizations. Care guidelines would address:

- Postpartum care for high-risk women
- Interconception care for high-risk women
- Risk assessment; address all risk factors; counseling and guidance; appropriate referrals
- Care related to other chronic conditions
- Planned pregnancies: family planning and reproductive life planning a component part of every health care visit
- Folic acid
- Life stressors (homelessness, unemployment, domestic violence)

This model focuses on health education, addressing chronic health conditions, assuring that women set reproductive and life planning goals, and increasing interpregnancy spacing intervals, with the result being that women delay and plan for healthy pregnancies.

Next Steps

HFS proposes to work with DHS and DPH, sister agencies with shared responsibilities related to maternal and child health, members of the General Assembly, other stakeholders – especially those engaged in the CHIPRA Child Health Quality Demonstration Grant – to craft a shared strategic vision and plan to implement the kinds of changes described above.

Appendix I

Charts and Maps

HFS Births

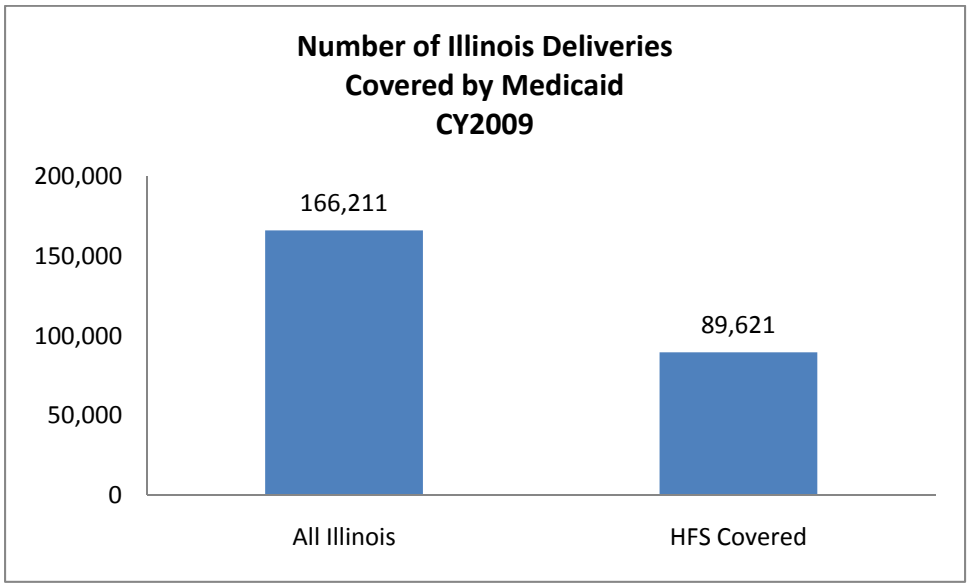


Chart 1 Healthcare and Family Services, Enterprise Data Warehouse, 2011

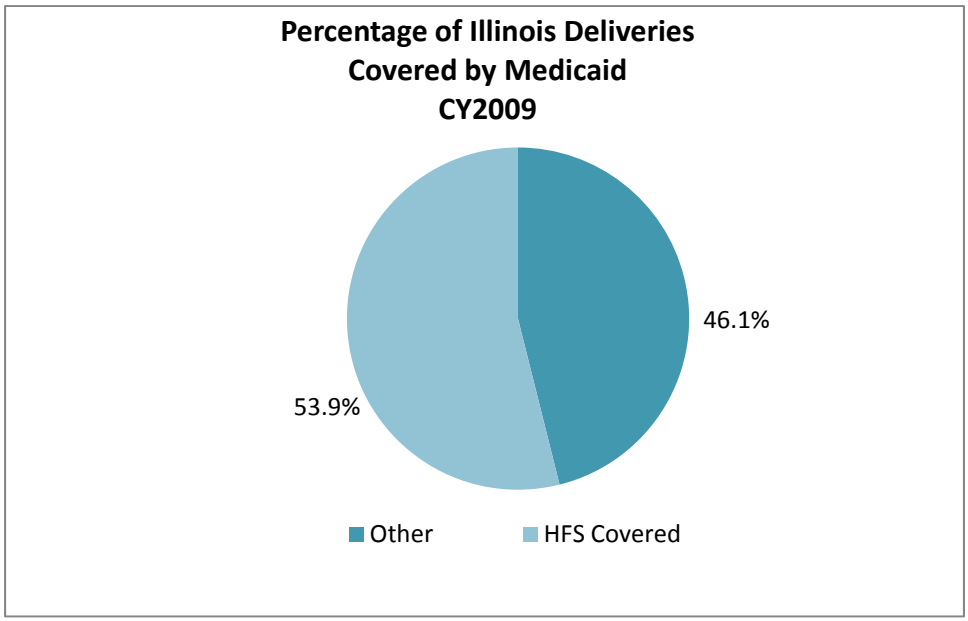


Chart 2 Healthcare and Family Services, Enterprise Data Warehouse, 2011

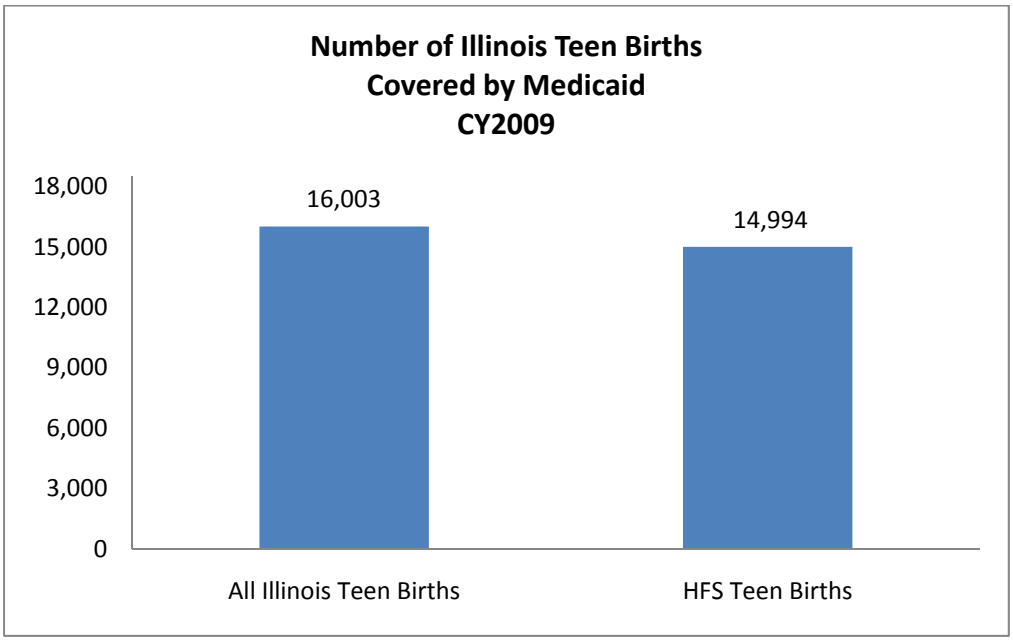


Chart 3 Healthcare and Family Services, Enterprise Data Warehouse, 2011

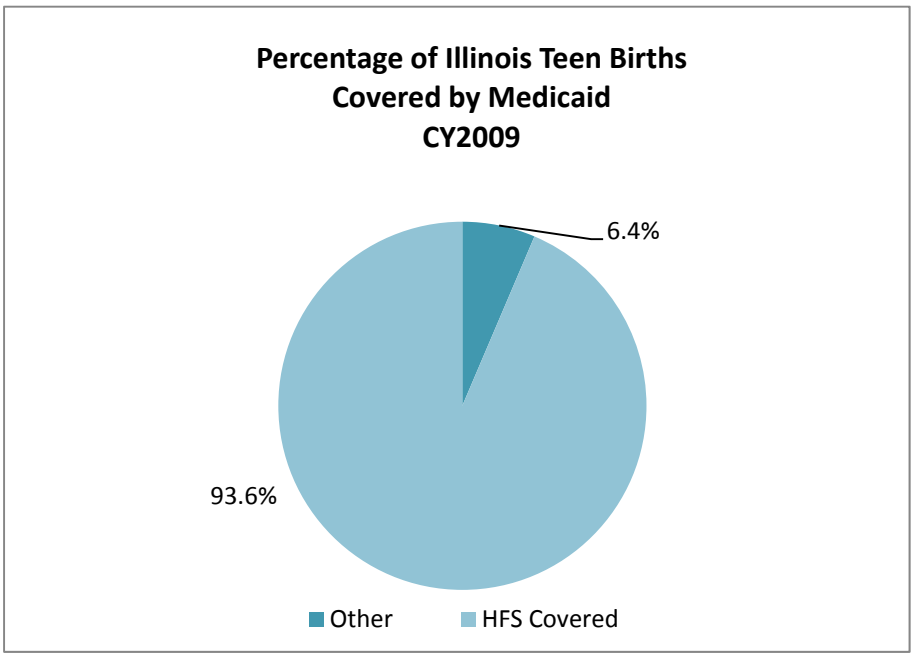


Chart 4 Healthcare and Family Services, Enterprise Data Warehouse, 2011

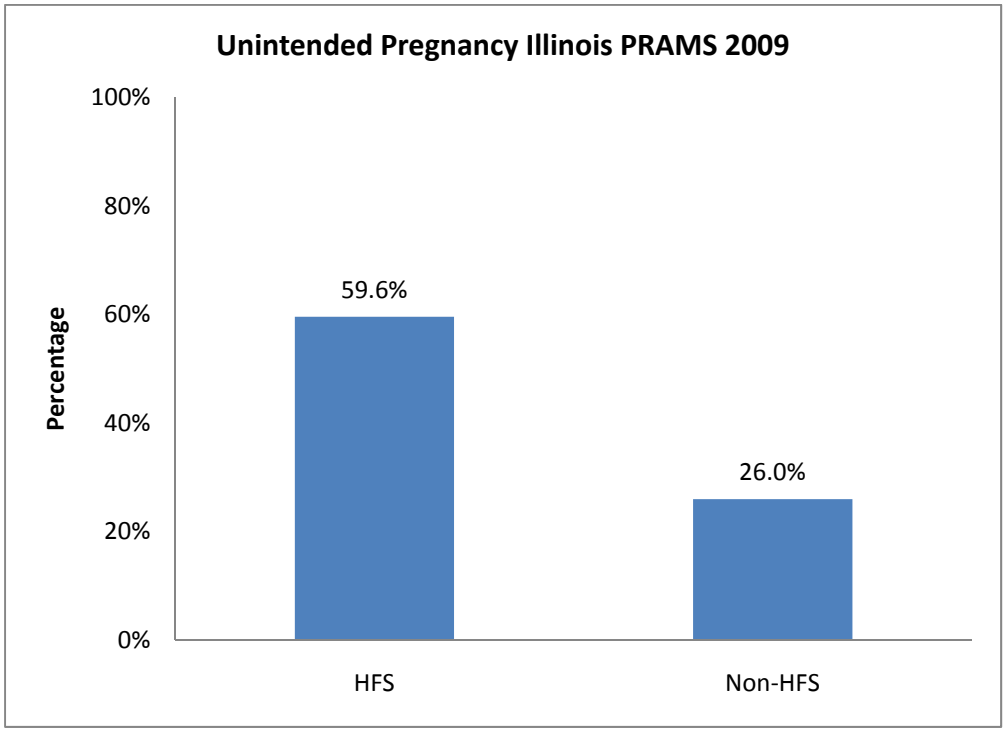


Chart 5 Illinois Department of Public Health, 2009 Pregnancy Risk Assessment Monitoring System (PRAMS)

