

**Midcourse
Review**



**Maternal, Infant,
and Child Health** **16**

Co-Lead Agencies:

Centers for Disease Control and Prevention
Health Resources and Services Administration

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Goal: Improve the health and well-being of women, infants, children, and families.

Introduction*

The well-being of mothers, infants, and children is an important public health goal for the United States because it predicts the health of the next generation. The objectives of the Maternal, Infant, and Child Health focus area address a wide range of conditions related to the quality of life for mothers and their children. Many of these conditions disproportionately affect select racial and ethnic populations in the United States.

At the midcourse review, progress was made toward achieving many of the maternal, infant, and child health objectives. Clear reductions occurred in infant deaths and deaths attributed to sudden infant death syndrome (SIDS). Reported rates for SIDS declined by 15 percent between 1999 and 2002.

As a result of the “Back to Sleep” campaign and other SIDS prevention education, the proportion of infants being put to sleep on their backs has doubled since the baseline in 1996, but the rate has leveled off in recent years.^{1,2,3,4} The proportion of women of child-bearing age consuming the recommended daily intake of folate has increased. The U.S. Department of Health and Human Services (HHS), through the Food and Drug Administration and the Centers for Disease Control and Prevention (CDC), has emphasized food fortification with folic acid to help prevent neural tube defects (NTDs). Efforts have been made to improve the health of underserved populations and to reduce health disparities in the rate for NTDs, including the use of evidence-based communication interventions to reach the Hispanic population and other groups with higher rates for NTDs.⁵ Another HHS program is the Health Resources and Services Administration’s (HRSA’s) Healthy Start Initiative, which aims to ensure adequate prenatal care and to reduce barriers to health care access in low-income communities.⁶

Modifications to Objectives and Subobjectives

The following discussion highlights the modifications, including changes, additions, and deletions, to this focus area’s objectives and subobjectives as a result of the midcourse review.

As stated in *Healthy People 2010*: “Most developmental objectives have a potential data source with a reasonable expectation of data points by the year 2004 to facilitate setting 2010 targets in the mid-decade review. Developmental objectives with no baseline at the midcourse will be dropped.” Accordingly, at the midcourse review some developmental objectives and subobjectives were deleted due to lack of a data source. However, HHS and the agencies that serve as the leads for the Healthy People 2010 initiative will consider ways to ensure these public health issues retain prominence despite their current lack of data.

* Unless otherwise noted, data referenced in this focus area come from Healthy People 2010 and can be located at <http://wonder.cdc.gov/data2010>. See the section on DATA2010 in the Technical Appendix for more information.

Four developmental objectives and one developmental subobjective became measurable: childbirth classes (16-7), developmental disabilities—autism spectrum disorder (16-14c), fetal alcohol syndrome (FAS) (16-18), hospitalization for sickle cell disease among children (16-21), and medical homes for children with special health care needs (16-22).

The age range of objective 16-21 was revised from children aged 4 years and under to children aged 9 years and under. Modifications were made to subobjectives 16-20a and b. The mechanism for ensuring that all newborns are screened at birth for conditions mandated by their State-sponsored newborn screening programs (16-20a) was added to the objective: matching the number screened by the State to birth certificate information. Objective 16-20b was revised to “ensure that followup testing for screened positives is performed within an appropriate time period by monitoring the period from time of birth to initial diagnosis.” Objective 16-23 was revised from “the proportion of Territories and States with service systems for children with special health care needs” to “the proportion of children with special health care needs who receive care in family-centered, comprehensive, and coordinated systems.”

Four subobjectives were deleted because of a lack of nationally representative data sources: ectopic pregnancies (16-5b), post partum complications (16-5c), developmental disability—epilepsy (16-14d), and appropriate newborn referral to services (16-20c).

Two new subobjectives were added to breastfeeding (16-19): breastfeeding exclusively through 3 months (16-19d) and breastfeeding exclusively through 6 months (16-19e). These two new subobjectives are consistent with recommendations from the American Academy of Pediatrics and the World Health Organization and are based on the recent availability of data on exclusive breastfeeding. Research-based evidence has shown significant declines in infections among infants who are exclusively breastfed.⁷

Progress Toward Healthy People 2010 Targets

The following discussion highlights objectives that met or exceeded their 2010 targets; moved toward the targets, demonstrated no change, or moved away from the targets; and those that lacked data to assess progress. Progress is illustrated in the Progress Quotient bar chart (see Figure 16-1), which displays the percent of targeted change achieved for objectives and subobjectives with sufficient data to assess progress.

Objectives that met or exceeded their targets. From its original baseline of 35 percent, the proportion of infants being put to sleep on their backs (16-13) met its target of 70 percent. The national “Back to Sleep” campaign is one initiative that has educated physicians and caregivers about the risks associated with prone sleeping (sleeping with stomach facing down).⁸ Median red blood cell (RBC) folate levels for nonpregnant females aged 15 to 44 years (16-16b) exceeded its target of 220ng/ml. In addition to food fortification, one of the initiatives working to increase folate levels among females is the “Folic Acid Education Campaign.”⁹ Consumption of folic acid by women of childbearing age has been shown to reduce the rate for NTDs.¹⁰

Objectives that moved toward their targets. Progress was made toward the fetal, perinatal, infant, child, adolescent and young adult, and maternal death objectives and subobjectives (16-1a through e, 16-1g and h, 16-2, 16-3a and b, and 16-4, respectively).

The objective for maternal deaths (16-4) is associated with many conditions and causes, some of which may be more manageable with intervention than others. Although some progress was made toward reducing maternal deaths, achieving the target will require that national, State, and local policies address women's needs before and during pregnancy and that gaps in prevention programs and research be identified. Improved monitoring is essential to assessing the effectiveness of policies to reduce maternal illness and death. Through the Maternal and Child Health Bureau at HRSA, HHS has initiated review committees in several States to identify ways to prevent pregnancy-related deaths.¹¹

Progress was made toward the reduction of some birth defects, including spina bifida and other neural tube defects (16-15). However, continued efforts are needed to fully realize the potential for preventing birth defects and birth-defect-related deaths with known causes. Several centers for birth defects research and prevention are collaborating on a large study to determine environmental, genetic, and behavioral factors that cause or contribute to specific birth defects.^{12, 13}

Breastfeeding rates increased for immediate and 6- and 12-months post partum (16-19), and early prenatal care rates (16-6a and b) also slightly increased. Multiple initiatives support breastfeeding, from the Federal level down to the grassroots. For example, 32 States have passed laws allowing women to breastfeed in any public or private location, and 20 have laws exempting breastfeeding from public indecency laws.¹⁴ Five States have also implemented or encouraged development of breastfeeding awareness and education campaigns.¹⁴ Among Federal initiatives that encourage breastfeeding are the "National Breastfeeding Awareness Campaign,"¹⁵ the Healthy Start Initiative,^{16, 17} and the Title V Block Grant Program, which is intended to improve the health of all mothers and children in the Nation.

The proportion of women who have abstained from smoking during pregnancy increased (16-17c), moving toward the target of 99 percent. Federal partnership activities aimed at reducing tobacco use among pregnant women are under way, including efforts to strengthen States' capacity to develop, implement, and evaluate tobacco prevention and cessation programs for women of reproductive age and the Action Learning Lab to assist States directly.¹⁸

Objectives that moved away from their targets. Ten objectives and subobjectives moved away from their targets. The subobjectives for mental retardation (16-14a) and cerebral palsy (16-14b) moved the farthest away from their respective targets. For many children, the cause of mental retardation is unknown. In some cases, mental retardation may be a secondary condition resulting from birth defects, infectious diseases, or trauma.^{19, 20, 21} Because of the high rate of comorbidity, achieving objectives related to mental retardation targets is closely linked to reductions in the number of developmental disabilities and birth defects. Some causes of mental retardation are known and can be prevented. Activities designed to reverse this trend include initiatives to prevent FAS (16-18) and efforts to expand standardized newborn screening that prevents mental retardation caused by a variety of metabolic disorders.

