The Reduction of Infant Mortality in Illinois
Annual Report
for Fiscal Years 2006 and 2007

TABLE OF CONTENTS

Executive Summary ........................................................................................................................ 2

Introduction .................................................................................................................................... 3

Success Story .................................................................................................................................. 4

Program Descriptions ...................................................................................................................... 5
  Special Supplemental Nutrition Program for Women, Infants and Children (WIC) ........ 5
  Family Case Management ........................................................................................................... 6
  The Chicago Healthy Start Initiative ..................................................................................... 6
  Targeted Intensive Prenatal Case Management .................................................................. 6
  Closing the Gap ........................................................................................................................ 7

Service Delivery System ............................................................................................................. 8

Caseload .......................................................................................................................................... 9

Performance .................................................................................................................................. 11
  Integrated Service Delivery ......................................................................................................... 12
  First Trimester Enrollment ........................................................................................................ 13
  Prenatal Weight Gain ................................................................................................................ 14
  Initiation and Duration of Breastfeeding ................................................................................... 15
  Immunizations ............................................................................................................................ 17
  Insured Children ........................................................................................................................ 19
  Well Child Visits ........................................................................................................................ 20
  Developmental Screening ......................................................................................................... 21

Outcomes ....................................................................................................................................... 22
  Very Low Birth Weight ................................................................................................................. 23
  Medicaid Expenditures in the First Year of Life ....................................................................... 24
  Infant Mortality .......................................................................................................................... 25

Racial and Ethnic Disparities in Infant Mortality: The Persistent Challenge ......................... 27

Financing ......................................................................................................................................... 30

History .......................................................................................................................................... 32
EXECUTIVE SUMMARY

This annual report is presented in compliance with the provisions of the Illinois Family Case Management Act, found at 410 ILCS 212, the purpose of which is to “provide for the establishment and recognition of a program of family case management to ensure and provide statewide wrap-around services targeted toward reducing the incidence of infant mortality, very low birth weight infants, and low birth weight infants within the state.”

Illinois' infant mortality rate for 2005 (the latest year available) was 7.2 deaths for every 1,000 live births, a rate that is tied with 2002 for the lowest rate in the state’s history. However, the 1,294 deaths in 2005 represented the lowest number in the state's history and were 10 fewer than in 2002.

The Illinois Department of Human Services (IDHS) is helping to reduce the state's infant mortality rate through the integrated delivery of two programs - the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and Family Case Management (FCM). These programs serve more than 44 percent of all infants and nearly 85 percent of the Medicaid-eligible infants born in Illinois. The Department supplements these statewide programs with targeted initiatives for women whose chances of giving birth prematurely are greater than average and for infants who have a greater-than-average chance of dying before their first birthday.

Program Success - The Department monitors the performance of the WIC and FCM programs on several short-term health status indicators. At the end of Fiscal Year 2007, performance on each indicator was --

- The proportion of WIC-eligible children with health insurance was 94.1 percent;
- The proportion of fully-immunized one-year-olds in WIC was 85.3 percent;
- The proportion of fully-immunized two-year-olds in WIC was 79.9 percent;
- The proportion of WIC infants who are breastfed was up to 65.1 percent;
- The proportion of infants in WIC who were breastfed through six months was 25.7 percent;
- The proportion of children in FCM who received at least 3 well-child health care visits during the first year of life was up to 81.3 percent.

Improved Health Status - For nine consecutive years, infants born to Medicaid-eligible pregnant women who participated in WIC and FCM have been found to be in better health than those born to Medicaid-eligible women who did not participate in either program. The rate of very low birth weight was 60 to 70 percent lower than that among non-participants, and the rate of infant mortality was 50 to 70 percent lower.

Fiscal Savings - In addition to the significant health benefits afforded by the WIC and FCM programs, Illinois’ investment in these programs saves the State an average of $200 million each year in Medicaid expenditures. Those expenses for health care in the first year of life were 30 to 50 percent lower among dual-program participants than among non-participants in 2007.
INTRODUCTION

"The infant mortality rate is the most sensitive index of the status of economic and social development of any country." -- Helen M. Wallace, M.D., M.P.H.\textsuperscript{1}

This report describes the accomplishments of the Illinois Department of Human Services’ (IDHS) maternal and child health program in reducing infant mortality and improving maternal and infant health in Illinois.

Illinois' infant mortality rate reached the lowest rate on record with 7.2 deaths for every 1,000 live births in 2005. This rate was also achieved in 2002.

Illinois’ ranking among the states has improved dramatically over the past two decades, with most of the progress occurring since 1990. In 1980, Illinois' infant mortality rate ranked 47\textsuperscript{th} among the states and the District of Columbia. By 1990 the state’s ranking was 44\textsuperscript{th} and by 2005 Illinois had moved up to 31\textsuperscript{st}.

There are many factors that contribute to an improvement in the state's infant mortality rate, just as there are many factors that contribute to the problem of infant mortality itself. There have been dramatic improvements in medical and pharmacological treatments for the conditions that used to take the lives of infants who were born prematurely. Illinois has maintained one of the best systems of hospital-based perinatal care services in the nation. Illinois’ success in maternal and child health services is also due to the Department of Human Services' ongoing collaborative efforts with both the Illinois Department of Public Health (IDPH) and the Illinois Department of Healthcare and Family Services (IDHFS).