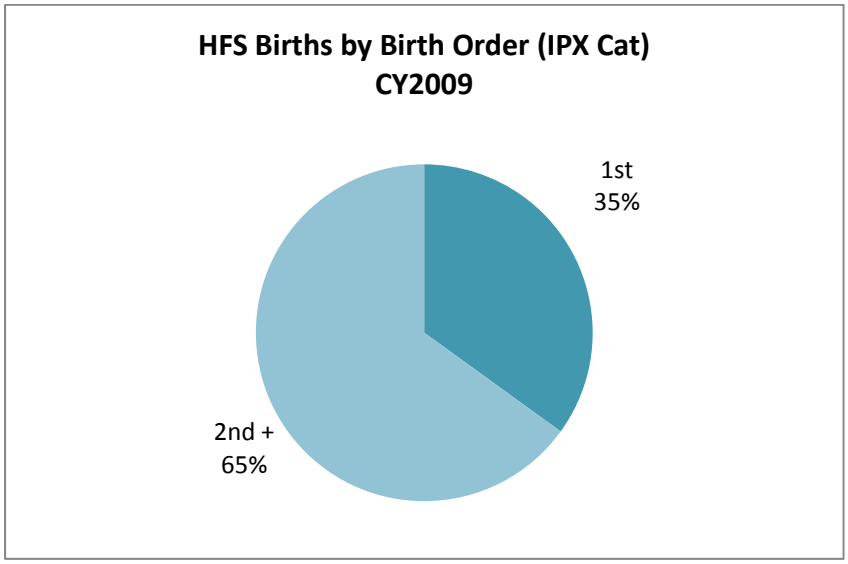


Chart 6 Healthcare and Family Services, Enterprise Data Warehouse, 2011

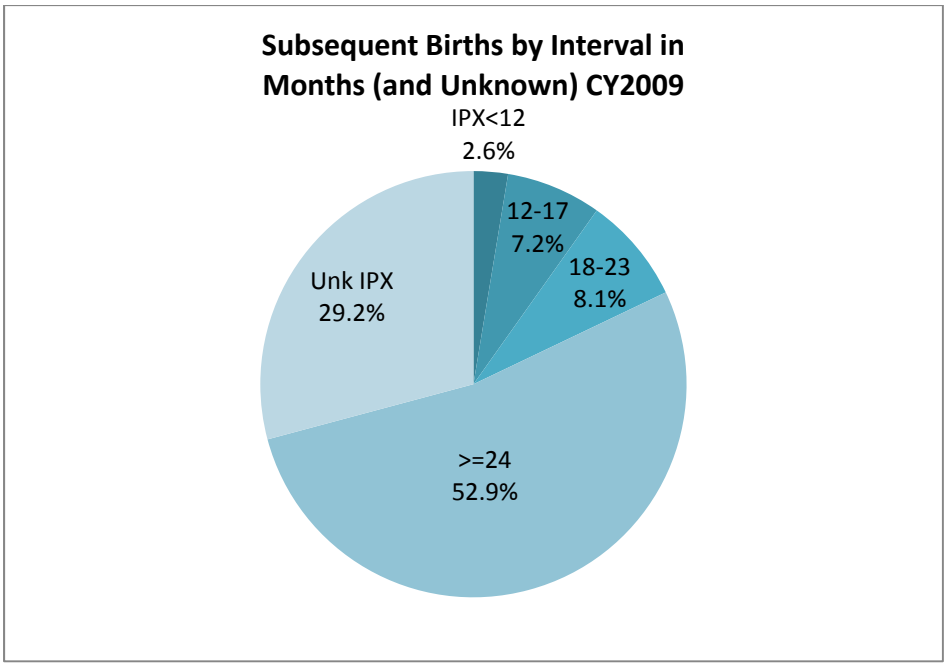


Chart 7 Healthcare and Family Services, Enterprise Data Warehouse, 2011

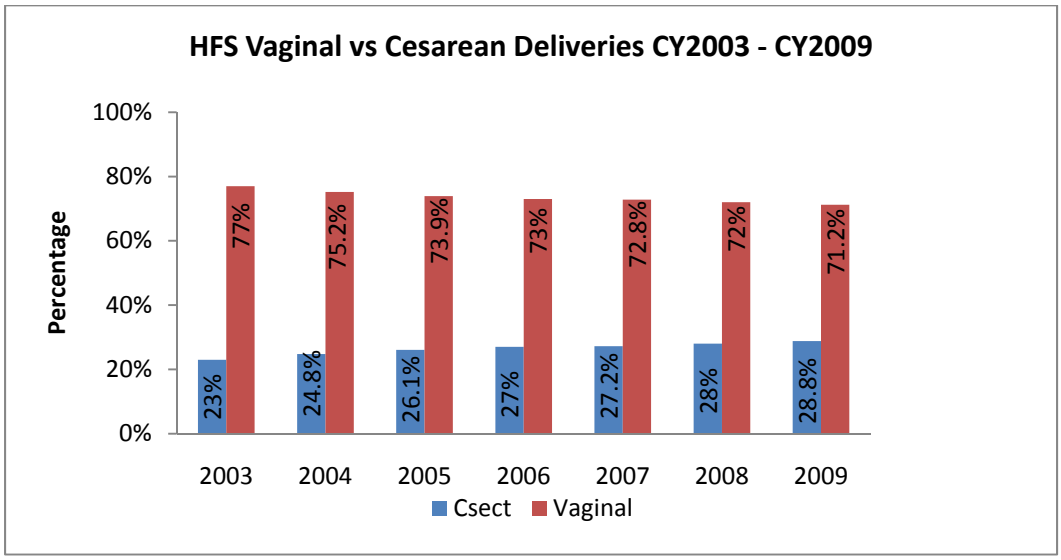


Chart 8 Healthcare and Family Services, Enterprise Data Warehouse, 2011

Birth Outcomes

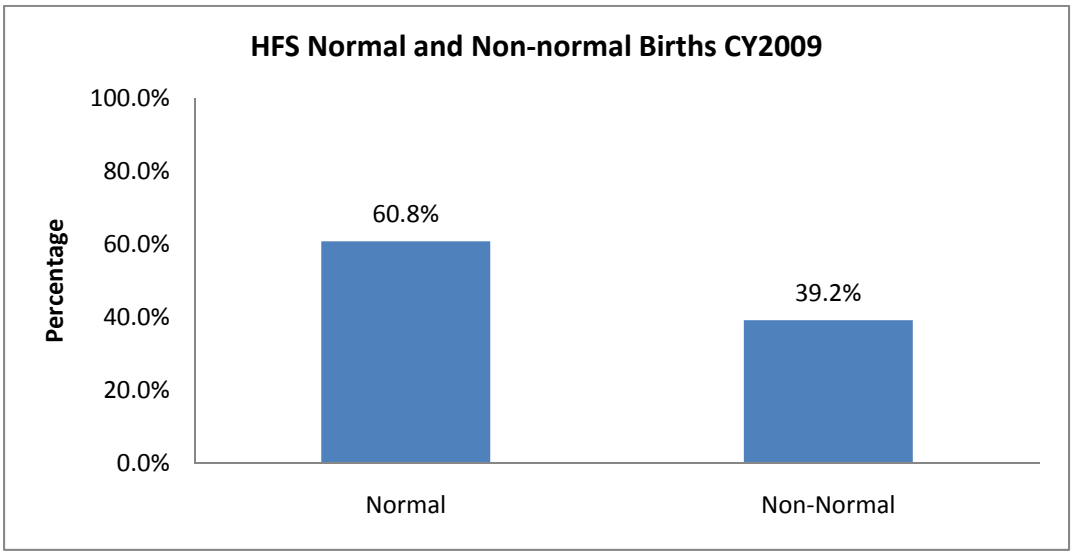


Chart 9 Healthcare and Family Services, Enterprise Data Warehouse, 2011

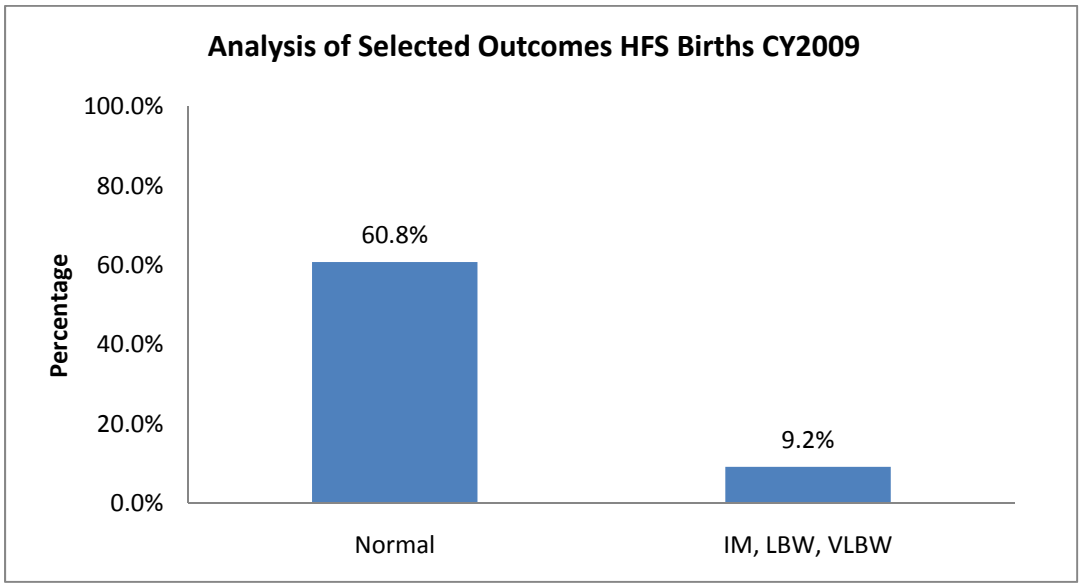


Chart 10 Healthcare and Family Services, Enterprise Data Warehouse, 2011

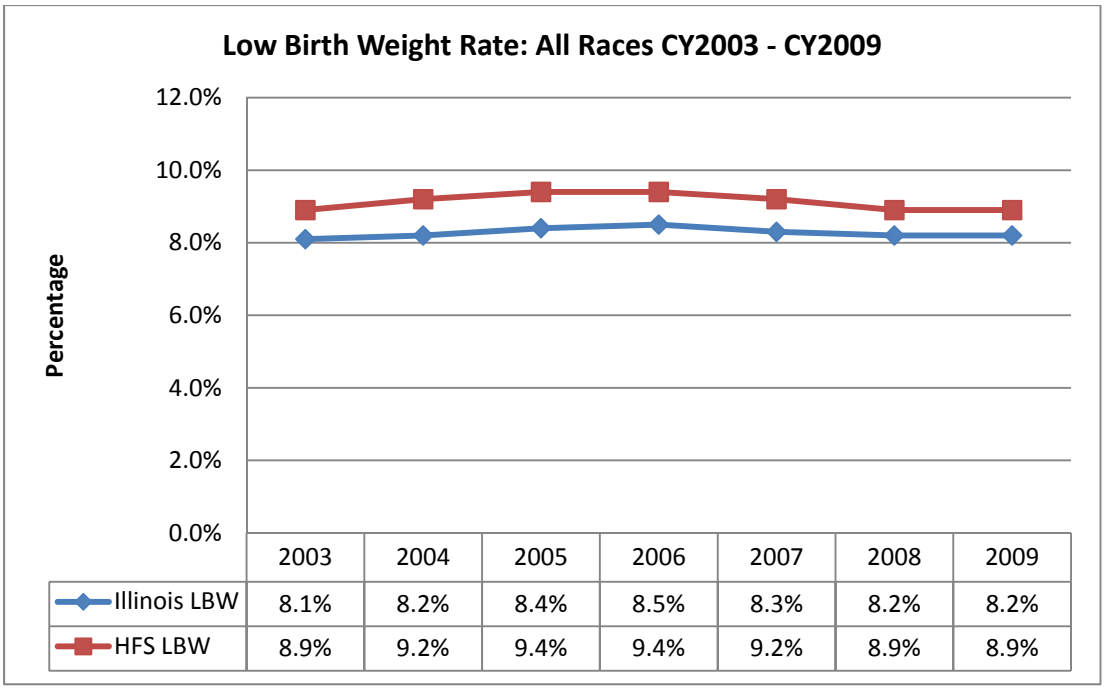


Chart 11 Healthcare and Family Services, Enterprise Data Warehouse, 2011

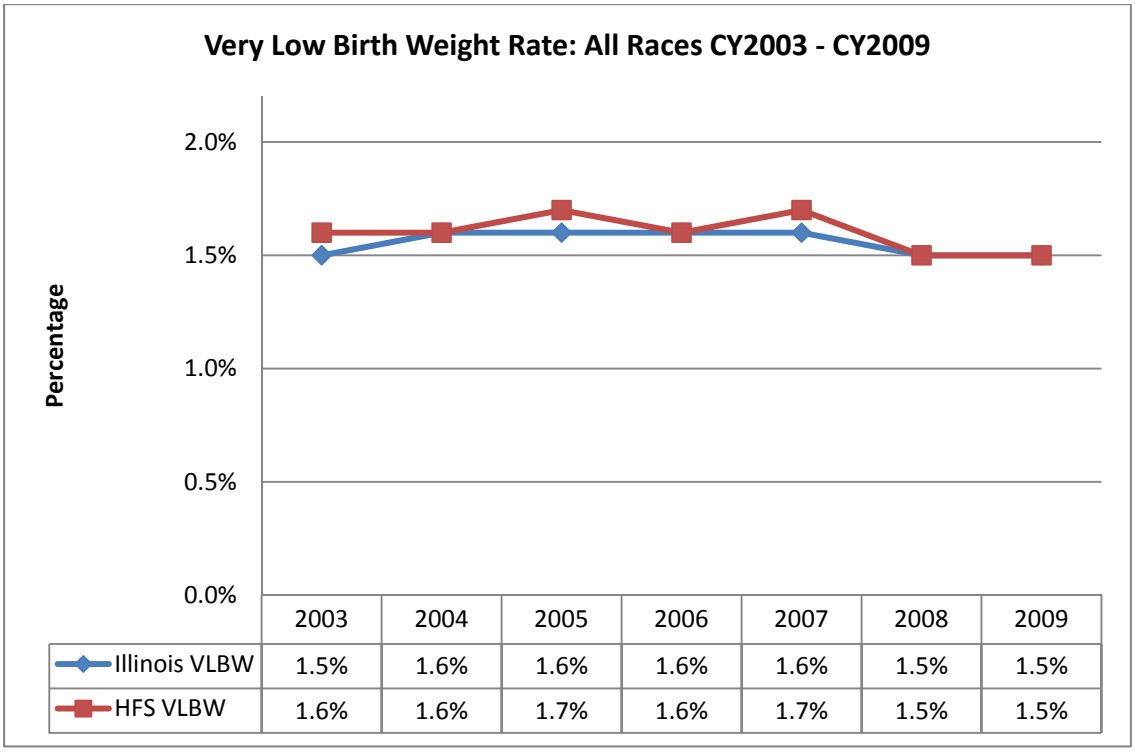


Chart 12 Healthcare and Family Services, Enterprise Data Warehouse, 2011

Illinois Infant Mortality Rate				
Year	Number	Overall Rate	White Rate	African American Rate
2008*	1,263	7.2	5.8	13.9
2007*	1,196	6.6	5.3	13.5
2006*	1,343	7.4	6.1	14.4
2005*	1,294	7.2	5.7	15.4
2004*	1,317	7.3	5.9	14.8
2003*	1,380	7.6	6.1	15.6
2002*	1,304	7.2	5.5**	15.7
2001*	1,379	7.5	5.9	14.9
2000*	1,528	8.3	6.5	16.3
1999*	1,504	8.3	6.2	17.4
1998*	1,505	8.2	6.3	16.8
1997*	1,476	8.2	6.2	16.5
1996*	1,536	8.4	6.3	17.1
1995*	1,724	9.3	7.2	18.2
1994*	1,711	9	6.7	17.9
1993*	1,838	9.6	7.1	18.8
1992*	1,911	10	7.4	19.5
1991*	2,068	10.7	7.9	21.1
1990*	2,090	10.7	7.6	22.1
Rates are per 1,000 live births				
* 1990 - 2008: Resident data from tabulations in Illinois Department of Public Health.				
**Corrected rate				

Chart 13 Illinois Center for Health Statistics, Illinois Department of Public Health, Vital Statistics, Illinois Mortality Statistics, 2011