As with mental retardation, the wide variety of contributing factors to cerebral palsy inhibits progress toward achieving the target for this objective. HHS supports, guides, and funds research on the factors that increase risk for cerebral palsy. In addition, the national "Learn the Signs. Act Early." campaign helps health care providers and parents identify earlier signs of developmental disorders, including autism, hearing loss, and cerebral palsy.²²

The rate for cesarean births (C-sections) (16-9), both primary and repeat, moved away from the target. According to the 2002 Birth Report, the rise in cesarean births may be due to nonclinical factors such as demographics, physicians' practice patterns, and maternal choice.²³ For older women, increased rates may be due to patient-practitioner concerns and the increased rate of multiple births.²³ The rate for repeat cesarean births increased. Although the causes for this increase are unknown, they may include reports on the risks associated with vaginal births after cesarean delivery, more conservative practice guidelines, and legal pressures. Although C-sections have been effective in saving lives, they also can increase the risk of illness and death.²⁴ Many programs have been initiated to reduce the rate for cesarean delivery with a focus on increasing the role of midwives, changing physicians' on-call schedules, and requiring second opinions from hospitals.²⁵

Other objectives and subobjectives that moved away from their targets included deaths in young adults aged 20 to 24 years (16-3c), maternal complications during labor and delivery (16-5a), low birth weight and very low birth weight (16-10a and b), and preterm births between 32 and 36 weeks of gestation (16-11b) and less than 37 weeks of gestation (16-11a). The increasing death rate for young adults may be due to the increase in the number of motor vehicle crashes, the leading cause of death in this age group.²⁶ The increase in the rates of maternal complications during hospitalized labor and delivery may be due to the increasing age of pregnant women, the use of epidural analgesia, and suboptimal care provided to select racial and ethnic groups.^{27, 28} Mothers aged 35 years and older and those who are black had the highest rates of labor and delivery complications. Part of the increase in low and very low birth weight rates may be due to recent increases in the rate for multiple births, which may be related to more widespread use of assisted reproductive technologies and pharmacologic treatment of infertility.²³ Similarly, since twins and triplets are more likely to be born early, the rise in multiple births affected the preterm delivery rate.²³

Objectives that demonstrated no change. No change occurred in the rate for infant deaths due to birth defects (16-1f). The new State Infant Mortality Collaborative was created to explore possible explanations for the increasing, stagnant, or high infant mortality rates in five States.²⁹

The rate for preterm births at less than 32 weeks of gestation (16-11c) also did not change. The specific causes of preterm delivery are not known. However, further increases in the proportion of women who receive preconception and prenatal care can improve access to screening and diagnostic tests that can reduce the risk of preterm birth and other poor-birth outcomes. Access to care is critical because it can reduce the risks of poor-birth outcomes.

Objectives that could not be assessed. At the time of the midcourse review, data to assess progress were unavailable for childbirth classes (16-7); very low birth weight infants born at level III hospitals (16-8); weight gain during pregnancy (16-12); age at diagnosis of autism spectrum disorder in children (16-14c); consumption of at least 400 µg of folic acid each day from fortified foods or dietary supplements by nonpregnant women aged 15 to 44 years (16-16a); abstinence from alcohol, binge drinking, and illicit drugs among pregnant women (16-17a, b, and d); FAS (16-18); mothers who breastfeed their babies exclusively through 3- and 6-months post partum (16-19d and e); bloodspot screening (16-20a) and bloodspot followup testing (16-20b); hospitalization for sickle cell disease among children (16-21); medical homes for children with special health care needs (16-22); and service systems for children with special health care needs (16-23).

Progress Toward Elimination of Health Disparities

The following discussion highlights progress toward the elimination of health disparities. The disparities are illustrated in the Disparities Table (see Figure 16-2), which displays information about disparities among select populations for which data were available for assessment.

Disparities in the maternal, infant, and child health objectives were evident among racial and ethnic populations. The Asian population had the best rates for several objectives, including those for fetal and infant deaths (16-1a through f), very low birth weight births (16-10b), preterm births (16-11a, b, and c), abstaining from cigarette smoking in pregnancy (16-17c), and breastfeeding in the early post partum and 6-months post partum periods (16-19a and b). The white non-Hispanic population had the best rates for many objectives, including infant deaths due to congenital heart defects (16-1g), maternal deaths (16-4), prenatal care (16-6a and b), attendance at childbirth classes (16-7), infants put to sleep on their backs (16-13), mental retardation (16-14a), cerebral palsy (16-14b), age at diagnosis for autism spectrum disorder (16-14c), consumption of folic acid (16-16a and b), FAS (16-18), breastfeeding at 1 year (16-19c), and service systems for children with special health care needs (16-23).

The disparities in infant deaths, both during the neonatal and the postneonatal periods (16-1c, d, and e), between the group with the best rates (the Asian population) and the Hispanic, white non-Hispanic, and black non-Hispanic populations increased significantly between 1998 and 2002. The increase in the disparities from the best group for the black non-Hispanic and the white non-Hispanic groups for infant death rates (16-1c, d, and e) may be related to the increase in disparities for these populations for very low birth weight (16-10b). The disparities between the Asian or Pacific Islander and the non-Hispanic black and white populations decreased for deaths of children aged 1 to 4 years (16-2a). While the disparity between the black non-Hispanic and Asian or Pacific Islander populations in death rates for adolescents aged 10 to 14 years increased, disparities decreased between these populations for deaths of adolescents aged 15 to 19 years (16-3b) and young adults aged 20 to 24 years (16-3c).

The American Indian or Alaska Native group also showed higher rates than the best group for fetal and infant deaths (16-1a through h), child deaths (16-2a and b), adolescent and young adult deaths (16-3a, b, and c), preterm delivery (16-11a through c), and FAS (16-18), as well as lower rates than the best group for prenatal care use (16-6a and b).

Black non-Hispanic women are at a higher risk of having low and very low birth weight babies (16-10a and b).³⁰ The greatest disparities from the best group rate for preterm delivery (16-11a, b, and c) were seen among black non-Hispanic women. Bacterial vaginosis has been shown to be associated with preterm deliveries³¹ and may contribute to the higher rate. Programs such as the Healthy Start Initiative seek to reduce rates of infant death and associated risks in disproportionately affected communities.³²

The black population also showed an increase in the disparities for mental retardation and cerebral palsy (16-14a and b), compared with the white population.³³ The disparities in the rates for mental retardation may be the result of differential patterns of referral for IQ testing, postnatal factors such as lead poisoning and anemia, and maternal conditions such as high blood pressure, diabetes, and sickle cell disease.³⁴ Differences in low birth weight may also be linked to these disparities in rates of cerebral palsy.³⁴

Of particular concern are the increases in disparities for smoking during pregnancy for the American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, Hispanic, black non-Hispanic, and white non-Hispanic populations, compared with the Asian population, which had the lowest rate for smoking during pregnancy (16-17c). Although Asian women met the target of 99 percent abstaining from smoking during pregnancy, the other racial and ethnic populations made little progress toward this target.

Of those objectives tracked by gender, females had the better rates for fetal, perinatal, and infant deaths (16-1a through e, g, and h), child deaths (16-2a and b), adolescent and young adult deaths (16-3a, b, and c), preterm births (16-11a, b, and c), mental retardation (16-14a), cerebral palsy (16-14b), age at identification of autism spectrum disorder (16-14c), hospitalizations for sickle cell disease (16-21), and service systems for children with special needs (16-23). Gender disparities of 100 percent or more existed for deaths of adolescents aged 15 to 19 years (16-3b) and deaths of young adults aged 20 to 24 years (16-3c). Gender disparities increased significantly for postneonatal deaths (16-1e), deaths of children aged 1 to 4 years (16-2a), and mental retardation (16-14a). Males had a better rate than females for low birth weight (16-10a).

Persons with at least some college education had the best rate for all objectives demonstrating significant disparities by education level, except for cesarean births to low-risk women (16-9a and b). This group reported the best rates for many objectives: fetal, perinatal, and infant deaths (16-1a through h), maternal deaths (16-4), prenatal care (16-6a and b), childbirth classes (16-7), low birth weight (16-10a and b), preterm births (16-11a, b, and c), folic acid consumption (16-16a and b), abstaining from cigarette smoking (16-17c), breastfeeding (16-19a through d), and service systems for children with special health care needs (16-23). Persons with less than a high school education demonstrated rates that were at least double the rates of persons with at least some college for postneonatal deaths (16-1e), infant deaths due to SIDS (16-1h), early entry into prenatal care (16-6a), attendance at childbirth classes (16-7), abstinence from smoking during pregnancy (16-17c), and breastfeeding during the early post partum period (16-19a). Women with less than a high school education also had the lowest median RBC folate level (16-16b).

Education level in women affects parity and the risk of adverse birth outcomes.³⁵ Pregnant women with higher levels of education may adopt healthy behaviors and habits more readily than other pregnant women.²³ Increased maternal education has been shown to be associated with lower risk of low birth weight for both black non-Hispanic and white non-Hispanic infants, as well as with protection against infant deaths.³⁶

Opportunities and Challenges

According to the *Guide to Community and Preventive Services* and the *Guide to Clinical Preventive Services*, many interventions improve the health and well-being of women, infants, and children.^{37, 38}

These include behavioral counseling programs to promote breastfeeding; screening for preeclampsia with blood measurement during women's pregnancy; and screening all newborns for phenylketonuria (PKU), congenital hypothyroidism, and hemoglobin disorders.

HHS recommends developmental screening for all infants and young children as part of routine medical care. Key efforts include raising awareness and knowledge; improving developmental screening; changing systems to improve availability of early identification, diagnosis, and services; and monitoring the benefits, usage, and outcomes of early identification.