Nine consecutive annual evaluations have shown that participation in WIC and FCM during pregnancy substantially improves infant health. This improvement contributes an estimated annual savings of at least $200 million in Medicaid expenditures for care required during the first year of life. Additional savings from avoided special education, disability and rehabilitation costs potentially accrue over a lifetime. A recent in-depth analysis of Medicaid-eligible WIC and FCM participants showed that these programs reduce very low birth weight among program participants by 24 percent – a statistically significant reduction -- after controlling for differences in demographic and behavioral characteristics.

While Illinois has made steady progress in the reduction of infant mortality, a significant disparity in infant mortality rates persists between African American and Caucasian infants. An African American infant born in Illinois during 2005 was 2.7 times more likely than a Caucasian

infant to die before reaching its first birthday. This disparity has persisted for many years and must no longer be accepted. In addition, in the years since 1996 there appears to be an emerging disparity between the infant mortality rates for Puerto Ricans and all non-Hispanic Whites. Although this is due in part to the small number of births and deaths involved, the Department is nonetheless concerned. The IDHS has made the reduction of racial disparities in health status, especially among society's most vulnerable members, a top priority.

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**A Success Story**

Two years ago, I was pregnant. My relationship with my baby’s father was not stable. I also had just been let go on my job due to missing many days when I was sick. I was feeling very down and hopeless, and not sure where to turn. I was receiving some help from family but they were unable to help much. My friend referred me to WIC services at the local health department. The first time I went to my WIC appointment, I felt so embarrassed and was so full of questions and concerns that I did not know if I would have the courage to ask [for assistance].

The caseworker that was assigned to me for WIC was helpful and made me feel so at ease. She referred me to Family Case Management and a caseworker met me at my WIC appointment. She also was very helpful and I was able to relate all my concerns about the baby, the loss of my job and other issues. She helped me sign up for KidCare and was able to help me in other ways with referrals.

My baby is now a year old and we are doing wonderful. I no longer need WIC services as I am married to the baby’s father and I have a good job. I don’t know what I would have done without the temporary support and assistance given to me during this trying time. These programs are awesome and I want to thank all of you.
PROGRAM DESCRIPTIONS

The IDHS has developed a comprehensive maternal and child health (MCH) strategy for the reduction of infant mortality. This strategy integrates two large-scale programs, the Special Supplemental Nutrition Program for Women, Infants and Children, more commonly known as WIC, and the Family Case Management (FCM) program. The Department supplements these basic services with programs targeted to women who have a greater chance of giving birth prematurely. The Chicago Healthy Start Initiative (CHSI), Targeted Intensive Prenatal Case Management (TIPCM) and Closing the Gap projects serve areas of the state with high infant mortality rates or significant racial disparities in infant mortality. These programs work as an integrated whole to improve the health of women and infants.

The integration of these programs is supported and enhanced by the shared use of Cornerstone, the Department’s maternal and child health management information system. This system collects and reports all of the information necessary for the operation of the WIC, FCM, Healthy Start and TIPCM programs, as well as other MCH services. Cornerstone provides an integrated record of the services provided to each participant and a service plan that identifies the services that the family requires. Cornerstone is also a distributed system, which means that much of the information collected by one MCH service provider can be retrieved by another service provider (with appropriate confidentiality safeguards). In this way, staff members within and among agencies have access to a comprehensive record of the services provided to participating families. This avoids the problem of duplicative data collection and recording. Cornerstone promotes the integration and streamlines the delivery of MCH services.

This comprehensive strategy also blends state and federal funds. WIC is supported entirely by funds from the United States Department of Agriculture (USDA). FCM and TIPCM are state-funded and these funds are used to leverage federal matching funds through the Medicaid program. CHSI and Closing the Gap are supported by discretionary grants from the federal Maternal and Child Health Bureau. Unfortunately, federal funding for Closing the Gap was discontinued as of June 30, 2007. The Department has been working with the Illinois Maternal and Child Health Coalition to identify alternative sources of funding.

A description of each of the above programs is presented below.

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) seeks to improve the health of women, infants, and children; to reduce the incidence of infant mortality, premature births and low birth weight; to promote breastfeeding; and to aid in the growth and development of children. The program serves income-eligible pregnant, breastfeeding and postpartum women, and infants and children up to five years of age who have a medical or nutritional risk factor.
Participants receive food “prescriptions” based on their nutritional needs. WIC foods include milk, cheese, eggs, adult and infant cereal and juice, peanut butter, tuna, carrots, beans, and infant formula. Food-specific vouchers are printed on site at WIC clinics statewide. Participants obtain their WIC foods by redeeming the vouchers at program-approved grocery stores throughout the state and at WIC Food Centers in certain parts of Chicago.

The Department grants funds to 100 local agencies to provide WIC services, including local health departments, not-for-profit health care agencies and social service agencies.

**Family Case Management** is a statewide program that provides comprehensive service coordination to pregnant women, infants, and high-risk children. The Department funds 113 agencies, including local health departments, community-based organizations and Federally Qualified Health Centers, to conduct FCM activities. Assessments are conducted and care plans are developed to address a wide range of needs, including health care, mental health, educational, vocational, child care, transportation, psychosocial, nutritional, environmental, developmental, and other services. Contacts with clients include home and office visits at a frequency necessary to meet the client’s needs. Most FCM providers are authorized to complete Medicaid Presumptive Eligibility applications for pregnant women and children and function as Application Agents for All Kids, Governor Blagojevich’s health insurance program for children.

The WIC and FCM programs are the foundation of this integrated maternal and child health strategy for reducing infant mortality and improving child health. The targeted components of this strategy are described below.

