

12. MATERNAL, INFANT, AND CHILD HEALTH

Goal

Improve maternal health and pregnancy outcomes and reduce the rate of disability in infants, thereby improving the health and well being of women, infants, children, and families in the Commonwealth of Kentucky. The health of a population is reflected in the health of its most vulnerable members. A major focus of many public health efforts, therefore, is improving the health of pregnant women and their infants, including reduction in rates of birth defects, risk factors for infant death and disabilities, and deaths of their mothers.

Terminology

Abruptio Placenta: A medical condition of a pregnant woman where the placenta separates from the lining of the uterus before delivery. This condition can result in maternal and fetal death.

ACOG: The American College of Obstetricians and Gynecologists.

Anencephaly: A fatal condition in which the upper end of the neural tube fails to close. The brain fails to develop completely or is entirely absent. If the infant is born alive, he/she will die soon after delivery.

Breastfeeding: The exclusive use of human milk or the use of human milk with supplemental bottle of formula, cow milk, or solid foods.

Congenital Anomaly: An abnormality in structure, function, or body metabolism that is present at birth; also known as a “birth defect.”

Developmental Disabilities: A broad spectrum of impairments, characterized by physical or mental delays or limitation in personal activity such as mental retardation, cerebral palsy, hearing and vision impairment.

Fetal Death: The death of a fetus in utero (prior to delivery) at 20 weeks or more gestation.

Fetal Death Rate: The number of fetal deaths in a population divided by the total number of live births and fetal deaths in the same population during the same time period.

Genetic Disorders: The group of health conditions that result from genes passed to the embryo from the parents.

HEDIS: Healthplan Employer Data and Information Set.

Infant Mortality: Death of an infant less than 1 year old.

Low Birthweight: Weight less than 2500 grams (5 pounds 8 ounces) at birth.

Maternal Death: Death of a woman while pregnant or within 42 days following the end of a pregnancy, from any cause related to or aggravated by the pregnancy or the management of the pregnancy. Does not include accidental deaths.

Maternal Mortality: The number of maternal deaths for every 100,000 live births.

Neonatal Mortality: Death of an infant less than 28 days after birth.

Neural Tube Defects (NTD): Birth defects that occur very early in pregnancy. The defect develops between the 17th and 30th day after conception, usually before a woman knows she is pregnant. During this critical time, the proper formation and closure of the neural tube, which later becomes the spinal cord and brain, normally takes place. A neural tube “defect” occurs when this neural tube fails to close properly. Anencephaly and spina bifida are the two most common NTDs.

Perinatal Mortality Rate: Includes both deaths of live-born infants through the first 7 days following birth and fetal deaths after 20 weeks of gestation.

Postneonatal Mortality: Death of an infant between 28 days and 1 year after birth.

Postneonatal Period: The time period from an infant’s 29th day of life until the 1st birthday.

Postpartum: The 6-week period immediately following birth.

Preconception Care: Health care provided to a woman prior to conception with the intent of identifying and reducing risk factors for an improved pregnancy outcome.

Premature Birth: A delivery occurring prior to the end of the 37th week of gestation.

Prenatal Care: Pregnancy related health care provided to a woman between conception and delivery.

Spina bifida: Occurs when the lower end of the neural tube fails to close. As a result, the spinal cord and backbones do not develop properly. Sometimes a sac of fluid protrudes through an opening in the back and often a portion of the spinal cord is

contained within this sac. Paralysis, loss of bladder and bowel control, hydrocephalus, and learning disabilities are common with spina bifida.

Sudden Infant Death Syndrome (SIDS): Sudden and unexplained death of an infant from an unknown cause.

Very Low Birthweight: A newborn weighing less than 1500 Grams (3 pounds 5 ounces) at birth.

WIC: Abbreviation for “Women, Infant, and Children,” a Federal program that provides supplemental nutrition for eligible families.

Overview

Improving the health of mothers and infants is a national as well as a state priority. Infant mortality is an important measure of a state’s health and an indicator of health status and social well being. The infant mortality rate in the United States ranked 25th among industrialized nations. In addition, the disparity in infant mortality rates between whites and specific ethnic groups such as African-Americans, Native Americans, (Indians, Alaskans, Hawaiians) persists.

Infant mortality is not the only measure of the health of infants. This chapter addresses a range of indicators of maternal, infant, and child health, including those affecting pregnant and postpartum women.

Each objective will have a brief narrative that is specific to that particular issue. In addition, an effort has been made to integrate all areas addressed in the Maternal, Infant and Child health section in view of the fact that they all interrelate to one another.

Progress Toward Year 2000 Objectives

14.1 To reduce the infant mortality rate to no more than 7 per 1,000 live births.

- Kentucky’s infant mortality rate was 8.4 per 1,000 in 1990. (Whites 7.9 per 1,000 and Nonwhites 12.6 per 1,000)
- The latest figure (1997) for Kentucky’s infant mortality rate was 7.2 per 1000 live births. (Whites 6.9 per 1,000 and Nonwhites 14.1 per 1,000)
- Kentucky should meet this 2000 objective

14.2 To reduce the fetal death rate (20 or more weeks of gestation) to no more than 5 per 1,000 live births plus fetal deaths.

The fetal death rate in Kentucky was 5.3 per 1,000 in 1990.
The fetal death rate in Kentucky was 4.6 per 1,000 (1997).
Kentucky has met this objective.

14.3 To reduce the maternal mortality rate to no more than 3.3 per 100,000 live births.

- The maternal mortality rate in Kentucky was 3.7 per 100,000 in 1990.
- The maternal mortality rate in Kentucky was 3.8 per 100,000 in 1997.
- Kentucky will be very close to meeting this objective in the year 2000.

14.4 To reduce low birth weight (LBW) to an incidence of no more than 5 percent of live births and very low birth weight to no more than 1 percent of live births.

- The incidence of low birth weight was 7 percent and the incidence of very low birth weight was 1.2 percent in Kentucky during 1990.
- The incidence of low birth weight was 6.4 percent (3,370) and the incidence of very low birth weight was 1.4 percent (743) in Kentucky during 1997.

Statistically, the percentage of low birthweight and very low birthweight deliveries has not changed nationally over the past decade. The overall survival of these LBW infants has dramatically improved as health care advances are made.

14.5 To increase to at least 85 percent the proportion of mothers who achieve the minimum recommended weight gain during their pregnancy.

No data are available to measure this objective.

14.6 To increase to at least 90 percent the proportion of all pregnant women who receive prenatal care in the first trimester of pregnancy.

- 77.2 percent of women in Kentucky received prenatal care in the first trimester of pregnancy in 1990.
- 85 percent of women in Kentucky currently receive prenatal care in the first trimester of pregnancy.
- Kentucky will be close to meeting this objective in the year 2000.

14.7 To increase to 100 percent the proportion of women enrolled in prenatal care who are offered screening and counseling on prenatal detection of fetal abnormalities.

All women enrolled in prenatal care in a Kentucky local health department prenatal clinic are provided with individualized counseling which includes the availability of maternal serum alpha fetoprotein testing. Data are not available for women enrolled in prenatal care outside of the local health departments. Data is not available to adequately determine the status of this objective.