States, local communities, and private-sector partners have been leaders in developing programs and interventions to address the maternal and child health issues included in the Healthy People 2010 objectives. One initiative addressing the current and emerging preventive and health promotion needs of infants, children, and adolescents is Bright Futures, an initiative to enhance the knowledge and skills of health care providers and help them practice developmentally appropriate preventive health care in the context of family and community.³²

Opportunities for birth defects surveillance have been provided through the National Birth Defects Prevention Network (NBDPN), a collaboration of individuals working at the State and national levels. NBDPN serves as a forum for developing uniform methods of birth defects surveillance, providing technical support, and exchanging ideas.³⁹

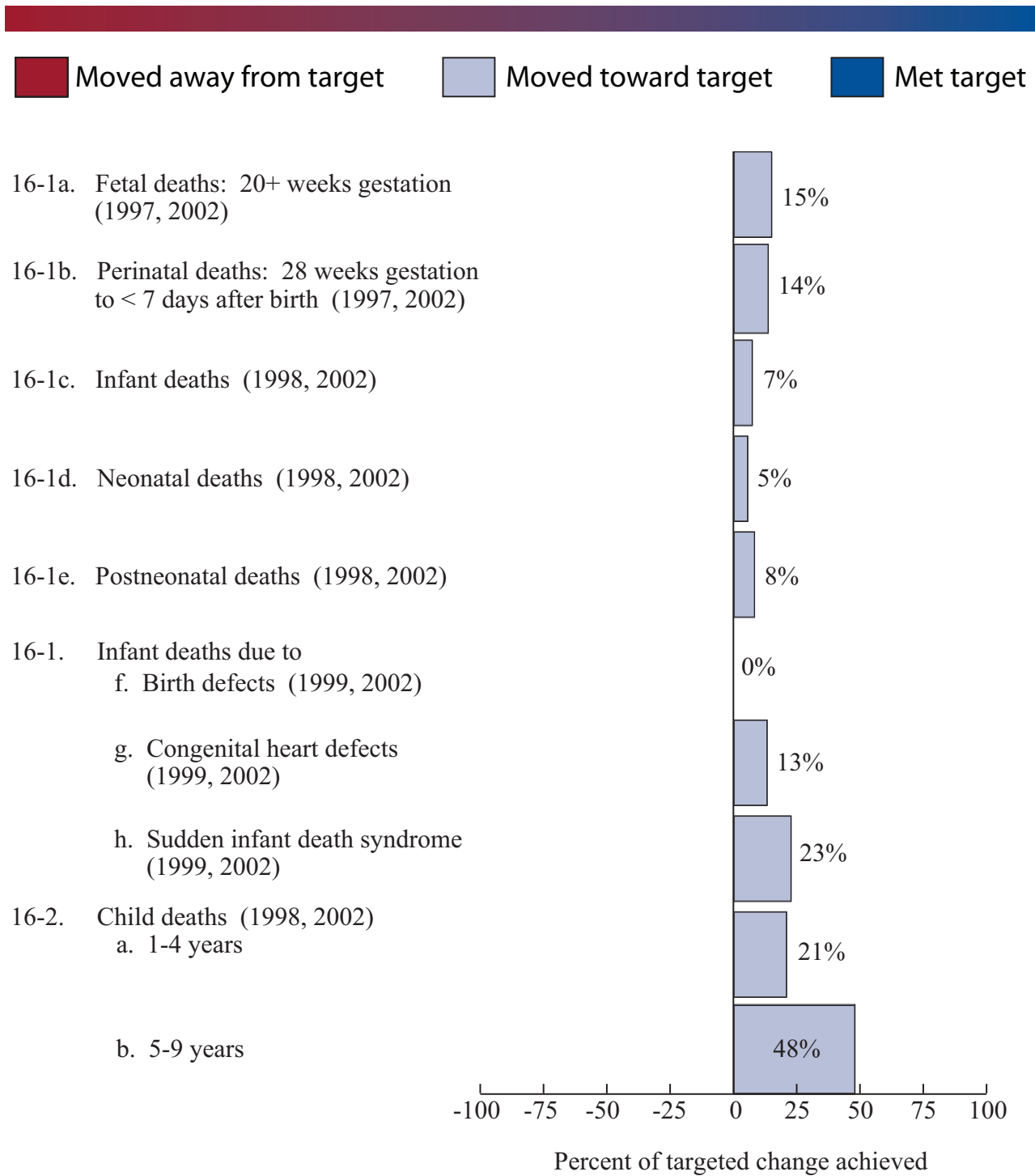
Emerging Issues

The field of maternal, infant, and child health is constantly changing. HHS is analyzing reasons for the recent increase in infant death rates, possible causes of preterm birth, issues in the coding and reporting of sudden and unexplained infant deaths, and strategies for preventing maternal illness and death. Given the adverse trends seen in preterm birth rates and related death rates, a comprehensive public health research agenda that investigates the social, genetic, and biomedical factors contributing to preterm birth and existing racial and ethnic disparities would inform policies and activities. A National Summit on Preconception Care was convened by CDC and its partners to begin developing national recommendations to coordinate services.^{40,41} These recommendations are expected to lead to improved pregnancy outcomes and reduce costs associated with adverse perinatal outcomes. In addition, a central World Wide Web gateway for pregnancy health information is under development for women, their partners, and their health care providers.

SIDS remains the third leading cause of infant death, despite significant declines in rates since 1990.¹ A national effort to standardize and improve the quality of data collected at infant death scene investigations and reported on death certificates has been launched to provide reliable information.^{42,43} More accurate cause-of-death data will improve the ability to monitor trends in infant deaths, evaluate prevention programs, and conduct research that will ultimately lead to a reduction in these deaths.

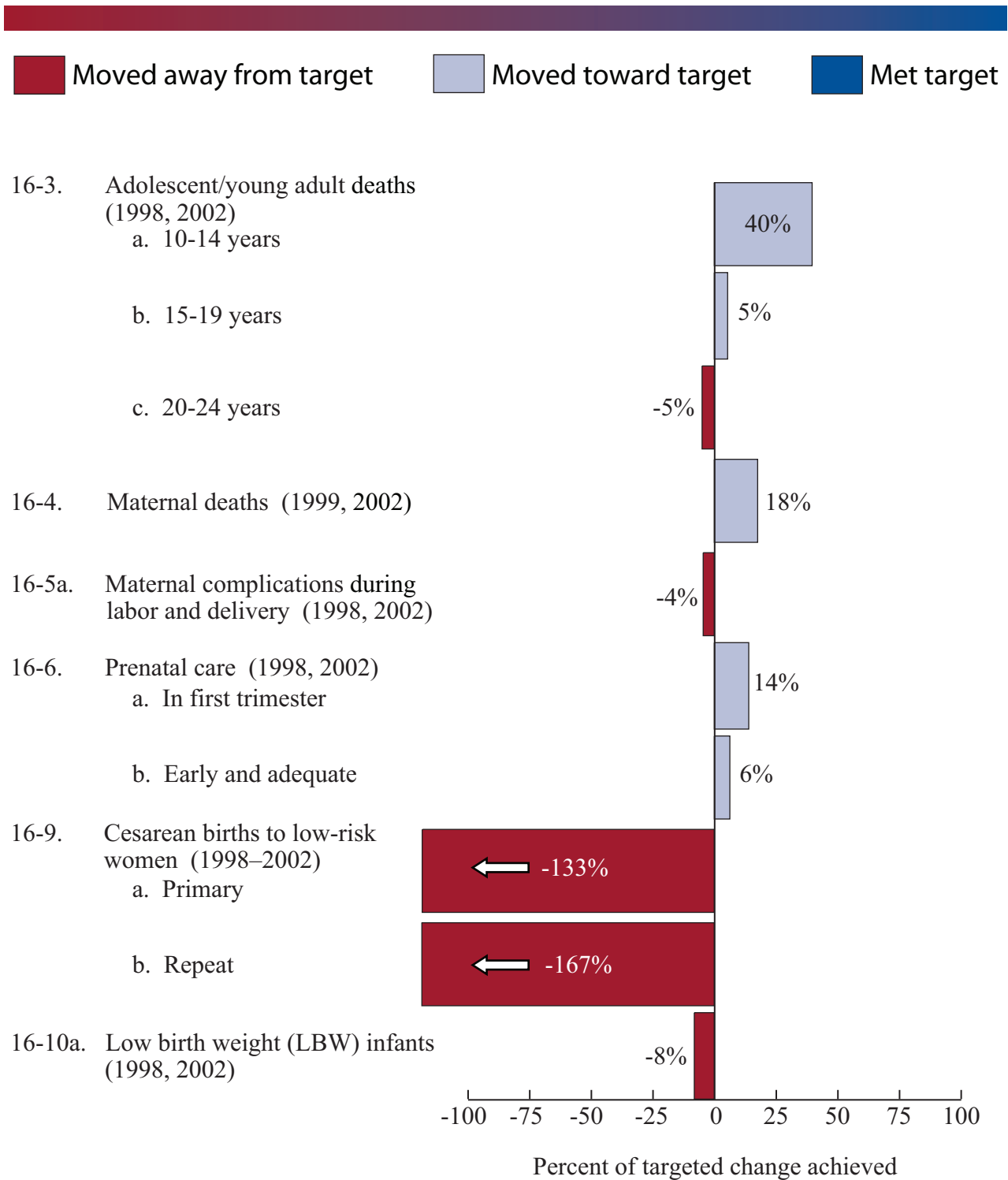
National surveillance systems for birth defects are vital for detecting and monitoring trends, producing the high quality data needed for epidemiologic studies to identify risk factors, and evaluating the effectiveness of various intervention efforts. In addition, surveillance systems can identify maternal deaths preventable with improved provider detection and treatment, access to care, and patient compliance.