The Chicago Healthy Start Initiative provides services through four Chicago Healthy Start Family Centers, which serve as “one-stop shopping centers” for intensive case management and linkage to prenatal care, pediatric primary care, family support, early intervention, substance abuse prevention, domestic violence prevention, and mental health counseling. The centers also provide two essential enabling services -- episodic child care and transportation -- to remove common barriers to care. CHSI targets the Near North Side, West Town, Near West Side, Near South Side, Douglas and Grand Boulevard Community Areas in the city of Chicago. This project is supported by a grant from the federal Maternal and Child Health Bureau.

**Targeted Intensive Prenatal Case Management.** This program’s goal is to reduce the rates of premature birth and low birth weight. TIPCM enhances FCM by:

- Adding community-based outreach and retention strategies (including practical incentives for women),
- Lowering caseloads and increasing the frequency of contact between case managers and clients;
- Requiring case managers to be public health nurses or licensed social workers;
• Developing explicit linkages to medical care, substance abuse treatment, mental health care and smoking cessation services; and
• Adding access-related services such as transportation, interpreter services and child care.

The program serves the following communities in Chicago: Austin, Auburn-Gresham, Avalon Park, Burnside, Calumet City, Chicago Heights, East and West Garfield, Humboldt Park, Morgan Park, North Lawndale, South Chicago, South Shore, Roseland, Woodlawn, and Washington Heights. In West Suburban Cook County, the program serves the cities of Bellwood and Maywood. In Southern Cook County, the program serves the cities of Calumet City, Chicago Heights, County Club Hills, Harvey, Hazel Crest, Homewood and Riverdale.

Downstate the program serves Macon, Peoria, St. Clair, Vermilion, Winnebago, and Eastside Health District. In Will County, the project serves the following cities: Bolingbrook, Joliet, Mokena and Romeoville. These communities had higher-than-average Medicaid expenditures for health care services during the first year of life. This indicates that there was an unusually high number of infants in these communities were born prematurely.

Closing the Gap - Illinois is one of four states targeted by this federal initiative. The program addresses racial disparities in infant mortality by targeting four Chicago Community Areas with the highest number and rate of African American infant deaths in the state. The project focuses on reducing premature birth and deaths due to Sudden Infant Death Syndrome, the two leading causes of infant mortality in these communities. The communities of Austin, Englewood, West Englewood and Auburn Gresham have a wide array of health and human services funded by all levels of government. Rather than create another case management program, Closing the Gap has used several community-level interventions. A media campaign is being conducted for raising community awareness of the problems of premature birth and Sudden Infant Death Syndrome (see following page). Education programs on these topics are offered to community residents in a variety of settings. The knowledge base of human service providers is being enhanced through an on-going series of workshops. The Department is working with the IDHFS and the University of Illinois to improve the quality of medical care provided to pregnant women. Closing the Gap is supported by a grant from the federal Maternal and Child Health Bureau. Unfortunately, these funds were discontinued as of June 30, 2007. The Department has been working with the Illinois Maternal and Child Health Coalition to identify alternative sources of funding.
SERVICE DELIVERY SYSTEM

These services are delivered at the community level by grantees of the IDHS. Most often, these are local health departments. Community Health Centers and social service agencies also play an integral role in the delivery of primary and preventive care to pregnant women, mothers, infants, children and adolescents.

*Local health departments.* Local health departments have a unique responsibility to assess needs, develop policy to address community problems and assure that services are delivered to address those problems. Local health departments are also uniquely accountable to the public for the health of the *entire* community. Consequently, local health departments are well positioned to provide maternal and child health services in their jurisdictions.

*Community Health Centers.* There are 251 community health centers and federally qualified health centers in Illinois. Community health centers provide a complete array of primary health care services in medically under-served communities. Several are IDHS grantees for these and other programs. The Department is collaborating with Access Community Health Network, a federally funded community health center, and the Chicago Department of Public Health, a federally qualified health center, to implement the Closing the Gap project. Erie Family Health Center, Near North Health Services Corporation and Mile Square Health Center have been partners in the CHSI for many years.

*Community-Based Organizations.* Several prominent community-based organizations in Chicago and suburban Cook County have participated in the FCM program and its predecessors, as well as the WIC program, since the mid-1980s. These organizations bring an extensive knowledge of the communities they serve, are familiar with the cultural diversity of their communities and employ staff who remain sensitive to community needs, beliefs and cultures.
CASELOAD

The number of persons served by the WIC and FCM programs during SFY 2007 is presented in Table 1. FCM does not keep a separate count of the number of participating “post partum or breastfeeding women.” However, under USDA guidelines, these women comprise a separate category of eligibility for the WIC program.

<table>
<thead>
<tr>
<th>Type of Client</th>
<th>WIC</th>
<th>FCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnant Women</td>
<td>116,648</td>
<td>121,408</td>
</tr>
<tr>
<td>Post Partum or Breastfeeding Women</td>
<td>48,085</td>
<td>not applicable</td>
</tr>
<tr>
<td>Infants</td>
<td>182,983</td>
<td>170,894</td>
</tr>
<tr>
<td>Children</td>
<td>171,534</td>
<td>53,467</td>
</tr>
<tr>
<td>Total</td>
<td>519,250</td>
<td>345,769</td>
</tr>
</tbody>
</table>

The caseload of both programs has remained fairly constant or grown over the last several years, as illustrated in Table 2.