- 14.8 To increase to at least 95 percent the proportion of pregnant women and infants who receive risk-appropriate care.

This objective is measured by tracking the proportion of very low birth weight infants (less than 1500 grams) born in a Level III facilities (those covered by a neonatologist 24 hours a day).

In 1990, 61 percent of very low birth weight infants were delivered in a Level III hospital.

A total of 743 very low birth weight (VLBW) infants were delivered. 632 VLBW infants or 63.3 percent were born at a Level III hospital. Another 111 (15 percent) of the VLBW infants were born out-of-state and the level of the facility was unknown.

Only minimal progress has been made in meeting this objective over the past years and need to evaluate why more of these high-risk infants are not being delivered at Level III hospitals. This may include further education for physicians, nurses, hospital administrators, and the public. Consideration must be given of implementing a quality assurance measure for hospitals to improve and/or meet this objective.

- 14.9 To maintain the current 95 percent rate of newborns screened by state-sponsored programs for phenylketonuria (PKU), galactosemia, and congenital hypothyroidism and to maintain the 99 percent of newborns with a positive screening receive a diagnosis.

- 14.10 To increase to 95 percent the rate of newborns screened for hemoglobinopathies and assures that 99 percent of those with sickle cell disease are referred for a definitive diagnosis.

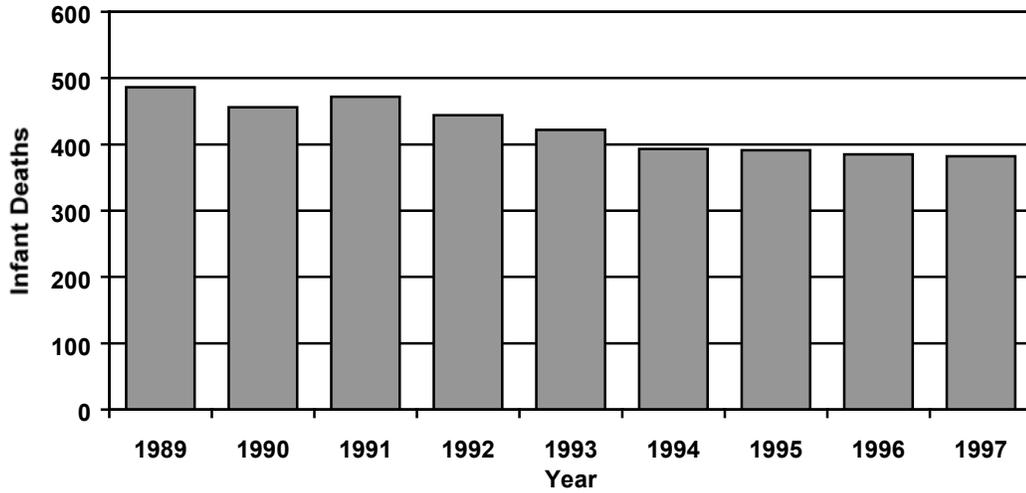
- Ninety-nine point five percent (99.5 percent) of all newborns were screened for PKU, galactosemia, congenital hypothyroidism and sickle cell.
- Four infants were diagnosed with classical galactosemia, 19 with Duarte/galactosemia, one with PKU, ten with sickle cell, and 12 with congenital hypothyroidism. 100 percent of the confirmed cases received treatment.

2010 Objectives

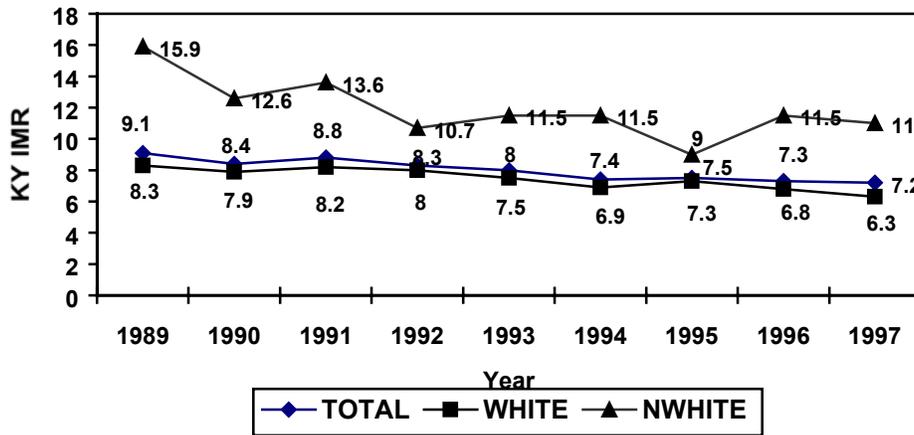
- 12.1 To reduce infant mortality to no more than 6 per 1,000 live births.**

Baseline: 1997 data revealed a total of 7.2 deaths per 1,000 (6.4/1,000 for whites and 11.0/1,000 for non-whites).

**Infant Deaths
Kentucky, 1989-1997**



**Infant Mortality
Kentucky, 1989-1997**



** NOTE in 1996 Race breakdown changed to White & Others and Blacks, from White and Non-Whites & Others in years prior to 1996.

	<u>1997</u>	<u>2010 Target</u>
Neonatal mortality	4.6/1,000	3.0/1,000
Post-neonatal mortality	2.7/1,000	1.5/1,000

Target Setting Method: Based on *Healthy People 2010* Objective 1 and prior national and state objectives.

Data Sources: Kentucky Vital Statistics, Data Health Branch

The leading causes of infant mortality in Kentucky are congenital anomalies, low birthweight, and Sudden Infant Death Syndrome (SIDS). Prevention of unplanned pregnancies, preconception health care, early and adequate prenatal care, adequate maternal weight gain in pregnancy, and enhanced education for parents, child-care providers, professionals, and para-professionals must be addressed in order to decrease Kentucky's infant mortality rate and meet the 2010 goal.

Implementation Strategy:

- Increase access to contraceptives, including emergency contraception, through all available health care providers (without regard to primary care provider) to prevent unwanted or mistimed pregnancies.
- Provide preconception health counseling to all women of childbearing age with the goals of planned pregnancies, early entry into prenatal care, and improved access to genetic counseling and referrals.
- Continue support of pregnancy prevention such as Postponing Sexual Involvement (PSI) and Reducing the Risk (RTR) initiatives.
- Expand pregnancy testing and family planning clinics to non-traditional sites for greater accessibility and utilization.
- Promote maternal smoking cessation by providing support for a Medicaid initiative to fund nicotine replacement and individual counseling sessions for pregnant women.
- Encourage recommended maternal weight gain based on the Institute of Medicine's guidelines.
- Increase awareness and financial support of user friendly and accessible pregnancy and parenting education classes focusing on age appropriate pregnancy care, infant care, and injury prevention issues to encourage parenting skills. Examples of such programs include State Resource Program, State Health Access Nurturing Development Services (HANDS) and the Jefferson County Health Families America Project.
- Support the Department for Public Health, March of Dimes, The Kentucky Spina Bifida Association, and others in the launching of a statewide campaign, beginning September 1999, to decrease the incidence of neural tube defects (NTD).