Figure 16-1. Progress Quotient Chart for Focus Area 16: Maternal, Infant, and Child Health



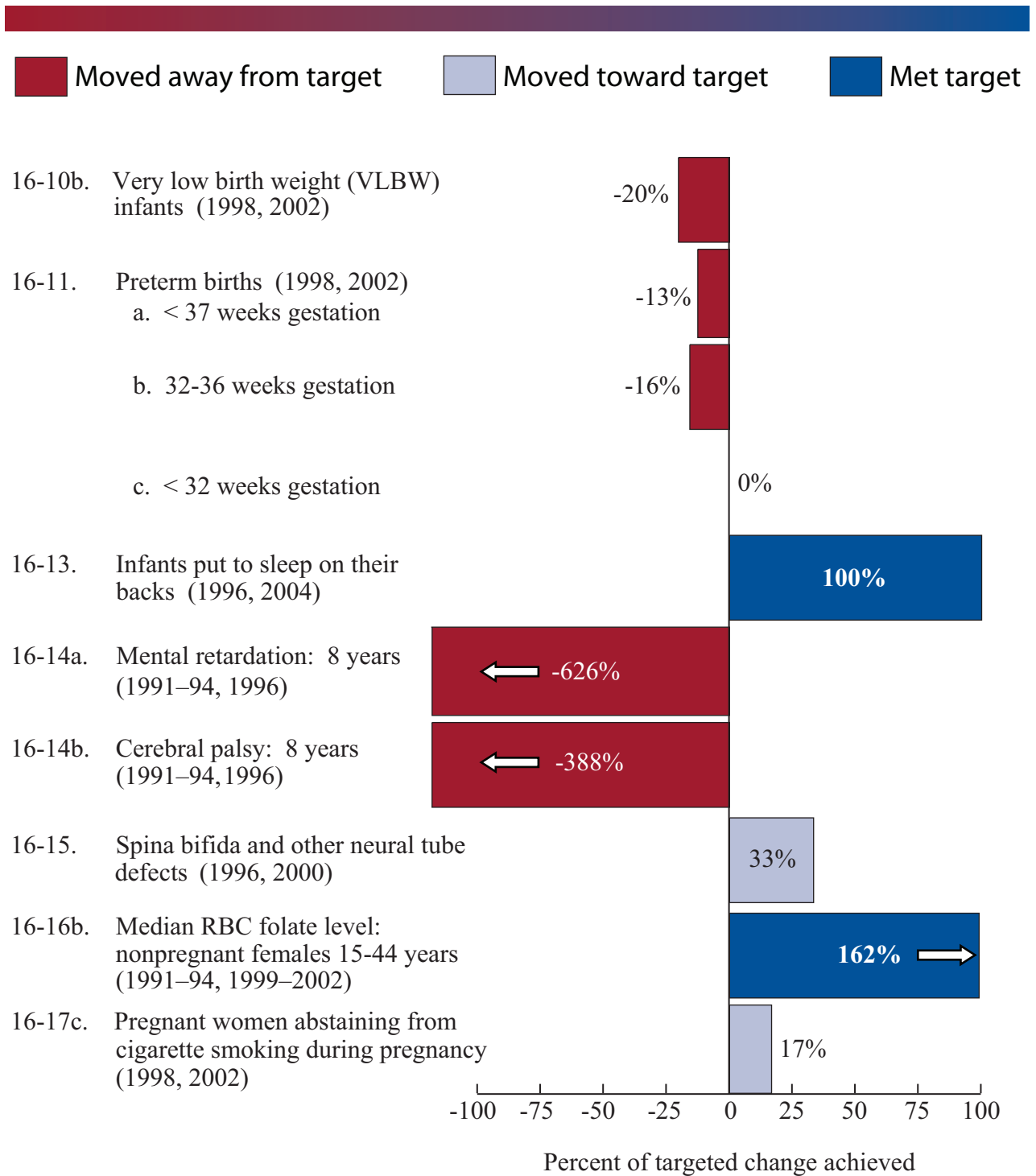
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Figure 16-1. (continued)



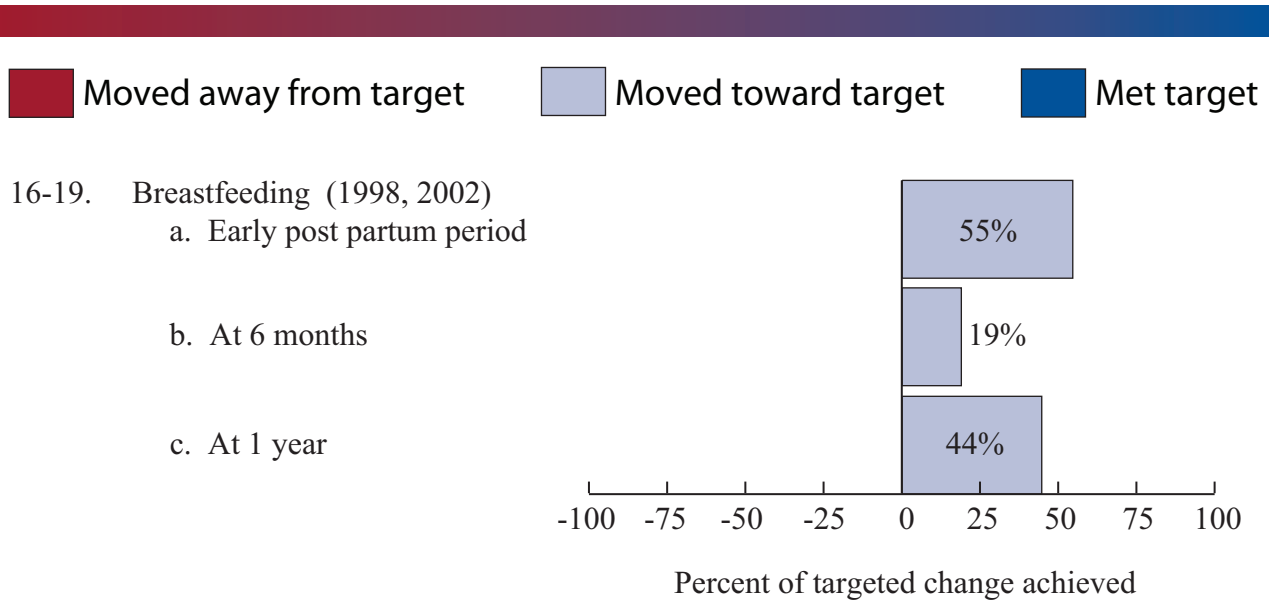
See notes at end of chart. (continued)

Figure 16-1. (continued)



See notes at end of chart. (continued)

Figure 16-1. (continued)



Notes: Tracking data for objectives 16-7, 16-8, 16-12, 16-14c, 16-16a, 16-17a and b, 16-17d, 16-18, 16-19d and e, 16-20a and b, 16-21, 16-22, and 16-23 are unavailable. Objectives 16-5b and c, 16-14d, and 16-20c were deleted at the midcourse.

Years in parentheses represent the baseline data year and the most recent data year used to compute the percent of the Healthy People 2010 target achieved.

$$\text{Percent of targeted change achieved} = \left(\frac{\text{Most recent value} - \text{baseline value}}{\text{Year 2010 target} - \text{baseline value}} \right) \times 100$$

Figure 16-2. Disparities Table for Focus Area 16: Maternal, Infant, and Child Health

Disparities from the best group rate for each characteristic at the most recent data point and changes in disparity from the baseline to the most recent data point.

Population-based objectives		Characteristics																					
		Race and ethnicity							Gender		Education			Income			Location		Disability				
		American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black non-Hispanic	White non-Hispanic	Summary index	Female	Male	Less than high school	High school graduate	At least some college	Summary index	Poor	Near poor	Middle/high income	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities
16-1a	Fetal deaths: 20+ weeks gestation (1997, 2002) *		B						B					B									
16-1b	Perinatal deaths: 28 weeks gestation to < 7 days after birth (1997, 2002) *		B						B					B									
16-1c	Infant deaths (1998, 2002) *		B			↑	↑↑	↑	↑	B				B									
16-1d	Neonatal deaths (1998, 2002) *		B			↑	↑	↑		B				B									
16-1e	Postneonatal deaths (1998, 2002) *		B			↑	↑↑	↑		B	↑		↑	B	↑								
16-1f	Infant deaths due to birth defects (1999, 2002) *		B							B	B			B									
16-1g	Infant deaths due to congenital heart defects (1999, 2002) *		b			B		B		B			↑	B	↑								
16-1h	Infant deaths due to sudden infant death syndrome (1999, 2002) *		b			B		↑↑		B				B									
16-2a	Child deaths: 1-4 years (1998, 2002) *		B ¹					↓↓	↓	B	↑												
16-2b	Child deaths: 5-9 years (1998, 2002) *		B ¹							B													
16-3a	Adolescent deaths: 10-14 years (1998, 2002) *		B ¹					↑		B													
16-3b	Adolescent deaths: 15-19 years (1998, 2002) *		B ¹					↓		B													
16-3c	Young adult deaths: 20-24 years (1998, 2002) *		B ¹					↓↓		B													
16-4	Maternal deaths (1999, 2002) *							B						B									
16-5a	Maternal complications during hospitalized labor and delivery (1998, 2002) *						2	B ²															
16-6a	Prenatal care: first trimester (1998, 2002) *							B					↓	B									
16-6b	Prenatal care: early and adequate (1998, 2002) *							B					↓	B									
16-7	Pregnant women attending childbirth classes (2000) †							B						B									
16-9a	Cesarean births to low-risk women: primary (1998, 2002) *			B									B										
16-9b	Cesarean births to low-risk women: repeat (1998, 2002) *	B				↓							B										
16-10a	Low birth weight (LBW) infants (1998, 2002) *					B				B			↓	B									