<table>
<thead>
<tr>
<th>Program</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
</tr>
<tr>
<td>FCM</td>
<td>352,710</td>
</tr>
<tr>
<td>WIC</td>
<td>485,800</td>
</tr>
</tbody>
</table>

The WIC and FCM programs together reach more than 44 percent of all infants and nearly 85 percent of Medicaid-eligible infants born in Illinois each year. Women who are at greatest risk for giving birth prematurely or having a baby with other health problems are over-represented in the caseload of the WIC and FCM programs. More than two-thirds of African American women who give birth in Illinois each year, as well as two-thirds of Hispanic and Latino women, three-fourths of unmarried mothers and four-fifths of teen-aged mothers participate in the WIC and FCM serve more than 44 percent of all infants born in Illinois and more than 85 percent of all Medicaid eligible infants.
WIC or FCM programs each year. This indicates that these programs are reaching their intended target population. Please refer to Table 3.

<table>
<thead>
<tr>
<th>Group</th>
<th>Live Births</th>
<th>All</th>
<th>WIC or FCM Participants</th>
<th>Percent of Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>White</td>
<td>134,418</td>
<td>77.2%</td>
<td>56,858</td>
<td>70.6%</td>
</tr>
<tr>
<td>Black</td>
<td>30,069</td>
<td>17.3%</td>
<td>21,234</td>
<td>26.4%</td>
</tr>
<tr>
<td>Asian and Native American**</td>
<td>9,709</td>
<td>5.6%</td>
<td>2,411</td>
<td>3.0%</td>
</tr>
<tr>
<td>All</td>
<td>174,196</td>
<td>100.0%</td>
<td>80,503</td>
<td>100.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>43,273</td>
<td>24.8%</td>
<td>31,691</td>
<td>39.4%</td>
</tr>
<tr>
<td>Single</td>
<td>64,952</td>
<td>37.3%</td>
<td>50,847</td>
<td>63.2%</td>
</tr>
<tr>
<td>Teen</td>
<td>17,017</td>
<td>9.8%</td>
<td>14,670</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

* Resident live births occurring in Illinois. From birth file released to IDHS by IDPH.
**Includes all other races.
PERFORMANCE

Program performance is measured against several short-term health status indicators among the women, infants and children enrolled in WIC, FCM or both programs. Measures include:

1. enrollment in both WIC and FCM;
2. first trimester enrollment in WIC and FCM;
3. appropriate prenatal weight gain of pregnant women in WIC;
4. initiation of breastfeeding in WIC;
5. three or more well-child visits to FCM infants before age 1;
6. fully immunized infants and two-year-olds in WIC;
7. health insurance coverage of infants and children in WIC;
8. developmental screening of infants and children in WIC and FCM;
9. face-to-face contacts and home visits for pregnant women and infants in FCM.

The Department uses Cornerstone, its maternal and child health management information system, to generate quarterly reports on these performance measures. Agency performance provides the basis for ongoing technical assistance. These reports can be found at http://www.dhs.state.il.us/page.aspx?item=31152 for provider and public access.

The Department also provides administrative and financial rewards to high performing agencies. The top two-thirds of agencies on the ranking report receive a WIC/FCM certification visit every two years, whereas the lower third may receive an annual evaluation visit in addition to the certification visit. Regional staff focus technical assistance activities on the agencies in the bottom third. In the spring of each year, the Department uses performance data from the first three-quarters of the fiscal year to determine which agencies will require more frequent visits. The proportion of agencies that will be exempted from annual review is re-evaluated annually.

Trend data, supplemented with a discussion of the significance of each indicator for improving the health of women and children, are presented below.
Integrated Service Delivery

The graph below displays the proportion of clients in one program who are also enrolled in the other program. For example, the line labeled ‘WIC’ shows the proportion of WIC clients who were also enrolled in FCM. At the end of Fiscal Year 2007, 92.3 percent of WIC participants were also participating in FCM and 94.8 percent of FCM participants were also receiving WIC services.

An evaluation of the WIC and FCM programs in 1998 found that Medicaid-eligible women who participated in WIC and FCM during pregnancy in 1996 had substantially lower rates of premature birth and infant mortality. Armed with this knowledge, the Department launched a concerted effort to integrate the delivery of these two programs across the state. Department staff helped local grantees to redesign the flow of patients through clinics, cross-trained staff and took other steps to ensure that patients were enrolled in both programs.
First Trimester Enrollment

Enrollment in FCM and WIC services during the first trimester of pregnancy is essential to ensure maximum impact on the health of the mother and the newborn infant. The graph below shows that between 2002 and 2007, there was a gradual upward trend in the proportion of program participants who enrolled in the FCM and WIC programs during the first trimester of pregnancy.

Local WIC and FCM agencies use a variety of strategies to reach low-income families in the communities they serve. These may include door-to-door canvassing, distribution of printed materials and use of mass media, as well as nontraditional methods that may be necessary to identify potential participants in hard-to-reach populations, such as persons who abuse drugs or engage in prostitution.

Enrollment in FCM during the first trimester of pregnancy has been improving but remains a challenge.

The Department also takes advantage of its computer technology to increase the proportion of Medicaid-eligible pregnant women who enroll in WIC and FCM and to improve the proportion of women who enroll in the first trimester of pregnancy. Local WIC and FCM service providers are indirectly linked to the Department’s Family Community Resource Centers through an electronic data exchange. Each month, information about pregnant women who have enrolled in the Medicaid program is transferred from the Client Information System used by the Family Community Resource Centers to the Cornerstone system. The information is then distributed to local service providers and is ultimately used to conduct targeted outreach efforts.
Prenatal Weight Gain

The chart below displays the proportion of pregnant women who were active in the WIC program during pregnancy and gained the ideal amount of weight while pregnant. An increase in this proportion indicates that the program is reaching its goal.