- Promote continuing educational opportunities to parents and families, health professionals, child-care providers, and others on the importance of placing infants under one year of age on their back to sleep, crib safety, smoking concerns, bedding and other risk factors related to Sudden Infant Death Syndrome (SIDS).
- Support and provide WIC and other nutritional services to all eligible families with children to promote health and growth with age appropriate education and WIC food supplements.
- Funding needed for education and promotion so that all health professionals, paraprofessionals, child-care providers, and parents can be trained in CPR and the Heimlich Maneuver.

12.2 Reduce the infant mortality rate due to birth defects to 1.2 per 1,000 live births.

Baseline: 1.7 per 1,000 live births in 1997.

Target Setting Method: Based on *Healthy People 2010* Objective 2, 30 percent improvement

Data Sources: Kentucky Birth Surveillance Registry (KBSR)
 Kentucky Child Fatality Review
 Kentucky Vital Statistics
 CDC National Center for Health Statistics

Congenital anomalies (birth defects) have been the leading cause of infant mortality for more than twenty years. In 1994, 1 out of every 5 infant deaths was due to birth defects. Congenital anomalies are the leading cause of infant mortality in the state of Kentucky and accounted for 27.5 percent of infant deaths in 1997. Kentucky's rate is significantly higher than the national average of 20.9 percent.

Birth defects have multiple causes, and therefore are difficult to prevent. One very important advance has been the determination that daily consumption of folic acid prior to and during early pregnancy can prevent the incidence of neural tube defects by 50-70 percent. Because of this information, preventive measures for NTD are now available and are addressed in Objective 12.16.

Implementation Strategy:

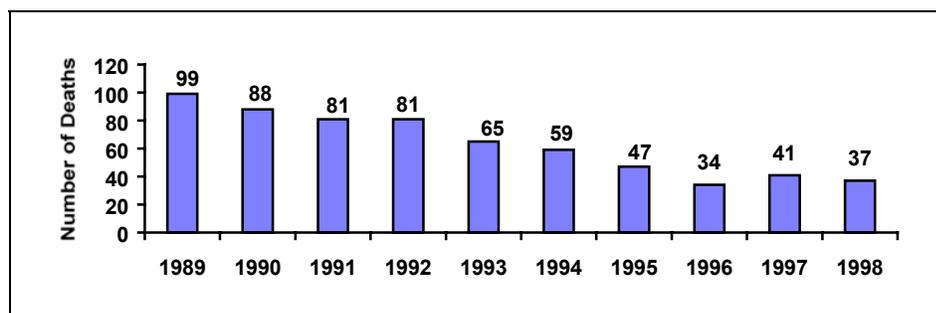
- Promote preconception care to all women of childbearing age during routine primary care visits to help reduce risk factors prior to pregnancy.
- Provide adequate funding to provide folic acid to low-income women.
- Conduct a statewide folic acid awareness campaign.
- Improve access to genetic counseling and referral services regardless of income status.

- Promote early entry into prenatal care and continuation of care throughout the pregnancy.
- Educate the public on the adverse effects of recreational drugs, alcohol, tobacco, prescription medications, and diabetes in women who are either planning a pregnancy or are already pregnant.

12.3. Reduce the Sudden Infant Death Syndrome (SIDS) mortality rate to 0.3 per 1,000 live births.

Baseline: 0.9 per 1,000 live births in 1998.

SIDS DEATHS 1989-1998



Target Setting Method: Based on *Healthy People 2010* Objective 12.3

Data Sources: Kentucky Vital Statistics, Health Data Branch

Sudden Infant Death Syndrome is the fourth cause of mortality in infants under one year of age in Kentucky. A reduction in the rate of death from SIDS contributes greatly to reducing the overall infant mortality rate.

Implementation Strategy:

- Continue with collaboration strategies between the Department for Public Health, Kentucky SIDS Network, National SIDS Alliance, Kentucky Pediatric Society, Kentucky Medical Association, and the Cabinet for Families and Children to provide educational opportunities for professionals, parents, families, child-care providers and communities to become educated in identifying risk factors and strategies for SIDS risk reduction.
- The Kentucky Child Fatality Review System must continue to support local child fatality review teams in their efforts to review circumstances surrounding the unexpected deaths of infants and assist in the development of prevention strategies to decrease the incidence of SIDS.
- Continue tracking the sleep positions of infants who have died from Sudden Infant Death Syndrome.

12.4. Reduce the rate of child mortality to 20 per 100,000 children ages 1-4 and 17 per 100,000 children ages 5-14.

Baseline: 29.6 per 100,000 children ages 1-14 in 1997.

Target Setting Method: Based on *Healthy People 2010* Objective 4 and prior national and state goals.

Data Sources: Kentucky Vital Statistics, Health Data Branch

The death of a child not only affects the family, but the entire community. Approximately 35 percent of deaths of children ages 1-14 are attributable to injuries. The leading causes of child deaths in Kentucky include motor vehicle accidents, homicide, asphyxia, fire/burns, drowning, and suicide. These deaths are for the most part, preventable. The deaths of children present a public health concern and an opportunity for prevention.

Implementation Strategy:

- Systematic review by local multidisciplinary child death review teams into circumstances surrounding specific deaths to identify risk and preventable factors associated with these deaths.
- Collaboration among agencies in the development and implementation of educational initiatives for parents, families, professionals, and the community to decrease child deaths.
- Continue collaboration between the Kentucky Child Fatality Review System and Kentucky Safe Kids Coalition to increase educational opportunities on child injury prevention for the community.
- Development of a network of certified carseat/seatbelt inspectors and educators for use in community initiatives.
- Offer training in CPR and the Heimlich Maneuver to parents, families, child-care providers, paraprofessionals and professionals.
- Provide education along with promotion and funding of working smoke detectors for homes unable to purchase devices.
- Increase funding for counseling services for children with depression, family dysfunction, and other psychosocial problems.
- Collaborate with appropriate local health departments, schools, private physicians, and community mental health centers in the development of age appropriate suicide prevention programs and promotion of routine screening for depression and suicidal tendencies.

12.5. Reduce the fetal death rate to no more than 4 per 1,000 live births plus fetal deaths.

Baseline: 4.6 per 1,000 live births in 1997.

Target Setting Method: Better than the best.

Data Sources: Kentucky Vital Statistics, Health Data Branch, RNDMU Data

Fetal death is associated with maternal complications of pregnancy such as diabetes, hypertension, and inadequate nutrition. Maternal smoking, drug abuse, domestic violence, and alcohol abuse contribute to fetal death. Fetal mortality rates are also increased if a congenital anomaly (birth defect) is present such as neural tube defects.