(continued)

Figure 16-2. (continued)

Population-based objectives	Characteristics																						
	Race and ethnicity							Gender		Education			Income			Location		Disability					
	American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black non-Hispanic	White non-Hispanic	Summary index	Female	Male	Less than high school	High school graduate	At least some college	Summary index	Poor	Near poor	Middle/high income	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities	
16-10b. Very low birth weight (VLBW) infants (1998, 2002) *	↑	B				↑	↑		B	B			B										
16-11a. Preterm births: < 37 weeks gestation (1998, 2002) *		B	↑						B				B										
16-11b. Preterm births: 32-36 weeks gestation (1998, 2002) *		B	↑						B				B										
16-11c. Preterm births: < 32 weeks gestation (1998, 2002) *		B							B				B										
16-13. Infants put to sleep on their backs (1996, 2004) †							B																
16-14a. Mental retardation: 8 years (1991-94, 1996) †						↑ ²	B ²		B	↑													
16-14b. Cerebral palsy: 8 years (1991-94, 1996) †						↑ ²	B ²		B														
16-14c. Autism spectrum disorder: 8 years (1996) †							B ²		B														
16-16a. Folic acid consumption: nonpregnant females 15-44 years (1991-94) †					3		B						B										B
16-16b. Median RBC folate level: nonpregnant females 15-44 years (1991-94, 1999-2002) †					3		B						B										B
16-17a. Pregnant women abstaining from alcohol in past month: 15-44 years (2002-03) †																							
16-17b. Pregnant women abstaining from binge drinking in past month (2002-03) †																							
16-17c. Pregnant women abstaining from cigarette smoking during pregnancy: 15-44 years (1998, 2002) *	↑↑	B	↑↑		↑	↑↑	↑↑	↑↑				↑	B	↑									
16-17d. Pregnant women abstaining from illicit drug use in past month: 15-44 years (2002-03) *																							
16-18. Fetal alcohol syndrome (1995-97) †					B	2	B																
16-19a. Breastfeeding: early post partum period (1998, 2002) †		B				2	2				4	4	B ⁴	4									
16-19b. Breastfeeding: at 6 months (1998, 2002) †		B				2	2				4	4	B ⁴	4									
16-19c. Breastfeeding: at 1 year (1998, 2002) †						2	B ²				4	4	B ⁴	4									
16-19d. Exclusive breastfeeding: at 3 months (2002) †					B								B										
16-19e. Exclusive breastfeeding: at 6 months (2002) †	B												B										
16-21. Sickle cell hospitalizations: ≤ 9 years (1995-99) †									B														

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








Figure 16-2. (continued)

Population-based objectives		Characteristics																					
		Race and ethnicity							Gender		Education			Income			Location		Disability				
		American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black non-Hispanic	White non-Hispanic	Summary index	Female	Male	Less than high school	High school graduate	At least some college	Summary index	Poor	Near poor	Middle/high income	Summary index	Urban or metropolitan	Rural or nonmetropolitan	Persons with disabilities	Persons without disabilities
16-23.	Service systems: < 18 years with special health care needs (2001) [†]			B				B					B				B		B				

Notes: Data for objectives 16-8, 16-12, 16-15, 16-20a and b, and 16-22 are unavailable or not applicable. Objectives 16-5b and c, 16-14d, and 16-20c were deleted at the midcourse.

Years in parentheses represent the baseline data year and the most recent data year (if available).

Disparity from the best group rate is defined as the percent difference between the best group rate and each of the other group rates for a characteristic (for example, race and ethnicity). The summary index is the average of these percent differences for a characteristic. Change in disparity is estimated by subtracting the disparity at baseline from the disparity at the most recent data point. Change in the summary index is estimated by subtracting the summary index at baseline from the summary index at the most recent data point. See Technical Appendix for more information.

The best group rate at the most recent data point.	 The group with the best rate for specified characteristic.	 Most favorable group rate for specified characteristic, but reliability criterion not met.	 Best group rate reliability criterion not met.	
Disparity from the best group rate at the most recent data point.	 Less than 10 percent or not statistically significant	 10-49 percent	 50-99 percent	 100 percent or more
Changes in disparity over time are shown when the change is greater than or equal to 10 percentage points and statistically significant, or when the change is greater than or equal to 10 percentage points and estimates of variability were not available.	Increase in disparity (percentage points)			
	↑ 10-49	↑↑ 50-99	↑ 100 or more	↑↑ 100 or more
	Decrease in disparity (percentage points)			
	↓ 10-49	↓↓ 50-99	↓ 100 or more	↓↓ 100 or more
Availability of data.	 Data not available.	 Characteristic not selected for this objective.		

* The variability of best group rates was assessed, and disparities of ≥ 10% are statistically significant at the 0.05 level. Changes in disparity over time, noted with arrows, are statistically significant at the 0.05 level. See Technical Appendix.

[†] Measures of variability were not available. Thus, the variability of best group rates was not assessed, and the statistical significance of disparities and changes in disparity over time could not be tested. See Technical Appendix.

¹ Data are for Asians or Pacific Islanders.

² Data include persons of Hispanic origin.

³ Data are for Mexican Americans.

⁴ Education levels: grade school or less, some high school or high school graduate, and at least some college.

Objectives and Subobjectives for Focus Area 16: Maternal, Infant, and Child Health

Goal: Improve the health and well-being of women, infants, children, and families.

As a result of the Healthy People 2010 Midcourse Review, changes were made to the Healthy People 2010 objectives and subobjectives. These changes are specific to the following situations:

- Changes in the wording of an objective to more accurately describe what is being measured.
- Changes to reflect a different data source or new science.
- Changes resulting from the establishment of a baseline and a target (that is, when a formerly developmental objective or subobjective became measurable).
- Deletion of an objective or subobjective that lacked a data source.
- Correction of errors and omissions in *Healthy People 2010*.

Revised baselines and targets for measurable objectives and subobjectives do not fall into any of the above categories and, thus, are not considered a midcourse review change.¹

When changes were made to an objective, three sections are displayed:

1. In the Original Objective section, the objective as published in *Healthy People 2010* in 2000 is shown.
2. In the Objective With Revisions section, strikethrough indicates text deleted, and underlining is used to show new text.
3. In the Revised Objective section, the objective appears as revised as a result of the midcourse review.

Details of the objectives and subobjectives in this focus area, including any changes made at the midcourse, appear on the following pages.

¹ See Technical Appendix for more information on baseline and target revisions.

Fetal, Infant, Child, and Adolescent Deaths

NO CHANGE IN OBJECTIVE (Data updated and footnoted)

16-1. Reduce fetal and infant deaths.

Target and baseline:

Objective	Reduction in Fetal and Infant Deaths	1997 Baseline	2010 Target
		<i>Rate per 1,000 Live Births Plus Fetal Deaths</i>	
16-1a.	Fetal deaths at 20 or more weeks of gestation	6.8	4.1
16-1b.	Fetal and infant deaths during perinatal period (28 weeks of gestation to less than 7 days after birth)	7.3 ¹	4.4 ²

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Target and baseline:

Objective	Reduction in Infant Deaths	1998 Baseline	2010 Target
		<i>Rate per 1,000 Live Births</i>	
16-1c.	All infant deaths (within 1 year)	7.2	4.5
16-1d.	Neonatal deaths (within the first 28 days of life)	4.8	2.9
16-1e.	Postneonatal deaths (between 28 days and 1 year)	2.4	1.2

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Target and baseline:

Objective	Reduction in Infant Deaths Related to Birth Defects	1998 Baseline	2010 Target
		<i>Rate per 1,000 Live Births</i>	
16-1f.	All birth defects	1.4 ³	0.7 ⁴
16-1g.	Congenital heart defects	0.46 ⁵	0.23 ⁶

**NO CHANGE IN OBJECTIVE (continued)
(Data updated and footnoted)**

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

16-1h. Reduce deaths from sudden infant death syndrome (SIDS).

Target: 0.23 deaths⁷ per 1,000 live births.

Baseline: 0.67⁸ deaths per 1,000 live births were from SIDS in 1999.⁸

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

¹ Baseline revised from 7.5 after November 2000 publication.

² Target revised from 4.5 because of baseline revision after November 2000 publication.

³ Baseline revised from 1.6 after November 2000 publication.

⁴ Target revised from 1.1 because of baseline revision after November 2000 publication.

⁵ Baseline revised from 0.53 after November 2000 publication.

⁶ Target revised from 0.38 because of baseline revision after November 2000 publication.

⁷ Target revised from 0.25 because of baseline revision after November 2000 publication.

⁸ Baseline and baseline year revised from 0.72 and 1998 after November 2000 publication.

**NO CHANGE IN OBJECTIVE
(Data updated and footnoted)**

16-2. Reduce the rate of child deaths.

Target and baseline:

Objective	Reduction in Deaths of Children	1998 Baseline	2010 Target
		<i>Rate per 100,000</i>	
16-2a.	Children aged 1 to 4 years	34.1 ¹	20.0 ²
16-2b.	Children aged 5 to 9 years	17.2 ³	13.0 ⁴

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

¹ Baseline revised from 34.6 after November 2000 publication.