Women require additional calories during pregnancy to adequately nourish the developing fetus. The Institute of Medicine has identified ideal weight gain ranges based on a woman’s pre-pregnancy weight status. The WIC Program uses these guidelines. The CDC's Prenatal Nutrition Surveillance System clearly shows women who gain too little weight during pregnancy and smoke are at the greatest risk for delivering a low birth weight baby. New research is becoming available indicating increased risks to mother and baby if too much weight is gained during pregnancy as well. Staff training now focuses on working with clients to encourage appropriate amounts of total weight gain at an appropriate rate. WIC’s core strategies for the improvement of birth weight and the reduction of infant mortality are nutrition education and food supplementation. Therefore, prenatal weight gain is a core performance measure for the WIC program. Illinois’ WIC program has been making steady progress in the improvement of prenatal weight gain.

Approximately 29 percent of women who participate in WIC during pregnancy gain an appropriate amount of weight, reducing the risk of low birth weight.
**Initiation and Duration of Breastfeeding**

The graph displays the proportion of women who participated in the WIC program during pregnancy and began to breastfeed their infants right after giving birth.

The rate of breastfeeding at hospital discharge has increased among WIC participants from 53 percent in 2002 to 65.1 percent for SFY 2007. The rate of breastfeeding among WIC-eligible women more than doubled between 1992 (26 percent) and 2002.

The American Academy of Pediatrics (AAP) states that infants should be breastfed for at least the first year of life and adds no limit for duration. In 35 agencies, breastfeeding peer counselors are part of the WIC team, promoting breastfeeding, educating women on the “how-to’s” of breastfeeding and supporting breastfeeding mothers when they deliver and begin breastfeeding. Usually WIC participants’ peer counselors are women from the community who have
successfully breastfed their own infants. They receive specialized training to serve as peer counselors. Representing diverse cultural backgrounds, they offer encouragement, information, and support to other WIC mothers.

Data from the Peer Counselor Summary Report show that women who receive services from a breastfeeding peer counselor are more likely to initiate breastfeeding and continue breastfeeding past one month. With the Peer Counselor program as a part of WIC services, Illinois babies are healthier and have improved overall long term health benefits. Besides serving as a resource and role model for breastfeeding women, the Peer Counselor also provides an important link to other health services in the community.

Additional activities of the WIC breastfeeding program include providing breastfeeding education and training for WIC, FCM and other MCH providers. In the past five years, over 1300 staff have received specialized breastfeeding training through workshops, conferences and seminars. Additional training is provided at biennial statewide conferences which bring together community partners and other breastfeeding advocates.

Each year WIC programs develop special breastfeeding promotions to coincide with World Breastfeeding Week and Illinois Breastfeeding Promotion Month. Activities are designed to meet the AAP recommendations to “promote breastfeeding as a cultural norm and encourage family and societal support for breastfeeding.” Activities such as Breastfeeding Walks and Fairs, breastfeeding displays in local libraries and the “Mobile Nursery” at local and state fairs help the public “see” breastfeeding as the norm and promote better understanding of the role breastfeeding plays in the health of our citizens.

WIC administers a state breast pump distribution program through their local agencies. As active community partners and collaborators, WIC promotes breastfeeding and advocates for participants with local hospitals, schools and employers.

Through the Physicians’ Breastfeeding Network of Illinois (PBNI) WIC maintains a collaboration with medical groups to promote continuing breastfeeding education for physicians and the need for increased breastfeeding education and training in medical schools.

The Cornerstone system collects data on breastfeeding practices for the U.S. Centers for Disease Control and Prevention’s Nutrition Surveillance Systems.

The proportion of infants in WIC who were breastfed at birth has more than doubled in the last 10 years.
Immunizations

The graph displays two performance measures and groups of children in the WIC program:

Statewide Immunization Campaign, 2002-2007

*Note: Beginning in the first quarter of 2007, the 3:2:2 series report was modified to allow the WIC and FCM programs to use the same age range criteria of 12 to 18 months.

- The line labeled “3:2:2” shows the proportion of children between 12 and 18 months of age who were active in the WIC program and had received:
  - 3 doses of diphtheria, pertussis and tetanus vaccine;
  - 2 doses of oral polio vaccine; and
  - 2 doses of *Haemophilus influenzae* type B vaccine.

- The line labeled “4:3:3:1” shows the proportion of children between 24 and 36 months of age who had received:
  - 4 doses of diphtheria, pertussis and tetanus vaccine;
  - 3 doses of oral polio vaccine;
  - 3 doses of *Haemophilus influenzae* type B vaccine; and
  - 1 dose of measles, mumps and rubella vaccine.
The Surgeon General of the United States made childhood immunization a national health objective in 1990 and selected it as one of the leading indicators of child health. The current national goal is 90 percent by the year 2010.

President Clinton launched a national initiative for the U.S. Department of Agriculture (USDA) and the U.S. Centers for Disease Control and Prevention (CDC) to increase the proportion of WIC-eligible children who were fully immunized. In response, the IDHS and the IDPH launched the WIC Immunization campaign in 2002.

In 7 years, the proportion of fully-immunized one-year-olds (3:2:2) increased from 70 percent to 85 percent and the proportion of fully immunized two-year-olds (4:3:3:1) increased from 56 percent to 80 percent.

The WIC Immunization Initiative is improving the state’s performance in ensuring that all two-year-olds are fully immunized.
Insured Children

The graph displays the proportion of children in the WIC program who were covered by public or private health insurance.