Implementation Strategy:

- Implementation of a Medicaid funded smoking cessation program for pregnant women that includes individual counseling and nicotine replacement therapy.
- Preconception counseling for all women of childbearing age with the goal of identifying and reducing risk factors prior to conception, including identification of substance abusers and those with chronic medical conditions such as diabetes.
- Encourage folic acid supplementation for women of childbearing age to decrease the incidence of neural tube defects.
- Promote early and consistent prenatal care by increasing access to include non-traditional sites for pregnancy testing and prenatal care.
- Routine preconception and prenatal screening of women who may be victims of domestic violence and proper referral.
- Routine preconception and prenatal screening of women for genetic risk factors associated with an increased risk of congenital anomalies and referral for genetic testing when appropriate.

12.6. Reduce the perinatal mortality rate to no more than 4.5 per 1,000 live births plus fetal deaths.

Baseline: 6.6 per 1,000 in 1997.

Target Setting Method: Based on *Healthy People 2010* objectives, previous State target

Data Sources: Kentucky Birth Surveillance Registry (KBSR)
Kentucky Vital Statistics Data
CDC National Center for Health Statistics

The perinatal mortality rate includes both deaths of live-born infants through the first 7 days of life and fetal deaths after 20 weeks gestation. Because this rate includes both deaths of live-born infants and fetal deaths, it is a useful overall measure of perinatal health and the quality of health care provided to pregnant women and newborns.

Significant risk factors for perinatal death include low birthweight, preterm birth, and congenital anomalies. Maternal risk factors contributing to low birthweight and preterm birth include substance abuse (tobacco, drugs, and alcohol), inadequate weight gain, poor nutrition, inadequate or absent prenatal care, and chronic conditions such as hypertension and diabetes.

Implementation Strategy:

- Provide preconception counseling to all women of childbearing age with the goal of reducing risk factors prior to conception.
- Facilitate early entry into prenatal care by coordinating efforts and co-location of health care providers and social services agencies.
- Increase access for genetic counseling and testing.
- Promote both professional and para-professional home visits with emphasis placed on high-risk groups, including the use of neighborhood “mentors.”
- Focus community education on groups at risk for poor pregnancy outcomes.
- Assure that the very low birth weight babies are delivered at facilities equipped for high-risk deliveries and neonates.
- Continue support of the federally funded WIC program.
- Increase availability of nutritionists for patient education in the private as well as the public sectors.
- Promote breastfeeding for all childbearing women, unless medically contraindicated.
- Educate the public on the benefits of folic acid prior to and during pregnancy and the effects of smoking, alcohol, and drug use in pregnancy.
- Develop a proposal for Medicaid reimbursement for smoking cessation pharmaceuticals and counseling for pregnant women who smoke.

12.7. Reduce the maternal mortality to no more than 3.3 per 100,000 live births.

Baseline: 3.8 per 100,000 live births in 1997.

Target Setting Method: Based on *Healthy People 2010* Objective 7 goal and prior national and state statistics.

Data Sources: Kentucky Vital Statistics, Health Data Branch

The majority of maternal deaths in Kentucky, as in the nation, are due to complications of pregnancy. Although the number of deaths is small, it is significant in that most complications of pregnancy are medically manageable with early identification and management by a health care provider experienced in high-risk pregnancies.

Implementation Strategy:

- Increase access to early prenatal care and referrals for complications to qualified professionals and facilities specializing in high-risk pregnancy conditions.
- Promote continuing education of all health professionals to enhance their knowledge of complications of pregnancy with early identification and acceptable medical management.
- Promote preconception counseling of all women of childbearing age with identification of potential risk factors and risk reduction to ultimately improve a pregnancy outcome for mother and baby.
- Routine preconception and prenatal screening of women for domestic violence with appropriate referrals.
- Continue support of the Maternal Mortality Review committee in investigation of all maternal deaths occurring in Kentucky.

- 12.8. (Developmental) Increase the proportion of women’s health care providers who routinely provide preconception counseling for women of childbearing age without a permanent method of contraception.**

Target Setting Method: Based on *Healthy People 2010* Objective 8.

Potential Data Sources: Patient Services Reporting System (PSRS)
Consider using PRAMS for data collection

The purpose of preconception counseling is to identify conditions that could affect a future pregnancy but may be altered by early intervention with maternal lifestyle modification and improved health prior to conception. Reducing risks prior to conception would significantly decrease maternal and infant morbidity and mortality rates.

Implementation Strategy:

- Incorporate preconception counseling into women’s health visits including but not limited to negative pregnancy test visits, family planning initial and annual examination visits, preventive health care visits by all health care providers.
- Propose an educational requirement that preconception education become a component of school health education classes.
- Encourage community education sessions that include preconception health care. Integrate preconception care into programs on contraception, folic acid campaigns, pregnancy prevention programs, parenting classes, etc.

- 12.9. Increase to at least 90 percent the proportion of all pregnant women who begin prenatal care in the first trimester of pregnancy.**

Baseline: 1997 data indicated that 85 percent of Kentucky’s women entered prenatal care in the first trimester.

12.10. Increase to at least 95 percent the proportion of all live born infants whose mothers received adequate prenatal care based on ACOG guidelines and Kessner Index

Baseline: 1997 data indicated that 96 percent of white women and 91 percent non-white women received adequate prenatal care.

Target Setting Method: Based on *Healthy People 2010* Objective 11 and prior national and state goals

Data Sources: Kentucky Vital Statistics, Health Data Branch
RNDMU (Region IV Network for Data Management/Utilization)

Prenatal care is composed of risk assessment, risk reduction, and education. Research has shown that women who begin prenatal care early in pregnancy and receive the recommended care have improved outcomes with lower maternal and infant morbidity and mortality rates.

The risk of poor birth outcomes is greatest among the youngest mothers, non-whites, and women in lower socio-economic groups. Education and alternative methods of providing prenatal care must be directed at the high-risk groups for the best possible outcomes for both the mother and baby.

Implementation Strategy:

- Improve early confirmation of pregnancy by offering pregnancy testing and counseling in non-traditional sites such as schools and public assistance offices.
- Provide routine preconception counseling for all females of childbearing age emphasizing the importance of early and adequate prenatal care with a special focus on educating high-risk groups. Examples of where preconception education could take place include but are not limited to: schools, family planning clinics, WIC clinics, public assistance offices, mental health centers, community centers, employers, and other public and private health care facilities.
- Increase accessibility to affordable prenatal care in satellite community centers or other non-traditional sites that offer extended hours, culturally sensitive workers, and the use of neighborhood “mentors” to emotionally support the pregnant woman through her pregnancy.

12.11. (Developmental) Increase to at least 65 percent the proportion of women who receive a postpartum visit within 42 days after delivery.

Target Setting Method: Based on HEDIS indicator and *Healthy People 2010* Objective 14
Recommended ACOG guideline

Potential Data Sources: Medicaid Managed Care Pandora System
Kentucky Vital Statistics Birth Registry
Department for Public Health (PSRS System)
PRAMS Data

The postpartum period is a critical opportunity to assess the physical and psychosocial health of both the mother and her newborn and to provide the counseling and support needed to identify and address problems within the family.

The postpartum visit is an opportune time to discuss avoiding unplanned pregnancies, provide effective contraception if indicated, and offer preconception counseling for future pregnancies.