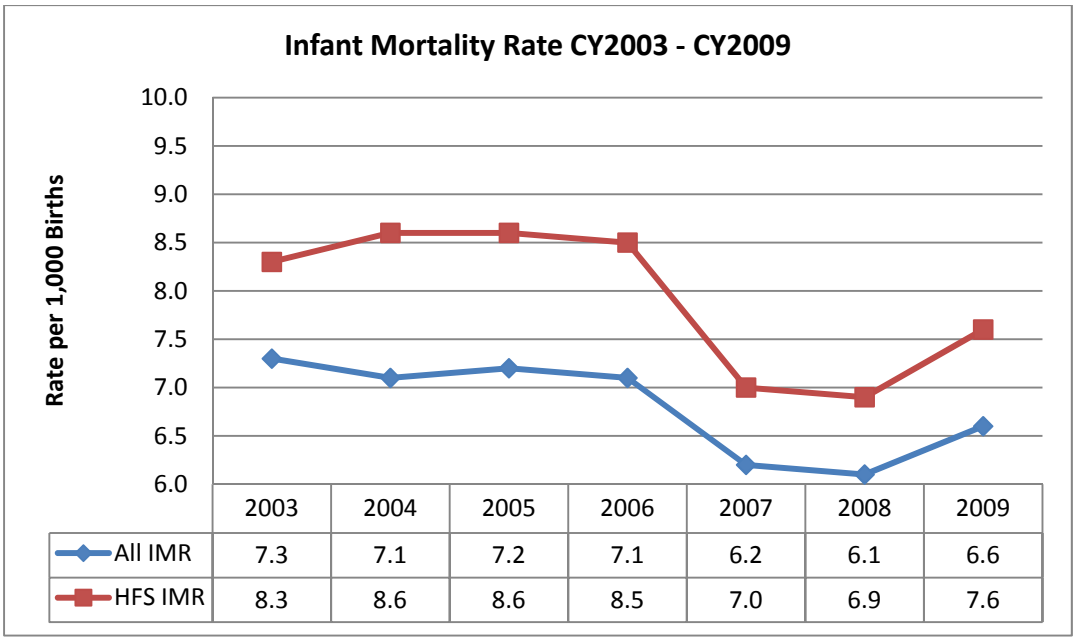


Chart 14 Healthcare and Family Services, Enterprise Data Warehouse, 2011

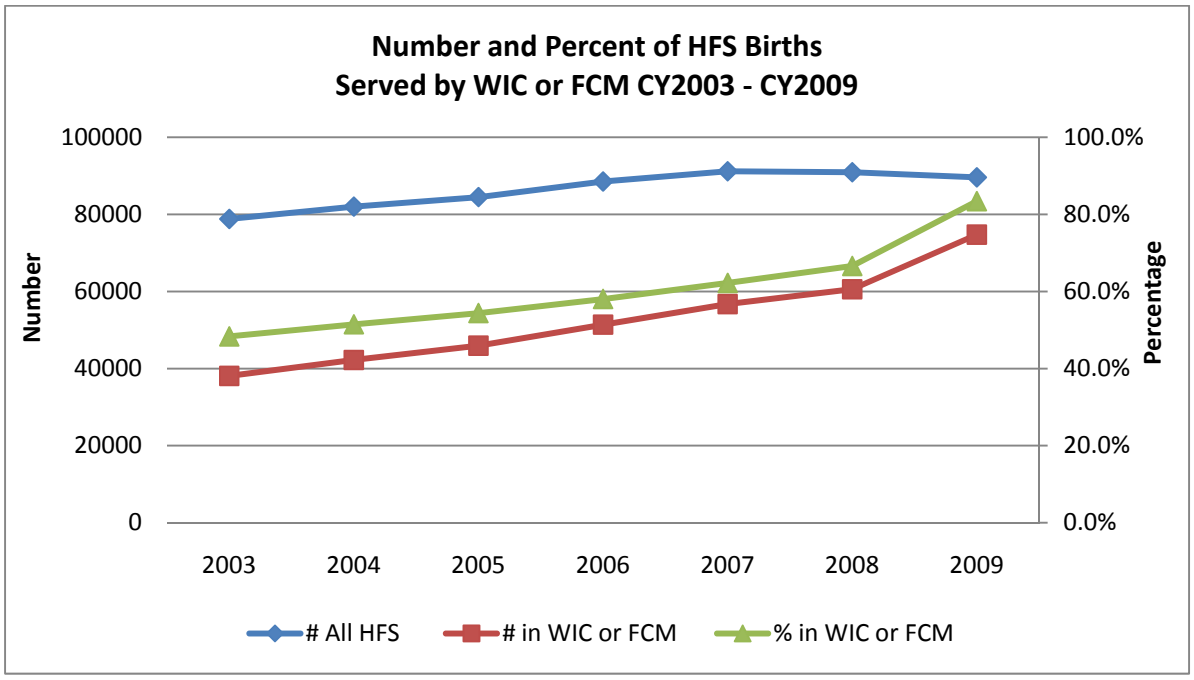


Chart 15 Healthcare and Family Services, Enterprise Data Warehouse, 2011

Prenatal and Postpartum Care

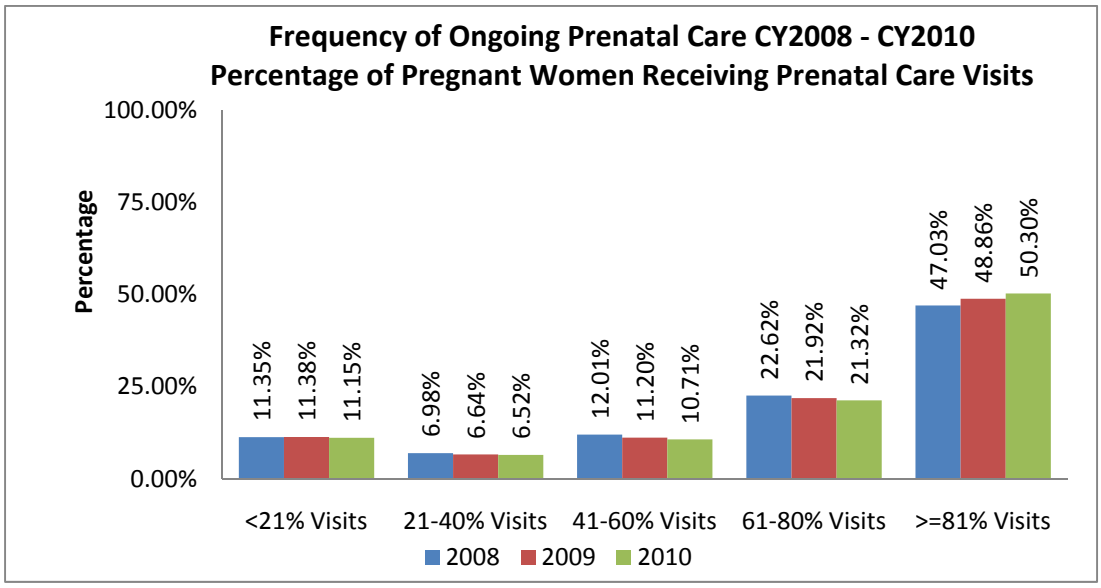


Chart 16 Healthcare and Family Services, Executive Information System, 2011

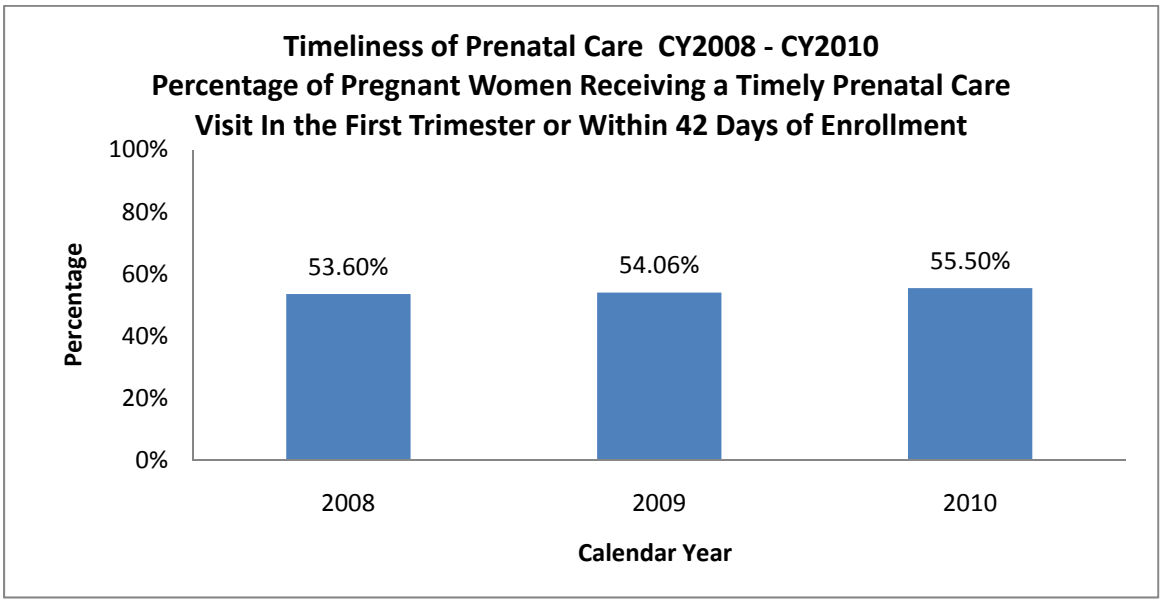


Chart 17 Healthcare and Family Services, Executive Information System, 2011

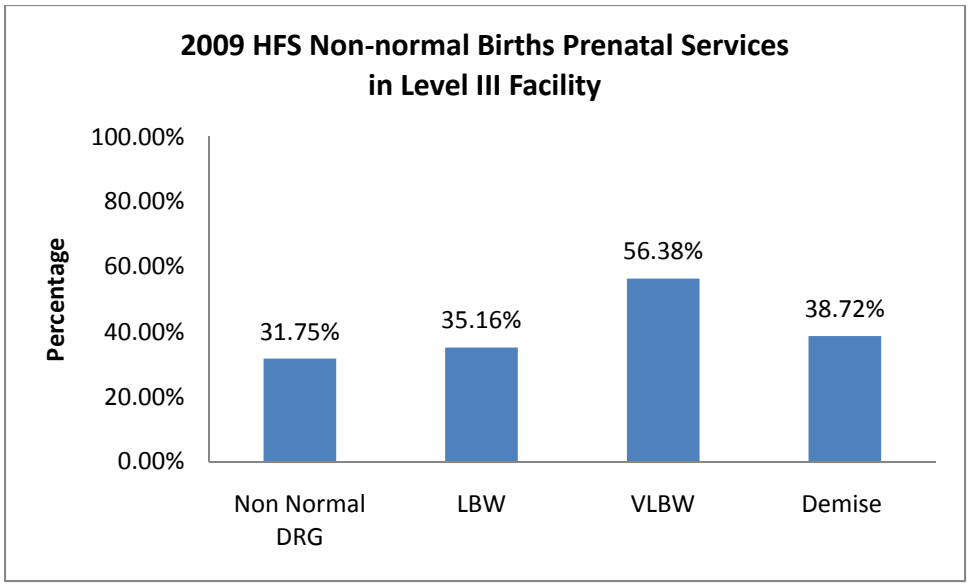


Chart 18 Healthcare and Family Services, Executive Information System, 2011

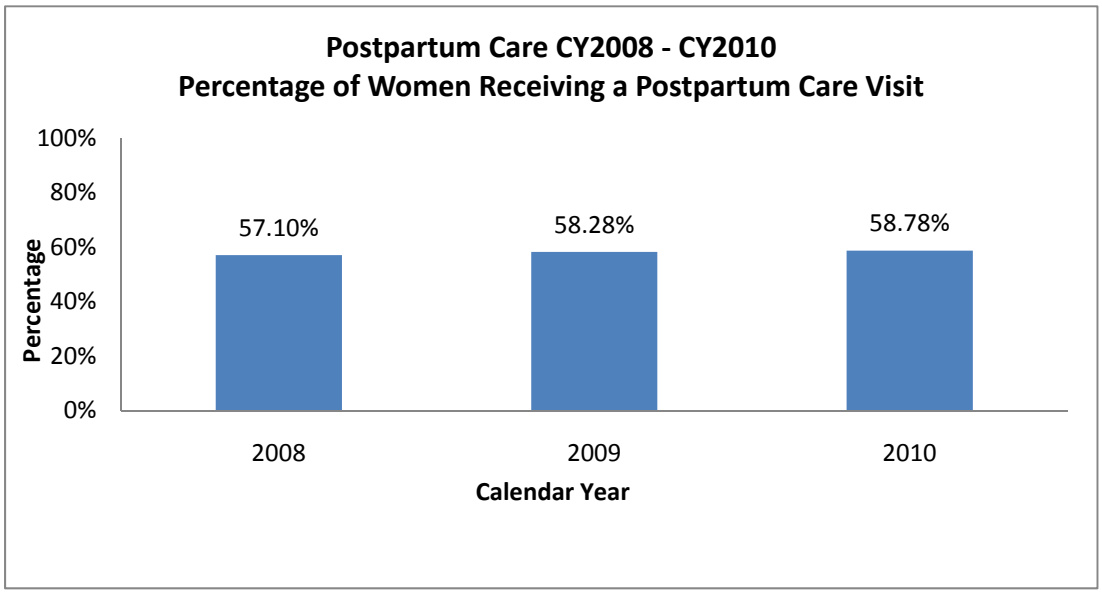


Chart 19 Healthcare and Family Services, Executive Information System, 2011

Risk Factors

Physical Abuse: Illinois PRAMS 2009

Abuse by Husband/Partner Before Pregnancy	Percentage
Illinois	2.8%
HFS Women	4.6%
Non-HFS Women	0.8%
Abuse by Husband/Partner During Pregnancy	
Illinois	2.1%
HFS Women	3.6%
Non-HFS Women	0.0%
2009 PRAMS did not include questions about abuse by "ex-" husband/partner	

Chart 20 Illinois Department of Public Health, 2009 Pregnancy Risk Assessment Monitoring System (PRAMS)

Prevalence of Drinking Before and During Pregnancy: Illinois PRAMS 2009

Women who drank 3 months before pregnancy	Percentage
Illinois	53.3%
HFS Women	40.9%
Non-HFS Women	67.8%
Women who drank during last 3 months of pregnancy	
Illinois	6.8%
HFS Women	4.4%
Non-HFS Women	9.6%

Chart 21 Illinois Department of Public Health, 2009 Pregnancy Risk Assessment Monitoring System (PRAMS)

Prevalence of Smoking Before and During Pregnancy: Illinois PRAMS 2009

Women who smoked 3 months before pregnancy	Percentage
Illinois	20.9%
HFS Women	25.5%
Non-HFS Women	15.6%
Women who smoked during last 3 months of pregnancy	
Illinois	9.2%
HFS Women	12.5%
Non-HFS Women	5.3%

Chart 22 Illinois Department of Public Health, 2009 Pregnancy Risk Assessment Monitoring System (PRAMS)

Illinois Tobacco Quitline Calls for SFY2010

Description	Number
Total Calls	11,174
Self-Reported as Being Pregnant	104
Self-Reported for Receiving WIC	152
Call Attributable to HFS Mailing	126
Female Callers	7,185
Children in Household under age 5	846

Chart 23 Illinois Tobacco Quitline, Caller Report, 2011

Postpartum Depression Diagnosis:
Illinois PRAMS 2009

Women with a postpartum depression diagnosis	Percentage
Illinois	9.1%
HFS Women	11.2%
Non-HFS Women	6.6%

Chart 24 Illinois Department of Public Health, 2009 Pregnancy Risk Assessment Monitoring System (PRAMS)

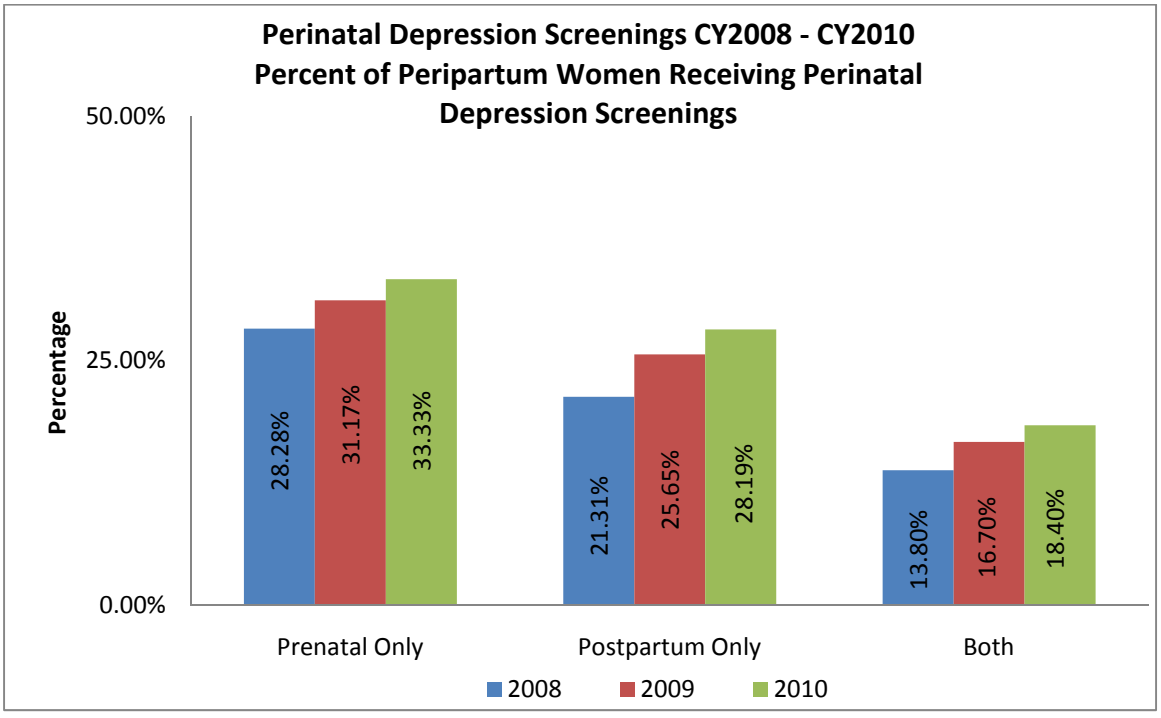


Chart 25 Healthcare and Family Services, Executive Information System, 2011

Women Served in DASA-supported Treatment and Recovery Services

SFY2007	SFY2008	SFY2009	SFY2010
28,376	28,123	25,009	28,756

Chart 26 Illinois Department of Human Services, Division of Alcoholism and Substance Abuse, 2011

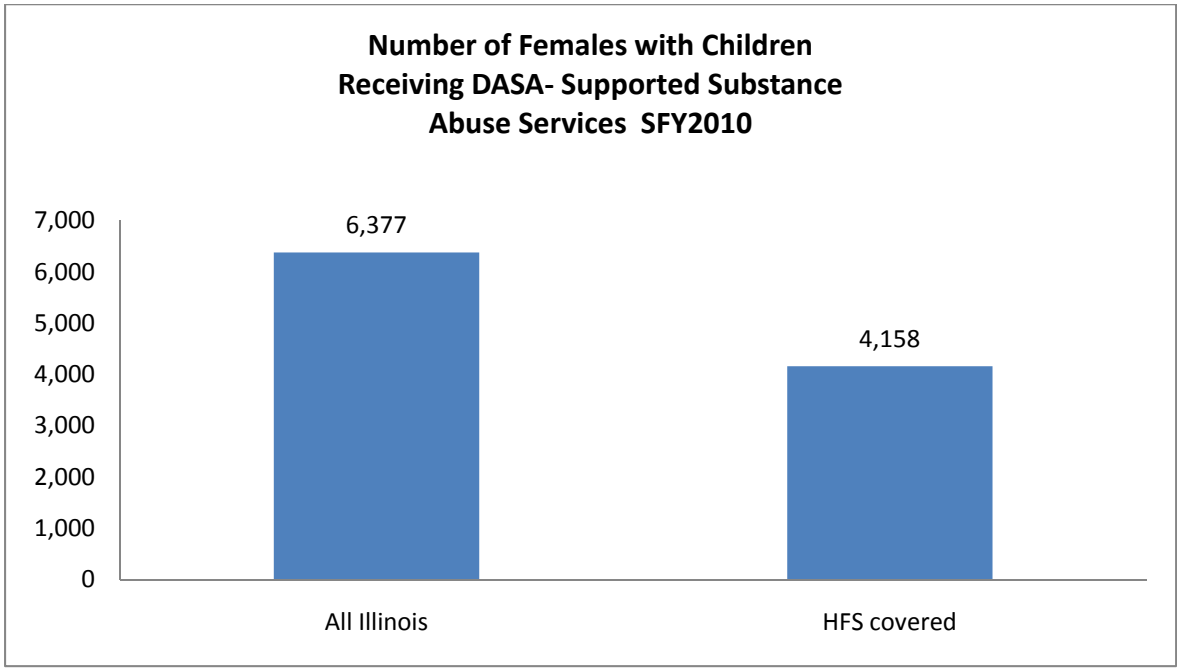


Chart 27 Illinois Department of Human Services, Division of Alcoholism and Substance Abuse, 2011

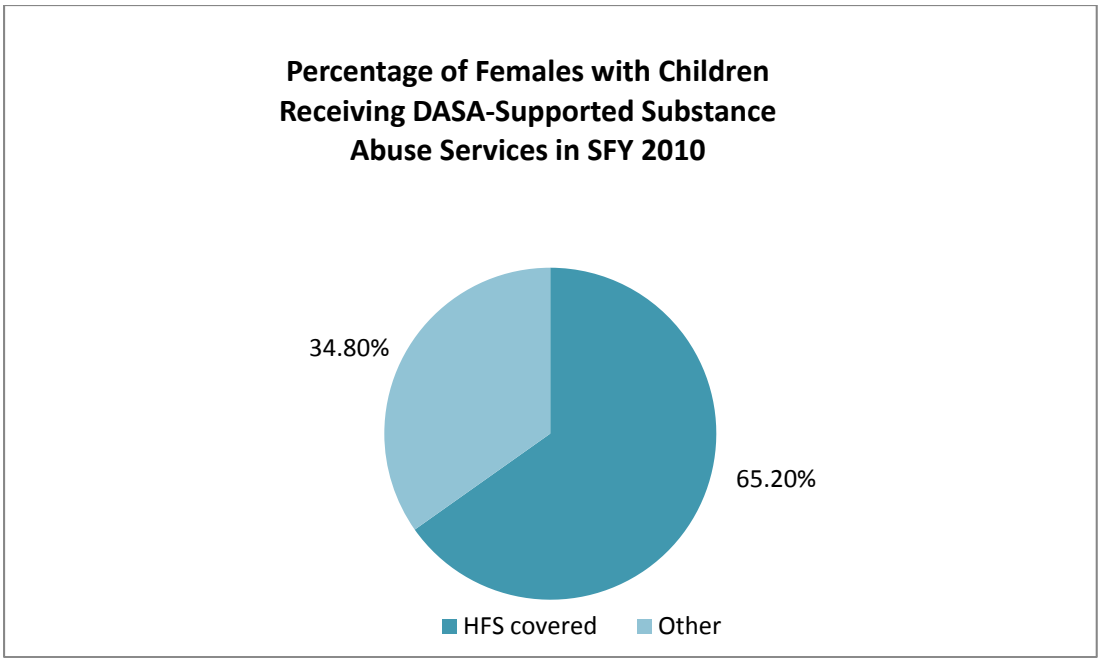


Chart 28 Illinois Department of Human Services, Division of Alcoholism and Substance Abuse, 2011