Health insurance is essential for access to health care services. Virtually every child on WIC is, by definition, eligible for the State of Illinois' All Kids program. The Department has been working with the IDHFS to increase the proportion of WIC-eligible children who are also enrolled in All Kids if they are not covered by their parents' health insurance. Local WIC/FCM agencies have been trained and certified by the IDHFS as "All Kids Application Agents." Local WIC program staff assist eligible families in applying for coverage through All Kids.

When this project began in September 2000, a total of 86 percent of WIC-enrolled infants and children were documented in the Cornerstone system as having All Kids or private insurance coverage. Due to the continued efforts of local WIC agency staff, this proportion has steadily increased. By September 2006, 93.7 percent of WIC-enrolled infants and children were documented in the Cornerstone system as having All Kids or private health insurance and by June 2007, an estimated 94.1 percent were documented. (An estimate is being used, due to changes in recording client insurance coverage.)
The Department monitors FCM agencies to ensure that participating infants receive at least three well child visits during the first year of life. The graph displays the proportion of infants who met this standard.

The American Academy of Pediatrics recommends routine well child visits. Providers monitor a child's growth and development, provide preventive health care services (i.e., immunizations), screen for potentially serious health problems (i.e., lead poisoning or problems with vision or hearing) and inform parents through anticipatory guidance. The Academy recommends six such visits during the first year of life, to occur at one month, two months, four months, six months, nine months and twelve months of age. Prior to December 2004 these data were incomplete until well child and immunization records began to be systematically loaded into the Cornerstone management information system from the IDHFS to provide a more complete picture of infant and child health to WIC and FCM providers.
Developmental Screening

The graph displays the proportion of 12-month-old children in WIC or FCM who had been screened for developmental delay at least once in the prior twelve months.

Infants and young children should be screened routinely for evidence of delays in cognitive, linguistic, motor, social and emotional development. Through routine screening, developmental delays can be promptly identified and therapy initiated.

The Department monitors the proportion of infants in the FCM program who have been screened for problems with physical or cognitive development at least once every year.

Statewide, nearly 80 percent of infants in WIC or FCM have been screened for developmental delay.
OUTCOMES

Illinois’ integrated strategy for improving maternal and child health focuses on four outcomes:

- Reducing the very low birth weight rate;
- Reducing the low birth weight rate;
- Reducing Medicaid expenditures during the first year of life; and
- Reducing the infant mortality rate.

Very low birth weight infants (newborns who weigh less than 3 pounds 2 ounces) require intensive medical care. While these infants represent less than 2 percent of all live births, they also account for about two-thirds of the infants who die in the first year of life. Interventions that reduce the very low birth weight rate will also reduce Medicaid expenditures during the first year of life and reduce the infant mortality rate.

The integrated delivery of the WIC and FCM programs is having a significant impact on the state’s infant mortality rate and health care expenditures. Nine consecutive annual program evaluations have shown that the health status of infants born to Medicaid-eligible women who participated in both WIC and FCM has been substantially better than that of infants born to Medicaid-eligible women who did not participate in either program. In particular, the rate of premature birth is more than 60 percent lower among participants in both programs. The rate of low birth weight is more than 35 percent lower; the rate of infant mortality is more than 55 percent lower; and health care expenditures during the first year of life are more than 30 percent lower.
Very Low Birth Weight

The very low birth weight rate among women who participated in both WIC and FCM was 1.4 percent in 2005, almost one-third of the rate (4.1 percent) observed among Medicaid-eligible women who did not participate in either program during pregnancy.

WIC and FCM are dramatically reducing the rate of premature birth.
The Department is able to match information from its maternal and child health management information system, Cornerstone, with vital records maintained by the IDPH and the Medicaid Management Information System maintained by the IDHFS. This allows the Department to compare the perinatal health status of women and children who participate in several of its programs to Medicaid-eligible non-participants and the general population of pregnant women and newborns.

WIC and FCM, through the reduction in very low birth weight, contribute to a significant reduction in Medicaid expenditures during the first year of life.
Infant Mortality

This report began with Dr. Helen Wallace's observation that the infant mortality rate is the most sensitive index of the status of economic and social development of any country. The state has made steady progress in reducing its infant mortality rate, in part, due to the improvement of birth outcomes as a result of at-risk women participating in the WIC and FCM programs. As noted earlier, and as evidenced in the next chart, the infant mortality rate is more than 60 percent lower when infants born to Medicaid-eligible women participated in WIC and FCM during pregnancy when compared to infants whose mothers did not participate in this integrated MCH program.

Participation in WIC and FCM saves lives.
Medicaid Client Infant Mortality Trend: Illinois 2002 - 2004
Source: Vital Records - Illinois Department of Public Health and Department of Human Services

<table>
<thead>
<tr>
<th>Year</th>
<th>Medicaid Only</th>
<th>w/WIC and/or FCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>17.7</td>
<td>6.3</td>
</tr>
<tr>
<td>2003</td>
<td>20.5</td>
<td>6.0</td>
</tr>
<tr>
<td>2004</td>
<td>18.9</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Rate per 1,000 births
RACIAL AND ETHNIC DISPARITIES IN INFANT MORTALITY: THE PERSISTENT CHALLENGE

The graph on the following page presents the infant mortality rates of African American, Asian, Caucasian and Hispanic infants from 1980 to 2005. It is clear from this illustration that there are significant and persistent disparities among these groups. The rate among Asians, for example, is better than the Healthy People Objective; the rates among Whites and Hispanics are close to the national goal, but the rate among African Americans is at an unacceptably high level of 15.1 per 1,000 live births.