Implementation Strategy:

- Implement the Department for Public Health Pandora System.
- Consider implementation of PRAMS Data.
- Postpartum telephone and home visit follow-up by Nurses and Paraprofessionals (Resource Persons and HANDS Programs) with emphasis on the importance of postpartum care, and contraception use to prolong the intervals between pregnancies.
- Promote the importance of postpartum examinations during prenatal counseling visits, childbirth education classes, WIC visits and newborn examination or immunization visits.

12.12. Reduce the incidence of low birthweight to no more than 5 percent (Baseline: 6.4 percent), **very low birthweight to no more than 1 percent** (Baseline: 1.3 percent white and 3.0 percent nonwhite), **and reduce the incidence of premature birth to no more than 7.6 percent** (Baseline: 6.1 percent white and 9.1 percent nonwhite) **of all live births.**

Baseline data are 1997 data.

Target Setting Method: Based on *Healthy People 2010* Objectives 17&18.

Data Source: Kentucky Vital Statistics Birth Registry

Premature birth is the leading cause of infant death and affects approximately 8 percent of all live births nationally. Numerous hypotheses have been researched to find the cause(s) of preterm labor without any significant statistical change in the

percentage of preterm births over the past decade. Great medical advances have been made in sustaining life in infants born prematurely.

Demographic risk factors for low birthweight include poverty, pregnancies spaced close together, non-white race, exposure to violence or victimization, teens, less than 12 years of education. Low birthweight has also been associated with maternal smoking, bacterial vaginosis, substance abuse, and periodontal (dental) disease.

Premature and low birthweight infants are significantly more likely to experience lifetime developmental and neurological disabilities than the infant of normal birthweight, including blindness, cerebral palsy, mental retardation, and requirements for long-term care.

The financial impact on Kentucky for premature and low birthweight infants is approximately \$120 million per year. This figure does NOT include long-term care or consideration of the emotional as well as financial impact on families.

Implementation Strategy:

- Enhance obstetrical provider's education on the latest research data that suggests contributing factors for premature births include periodontal disease, bacterial vaginosis, and inadequate weight gain during pregnancy and appropriate medical management.
- Enhance dental care provider's education on the risks and treatments of periodontal disease in pregnancy. Promote routine dental evaluation in all pregnant women.
- Promote routine screening for domestic violence during prenatal visits for all pregnant women and appropriate referrals.
- Facilitate early entry into prenatal care by coordinating efforts and co-location of health care providers and social services agencies.
- Enhance the access and provision of prenatal care in non-traditional sites such as neighborhood community centers by culturally diverse providers.
- Promote both professional and para-professional home visits with particular emphasis on the higher risk groups, including the use of neighborhood volunteers or "mentors".
- Consider the role of infertility treatments with the increase in multiple fetuses and increase incidence of prematurity and low birthweight.
- Focus community education on higher risk groups including lower socio-economic, African-Americans, immigrants, multiple gestations, substance abusers, and victims of domestic violence, teens, older mothers, women with inadequate nutrition and/or weight gain, and those with chronic medical conditions (diabetes and hypertension).
- Increase access to contraception, including emergency contraception, and continue support of pregnancy prevention initiatives like PSI and RPR to prevent unplanned pregnancies.

- Provide preconception health counseling to all women of childbearing age.

12.13. Increase to at least 90 percent the proportion of very low birthweight infants (1500 grams or less) born at facilities equipped for high-risk deliveries and neonates.

Baseline: 63.3 percent in 1997.

Target Setting Method: The focus of this objective is based on the *Healthy People 2010* Objective 15.

Data Sources: Region IV Network for Data Management and Utilization
Kentucky Vital Statistics, Data Health Branch

Research has shown that very low birthweight infants experience lower morbidity and mortality rates if they are delivered at hospitals with specialized staff and equipment to manage their special medical needs.

Geographically, Kentucky has many rural areas with only three Level III facilities (2 in Louisville and 1 in Lexington). Many women are reluctant to leave their small rural towns and deliver in a larger urban hospital. In addition, physicians may be reluctant to transfer a patient many miles to one of the Level III facilities unless complications in the mother or newborn occur. Education regarding the advantage of prenatal transfer is needed for both the public and professional staff before significant improvement is seen in meeting this objective.

Implementation Strategy:

- Improve data collection to include out-of-state hospitals.
- Enhance continuing education of all health care providers and facilities that provides maternity services with special emphasis on physician and staff training in appropriate timing of pre-delivery maternal transfer, avoiding neonatal emergency transfers.
- Assure adequate transportation to access Level III facilities.
- Incorporate routine prenatal education of all expectant parents on the necessity and improved outcomes of pre-delivery transfer of mothers with very low birthweight babies to level III facilities.
- Professional Organizations and Licensing Agents must be educated on the importance of adopting this standard of care and incorporating it into practice policies.

12.14. (Developmental) Increase the proportion of women who achieve the recommended weight gain during pregnancy.

Target Setting Method: Based on *Healthy People 2010* Developmental Objective 19 and the Institute of Medicine's guidelines.

Potential Data Source: PRAMS Data

Current evidence indicates that gestational weight gain, particularly during the second and third trimesters, is an important determinant of fetal growth, and inadequate weight gain during pregnancy is associated with poor outcomes including low birthweight, intrauterine growth retardation, and increased infant mortality.

Maternal weight gain is susceptible to intervention and represents an avenue for prevention of poor birth outcomes. The guidelines for weight gain in pregnancy are based on a woman's pre-pregnancy body mass index (ratio of weight to height). A woman with a normal BMI should gain 25-35 pounds; those with a below normal BMI should gain 28-40 pounds, and overweight women should gain 15-25 pounds. Weight reduction should never be recommended in pregnancy.

Implementation Strategy:

- Implement an available data collection system.
- Nutrition education, including recommended weight gain, to be included in routine prenatal care visits, childbirth education classes, WIC participants, and community education promotion activities.
- Promote education of health care providers of the recommended current weight gain guidelines.
- Increase accessibility to early pregnancy detection and early prenatal care.
- Continue support of the federally funded WIC program.
- Increase availability of nutritionists for patient education in the private sector by location in private physician's offices.

12.15. (Developmental) Increase to at least 75 percent the proportion of mothers who breastfeed their babies in the early postpartum period; to at least 50 percent the proportion who continue breastfeeding until their babies are 6 months old; and to at least 25 percent the proportion who breastfeed until their infants are 1 year old.

Baseline: 1996 - 44.4 percent during the early postpartum period and 12.7 percent at 6 months.

Target Setting Method: Based on *Healthy People 2010* Objective 29 and recommendations of the American Academy of Pediatrics

Potential Data Sources: Annual CDC Review (not specific to Kentucky)
Mother's Survey, Ross Products Division, Abbott Laboratories, Inc.

Breastfeeding Statistics Reports, Kentucky WIC Report
#1596 - Kentucky WIC Infant Feeding Survey

Breast milk is widely acknowledged to be the most complete form of nutrition for infants. The benefits of breastfeeding include decreased respiratory infections and ear infections and increased immunity to disease. Breastfeeding contributes to decrease uterine bleeding in the postpartum period, thereby decreasing the incidence of anemia in the mother. Women who breastfeed also have a lower risk of osteoporosis and pre-menopausal breast cancer.