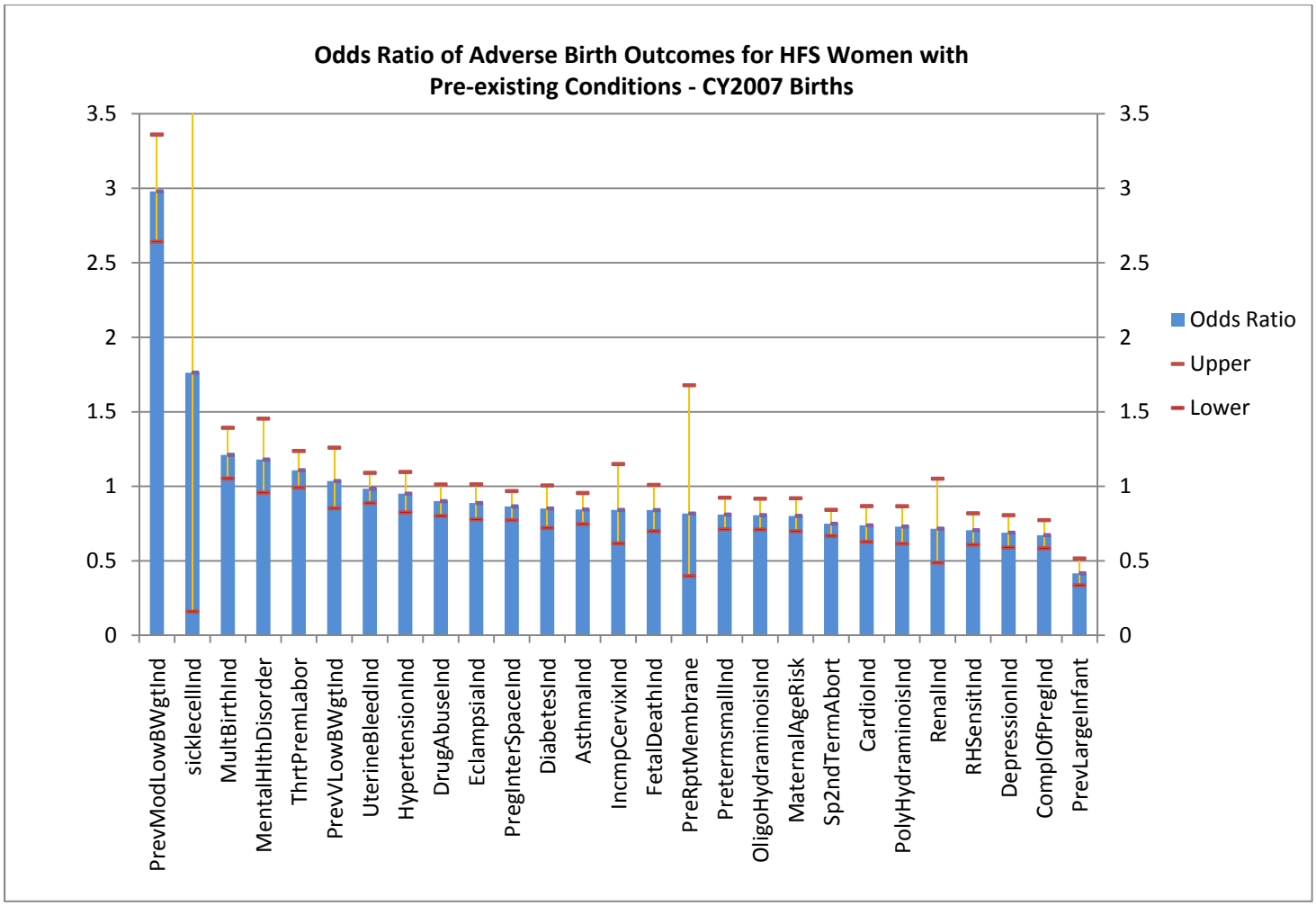


Chart 29 Healthcare and Family Services, Enterprise Data Warehouse, 2008

Family Planning

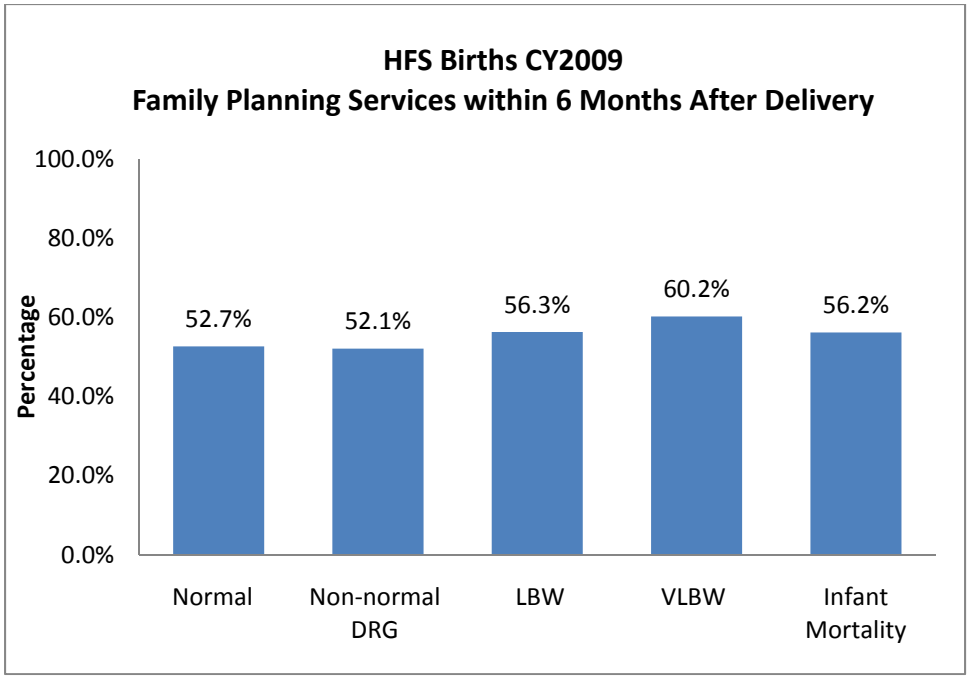


Chart 30 Healthcare and Family Services, Enterprise Data Warehouse, 2011

Eligibility

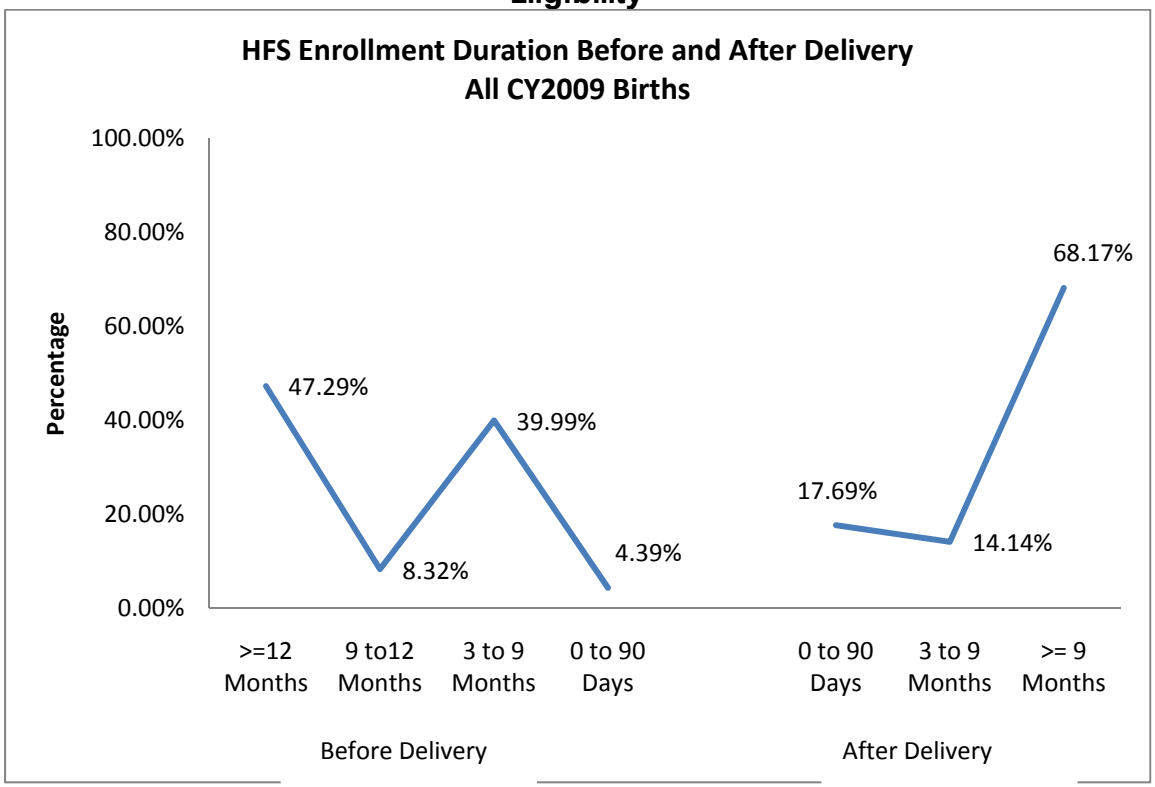


Chart 31 Healthcare and Family Services, Enterprise Data Warehouse, 2011

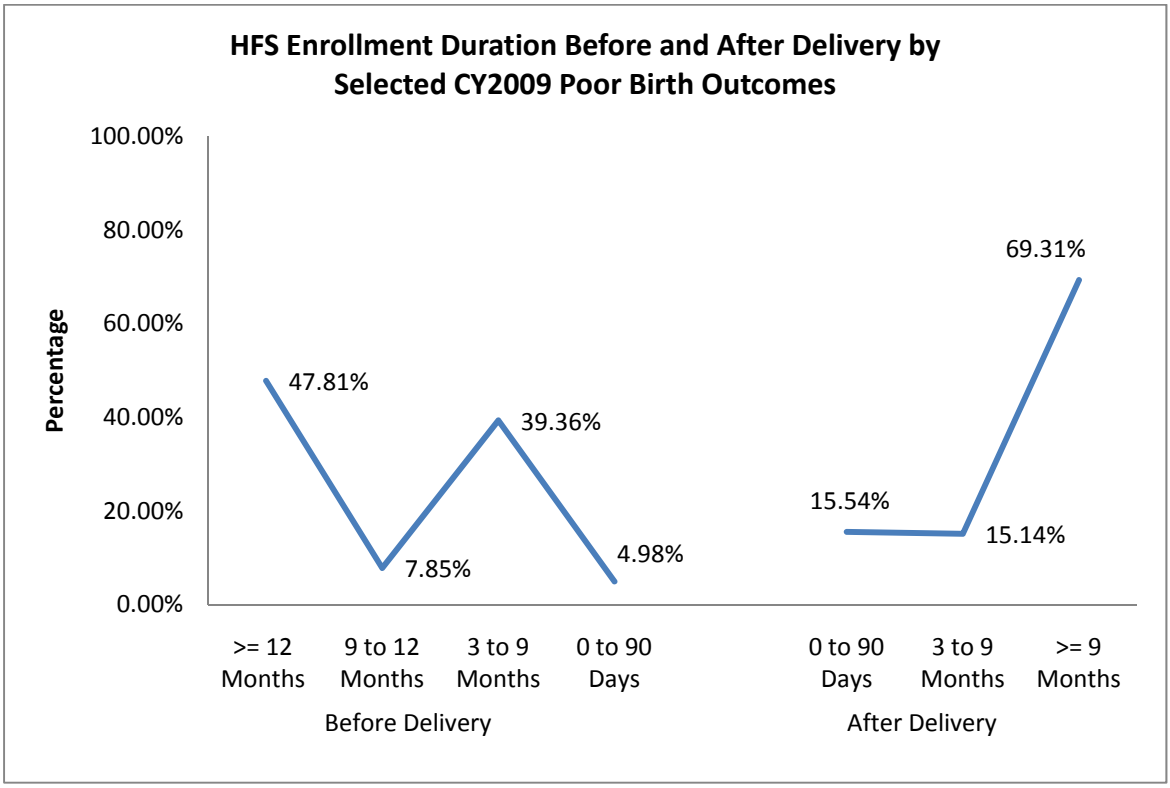


Chart 32 Healthcare and Family Services, Enterprise Data Warehouse, 2011

Birth Costs

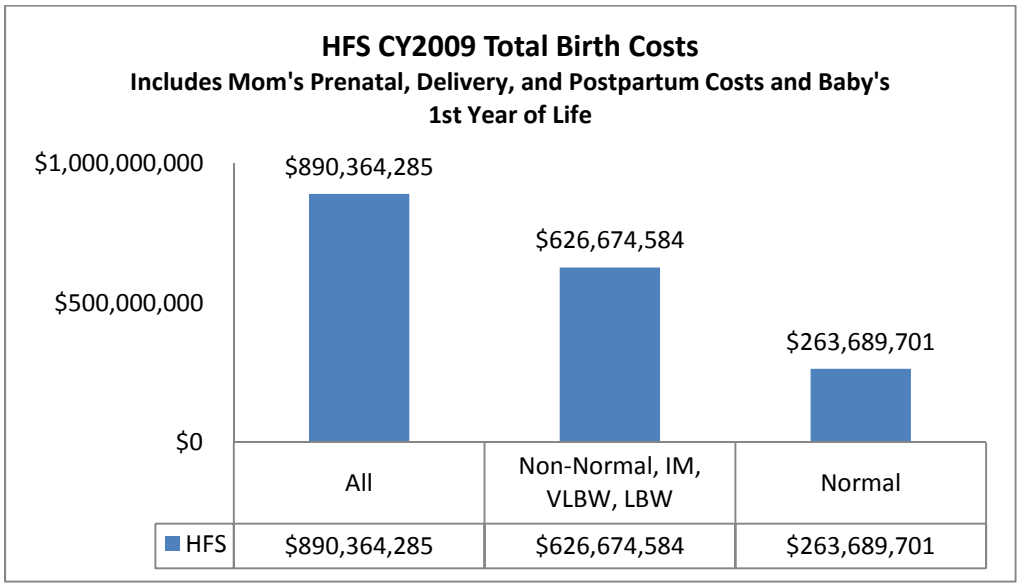


Chart 33 Healthcare and Family Services, Enterprise Data Warehouse 2011
Non-normal DRGs: 385, 386, 387, 388, 389, 390, 985, 986, 987, 989