As can be seen in Table 4, although the infant mortality rate among Puerto Ricans has remained relatively stable since 1990, the decreasing rate among non-Hispanic Whites has led to an increasing disparity between Whites and Puerto Ricans that began in 1996 and continues to worsen. It should be noted that the Puerto Rican infant mortality rate is based on a relatively small number of events, and that the rate, therefore, varies widely from year to year. However, an examination of these data aggregated over the past decade shows a clear indication of significant and unacceptable disparity when compared with non-Hispanic Whites.

Table 5 presents the ratio of African American to Caucasian infant mortality rates, regardless of Hispanic descent, over the same period. While the state has made steady progress in the reduction of infant mortality, the racial disparity between African American and Caucasian infants has not appreciably improved.

The Department has set the reduction of this racial disparity in health status one of the top priorities of its Division of Community Health and Prevention. The Department's targeted infant mortality reduction initiatives -- CHSI, TIPCM and Closing the Gap -- are promising first steps toward addressing this unacceptable loss of life. The Department will continue to work with partners at the federal, state and community level to identify, develop and implement new strategies to address this pressing health problem.
Table 4
Infant Mortality Rate Ratios for Select Racial and Ethnic Groups
1980 - 2005

<table>
<thead>
<tr>
<th></th>
<th>Non-Hispanic Black to Non-Hispanic White</th>
<th>Mexican to Non-Hispanic White</th>
<th>Puerto Rican to Non-Hispanic White</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>2.2</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>1985</td>
<td>2.3</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>1990</td>
<td>3.0</td>
<td>1.1</td>
<td>1.0</td>
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<tr>
<td>1995</td>
<td>2.5</td>
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<td>1.0</td>
</tr>
<tr>
<td>2000</td>
<td>2.6</td>
<td>1.2</td>
<td>1.7</td>
</tr>
<tr>
<td>2005</td>
<td>2.6</td>
<td>0.9</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Table 5
Ratio of African American and Caucasian Infant Mortality

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio</th>
<th>Year</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>2.1:1</td>
<td>1993</td>
<td>2.7:1</td>
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<td>2.1:1</td>
<td>1994</td>
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<tr>
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<td>2.2:1</td>
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<tr>
<td>1983</td>
<td>2.3:1</td>
<td>1996</td>
<td>2.8:1</td>
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<td>1984</td>
<td>2.3:1</td>
<td>1997</td>
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<td>1985</td>
<td>2.3:1</td>
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<td>1987</td>
<td>2.2:1</td>
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<td>2.5:1</td>
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<tr>
<td>1992</td>
<td>2.6:1</td>
<td>2005</td>
<td>2.7:1</td>
</tr>
</tbody>
</table>
FINANCING

Illinois’ integrated maternal and child health program for the reduction of infant mortality is supported by a combination of state and federal resources. The SFY’06 and SFY’07 budgets by program component are presented in Table 6.

<table>
<thead>
<tr>
<th>Program</th>
<th>SFY’06</th>
<th>SFY’07</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIC (all sources)</td>
<td>$255,000.0</td>
<td>$264,000.0</td>
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<tr>
<td>FCM</td>
<td>$42,980.9</td>
<td>$43,411.0</td>
</tr>
<tr>
<td>TIPCM</td>
<td>$5,000.0</td>
<td>$5,075.0</td>
</tr>
<tr>
<td>CHSI</td>
<td>$1,775.0</td>
<td>$1,775.0</td>
</tr>
<tr>
<td>Closing the Gap</td>
<td>$562.5</td>
<td>$562.5</td>
</tr>
<tr>
<td>Total</td>
<td>$305,324.4</td>
<td>$314,823.5</td>
</tr>
</tbody>
</table>

The WIC budget includes funds for both program operations at the state and local level (referred to as Nutrition Services and Administration, or NSA) and funds for the purchase of food. The food funds include both an award from the USDA and rebates on the purchase of infant formula from Ross Laboratories. Rebates add an average of $65 million to the program’s food budget each year. Grant awards to local agencies are based on estimated caseload.

Local agencies receive $130.00 per participant per year in NSA funds for program administration and each participant receives approximately $700.00 in food benefits per year. Due in part to the effectiveness of the Department’s integrated approach to service delivery, Illinois’ WIC caseload continues to grow in contrast to other states in federal Region V. This trend results in annual increases to Illinois’ WIC award from the USDA.

The FCM program was supported by one General Revenue Fund appropriation in SFY’07. The Department also used federal Title V (Maternal and Child Health Services Block Grant) and Title XX (Social Services Block Grant) funds to support the program. Local health departments also add their own funds for the operation of the program. At the end of FY07, FCM and TIPCM providers were paid a 1.5% COLA to provide additional reimbursement for FCM services provided during that fiscal year.

The Department has worked closely with the IDHFS since 1990 to obtain federal matching funds through the Medicaid program for FCM expenditures. The IDHFS and the federal Center for Medicare and Medicaid Services have agreed that FCM expenditures can be considered administrative costs of the Medicaid program.
Prior to SFY’05, the Department only used funds appropriated through the “IMRI Medicaid” line item to obtain federal matching funds, even though claimable expenditures exceeded this amount. In order to increase federal revenue through the Medicaid program, the Department began claiming the maximum amount possible through the FCM program.