² Target revised from 18.6 because of baseline revision after November 2000 publication.

³ Baseline revised from 17.7 after November 2000 publication.

⁴ Target revised from 12.3 because of baseline revision after November 2000 publication.

**NO CHANGE IN OBJECTIVE
(Data updated and footnoted)**

16-3. Reduce deaths of adolescents and young adults.

Target and baseline:

Objective	Reduction in Deaths of Adolescents and Young Adults	1998 Baseline	2010 Target
		<i>Rate per 100,000</i>	
16-3a.	Adolescents aged 10 to 14 years	21.5 ¹	16.5 ²
16-3b.	Adolescents aged 15 to 19 years	69.5 ³	38.0 ⁴
16-3c.	Young adults aged 20 to 24 years	92.7 ⁵	41.5 ⁶

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

¹ Baseline revised from 22.1 after November 2000 publication.

² Target revised from 16.8 because of baseline revision after November 2000 publication.

³ Baseline revised from 70.6 after November 2000 publication.

⁴ Target revised from 39.8 because of baseline revision after November 2000 publication.

⁵ Baseline revised from 95.3 after November 2000 publication.

⁶ Target revised from 49.0 because of baseline revision after November 2000 publication.

Maternal Deaths and Illnesses

**NO CHANGE IN OBJECTIVE
(Data updated and footnoted)**

16-4. Reduce maternal deaths.

Target: 4.3¹ maternal deaths per 100,000 live births.

Baseline: 9.9² maternal deaths per 100,000 live births occurred in 1999.²

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

¹ Target revised from 3.3 because of baseline revision after November 2000 publication.

² Baseline and baseline year revised from 7.1 and 1998 after November 2000 publication.

ORIGINAL OBJECTIVE

16-5. Reduce maternal illness and complications due to pregnancy.

Target and baseline:

Objective	Reduction in Maternal Illness and Complications	1998 Baseline	2010 Target
		<i>Rate per 100 Deliveries</i>	
16-5a.	Maternal complications during hospitalized labor and delivery	31.2	24.0
16-5b.	Ectopic pregnancies	Developmental	
16-5c.	Post partum complications, including post partum depression	Developmental	

Target setting method: Better than the best.

Data source: National Hospital Discharge Survey, CDC, NCHS.

Potential data source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

OBJECTIVE WITH REVISIONS (Including subobjectives deleted)

16-5. Reduce maternal illness and complications due to pregnancy.

Target and baseline:

Objective*	Reduction in Maternal Illness and Complications	1998 Baseline	2010 Target
		<i>Rate per 100 Deliveries</i>	
16-5a.	Maternal complications during hospitalized labor and delivery	31.2	24.0
16-5b.	<i>(Subobjective deleted due to lack of data source)*</i> Ectopic pregnancies	Developmental	
16-5c.	<i>(Subobjective deleted due to lack of data source)*</i> Post partum complications, including post partum depression	Developmental	

* For data control purposes, subobjectives are not renumbered.

Target setting method: Better than the best.

Data source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

Potential data source: ~~National Hospital Discharge Survey (NHDS), CDC, NCHS.~~

REVISED OBJECTIVE

16-5. Reduce maternal illness and complications due to pregnancy.

Target and baseline:

Objective*	Reduction in Maternal Illness and Complications	1998 Baseline	2010 Target
		<i>Rate per 100 Deliveries</i>	
16-5a.	Maternal complications during hospitalized labor and delivery	31.2	24.0

* For data control purposes, subobjectives are not renumbered.

Target setting method: Better than the best.

Data source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

Prenatal Care

NO CHANGE IN OBJECTIVE

16-6. Increase the proportion of pregnant women who receive early and adequate prenatal care.

Target and baseline:

Objective	Increase in Maternal Prenatal Care	1998 Baseline	2010 Target
		<i>Percent of Live Births</i>	
16-6a.	Care beginning in first trimester of pregnancy	83	90
16-6b.	Early and adequate prenatal care	74	90

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

ORIGINAL OBJECTIVE

16-7. (Developmental) Increase the proportion of pregnant women who attend a series of prepared childbirth classes.

Potential data sources: National Pregnancy and Health Survey, NIH, NICHD; National Survey of Family Growth (NSFG) or National Health Interview Survey (NHIS), CDC, NCHS.

OBJECTIVE WITH REVISIONS

16-7. (~~Developmental~~) Increase the proportion of pregnant women who attend a series of prepared childbirth classes.

Target: 77 percent.

Baseline: 66 percent of pregnant women attended a series of prepared childbirth classes in 2000.

Target setting method: Better than the best.

Potential dData sources: National Pregnancy and Health Survey, NIH, NICHD; National Survey of Family Growth (NSFG) or National Health Interview Survey (NHIS), GDC, NGHS National Survey of Early Childhood Health (NSECH), CDC, NCHS.

REVISED OBJECTIVE

16-7. Increase the proportion of pregnant women who attend a series of prepared childbirth classes.

Target: 77 percent.

Baseline: 66 percent of pregnant women attended a series of prepared childbirth classes in 2000.

Target setting method: Better than the best.

Data source: National Survey of Early Childhood Health (NSECH), CDC, NCHS.

Obstetrical Care

NO CHANGE IN OBJECTIVE

16-8. Increase the proportion of very low birth weight (VLBW) infants born at level III hospitals or subspecialty perinatal centers.

Target: 90 percent.

Baseline: 73 percent of VLBW infants were born at level III hospitals or subspecialty perinatal centers in 1996–97.

Target setting method: 25 percent improvement. (Better than the best will be used when data are available.)

Data source: Title V Reporting System, HRSA, MCHB.

NO CHANGE IN OBJECTIVE

16-9. Reduce cesarean births among low-risk (full-term, singleton, vertex presentation) women.

Target and baseline:

Objective	Reduction in Cesarean Births	1998 Baseline	2010 Target
		<i>Percent of Live Births</i>	
16-9a.	Women giving birth for the first time	18	15
16-9b.	Prior cesarean birth	72	63

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Risk Factors

NO CHANGE IN OBJECTIVE

16-10. Reduce low birth weight (LBW) and very low birth weight (VLBW).

Target and baseline:

Objective	Reduction in Low and Very Low Birth Weight	1998 Baseline	2010 Target
		<i>Percent of Live Births</i>	
16-10a.	Low birth weight (LBW)	7.6	5.0
16-10b.	Very low birth weight (VLBW)	1.4	0.9

Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

NO CHANGE IN OBJECTIVE

16-11. Reduce preterm births.

Target and baseline:

Objective	Reduction in Preterm Births	1998 Baseline	2010 Target
		<i>Percent of Live Births</i>	
16-11a.	Total preterm births	11.6	7.6
16-11b.	Live births at 32 to 36 weeks of gestation	9.6	6.4

NO CHANGE IN OBJECTIVE *(continued)*

16-11c.	Live births at less than 32 weeks of gestation	2.0	1.1
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Target setting method: Better than the best.

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

NO CHANGE IN OBJECTIVE

16-12. (Developmental) Increase the proportion of mothers who achieve a recommended weight gain during their pregnancies.

Potential data source: National Vital Statistics System (NVSS), CDC, NCHS.

NO CHANGE IN OBJECTIVE

16-13. Increase the percentage of healthy full-term infants who are put down to sleep on their backs.

Target: 70 percent.

Baseline: 35 percent of healthy full-term infants aged under 8 months were put down to sleep on their backs in 1996.

Target setting method: Better than the best.

Data source: National Infant Sleep Position Study, NIH, NICHD.

Developmental Disabilities and Neural Tube Defects

ORIGINAL OBJECTIVE

16-14. Reduce the occurrence of developmental disabilities.

Target and baseline:

Objective	Reduction in Developmental Disabilities in Children	1991–94 Baseline	2010 Target
		<i>Rate per 10,000</i>	
16-14a.	Mental retardation	131.0* ¹	124.5 ²
16-14b.	Cerebral palsy	33.3† ³	31.6 ⁴
16-14c.	Autism spectrum disorder	Developmental	
16-14d.	Epilepsy	Developmental	

ORIGINAL OBJECTIVE *(continued)*

* Children aged 8 years in metropolitan Atlanta, GA, having an IQ of 70 or less.

† Children aged 8 years in metropolitan Atlanta, GA.

Target setting method: 5 percent improvement.

Data source: Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP), CDC, NCEH.

¹ Baseline revised from 131 after November 2000 publication.

² Target revised from 124 because of baseline revision after November 2000 publication.

³ Baseline revised from 32.2 after November 2000 publication.

⁴ Target revised from 31.5 because of baseline revision after November 2000 publication.

OBJECTIVE WITH REVISIONS (Including subobjective deleted)

16-14. Reduce the occurrence of developmental disabilities.

Target and baseline:

Objective	Reduction in Developmental Disabilities in Children	1991–94 Baseline (unless noted)	2010 Target
		<i>Rate per 10,000</i>	
16-14a.	Mental retardation	131.0 ^{*1}	124.5 ²
16-14b.	Cerebral palsy	33.3 ^{†3}	31.6 ⁴
	<u>Reduction in age of identification</u>	<i>Months</i>	
16-14c.	Autism spectrum disorder [‡]	50 (1996)	48
16-14d.	<i>(Subobjective deleted due to lack of data source)</i> [§] Epilepsy	Developmental	

* Children aged 8 years in metropolitan Atlanta, GA, having an IQ of 70 or less.