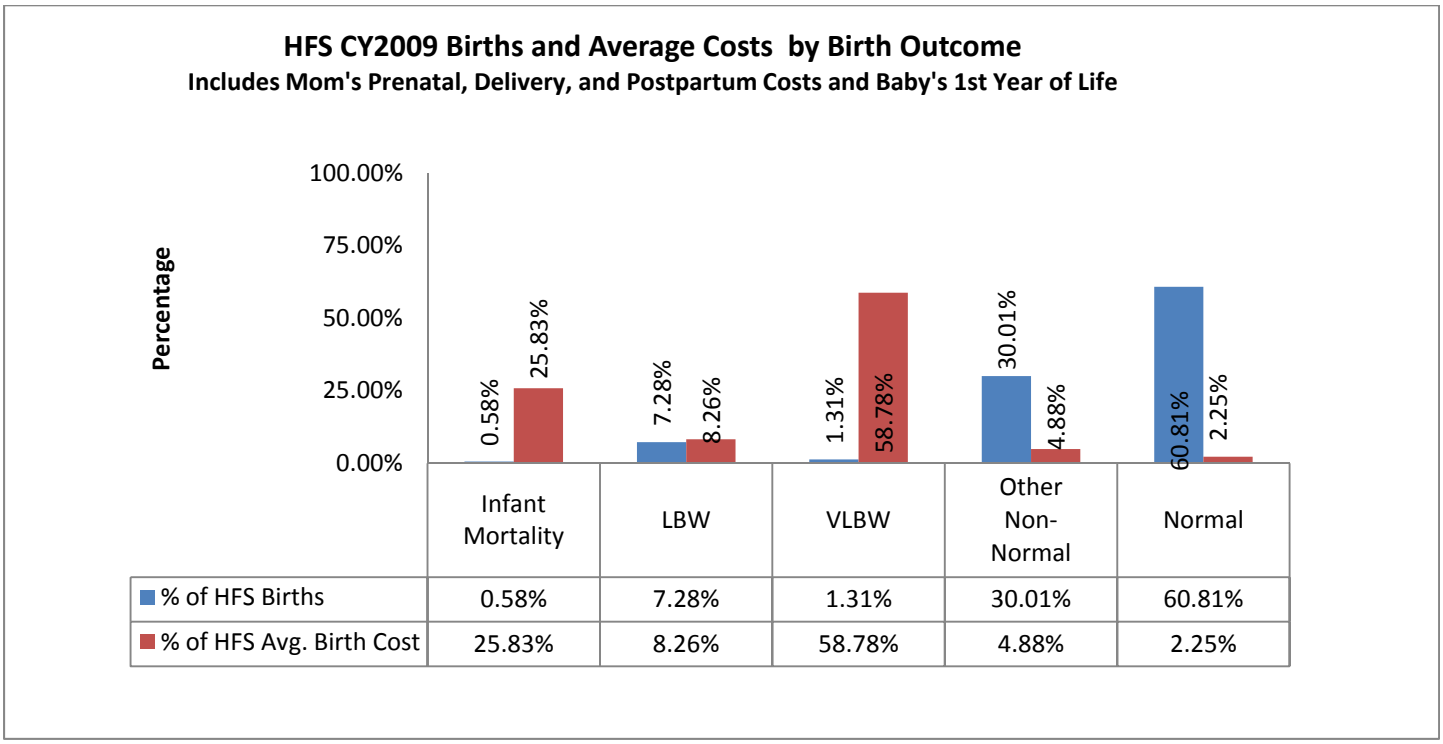
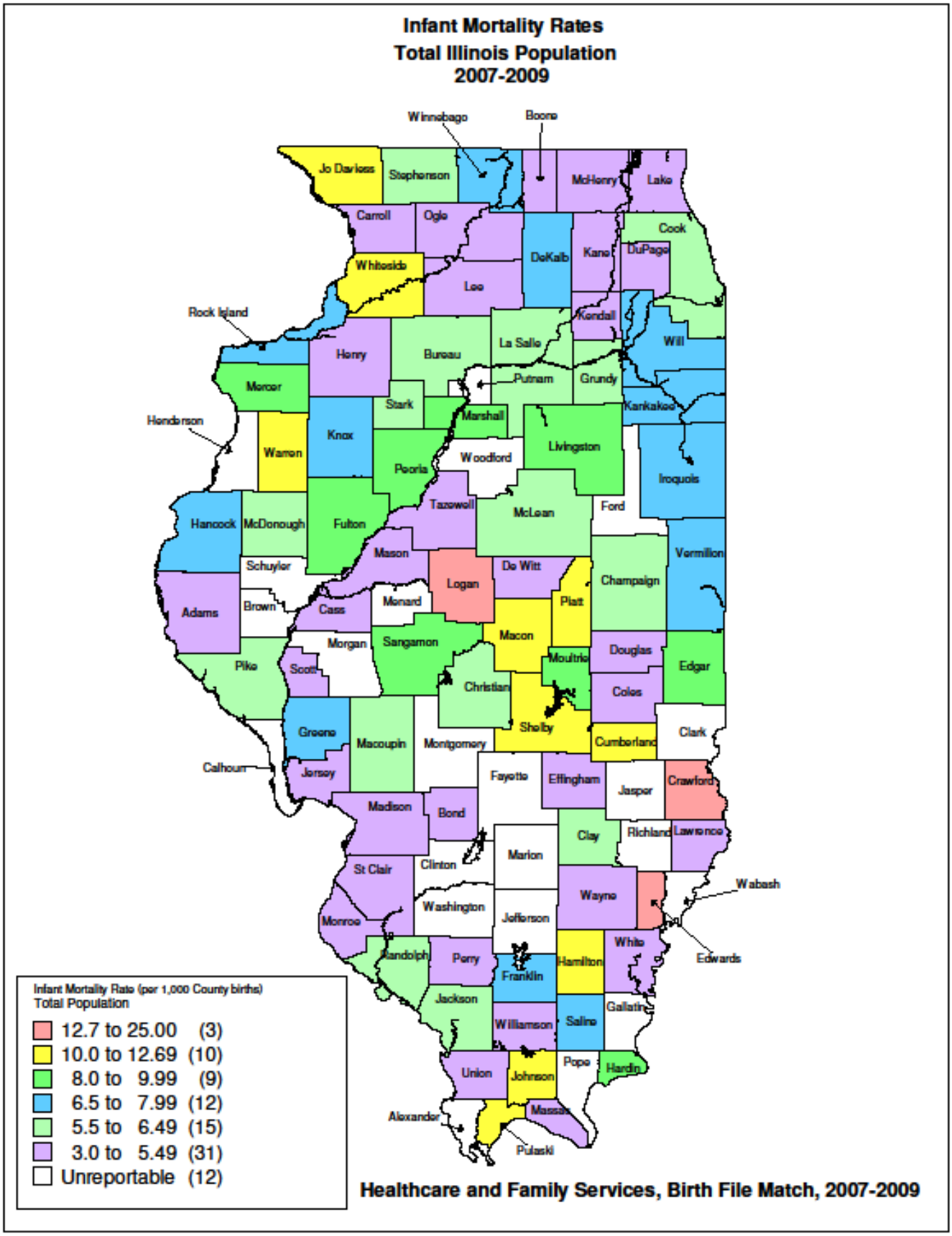
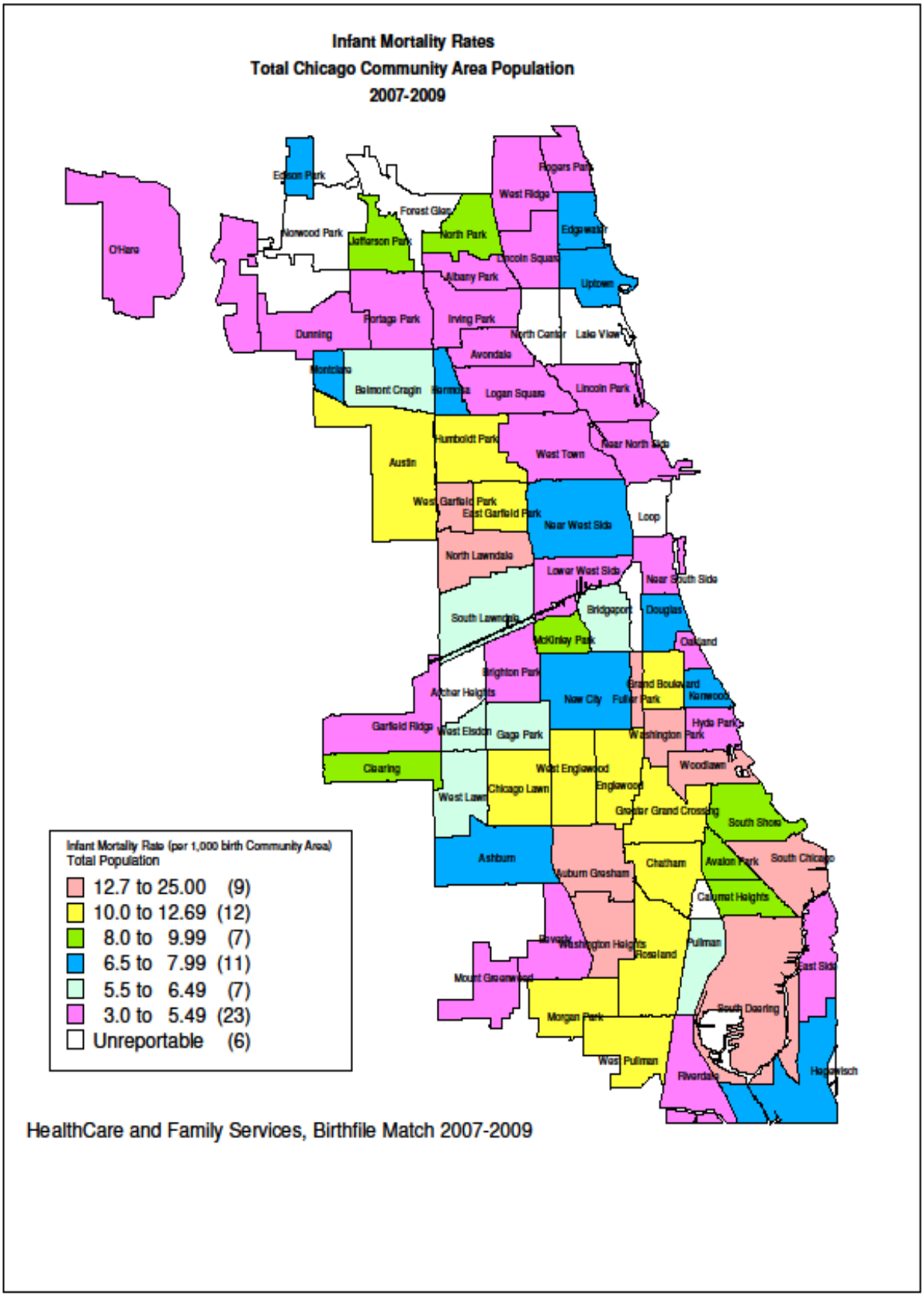


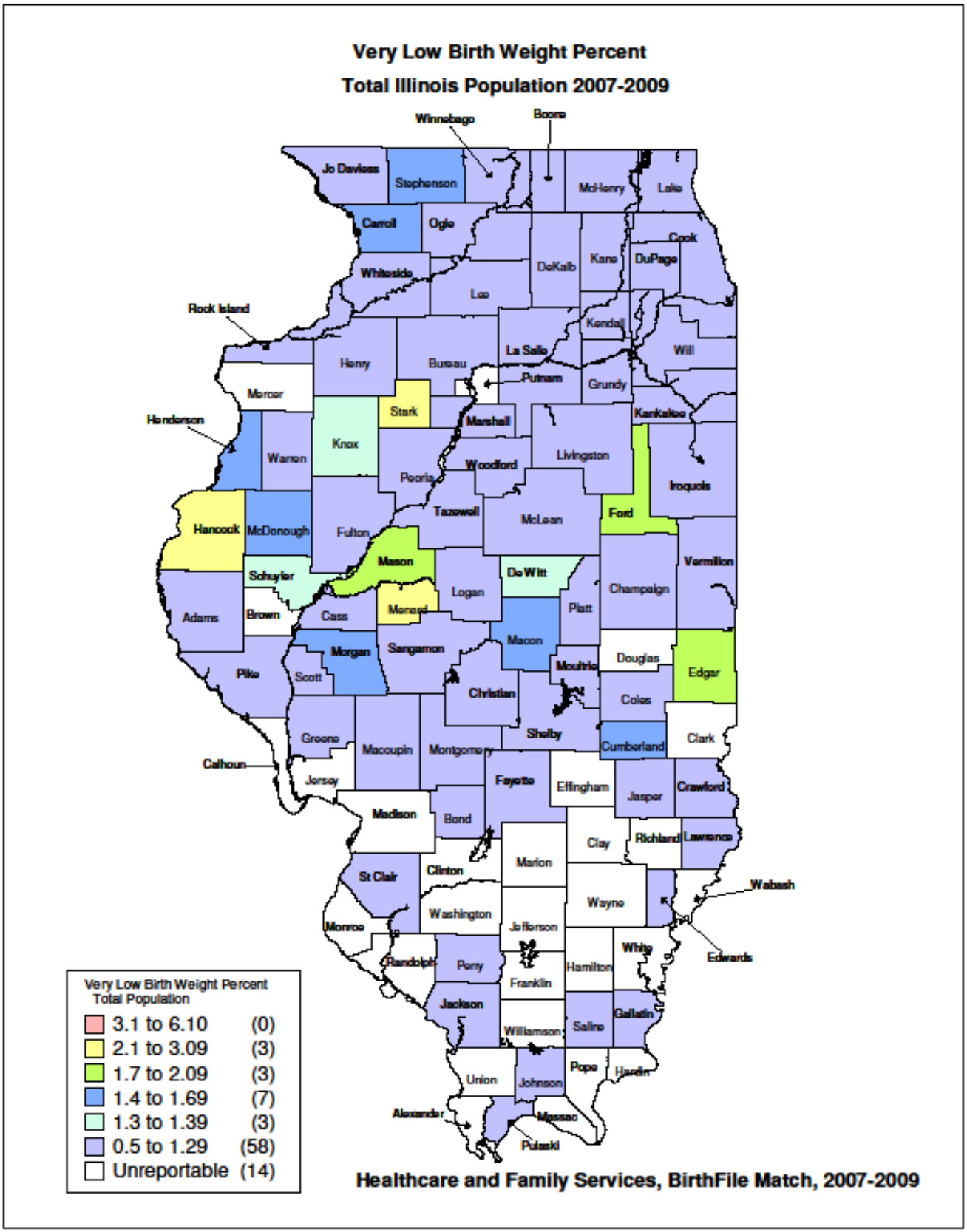
Chart 34 Healthcare and Family Services, Enterprise Data Warehouse, 2011


Infant Mortality Rates
Total Illinois Population
2007-2009
Winnebago
Boone
Jo Daviess
Stephenson
McHenry
Lake
Carroll
Ogle
Cook
DeKalb
Kane
DuPage
Whiteside
Lee
Rock Island
Kendall
Henry
Bureau
La Salle
Will
Mercer
Putnam
Grundy
Stark
Marshall
Kankakee
Henderson
Knox
Livingston
Warren
Peoria
Woodford
Iroquois
Tazewell
McLean
Ford
Hancock
McDonough
Fulton
Mason
Vermilion
Schuyler
Logan
De Witt
Champaign
Adams
Brown
Cass
Menard
Platt
Macon
Morgan
Sangamon
Douglas
Pike
Scott
Moultrie
Edgar
Christian
Coles
Greene
Macoupin
Montgomery
Shelby
Cumberland
Clark
Calhoun
Jersey
Fayette
Effingham
Jasper
Crawford
Madison
Bond
Clay
Richland
Lawrence
Clinton
Marion
St Clair
Wayne
Wabash
Washington
Jefferson
Monroe
White
Randolph
Perry
Hamilton
Edwards
Franklin
Jackson
Gallatin
Williamson
Saline
Union
Johnson
Pope
Hardin
Alexander
Massac
Pulaski
Infant Mortality Rate (per 1,000 County births)
Total Population
12.7 to 25.00 (3)
10.0 to 12.69 (10)
8.0 to 9.99 (9)
6.5 to 7.99 (12)
5.5 to 6.49 (15)
3.0 to 5.49 (31)
Unreportable (12)
Healthcare and Family Services, Birth File Match, 2007-2009