The American College of Obstetricians and Gynecologists, the American College of Nurse-Midwives and the American Academy of Pediatricians recommend breastfeeding unless otherwise medically contraindicated.

Implementation Strategy:

The most effective breastfeeding programs use a combination of ideas for breastfeeding promotion including the following:

- Provide education and support to mothers before and after delivery.
- Improve hospital policies through development of local coalitions and education on Baby Friendly Hospital Initiatives 10 Steps for successful breastfeeding.
- Improve information given to pregnant and breastfeeding women through continuing education offerings for professional staff.
- Develop a breastfeeding peer counselor network within the local community based programs that work with families to include but not limited to the HANDS Program, WIC program, Resource Persons Program, La Leche League, and Childbirth Educators.
- Increase the number of available lactation consultants in communities through continuing education of local health department staff.
- Media campaigns to increase the number of breastfeeding friendly environments within the workplace and community.
- Continue support of the federally funded WIC program and the program's breastfeeding promotion component.

12.16. Reduce the incidence of Neural Tube Defects (Spina bifida and Anecephaly) to 12 per 10,000 births by increasing the proportion of women of childbearing age who take a daily vitamin that contains 0.4 mg of folic acid.

Baseline: 1997 data show 20 per 10,000 births are affected with a neural tube defect and only 38 percent of women of childbearing age take a daily vitamin containing folic acid).

Target Setting Method: Based on *Healthy People 2010* Objectives 26 & 27 and previous State Objectives

Data Sources: Kentucky Birth Surveillance Registry (KBSR)
Centers for Disease Control and Prevention
National Birth Defects Prevention Network (NBDPN)
March of Dimes
Kentucky BRFSS

Unique cultural, ancestral, and environmental characteristics of Kentucky, as noted below, create an environment for increased risk of congenital anomalies, including NTDs:

- A. High rate of consanguinity
- B. English, Scotch, Irish, or Welsh heritage
- C. High prevalence of poverty and low education levels
- D. High prevalence of Diabetes Mellitus
- E. High teen birth rate
- F. Increased migration of Hispanics into Kentucky

Folic acid, one of the B-vitamins, is necessary for normal cell growth and development of the embryo. Folic acid is required for the production of DNA, which is necessary for rapid cell growth needed to make fetal tissues and organs in the early weeks of pregnancy. Although the specific dynamics are yet unknown, research has proved that folic acid taken prior to and during early pregnancy can reduce the incidence of NTDs from 50-70 percent.

Due to this information, the United States Public Service has recommended that all women of childbearing age consume 0.4mg of folic acid per day. Women with a previous child with a neural tube defect should consume 10 times that amount on a prescription basis.

Implementation Strategy:

- Promote timely reporting of neural tube defect cases to the Kentucky Birth Surveillance Registry.
- Implement a system for reporting stillbirths to the KBSR.
- Provide folic acid education and genetic counseling to families identified as having newborn/stillborn/aborted fetus with a neural tube defect.
- Provide sufficient funding to provide low-income women of childbearing age with folic acid supplements.
- Promote preconception health education counseling for all women/teens of childbearing age.
- Encourage early entry into prenatal care.
- Conduct a statewide folic acid awareness campaign for both the public and health care providers.
- Promote community outreach targeted for special high-risk populations.

12.17. Increase to at least 50 percent the proportion of pregnant smokers who abstain from tobacco use beginning early in pregnancy and maintain abstinence for the remainder of their pregnancy, following delivery, and through 6 weeks postpartum.

Baseline: 1998 data indicate that approximately 30 percent of pregnant smokers abstain from tobacco at some time during the pregnancy.

Target Setting Method: Retain *Healthy Kentuckians 2000* target

Data Source: Implementation of PRAMS data needed
Ad Hoc Surveys and HEDIS data
Pregnancy Nutrition Surveillance System (PNSS)
Vital Statistics Birth Certificates

Research has shown that pregnant women who smoke have increased risks of poor pregnancy outcomes including miscarriage, preterm birth, low birthweight, abruptio placenta, intrauterine growth retardation, and SIDS.

Unfortunately, current surveillance of pregnant smokers is very subjective since it is based only on self-reporting. The legitimacy and reliability of the data is questionable because most women will provide a socially acceptable response. Validity of the outcome is greatly improved with urine cotinine or exhaled carbon monoxide measures.

Another area to consider is the impact secondary smoke plays during pregnancy.

Currently, two research studies are being conducted as a joint effort between the March of Dimes, Department for Public Health and a Nurse-Midwife researcher from the University of Louisville. The two studies are evaluating the percentage of pregnant smokers who quit during pregnancy when counseling is combined with carbon monoxide measurements. Preliminary data are encouraging.

Implementation Strategy:

- Develop a formal Medicaid proposal from the DPH for approval of pharmaceutical smoking cessation aids and behavioral counseling for pregnant women who are eligible for Medicaid coverage.
- Provide regionally located intensive training workshops for health care providers on smoking cessation counseling and monitoring specifically for pregnant women.
- Promote preconception counseling to all women of childbearing age during primary care visits and endorse early entry into prenatal care.
- Provide community education on the risks of smoking in pregnancy, exposure of mother and baby to secondary smoke, and available cessation therapies, including support groups.

12.18. Reduce the incidence of Fetal Alcohol Syndrome (FAS) by increasing the abstinence from alcohol use by pregnant women.

Baseline: 1998 data show a FAS ratio of 1:700 or an estimated total of 74 newborns affected with FAS per year in Kentucky.

Target Setting Method: Based on *Healthy People 2010* Objectives 21&24.

Data Sources: Kentucky Birth Surveillance Registry
Potential source - PRAMS data

Fetal Alcohol Syndrome is one of the leading preventable causes of mental retardation and a leading cause of birth defects, including growth deficiency and microcephaly. The cause of FAS is alcohol ingestion during pregnancy. It is also known that more subtle growth and neurodevelopmental deficits occur and affected children may show infantile irritability, poor coordination, hypotonia, attention deficit/hyperactivity disorder, and poor school performance or behavior problems.

The diagnosis of FAS is based on three criteria: prenatal or postnatal growth retardation, central nervous system impairment, and characteristic facial malformations. Inconsistencies in diagnosis have been problematic somewhat due to lack of training among clinicians to recognize the disorder, difficulty in evaluating newborn central nervous system impairment, and society's acceptance of alcohol use and preference to avoid the stigma associated with alcohol problems.

There is no known "safe" level of alcohol consumption in pregnancy, therefore, the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists recommend that women who are pregnant or planning a pregnancy totally abstain from the use of alcohol.

Implementation Strategy:

- Provide preconception counseling to all women of childbearing age with the goal of identifying and reducing risks factors.
- Expand pregnancy testing to non-traditional sites to enhance early entry into prenatal care.
- Provide routine counseling on the effects of alcohol in pregnancy at the time of pregnancy tests and during early and ongoing prenatal visits.
- Promote continuing education of health professionals to increase their knowledge base about FAS and appropriate diagnosis and referrals.
- Increase collaboration between the local Public Health Departments and the Community Mental Health Centers through the establishment of linkage

agreements to increase the identification and referral of pregnant women requiring alcohol prevention and treatment services.