† Children aged 8 years in metropolitan Atlanta, GA.

[‡] Age at identification of autism.

[§] For data control purposes, subobjectives are not renumbered.

Target setting method: 5 percent improvement.

Data source: Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP), CDC, NCEH, BDDD.

¹ Baseline revised from 131 after November 2000 publication.

² Target revised from 124 because of baseline revision after November 2000 publication.

³ Baseline revised from 32.2 after November 2000 publication.

⁴ Target revised from 31.5 because of baseline revision after November 2000 publication.

REVISED OBJECTIVE

16-14. Reduce the occurrence of developmental disabilities.

Target and baseline:

Objective*	Reduction in Developmental Disabilities in Children	1991–94 Baseline (unless noted)	2010 Target
		<i>Rate per 10,000</i>	
16-14a.	Mental retardation	131.0 ^{†1}	124.5 ^{‡2}
16-14b.	Cerebral palsy	33.3 ^{‡3}	31.6 ^{‡4}
	Reduction in age of identification	<i>Months</i>	
16-14c.	Autism spectrum disorder [§]	50 (1996)	48

* For data control purposes, subobjectives are not renumbered.

[†] Children aged 8 years in metropolitan Atlanta, GA, having an IQ of 70 or less.

[‡] Children aged 8 years in metropolitan Atlanta, GA.

[§] Age at identification of autism.

Target setting method: 5 percent improvement.

Data source: Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDSP), CDC, NCBDDD.

¹ Baseline revised from 131 after November 2000 publication.

² Target revised from 124 because of baseline revision after November 2000 publication.

³ Baseline revised from 32.2 after November 2000 publication.

⁴ Target revised from 31.5 because of baseline revision after November 2000 publication.

NO CHANGE IN OBJECTIVE

16-15. Reduce the occurrence of spina bifida and other neural tube defects (NTDs).

Target: 3 new cases per 10,000 live births.

Baseline: 6 new cases of spina bifida or another NTD per 10,000 live births occurred in 1996.

Target setting method: 50 percent improvement. (Better than the best will be used when data are available.)

Data source: National Birth Defects Prevention Network (NBDPN), CDC, NCBDDD.

NO CHANGE IN OBJECTIVE

16-16. Increase the proportion of pregnancies begun with an optimum folic acid level.

Target and baseline:

Objective	Increase in Pregnancies Begun With Optimum Folic Acid Level	1991–94 Baseline	2010 Target
		<i>Percent</i>	
16-16a.	Consumption of at least 400 µg of folic acid each day from fortified foods or dietary supplements by nonpregnant women aged 15 to 44 years	21	80
		<i>Concentration in ng/ml</i>	
16-16b.	Median RBC folate level among nonpregnant women aged 15 to 44 years	160	220

Target setting method: Better than the best.

Data source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS.

Prenatal Substance Exposure

NO CHANGE IN OBJECTIVE (Data updated and footnoted)

16-17. Increase abstinence from alcohol, cigarettes, and illicit drugs among pregnant women.

Target and baseline:

Objective	Increase in Reported Abstinence in Past Month From Substances by Pregnant Women*	2002–03 ¹ Baseline (unless noted)	2010 Target
		<i>Percent of Pregnant Women</i>	
16-17a.	Alcohol	90 ²	95 ³
16-17b.	Binge drinking	96 ⁴	100
16-17c.	Cigarette smoking [†]	87 (1998)	99
16-17d.	Illicit drugs	96 ⁵	100

* Pregnant women aged 15 to 44 years.

† Smoking during pregnancy for all women giving birth in 1998 in 46 States, the District of Columbia, and New York City.

**NO CHANGE IN OBJECTIVE (continued)
(Data updated and footnoted)**

Target setting method: For 16-17a and 16-17c, better than the best; for 16-17b and 16-17d, complete elimination.

Data sources: National Survey on Drug Use and Health (NSDUH), SAMHSA; National Vital Statistics System (NVSS), CDC, NCHS.

¹ Baseline year revised from 1996–97 after November 2000 publication.

² Baseline revised from 86 after November 2000 publication.

³ Target revised from 94 because of baseline revision after November 2000 publication.

⁴ Baseline revised from 99 after November 2000 publication.

⁵ Baseline revised from 98 after November 2000 publication.

ORIGINAL OBJECTIVE

16-18. (Developmental) Reduce the occurrence of fetal alcohol syndrome (FAS).

Potential data source: Fetal Alcohol Syndrome Network (FASNet), CDC, NCEH.

OBJECTIVE WITH REVISIONS

16-18. (Developmental) Reduce the occurrence of fetal alcohol syndrome (FAS).

Target: 0.1 cases per 1,000 live births.

Baseline: Fetal alcohol syndrome occurred in 0.4 per 1,000 live births* in 1995–97.

Target setting method: Better than the best.

Potential data source: Fetal Alcohol Syndrome Surveillance Network (FASNet), CDC, NCEH, NCBDDD.

* Based on data from Alaska, Arizona, Colorado, and New York.

REVISED OBJECTIVE

16-18. Reduce the occurrence of fetal alcohol syndrome (FAS).

Target: 0.1 cases per 1,000 live births.

Baseline: Fetal alcohol syndrome occurred in 0.4 per 1,000 live births* in 1995–97.

Target setting method: Better than the best.

Data source: Fetal Alcohol Syndrome Surveillance Network (FASNet), CDC, NCBDDD.

* Based on data from Alaska, Arizona, Colorado, and New York.

Breastfeeding, Newborn Screening, and Service Systems

ORIGINAL OBJECTIVE

16-19. Increase the proportion of mothers who breastfeed their babies.

Target and baseline:

Objective	Increase in Mothers Who Breastfeed	1998 Baseline	2010 Target
		<i>Percent</i>	
16-19a.	In early post partum period	64	75
16-19b.	At 6 months	29	50
16-19c.	At 1 year	16	25

Target setting method: Better than the best.

Data source: Mothers' Survey, Abbott Laboratories, Inc., Ross Products Division.

OBJECTIVE WITH REVISIONS

16-19. Increase the proportion of mothers who breastfeed their babies.

Target and baseline:

Objective	Increase in Mothers Who Breastfeed	1998 Baseline (unless noted)	2010 Target
		<i>Percent of Mothers</i>	
16-19a.	In early post partum period	64	75
16-19b.	At 6 months	29	50
16-19c.	At 1 year	16	25
16-19d.	<u>Exclusively through 3 months</u>	<u>43 (2002)</u>	<u>60</u>
16-19e.	<u>Exclusively through 6 months</u>	<u>13 (2002)</u>	<u>25</u>

Target setting method: Better than the best.

Data sources: Mothers' Survey, Abbott Laboratories, Inc., Ross Products Division; National Immunization Survey (NIS), CDC, NIP and NCHS.

REVISED OBJECTIVE

16-19. Increase the proportion of mothers who breastfeed their babies.

Target and baseline:

Objective	Increase in Mothers Who Breastfeed	1998 Baseline (unless noted)	2010 Target
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REVISED OBJECTIVE *(continued)*

		<i>Percent of Mothers</i>	
16-19a.	In early post partum period	64	75
16-19b.	At 6 months	29	50
16-19c.	At 1 year	16	25
16-19d.	Exclusively through 3 months	43 (2002)	60
16-19e.	Exclusively through 6 months	13 (2002)	25

Target setting method: Better than the best.

Data sources: Mothers' Survey, Abbott Laboratories, Inc., Ross Products Division; National Immunization Survey (NIS), CDC, NIP and NCHS.

ORIGINAL OBJECTIVE

16-20. (Developmental) Ensure appropriate newborn bloodspot screening, followup testing, and referral to services.

16-20a. Ensure that all newborns are screened at birth for conditions mandated by their State-sponsored newborn screening programs, for example, phenylketonuria and hemoglobinopathies.

16-20b. Ensure that followup diagnostic testing for screening positives is performed within an appropriate time period.

16-20c. Ensure that infants with diagnosed disorders are enrolled in appropriate service interventions within an appropriate time period.

Potential data source: Title V Performance Measures, HRSA, MCHB, National Newborn Screening and Genetic Resource Center.

OBJECTIVE WITH REVISIONS (Including subobjective deleted)

16-20. (Developmental) Ensure appropriate newborn bloodspot screening, and followup testing, ~~and referral to services.~~

16-20a. Ensure that all newborns are screened at birth for conditions mandated by their State-sponsored newborn screening programs, ~~for example, phenylketonuria and hemoglobinopathies~~ by matching the number screened by the State to birth certificate information.

16-20b. Ensure that followup ~~diagnostic~~ diagnostic testing for screened ~~positives~~ positives is performed within an appropriate time period by monitoring the period from time of birth to initial diagnosis~~within an appropriate time period.~~

**OBJECTIVE WITH REVISIONS (continued)
(Including subobjective deleted)**

~~16-20c. (Subobjective deleted due to lack of data source) Ensure that infants with diagnosed disorders are enrolled in appropriate service interventions within an appropriate time period.~~

Potential data source: Title V Performance Measures, HRSA, MCHB, National Newborn Screening and Genetic Resource Center (NNSGRC).