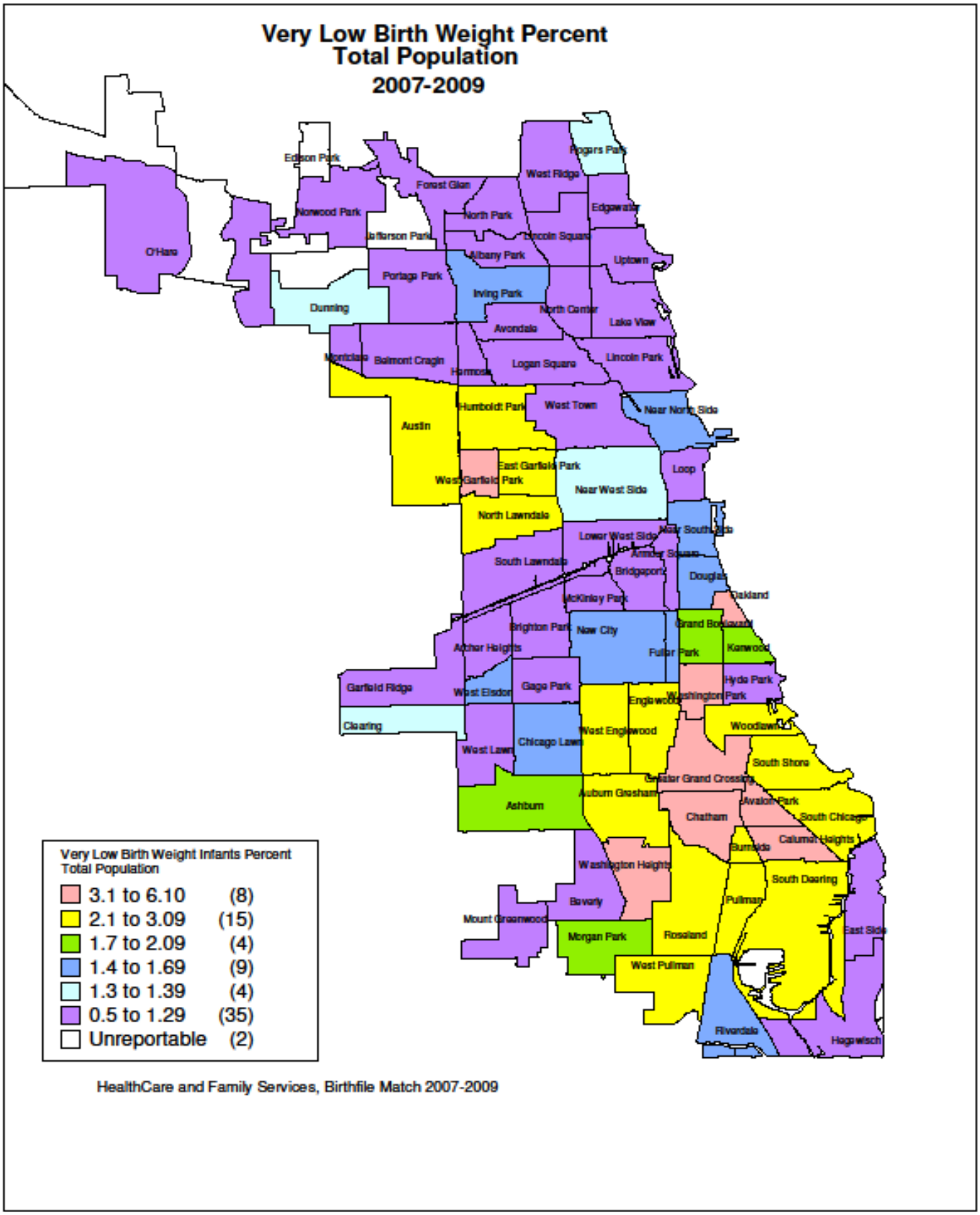
Map 1


Infant Mortality Rates
Total Chicago Community Area Population
2007-2009
Edison Park
Rogers Park
West Ridge
Forest Glen
Norwood Park
Jefferson Park
North Park
Edgewater
O'Hare
Lincoln Square
Albany Park
Uptown
Portage Park
Irving Park
Dunning
North Center
Lake View
Avondale
Montclare
Belmont Cragin
Hermosa
Logan Square
Lincoln Park
Humboldt Park
West Town
Near North Side
Austin
West Garfield Park
East Garfield Park
Near West Side
Loop
North Lawndale
Lower West Side
Near South Side
South Lawndale
Bridgeport
Douglas
McKinley Park
Oakland
Brighton Park
Grand Boulevard
Kenwood
Archer Heights
New City
Fuller Park
Garfield Ridge
West Elsdon
Gage Park
Hyde Park
Washington Park
Clearing
West Englewood
Woodlawn
Chicago Lawn
Englewood
West Lawn
Greater Grand Crossing
South Shore
Ashburn
Auburn Gresham
Chatham
Avalon Park
South Chicago
Calumet Heights
Beverly
Washington Heights
Roseland
Pullman
Mount Greenwood
East Side
South Deering
Morgan Park
West Pullman
Riverdale
Hegewisch
Infant Mortality Rate (per 1,000 birth Community Area)
Total Population
12.7 to 25.00 (9)
10.0 to 12.69 (12)
8.0 to 9.99 (7)
6.5 to 7.99 (11)
5.5 to 6.49 (7)
3.0 to 5.49 (23)
Unreportable (6)
HealthCare and Family Services, Birthfile Match 2007-2009

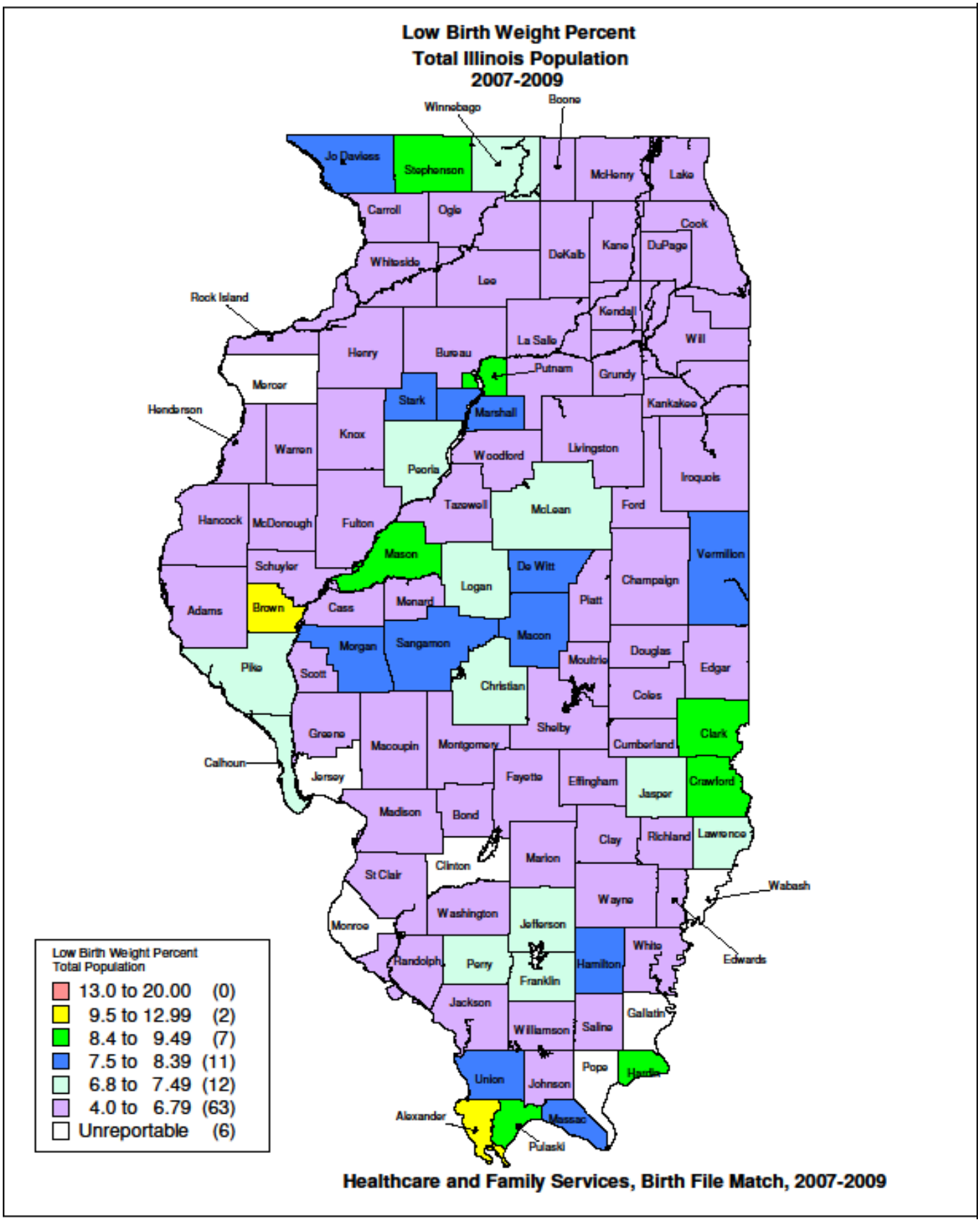
Map 2


Very Low Birth Weight Percent
Total Illinois Population 2007-2009
Winnebago
Boone
Jo Daviess
Stephenson
McHenry
Lake
Carroll
Ogle
Cook
DeKalb
Kane
DuPage
Whiteside
Lee
Rock Island
Kendall
Henry
Bureau
La Salle
Will
Putnam
Grundy
Mercer
Stark
Marshall
Kankakee
Henderson
Knox
Livingston
Warren
Peoria
Woodford
Iroquois
Tazewell
McLean
Ford
Hancock
McDonough
Fulton
Mason
Vermilion
Schuyler
DeWitt
Champaign
Logan
Adams
Brown
Cass
Menard
Platt
Macon
Morgan
Sangamon
Douglas
Edgar
Pike
Scott
Moultrie
Christian
Coles
Shelby
Greene
Macoupin
Montgomery
Cumberland
Clark
Calhoun
Jersey
Fayette
Effingham
Jasper
Crawford
Madison
Bond
Clay
Richland
Lawrence
Marion
Clinton
St Clair
Wayne
Wabash
Washington
Jefferson
Monroe
White
Randolph
Perry
Hamilton
Edwards
Franklin
Jackson
Gallatin
Williamson
Saline
Union
Johnson
Pope
Hardin
Alexander
Massac
Pulaski
Very Low Birth Weight Percent
Total Population
3.1 to 6.10 (0)
2.1 to 3.09 (3)
1.7 to 2.09 (3)
1.4 to 1.69 (7)
1.3 to 1.39 (3)
0.5 to 1.29 (58)
Unreportable (14)
Healthcare and Family Services, BirthFile Match, 2007-2009

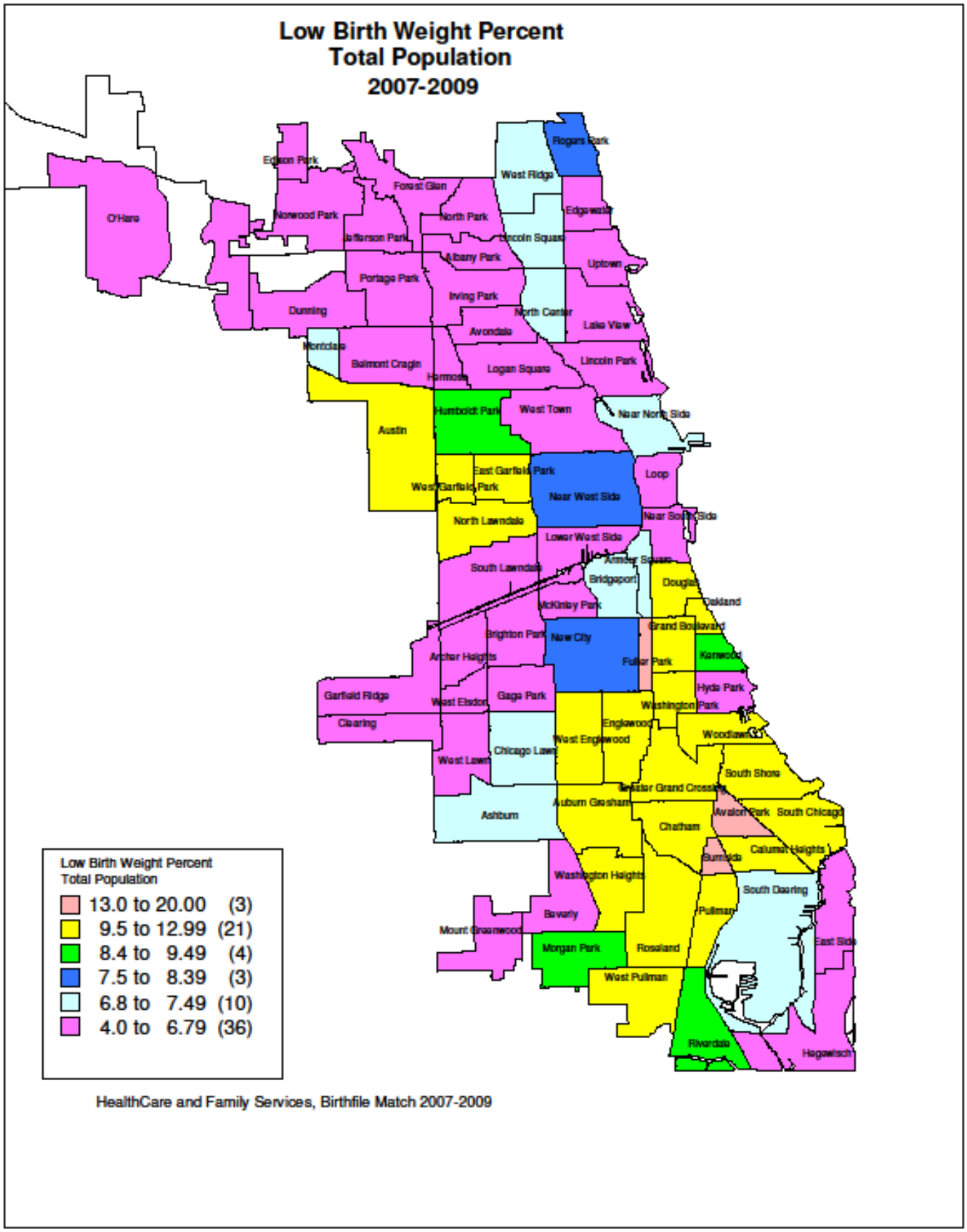
Map 3


Very Low Birth Weight Percent
Total Population
2007-2009
Edison Park
Norwood Park
Jefferson Park
O'Hare
Forest Glen
North Park
Rogers Park
West Ridge
Edgewater
Lincoln Square
Albany Park
Uptown
Portage Park
Irving Park
Dunning
North Center
Lake View
Avondale
Montclare
Belmont Cragin
Hermosa
Logan Square
Lincoln Park
Humboldt Park
West Town
Near North Side
Austin
East Garfield Park
West Garfield Park
Loop
Near West Side
North Lawndale
Lower West Side
Near South Side
Armour Square
South Lawndale
Bridgeport
Douglas
McKinley Park
Oakland
Brighton Park
New City
Grand Boulevard
Archer Heights
Fuller Park
Kenwood
Garfield Ridge
West Elsdon
Gage Park
Hyde Park
Englewood
Washington Park
Clearing
West Englewood
Woodlawn
West Lawn
Chicago Lawn
South Shore
Greater Grand Crossing
Auburn Gresham
Avalon Park
Ashburn
Chatham
South Chicago
Burnside
Calumet Heights
Washington Heights
South Deering
Beverly
Pullman
Mount Greenwood
Morgan Park
Roseland
East Side
West Pullman
Riverdale
Hegewisch
Very Low Birth Weight Infants Percent
Total Population
3.1 to 6.10 (8)
2.1 to 3.09 (15)
1.7 to 2.09 (4)
1.4 to 1.69 (9)
1.3 to 1.39 (4)
0.5 to 1.29 (35)
Unreportable (2)
HealthCare and Family Services, Birthfile Match 2007-2009