12.19. (Developmental) Reduce the incidence of birth defects caused by prenatal exposures to prescription medications with known teratogenic effects, such as Acutane and anti-seizure medications.

Target Setting Method: Based on the *Healthy People 2010* Objective 25.

Potential Data Source: Kentucky Birth Surveillance Registry

It has been estimated that women on average ingest four (4) drugs during pregnancy. Some of these medications are known to cause devastating birth defects, but are deemed to have sufficient unique benefits that warrant their distribution by prescription.

There are many prescription drugs with teratogenic effect with a few highlighted below:

Accutane: Used by women of childbearing age for severe cystic acne that does not respond to other treatments. Severe malformations can occur even when taken in small doses for short periods of time. Adverse outcomes may include cranio-facial abnormalities, central nervous system, cardiovascular, and thymic defects.

Hydantoin (Dilantin): An anticonvulsant medication, it is associated with a distinct pattern of anomalies called the “fetal hydantoin syndrome”.

Thalidomide: First prescribed in the late 1950’s for nausea, anxiety, and insomnia and was withdrawn in the early 1960’s when it was discovered that it caused major limb defects. It has been marketed again recently with strict usage guidelines as a treatment for leprosy and research into some conditions caused by AIDS and certain cancers.

Valproic Acid (Depacon, Depakote): Anticonvulsant medication associated with ten times (10X) an increase in neural tube defects if taken during pregnancy.

Warfarin: An anticoagulant, may result in a distinct pattern of anomalies including nasal hypoplasia, eye anomalies, malformations in the central nervous system, or mental retardation.

Implementation Strategy:

- Increase the number of women who receive preconception counseling that includes information on prescription drug exposures.
- Increase access to contraception, including emergency contraception to prevent unplanned pregnancies.
- Promote early entry into prenatal care and improve access to genetic counseling and referral services.

- Partner with the Department for Public Health Pharmacy to provide professional education on risks associated with prescription drug use during pregnancy and alternatives.

12.20. Increase by 50 percent the number of pregnant alcohol and/or drug abusers who are admitted to publicly funded substance abuse treatment programs.

Baseline: 1997 - 264 pregnant women were admitted to public facilities for substance abuse treatment.

Target Setting Method: Collaborative agreement between the Department for Public Health and the Department for Mental Health and Mental Retardation Services.

Data Sources: DMHMR Minimum Client Data Set
Medicaid Management Information Services

Use of illicit drugs, particularly marijuana, is becoming more common during pregnancy. Certain illicit “street” drug and/or alcohol use in pregnancy has been shown to significantly contribute to premature birth, impaired fetal growth, neonatal seizures, developmental delays, school and behavioral problems and possible birth defects. Cocaine has been shown to cause abruptio placenta and cardiac complications in the mother. Alcohol use in pregnancy is associated with fetal alcohol syndrome. The effects on pregnancy of some illicit drugs are still unknown.

In addition, pregnant women who are substance abusers are at an increased risk of inadequate nutrition, poor weight gain, anemia, and infectious diseases such as sexually transmitted diseases, Hepatitis B, and HIV.

Elimination (or at least reduction) of illicit drugs and alcohol use in pregnancy would significantly reduce infant mortality and premature birth /low birthweight rates. Reduction in premature/low birthweight deliveries would appreciably decrease Kentucky’s financial obligation for these high-risk deliveries.

Implementation Strategy:

- Promote continuing education of all health care professionals on the needed skills for screening and appropriate referrals for substance abuse.
- Provide preconception counseling that includes screening for illicit drugs and alcohol abuse to all women of childbearing age.
- Counsel all women obtaining a pregnancy test on the effects of alcohol/ illicit drug use and available resources. Work with drug companies who manufacture home pregnancy test kits to include a statement on smoking, alcohol, and drug use in pregnancy.
- Promote early entry into and continuation of prenatal care.

- Promote routine screening of women of childbearing age for domestic violence since research has shown a strong linkage between domestic violence and alcohol abuse, drug use, and addiction.
- Increase collaboration between the local Public Health Departments and the Community
- Mental Health Centers through the establishment of linkage agreements to increase the identification and referral of pregnant women requiring substance abuse prevention or treatment services.
- Provide sufficient Medicaid funding to provide substance abuse prevention and early intervention services to eligible women of childbearing age.
- Provide sufficient Medicaid funding for substance abuse treatment programs.
- Based on available funding, implement a public awareness campaign focused on the effects of alcohol and drug use during pregnancy and the reduction of the intense shame and stigma associated with the pregnant substance abuser, with the purpose of increased patient acceptance of disclosure and treatment.
- Explore the possibility of a system to track referrals from health care providers to substance abuse providers, and to identify the number of clients entering substance abuse prevention and treatment services.

12.21. Ensure that 100 percent of all newborns are tested for phenylketonuria (PKU), congenital hypothyroidism, galactosemia and hemoglobinopathies.

Baseline: 1998 data reviewed showed a total of 51,164 births with 50,900 newborns having the required testing. This represents a 99.5 percent screening rate.

Target Setting Method: Based on *Healthy People 2010* Objective 31 and prior national and state goals.

Data Source: Neometrics, Inc. MSDS

Newborn screening for PKU, Galactosemia, Congenital hypothyroidism, and Hemoglobinopathies is required by KRS 214.155. Testing is required prior to hospital discharge on all newborns. The blood specimen is sent to the Division of Laboratory Services for testing. All positive test results require referral to either the University of Kentucky Medical Center or the University of Louisville Medical Center for definitive diagnosis and follow-up care.

The Department for Public Health contracts with both medical centers for their services and also supplies diagnosed PKU patients with the necessary dietary formulas.

Implementation Strategy:

- Continue with the already successful program that is currently in place.

- Continue monitoring the number of deliveries/year verses the number of unduplicated screenings.
- Promote parent education about the need for screening at prenatal visits, home visits, and childbirth education classes.
- Conduct annual workshops for all health care providers to provide continuing education in the area of newborn screening.
- Develop a practitioner’s manual for use by health care providers that will include policies, correct screening procedures, and legal information on newborn screening.

12.22. (Developmental) Increase the proportion of babies aged 18 months and younger who receive recommended primary care services at the appropriate intervals.

Target Setting Method: Based on Healthy People 2010 Objective 37.

Potential Data Source: Department of Medicaid Services/Division of Children’s Health

The American Academy of Pediatrics recommends that infants have a total of ten (10) primary care visits in their first eighteen months of life. Each of the visits includes an assessment with a recommended set of measurements, screenings, developmental and behavioral assessments, immunizations, and anticipatory guidance. The purpose of the recommended preventive care visits is to totally avoid, reverse, or minimize chronic or disabling complications and their impact on children and their families.