The Department has helped local health departments negotiate agreements with the IDHFS that allow them, as units of local government, to receive federal match for the local funds they expend in support of the FCM program. This increased the total amount of funds available for the FCM program by about $4 million per year without an increase in the Department’s appropriation for the FCM program.

The Department budgets and reconciles FCM expenditures using per-family-per-month “rates” that were set on the basis of program expenditures and caseload in 1990. The rates were increased for the first time in Fiscal Year 2007, and are now $27.04 per month (or $324.48 per year) for a family with a pregnant woman or an infant and $12.88 (or $154.56 per year) for a family with a child over one year of age. (In Cook and St. Clair counties, the rate for families with an older child is $17.24 per month, or $207 per year.)

Targeted Intensive Prenatal Case Management began in Fiscal Year 2001 with an appropriation of $2.5 million. The Department also claims federal matching funds through the Medicaid program for these expenditures. The CHSI and Closing the Gap in Infant Mortality are supported by federal discretionary grants. Unfortunately, federal funding for Closing the Gap was discontinued as of June 30, 2007. The Department has been working with the Illinois Maternal and Child Health Coalition to identify alternative sources of funding.
HISTORY

FCM has its roots in the Prenatal Care program and the state’s Infant Mortality Reduction Initiative *Families with a Future (FWF)*. The Department implemented the Prenatal Care program in 1981, beginning with grants to 10 local health departments and other community-based agencies. The program provided health education, prenatal care services (including physical examinations, prenatal vitamins, laboratory services and other procedures) and referrals to other appropriate supportive services in the community. The program was expanded to an additional 20 sites in 1983 as a part of the Parents Too Soon initiative, and was expanded statewide in 1985 as a part of the Infant Mortality Reduction Initiative.

*Families with a Future* was created by the Illinois Infant Mortality Reduction Act (Ill.Rev.Stat.1989 ch.111-1/2 par 7001 et seq.), which was enacted on December 2, 1985. The Act implemented the Department’s “9 By ’90 Plan” to help Illinois reach the U.S. Surgeon General’s goal of no more than nine infant deaths per thousand live births by 1990. The plan provided for the establishment of comprehensive, community-based service networks that would provide case management and assure that high-risk pregnant women and their infants had access to specific set of services. This innovative and comprehensive approach to service delivery in high-risk targeted areas resulted in Families with a Future being designated a semifinalist for the Innovations in State and Local Government award of the Ford Foundation and the John F. Kennedy School of Government at Harvard University.

The federal Omnibus Budget Reconciliation Act of 1989 amended Title XIX of the Social Security Act to allow states to cover targeted case management and health education activities for low-income pregnant women and infants through the Medicaid program. After many months of planning with the IDHFS, the Department implemented procedures in the FWF and Prenatal Care programs. Federal matching funds were obtained by claiming MCH program outreach and case management activities as part of the cost of administering the Medicaid program in Illinois. This transaction added millions of dollars to the FWF and Prenatal Care programs.

The Edgar Administration’s maternal and child health initiative, Healthy Moms/Healthy Kids, replaced Families with a Future in 1993. In addition to outreach and case management, Healthy Moms/Healthy Kids introduced managed care for Medicaid-eligible pregnant women and young children in Chicago. The program budget for case management was expanded to provide sufficient resources to serve all Medicaid-eligible pregnant women and children under three years of age statewide. This expansion, in addition to the Department’s existing resources for the Infant Mortality Reduction Initiative, brought the resources for this component to its present total, in excess of $40 million.

The managed care, outreach and case management components of the Healthy Moms/Healthy Kids program in Chicago were placed under the auspices of First Health, Inc., a managed-care intermediary with previous experience in several states. Downstate, the case management and outreach components of Healthy Moms/Healthy Kids continued to be provided by the network of local health departments and other community-based organizations that had provided these
services for the Families with a Future and Prenatal Care programs. The program model was changed to focus exclusively on outreach and case management; the maintenance of service provider networks was de-emphasized.

The managed care component of Healthy Moms/Healthy Kids was discontinued in June 1995. The case management component of the program continued in SFY’96 under joint administration of the IDPH and the IDHFS. In SFY’97, all of the resources for outreach and case management were transferred to the IDPH and the program was renamed “Family Case Management.” The program was transferred to the IDHS on July 1, 1997.

The Illinois WIC program began in 1974, serving a caseload of 12,000 low-income pregnant, breastfeeding and postpartum women and infants and children up to 5 years of age. At that time the program was offered through eight local agencies serving nine counties.

In 1998, the “Dan Glickman Pyramid of Excellence Awards” were established by the USDA to showcase the best Food and Nutrition Programs across the country. That year, the Illinois WIC Program received the first Glickman award in the WIC category for the WIC Food Center Project. In 1999, the program received the second Glickman award for excellence in administration of the WIC program based upon the development and implementation of the Cornerstone management information system. These were the only two Glickman awards presented by the USDA for excellence in WIC program administration.

Today, WIC provides nutrition education, health care referral, breastfeeding support and supplemental nutritious foods to over 289,000 women, infants and children through 220 clinics statewide. WIC continues to regularly update eligibility risks to reflect current health concerns related to prematurity, obesity and diet quality. A new risk will be added in the coming year to address environmental tobacco smoke. Strides have been made in making services client-centered and staff are receiving training on motivational interviewing, stages of change and other proven behavioral change techniques. Loving Support breastfeeding peer counseling programs were established in 2004 and the program has expanded each year since. Besides serving as a resource and role model for breastfeeding women, they also provide an important link to other health services in the community. Through WIC, Illinois babies are healthier and have improved overall long term health benefits.