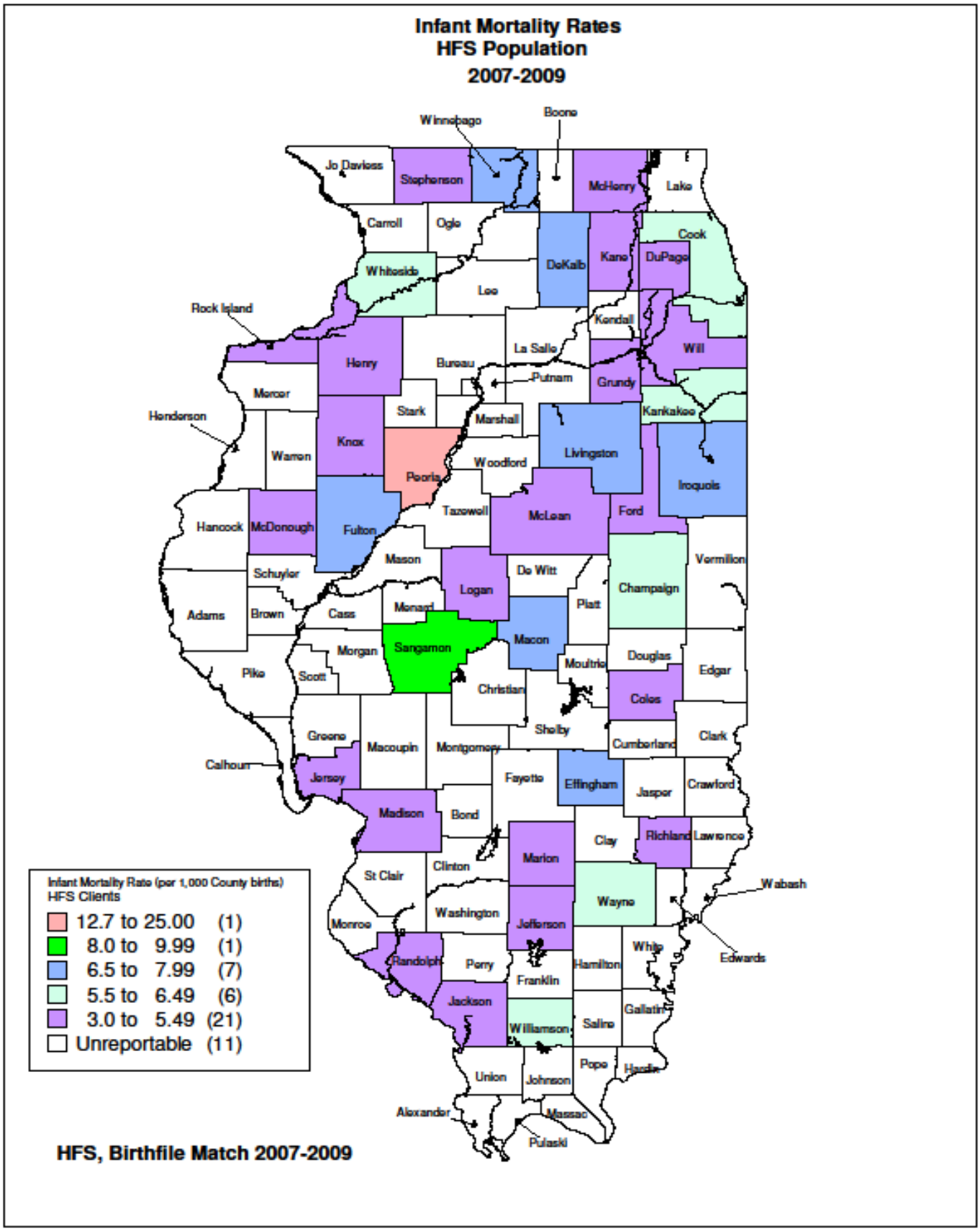
Map 4


Low Birth Weight Percent
Total Illinois Population
2007-2009
Winnebago
Boone
Jo Daviess
Stephenson
McHenry
Lake
Carroll
Ogle
Cook
DeKalb
Kane
DuPage
Whiteside
Lee
Rock Island
Kendall
Will
Henry
Bureau
La Salle
Putnam
Grundy
Mercer
Stark
Marshall
Kankakee
Henderson
Knox
Warren
Peoria
Woodford
Livingston
Iroquois
Hancock
McDonough
Fulton
Tazewell
McLean
Ford
Mason
Vermilion
Schuyler
Logan
De Witt
Champaign
Adams
Brown
Cass
Menard
Platt
Morgan
Sangamon
Macon
Douglas
Pike
Scott
Moultrie
Edgar
Christian
Coles
Greene
Macoupin
Montgomery
Shelby
Cumberland
Clark
Calhoun
Jersey
Fayette
Effingham
Jasper
Crawford
Madison
Bond
Clay
Richland
Lawrence
Clinton
Marion
St Clair
Wayne
Wabash
Washington
Jefferson
Monroe
White
Randolph
Perry
Hamilton
Edwards
Franklin
Jackson
Gallatin
Williamson
Saline
Union
Johnson
Pope
Hardin
Alexander
Massac
Pulaski
Low Birth Weight Percent
Total Population
13.0 to 20.00 (0)
9.5 to 12.99 (2)
8.4 to 9.49 (7)
7.5 to 8.39 (11)
6.8 to 7.49 (12)
4.0 to 6.79 (63)
Unreportable (6)
Healthcare and Family Services, Birth File Match, 2007-2009

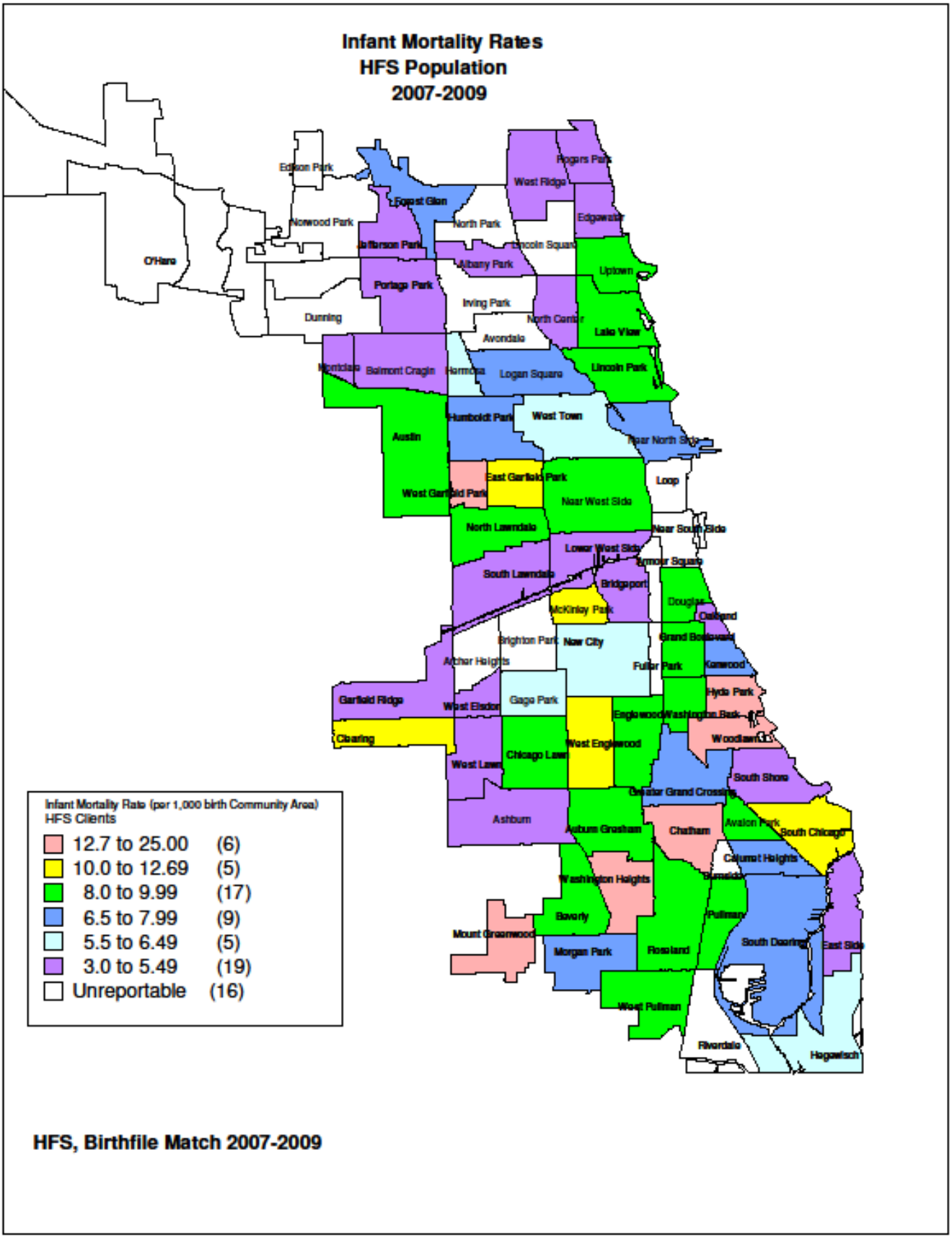
Map 5


Low Birth Weight Percent
Total Population
2007-2009
Rogers Park
West Ridge
Edgewater
Edison Park
Forest Glen
Norwood Park
North Park
O'Hare
Jefferson Park
Lincoln Square
Albany Park
Uptown
Portage Park
Irving Park
Dunning
North Center
Lake View
Avondale
Montclare
Belmont Cragin
Hermosa
Logan Square
Lincoln Park
Humboldt Park
West Town
Near North Side
Austin
East Garfield Park
Loop
West Garfield Park
Near West Side
North Lawndale
Near South Side
Lower West Side
Armour Square
South Lawndale
Bridgeport
Douglas
McKinley Park
Oakland
Grand Boulevard
Brighton Park
New City
Kenwood
Archer Heights
Fuller Park
Hyde Park
Garfield Ridge
West Elsdon
Gage Park
Washington Park
Clearing
Englewood
Woodlawn
West Englewood
Chicago Lawn
South Shore
West Lawn
Greater Grand Crossing
Auburn Gresham
Ashburn
Avalon Park
South Chicago
Chatham
Calumet Heights
Burnside
Washington Heights
South Deering
Beverly
Pullman
Mount Greenwood
Morgan Park
Roseland
East Side
West Pullman
Riverdale
Hegewisch
Low Birth Weight Percent
Total Population
13.0 to 20.00 (3)
9.5 to 12.99 (21)
8.4 to 9.49 (4)
7.5 to 8.39 (3)
6.8 to 7.49 (10)
4.0 to 6.79 (36)
HealthCare and Family Services, Birthfile Match 2007-2009

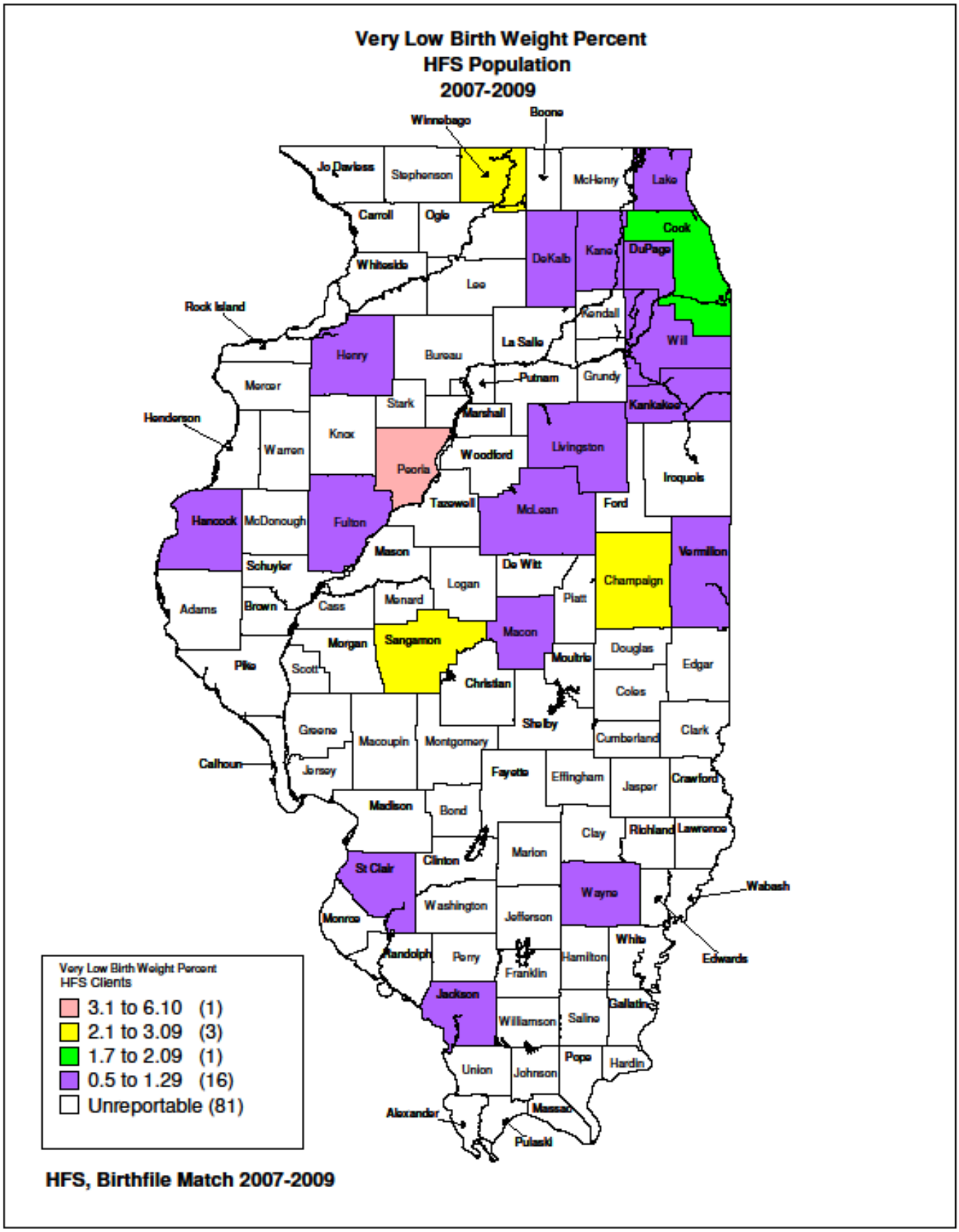
Map 6


Infant Mortality Rates
HFS Population
2007-2009
Winnebago
Boone
Jo Daviess
Stephenson
McHenry
Lake
Carroll
Ogle
Cook
DeKalb
Kane
DuPage
Whiteside
Lee
Rock Island
Kendall
Henry
La Salle
Will
Bureau
Putnam
Grundy
Mercer
Stark
Marshall
Kankakee
Henderson
Knox
Livingston
Warren
Peoria
Woodford
Iroquois
Tazewell
McLean
Ford
Hancock
McDonough
Fulton
Vermilion
Mason
Champaign
Schuyler
Logan
De Witt
Adams
Brown
Cass
Menard
Platt
Macon
Sangamon
Douglas
Morgan
Moultrie
Edgar
Pike
Scott
Christian
Coles
Shelby
Greene
Cumberland
Clark
Macoupin
Montgomery
Calhoun
Jersey
Fayette
Effingham
Jasper
Crawford
Madison
Bond
Clay
Richland
Lawrence
Marion
Clinton
St Clair
Wayne
Wabash
Washington
Jefferson
Monroe
White
Randolph
Perry
Hamilton
Edwards
Franklin
Jackson
Gallatin
Williamson
Saline
Union
Johnson
Pope
Hardin
Alexander
Massac
Pulaski
Infant Mortality Rate (per 1,000 County births)
HFS Clients
12.7 to 25.00 (1)
8.0 to 9.99 (1)
6.5 to 7.99 (7)
5.5 to 6.49 (6)
3.0 to 5.49 (21)
Unreportable (11)
HFS, Birthfile Match 2007-2009

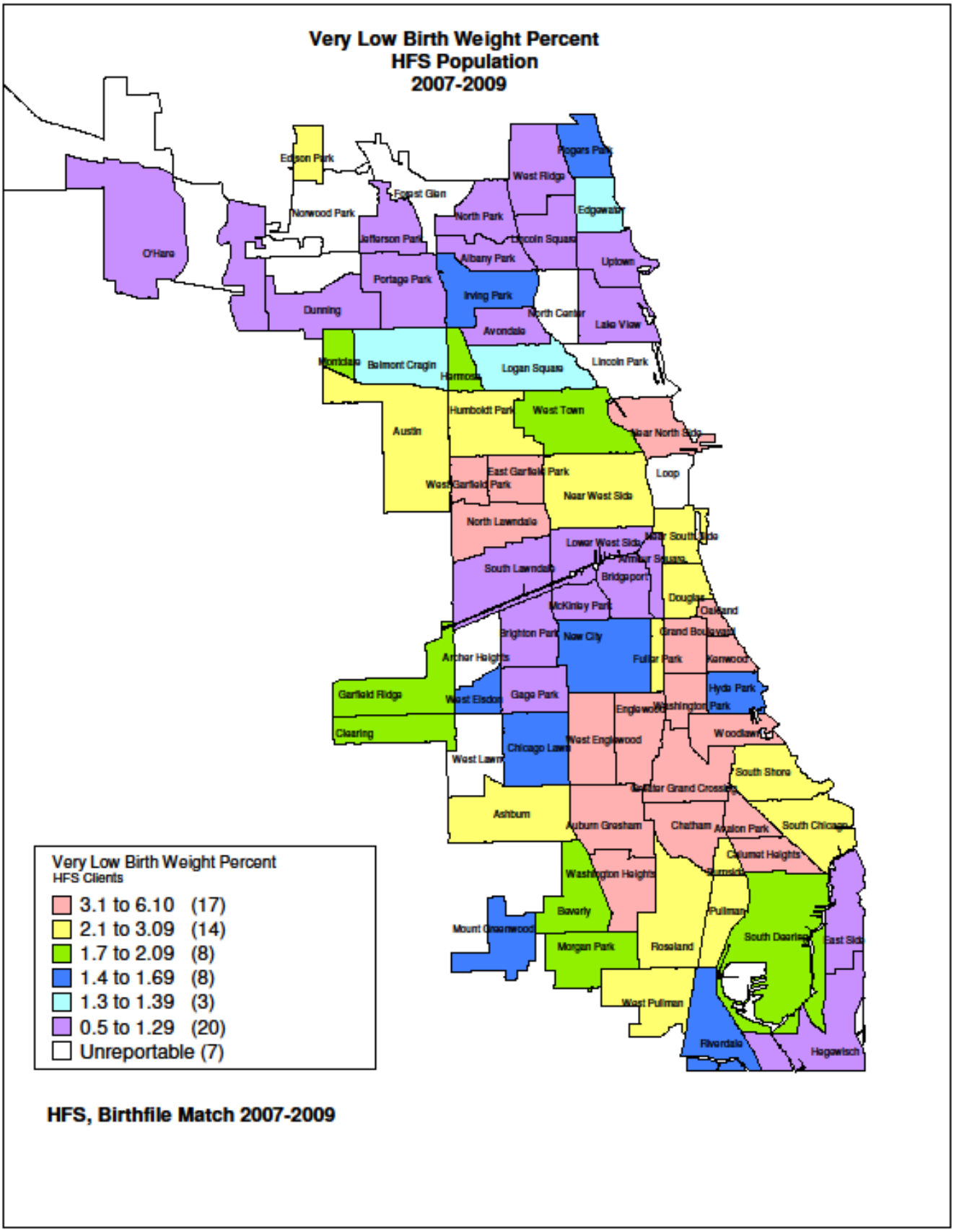
Map 7


Infant Mortality Rates
HFS Population
2007-2009
Edison Park
Norwood Park
Jefferson Park
O'Hare
Forest Glen
North Park
Rogers Park
West Ridge
Edgewater
Lincoln Square
Albany Park
Uptown
Portage Park
Irving Park
Dunning
North Center
Lake View
Avondale
Montclare
Belmont Cragin
Hermosa
Logan Square
Lincoln Park
Humboldt Park
West Town
Austin
Near North Side
East Garfield Park
Loop
West Garfield Park
Near West Side
North Lawndale
Near South Side
Lower West Side
Armour Square
South Lawndale
Bridgeport
Douglas
McKinley Park
Oakland
Brighton Park
New City
Grand Boulevard
Archer Heights
Fuller Park
Kenwood
Garfield Ridge
West Elsdon
Gage Park
Hyde Park
Englewood
Washington Park
Clearing
West Englewood
Woodlawn
Chicago Lawn
West Lawn
South Shore
Greater Grand Crossing
Ashburn
Auburn Gresham
Chatham
Avalon Park
South Chicago
Calumet Heights
Washington Heights
Burnside
Beverly
Pullman
Mount Greenwood
Morgan Park
Roseland
South Deering
East Side
West Pullman
Riverdale
Hegewisch
Infant Mortality Rate (per 1,000 birth Community Area)
HFS Clients
12.7 to 25.00 (6)
10.0 to 12.69 (5)
8.0 to 9.99 (17)
6.5 to 7.99 (9)
5.5 to 6.49 (5)
3.0 to 5.49 (19)
Unreportable (16)
HFS, Birthfile Match 2007-2009