These routine recommended visits allow health care professional an opportunity to assess for developmental delays, sensory impairments, and other disorders that may not be obvious to a child’s parents. Approximately 12 percent of all children have developmental delays, which can interfere significantly with academic success and life functioning. Early intervention has been shown to improve family functioning, child behavior, adult outcome, and socio-economic status.

Children with (or risk of developing) a chronic or disabling condition, often referred to as children with special needs, include children with psychological as well as physical problems. National population-based data is not currently available to assess the proportion of infants who receive the full schedule of benefits. The development of such data is important to the assurance of infants’ access to comprehensive, age-appropriate primary care.

Implementation Strategy:

- Promote parental education on the need for preventive health screenings for infants during prenatal and postpartum visits, WIC visits, and at the time of routine immunizations.

- Implementation of KCHIP program to provide needed insurance coverage for eligible families.
- Continuing education for health care providers on the AAP recommendations and appropriate screenings needed on the childbirth through 18 months of age.

12.23. Reduce the prevalence and limit the consequences of serious developmental disabilities arising from events in the prenatal and infant periods.

	<u>1997 Baseline rates per 10,000</u>	<u>2010 target</u>
Mental retardation		
Mild (IQ 50-70)	72.4	68.7
Severe/profound (IQ < 50)	39.1	37.1
Cerebral Palsy	28.1	27.3
Blindness	10.5	10.0
Moderate/Profound hearing loss	12.2	11.6

Target Setting Method: 5 percent improvement based on *Healthy People 2010* objectives.

Data Sources: Kentucky Birth Surveillance Registry
 First Steps Central Billing and Information System
 Kentucky High-Risk Hearing Registry
 Kentucky Society to Prevent Blindness

The majority of developmental disabilities are caused by events that occur in the prenatal, newborn, and infant periods. Typically, many of these disabilities have either unrecognized or without intervention until the child approached school age or was educationally challenged in school. Early detection and intervention are of paramount importance if we are to limit the consequences of disabilities.

First Steps or KEIS (Kentucky Early Intervention System) is a comprehensive, statewide system of community-based, family-centered services for young children (birth through 3years) and their families. The vision of First Steps is to maximize the potential of infants and toddlers either having or being at risk for developmental disabilities. The Department for Public Health leads this interdisciplinary program that brings together health and social services to meet the special needs of children and their families. Services are provided locally based on the family's resources, priorities, and concerns. First Steps has 8 regional intensive evaluation clinics that provide diagnosis, evaluation, and program recommendations.

Implementation Strategy:

- Promote preconception screening and counseling to all women of childbearing age during routine primary care visits.

- Promote early pregnancy testing and entry into prenatal care by co-locating health care with social services agencies.
- Assure that women with high-risk pregnancies have access to health care providers who are qualified to manage high-risk pregnancies and deliveries.
- Assure that all very low birthweight infants are delivered in facilities equipped for high-risk deliveries and neonatal care.
- Guarantee access to substance abuse treatment programs for pregnant women.
- Focus community education on risk reduction for pregnant women including adequate weight gain and dietary intake, abstinence from smoking, alcohol, and drugs and early prenatal care.
- Continue the current policy that First Steps will accept referrals from multiple sources regardless of a family's income level.
- Promote prenatal, postpartum, and infant home visiting through the Resource Moms and HANDS (Health Access Nurturing Development System) programs.
- Endorse preventive health care guidelines for infants ages birth-18 months as defined by the American Academy of Pediatrics.

12.24. To increase to a minimum of 90 percent the number of newborns who are screened for hearing disorders and when indicated, receive appropriate diagnosis and intervention by 6 months of age.

Baseline: Currently only 45 percent of all Kentucky newborns are screened for hearing loss.

Target Setting Method: *Healthy People 2010*, Objective 33
Joint Commission on Infant Hearing Statement

Data Sources: Kentucky High-Risk Hearing Registry
Title V Performance Measures

The future of a child with a significant hearing loss depends on early identification (audiological diagnosis prior to 6 months of age), followed by immediate and appropriate intervention.

If a child with hearing loss is not identified early, it is difficult for him/her to acquire the fundamental language, social, and cognitive skills that provide the foundation for later schooling, and success. When early identification and intervention occurs, children with hearing loss make amazing progress and are more successful in school. The earlier the intervention occurs, the more dramatic the benefits.

Unfortunately, the average age at which a child with significant hearing loss is identified in the United States is somewhere between 2 and 2 ½ years of age. Factors that contribute to failure of identifying these children include lack of

parental awareness of the indicators of hearing loss, lack of universal newborn screening, and/or lack of preventive health care examinations.

Implementation Strategy:

- Support universal newborn screening for hearing disorders using currently accepted methods prior to hospital discharge.
- Refer abnormal screening results to the Commission for Children with Special Needs.
- High-Risk Hearing Registry will provide oversight responsibility for the hospital screening program to assure adequate training of staff and proper equipment calibration.
- Department for Public Health will work with Audiologists and other community providers to provide community based screening and education programs.

Contributors

- Trisha Mullins, CNM, Women’s Health Consultant, Division of Adult and Child Health, Department for Public Health, Chapter Coordinator
- Steve Armstrong, MD, President, Kentucky Chapter, American College of Obstetricians and Gynecologists
- Zaida Belendez, RN, “First Steps” Program, Division of Adult and Child Health, Department for Public Health
- Kerda DeHaan, KBSR Data Manager, Division of Adult and Child Health, Department for Public Health
- Sophia Franco, MD, Medical Director, Department of Pediatrics, University of Louisville
- Stanley Gall, MD, Chief, Department OB-GYN, University of Louisville
- Beth Harp, MS, Consultant, Newborn/Genetics Screening Program, Department for Public Health
- Laura Harrod, Lactation Consultant, Nutrition Branch, Department for Public Health
- Fran Hawkins, Manager, Nutrition Branch, Division of Adult and Child Health, Department for Public Health
- Mary Ann Hindman, Director of Program Services, March of Dimes- Greater Kentucky Chapter
- Sharma Klee, RN, Family Planning Program Consultant, Division of Adult and Child Health, Department for Public Health
- Linda Lancaster, RN, Birth Surveillance Registry, Division of Adult and Child Health, Department for Public Health
- Hatim A. Omar, MD, Adolescent Medicine/Young Parents Program, Department of Pediatrics, University of Kentucky
- Joyce Robl, MS, CGC, Genetics Consultant, Kentucky Birth Surveillance Registry, Department for Public Health

- Mickey J. Smith, RN, Pediatric Nurse Consultant, Division of Adult and Child Health, Department for Public Health
- Carol Sauers Stange, Women's Program Administrator, Division of Substance Abuse, Mental Health/Mental Retardation, Department for Community Services
- Linda Vanorio, RN, BSN, Consultant-Child Mortality Review, Division of Adult and Child Health, Department for Public Health
- Emma Walters, RD, Chief Nutritionist, Division of Adult and Child Health, Department for Public Health
- Sheila Ward, CNM, Department of OB-GYN , University of Louisville
- Todd Warnick, Tobacco Control Coordinator, Tobacco Program, Department for Public Health
- Peter Wong, MD, Director, General Pediatrics, University of Kentucky