REVISED OBJECTIVE

16-20. (Developmental) Ensure appropriate newborn bloodspot screening and followup testing.

16-20a. Ensure that all newborns are screened at birth for conditions mandated by their State-sponsored newborn screening programs by matching the number screened by the State to birth certificate information.

16-20b. Ensure that followup testing for screened positives is performed within an appropriate time period by monitoring the period from time of birth to initial diagnosis.

Potential data source: Title V Performance Measures, HRSA, MCHB, National Newborn Screening and Genetic Resource Center (NNSGRC).

ORIGINAL OBJECTIVE

16-21. (Developmental) Reduce hospitalization for life-threatening sepsis among children aged 4 years and under with sickling hemoglobinopathies.

Potential data source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

OBJECTIVE WITH REVISIONS

16-21. (Developmental) Reduce hospitalization for sickle cell disease among children aged 9 years and for life-threatening sepsis among children aged 4 years and under with sickling hemoglobinopathies under.

Target: 33.0 discharges per 100,000 children aged 9 years and under.

Baseline: 41.3 hospital discharges for sickle cell disease per 100,000 children aged 9 years and under occurred in 1995–99.

Target setting method: 20 percent improvement.

Potential dData source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

REVISED OBJECTIVE

16-21. Reduce hospitalization for sickle cell disease among children aged 9 years and under.

Target: 33.0 discharges per 100,000 children aged 9 years and under.

Baseline: 41.3 hospital discharges for sickle cell disease per 100,000 children aged 9 years and under occurred in 1995–99.

Target setting method: 20 percent improvement.

Data source: National Hospital Discharge Survey (NHDS), CDC, NCHS.

ORIGINAL OBJECTIVE

16-22. (Developmental) Increase the proportion of children with special health care needs who have access to a medical home.

Potential data source: Title V Reporting System, HRSA, MCHB.

OBJECTIVE WITH REVISIONS

16-22. (Developmental) Increase the proportion of children with special health care needs who have access to a medical home.

Target: 100 percent.

Baseline: 53 percent of children with special health care needs received care in medical homes during 2001.

Target setting method: Total coverage.

Potential dData source: Title V Reporting System National Survey of Children With Special Health Care Needs (NSHCN), CDC, NCHS, and HRSA, MCHB.

REVISED OBJECTIVE

16-22. Increase the proportion of children with special health care needs who have access to a medical home.

Target: 100 percent.

Baseline: 53 percent of children with special health care needs received care in medical homes during 2001.

Target setting method: Total coverage.

Data source: National Survey of Children With Special Health Care Needs (NSHCN), CDC, NCHS, and HRSA, MCHB.

ORIGINAL OBJECTIVE

16-23. Increase the proportion of Territories and States that have service systems for children with special health care needs.

Target: 100 percent.

Baseline: 15.7 percent of Territories and States met Title V for service systems for children with special health care needs in FY 1997.

Target setting method: Total coverage.

Data source: Title V Block Grant Application Form 13, HRSA, MCHB.

OBJECTIVE WITH REVISIONS

16-23. Increase the proportion of Territories and States that have service systems for children with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems.

Target: 100 percent.

Baseline: ~~15.7~~³⁵ percent percent of Territories and States met Title V for service systems ~~for~~ children with special health care needs received their care in family-centered, comprehensive, and coordinated systems in FY ~~1997~~²⁰⁰¹.

Target setting method: Total coverage.

Data source: ~~Title V Block Grant Application Form 13~~, National Survey of Children With Special Health Care Needs (NSHCN), CDC, NCHS, and HRSA, MCHB.

REVISED OBJECTIVE

16-23. Increase the proportion of children with special health care needs who receive their care in family-centered, comprehensive, and coordinated systems.

Target: 100 percent.

Baseline: 35 percent of children with special health care needs received their care in family-centered, comprehensive, and coordinated systems in 2001.

Target setting method: Total coverage.

Data source: National Survey of Children With Special Health Care Needs (NSHCN), CDC, NCHS, and HRSA, MCHB.

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Related Objectives From Other Focus Areas

1. Access to Quality Health Services

- 1-1. Persons with health insurance
- 1-4. Source of ongoing care
- 1-5. Usual primary care provider
- 1-6. Difficulties or delays in obtaining needed health care
- 1-9. Hospitalization for ambulatory-care-sensitive conditions
- 1-12. Single toll-free number for poison control centers
- 1-13. Trauma systems
- 1-14. Special needs of children

6. Disability and Secondary Conditions

- 6-2. Feelings and depression among children with disabilities
- 6-7. Congregate care of children and adults with disabilities
- 6-9. Inclusion of children and youth with disabilities in regular education programs

7. Educational and Community-Based Programs

- 7-1. High school completion
- 7-2. School health education
- 7-4. School nurse-to-student ratio

8. Environmental Health

- 8-11. Elevated blood lead levels in children
- 8-20. School policies to protect against environmental hazards
- 8-22. Lead-based paint testing

9. Family Planning

- 9-2. Birth spacing
- 9-7. Adolescent pregnancy
- 9-8. Abstinence before age 15 years
- 9-9. Abstinence among adolescents aged 15 to 17 years
- 9-10. Pregnancy prevention and sexually transmitted disease (STD) protection
- 9-11. Reproductive health education

13. HIV

- 13-17. Perinatally acquired HIV/AIDS and AIDS

14. Immunization and Infectious Diseases

- 14-1. Vaccine-preventable diseases
- 14-2. Hepatitis B in infants and young children
- 14-18. Antibiotics prescribed for ear infections
- 14-19. Antibiotics prescribed for common cold
- 14-22. Universally recommended vaccination of children aged 19 through 35 months of age
- 14-23. Vaccination coverage for children in day care and kindergarten
- 14-24. Fully immunized young children and adolescents

- 14-25. Providers who measure childhood vaccination coverage levels
- 14-26. Children participating in population-based immunization registries
- 14-27. Vaccination coverage among adolescents
- 14-30. Adverse events from vaccinations
- 14-31. Active surveillance for vaccine safety

15. Injury and Violence Prevention

- 15-1. Nonfatal head injuries
- 15-2. Nonfatal spinal cord injuries
- 15-3. Firearm-related deaths
- 15-4. Proper firearm storage in homes
- 15-5. Nonfatal firearm-related injuries
- 15-7. Nonfatal poisonings
- 15-8. Deaths from poisoning
- 15-9. Deaths from suffocation
- 15-10. Emergency department surveillance systems
- 15-11. Hospital discharge surveillance systems
- 15-12. Emergency department visits
- 15-19. Safety belts
- 15-20. Child restraints
- 15-23. Bicycle helmet use
- 15-24. Bicycle helmet laws
- 15-31. Injury protection in school sports
- 15-33. Maltreatment and maltreatment fatalities of children
- 15-38. Physical fighting among adolescents
- 15-39. Weapon carrying by adolescents on school property

18. Mental Health and Mental Disorders

- 18-2. Adolescent suicide attempts
- 18-5. Disordered eating behaviors
- 18-7. Treatment for children with mental health problems
- 18-8. Juvenile justice facility screening

19. Nutrition and Overweight

- 19-3. Overweight or obesity in children and adolescents
- 19-4. Growth retardation in children
- 19-12. Iron deficiency in young children and in females of childbearing age
- 19-13. Anemia in low-income pregnant females
- 19-14. Iron deficiency in pregnant females

21. Oral Health

- 21-1. Dental caries experience
- 21-2. Untreated dental decay
- 21-8. Dental sealants
- 21-9. Community water fluoridation
- 21-10. Use of oral health care system
- 21-13. School-based health centers with oral health component
- 21-14. Health centers with oral health service components
- 21-15. Referral for cleft lip or palate
- 21-16. Oral and craniofacial State-based surveillance system

22. Physical Activity and Fitness

- 22-6. Moderate physical activity in adolescents
- 22-7. Vigorous physical activity in adolescents
- 22-8. Physical education requirement in schools
- 22-9. Daily physical education in schools
- 22-10. Physical activity in physical education class
- 22-11. Television viewing
- 22-12. School physical activity facilities

24. Respiratory Diseases

- 24-1. Deaths from asthma
- 24-2. Hospitalizations for asthma
- 24-3. Hospital emergency department visits for asthma
- 24-5. School or work days lost

25. Sexually Transmitted Diseases

- 25-9. Congenital syphilis
- 25-11. Responsible adolescent sexual behavior

26. Substance Abuse

- 26-6. Adolescents riding with a driver who has been drinking
- 26-9. Substance-free youth
- 26-10. Adolescent and adult use of illicit substances
- 26-14. Steroid use among adolescents
- 26-15. Inhalant use among adolescents
- 26-16. Peer disapproval of substance abuse
- 26-17. Perception of risk associated with substance abuse

27. Tobacco Use

- 27-2. Adolescent tobacco use
- 27-3. Initiation of tobacco use
- 27-4. Age at first use of tobacco
- 27-6. Smoking cessation during pregnancy
- 27-7. Smoking cessation by adolescents
- 27-11. Smoke-free and tobacco-free schools

- 27-14. Enforcement of illegal tobacco sales to minors laws
- 27-15. Retail license suspension for sales to minors
- 27-17. Adolescent disapproval of smoking

28. Vision and Hearing

- 28-2. Vision screening for children
- 28-4. Impairment in children and adolescents