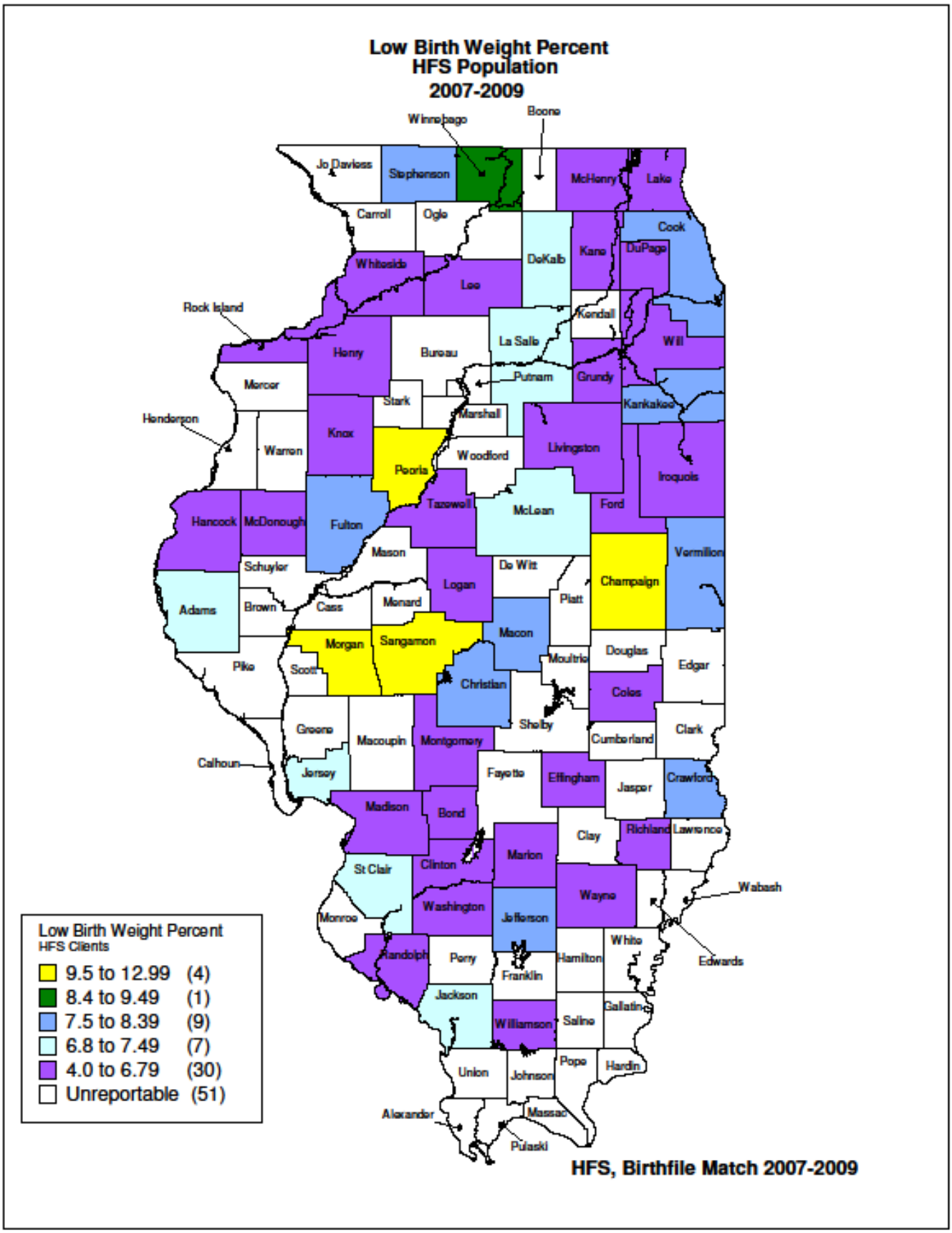
Map 8


Very Low Birth Weight Percent
HFS Population
2007-2009
Winnebago
Boone
Jo Daviess
Stephenson
McHenry
Lake
Carroll
Ogle
DeKalb
Kane
Cook
DuPage
Whiteside
Lee
Rock Island
Kendall
Henry
Bureau
La Salle
Will
Mercer
Putnam
Grundy
Stark
Kankakee
Henderson
Marshall
Knox
Warren
Livingston
Peoria
Woodford
Iroquois
Hancock
McDonough
Fulton
Tazewell
McLean
Ford
Vermilion
Schuyler
Mason
De Witt
Champaign
Adams
Brown
Cass
Menard
Logan
Platt
Macon
Morgan
Sangamon
Douglas
Pike
Scott
Moultrie
Edgar
Christian
Coles
Shelby
Greene
Macoupin
Montgomery
Cumberland
Clark
Calhoun
Jersey
Fayette
Effingham
Jasper
Crawford
Madison
Bond
Clay
Richland
Lawrence
Marion
St Clair
Clinton
Wayne
Wabash
Washington
Jefferson
Monroe
White
Randolph
Perry
Hamilton
Edwards
Franklin
Jackson
Gallatin
Williamson
Saline
Union
Johnson
Pope
Hardin
Alexander
Massac
Pulaski
Very Low Birth Weight Percent
HFS Clients
3.1 to 6.10 (1)
2.1 to 3.09 (3)
1.7 to 2.09 (1)
0.5 to 1.29 (16)
Unreportable (81)
HFS, Birthfile Match 2007-2009

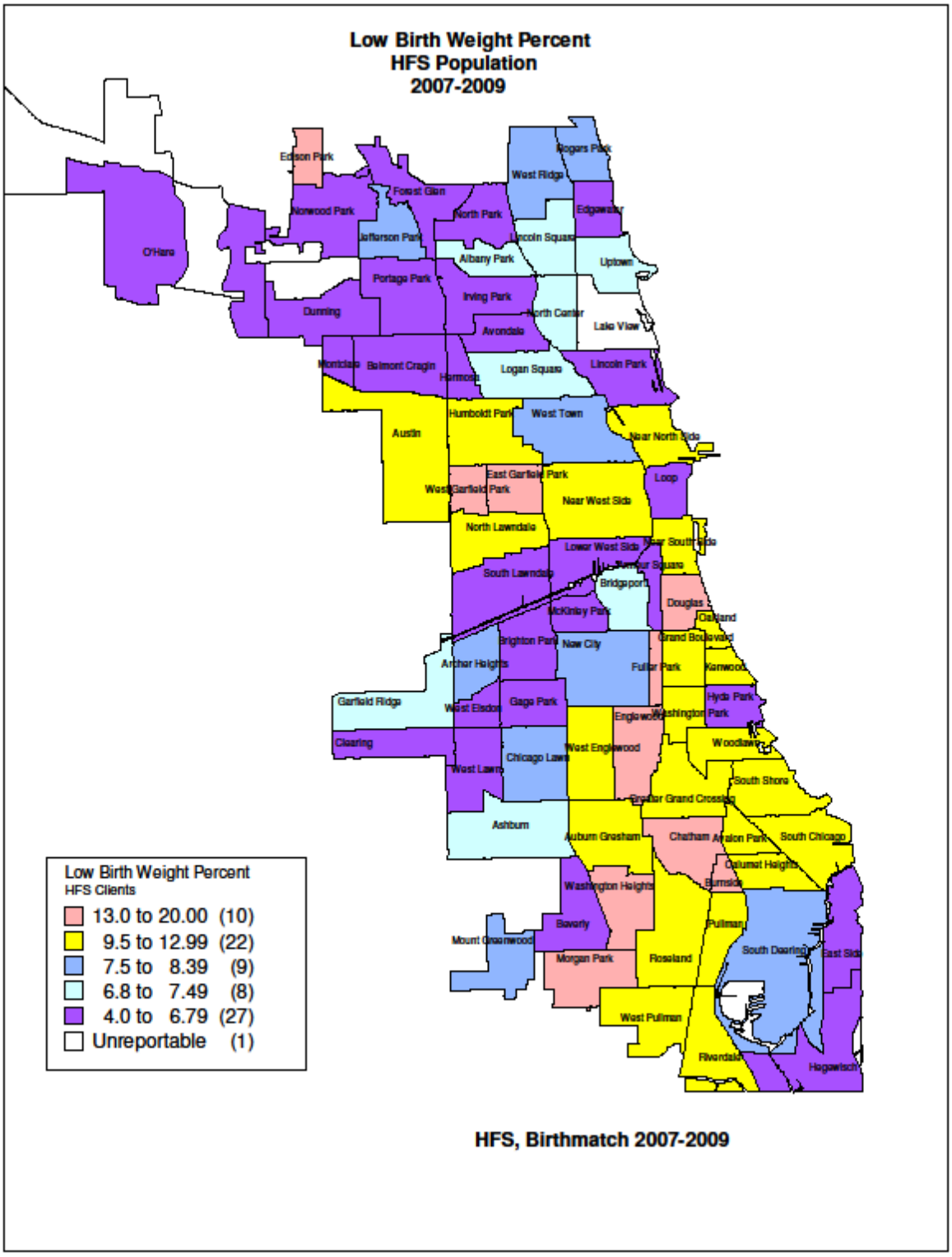
Map 9


Very Low Birth Weight Percent
HFS Population
2007-2009
Edison Park
Norwood Park
Forest Glen
Jefferson Park
O'Hare
Rogers Park
West Ridge
North Park
Edgewater
Lincoln Square
Albany Park
Uptown
Portage Park
Irving Park
Dunning
North Center
Lake View
Avondale
Montclare
Belmont Cragin
Hermosa
Logan Square
Lincoln Park
Humboldt Park
West Town
Austin
Near North Side
East Garfield Park
West Garfield Park
Loop
Near West Side
North Lawndale
Lower West Side
Near South Side
Armour Square
South Lawndale
Bridgeport
Douglas
McKinley Park
Oakland
Brighton Park
New City
Grand Boulevard
Archer Heights
Fuller Park
Kenwood
Garfield Ridge
West Elsdon
Gage Park
Hyde Park
Englewood
Washington Park
Clearing
Chicago Lawn
West Englewood
Woodlawn
West Lawn
South Shore
Greater Grand Crossing
Ashburn
Auburn Gresham
Chatham
Avalon Park
South Chicago
Calumet Heights
Washington Heights
Beverly
Pullman
Mount Greenwood
Morgan Park
Roseland
South Deering
East Side
West Pullman
Riverdale
Hegewisch
Very Low Birth Weight Percent
HFS Clients
3.1 to 6.10 (17)
2.1 to 3.09 (14)
1.7 to 2.09 (8)
1.4 to 1.69 (8)
1.3 to 1.39 (3)
0.5 to 1.29 (20)
Unreportable (7)
HFS, Birthfile Match 2007-2009

Map 10


Low Birth Weight Percent
HFS Population
2007-2009
Winnebago
Boone
Jo Daviess
Stephenson
McHenry
Lake
Carroll
Ogle
Cook
DeKalb
Kane
DuPage
Whiteside
Lee
Rock Island
Kendall
La Salle
Will
Henry
Bureau
Putnam
Grundy
Mercer
Stark
Kankakee
Marshall
Henderson
Knox
Warren
Livingston
Peoria
Woodford
Iroquois
Hancock
McDonough
Fulton
Tazewell
McLean
Ford
Mason
Vermilion
Schuyler
Do Witt
Champaign
Logan
Adams
Brown
Cass
Menard
Platt
Morgan
Sangamon
Macon
Douglas
Pike
Scott
Moultrie
Edgar
Christian
Coles
Greene
Macoupin
Montgomery
Shelby
Cumberland
Clark
Calhoun
Jersey
Fayette
Effingham
Jasper
Crawford
Madison
Bond
Clay
Richland
Lawrence
Marion
St Clair
Clinton
Wayne
Wabash
Monroe
Washington
Jefferson
Randolph
Perry
Hamilton
White
Edwards
Franklin
Jackson
Gallatin
Williamson
Saline
Union
Johnson
Pope
Hardin
Alexander
Massac
Pulaski
Low Birth Weight Percent
HFS Clients
9.5 to 12.99 (4)
8.4 to 9.49 (1)
7.5 to 8.39 (9)
6.8 to 7.49 (7)
4.0 to 6.79 (30)
Unreportable (51)
HFS, Birthfile Match 2007-2009

Map 11



Map 12

Appendix II – Acronyms

Access	Access Health Network
AAFP	American Academy of Family Physicians
ACOG	American College of Obstetrics and Gynecology
APN	Advanced Practice Nurse
APORS	Adverse Pregnancy Outcome Reporting System
ATOD	Alcohol tobacco and other drugs
CDC	Centers for Disease Control
CHIP	State Children's Health Insurance Program
CHIPRA	Children's Health Insurance Program Reauthorization Act
CMS	Centers for Medicare and Medicaid Services
CORE	HIV/AIDS clinic partnership between the Cook County Health and Hospitals Systems and Rush University Medical Center
CSAT	Center for Substance Abuse Treatment
DARTS	Data Automated Recording and Tracking System, administered by DHS/DASA
DASA	Division of Alcohol and Substance Abuse (DHS)
DHS	Illinois Department of Human Services
DRG	Diagnosis Related Grouping
DMH	Division of Mental Health (DHS)
DPH	Illinois Department of Public Health
EDOPC	Enhancing Developmentally Oriented Primary Care
EDW	Enterprise Data Warehouse
EHR	Electronic Health Records
EIS	Executive Information System
FCM	Family Case Management
FIMR	Fetal Infant Mortality Reduction Initiative
FQHC	Federally Qualified Health Center
HBHC	Healthy Births for Healthy Communities
HFS	Illinois Department of Healthcare and Family Services
HIV	Human Immunodeficiency Virus
ICAAP	Illinois Chapter of the American Academy of Pediatrics
IHW	Illinois Healthy Women Program
IM	Infant Mortality
LBW	Low Birth Weight
MCH	Maternal and Child Health
MCO	Managed Care Organization
MIECHV	Maternal Infant Early Childhood Home Visiting
NCHS	National Center for Health Statistics
NICU	Neonatal Intensive Care Unit
PCCM	Primary Care Case Management
PCP	Primary Care Provider
PEDS	Prenatal Electronic Data Set
PICC	Preconception/Interconception Care Committee
PRAMS	Pregnancy Risk Assessment Monitoring System
QIO	Quality Improvement Organization
RFI	Request for Information
RFP	Request for Proposal
SBIRT	Screening, Brief Intervention, and Referral to Treatment

SNAP	Supplemental Nutrition Assistance Program
SUDS	Substance Use Disorder
TIPCM	Targeted Intensive Prenatal Case Management (administered by DHS)
UIC	University of Illinois at Chicago
USPSTF	U.S. Preventive Services Task Force
VLBW	Very Low Birth Weight
WIC	Special Supplemental Nutrition Program for Women, Infants and Children