

II. NEEDS ASSESSMENT

A. Needs Assessment Process

The Division's needs assessment process is one which relies on surveillance, parent and community input, and interagency collaboration. Utilizing data from our Women's Health Screening and Referral Program, Universal Newborn Developmental Risk Screening (Level I) and Family Outreach (Home Visiting) databases provides us with a current picture of the needs of pregnant women, infants and their families. Surveys such as the Pregnancy Risk Assessment Monitoring System (PRAMS) and Rhode Island's new follow-up survey, the Toddler Wellness Overview Survey (TWOS) are additional tools to assess the experiences, behaviors, development and/or well being of pregnant women, mothers and young children. Vital Records data also allow us to track maternal and child health status indicators such as entry into prenatal care, low birth weight and infant mortality.

Program databases such as WIC, Lead Screening, and Birth Defects provide us with information on children. Our KIDSNET system, described throughout our Annual Report and Application, is also key in tracking data related to children's preventive services and for the determination of medical home. Hospital discharge data, school-based health center data, the Youth Risk Behavior Survey, and School Accountability for Learning and Teaching (SALT) Survey are also examples of tools used to assess the well-being of Rhode Island's youth. Utilizing these data sources allows us to determine the trends and health status of the maternal and child population.

National surveys, such as the National Survey of Children with Special Health Care Needs, National Survey of Children's Health and National Immunization Survey, provide state-level data on the children including CSHCN. Our partnership with the Rhode Island Parent Information Network and Family Voices led to the development and implementation of a survey of families of CSHCN. These data

In addition, working closely with the Children's Cabinet agencies (e.g., Human Services; Education; and Children, Youth and Families) and with RI KIDS COUNT and other community organizations, provides us with a more comprehensive understanding of the well being of children and their families and the environment in which they live. State and local partnerships as exemplified through local CATCH grants and initiatives with The Providence Plan, have provided us with better information on maternal and child health at the neighborhood level.

Finally, a key part of the needs assessment process is the involvement of parent consultants, families and communities. Our needs assessment and the identification of emerging priorities rely heavily on parent/community input before, during and after the Title V Applications completion. By conducting this multi-pronged needs assessment process described above, we are able to obtain a wide breadth of information giving us a better understanding of the maternal and child health needs of families in Rhode Island. Section 1 describes the results of this process. The section is organized by population group and by the priorities identified by the Division of Family Health.

B. Five Year Needs Assessment

Overview of the Maternal and Child Health Population Status

The following overview is organized by maternal and child health (MCH) population groups, i.e., pregnant women and mothers, infants, children, adolescents and children with special health care needs. Topics are organized by the priorities identified by the state following the needs assessment process. A brief discussion of the changes in these populations between 1990, 2000 and 2004 precedes the overview of the health status of the MCH populations in Rhode Island.

Population Changes in Rhode Island: 1990-2004

Between 1990 and 2004, Rhode Island's population rose 7.7%, from 1,003,464 to 1,080,632. Although more than half of this 7.7% increase (4.5%) occurred during the ten years between 1990 and 2000, in just 4 years, the population grew another 3.1%. The largest increase (60.0%) occurred among those aged 45-59, where that population rose from 138,502 in 1990 to 221,652 in 2004. However, not all age groups experienced increases; decreases were seen among children aged less than 5 (-8.1%); those aged 20-34 (-13.9%) and 60-74 (-16.2%).

The number of children in Rhode Island aged less than 18 increased by 8.0%, from 225,690 in 1990 to 243,813 in 2004. There were differences within specific age categories in the amount of increase, where the largest increase was among children aged 10-14. In 1990 there were 59,406 children aged 10-14 and by 2004 the number rose to 73,507, a 23.7% increase. There was only a slight increase, 1.9%, in the number of teens aged 15-19 during this period.

Figures 1 and 2 show the Rhode Island population in 1990 and 2004 by selected age groups and gender. Changes in the number of births are described in more detail in Section A1. Overall, the number of women of childbearing age (15-44) decreased by 2.8%, from 238,886 in 1990 to 232,239 in 2004. Specifically, the number of women aged 20-24 decreased the most, 32.4%. However, women aged 35-39 and 40-44 increased by 5.1% and 15.3%, respectively.

Over the past decade, Rhode Island experienced significant changes in its racial/ethnic populations. Specifically, the number of those of Hispanic/Latino ethnicity doubled from 45,752 (4.6%) in 1990 to 90,820 (8.7%) in 2000. Increases were also seen among African Americans (from 3.9% to 4.5%), Asians (from 1.8% to 2.3%), and Native Americans (from 0.4% to 0.5%). In 1990, Whites represented 91.4% of the state's population and by 2000, this proportion dropped to 85.0%.

Figure 1

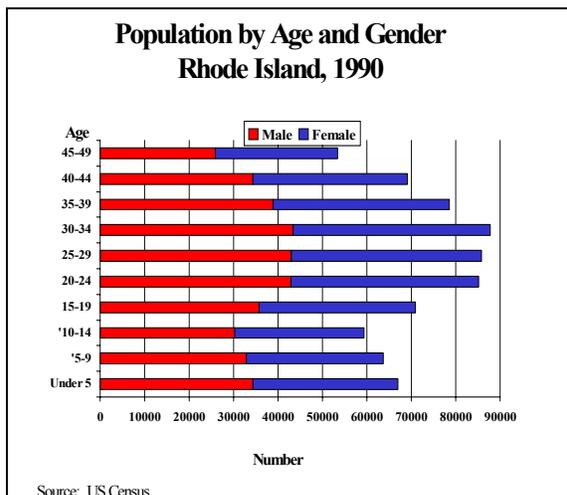
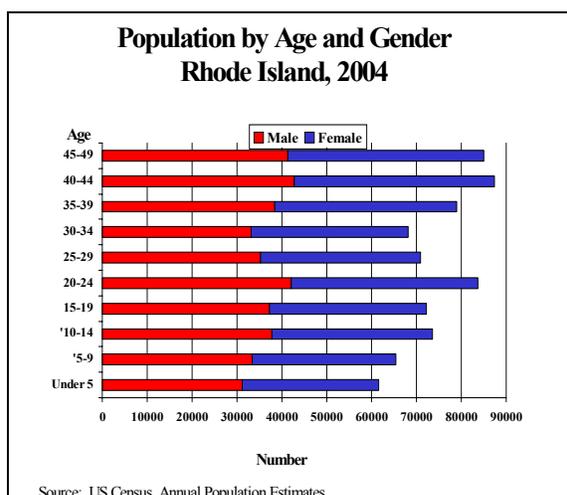


Figure 2



1. PREGNANT WOMEN AND MOTHERS

PRIORITY: IMPROVE MATERNAL HEALTH THROUGH THE REPRODUCTIVE LIFESPAN
PRIORITY: IMPROVE PREGNANCY OUTCOMES
PRIORITY: ENHANCE MCH PROGRAMS

Family Planning/Birth Control

Between 1999 and 2004, the number of clients seen at Rhode Island’s Title X-funded family planning clinics rose by 80.9%, from 12,099 to 21,892. Of the clients seen in 2004, 75.2% were aged 18-44; 47.7% were non-White; 35.3% were of Hispanic/Latino ethnicity; 47% had no health insurance; and 39.4% were covered by Medicaid.

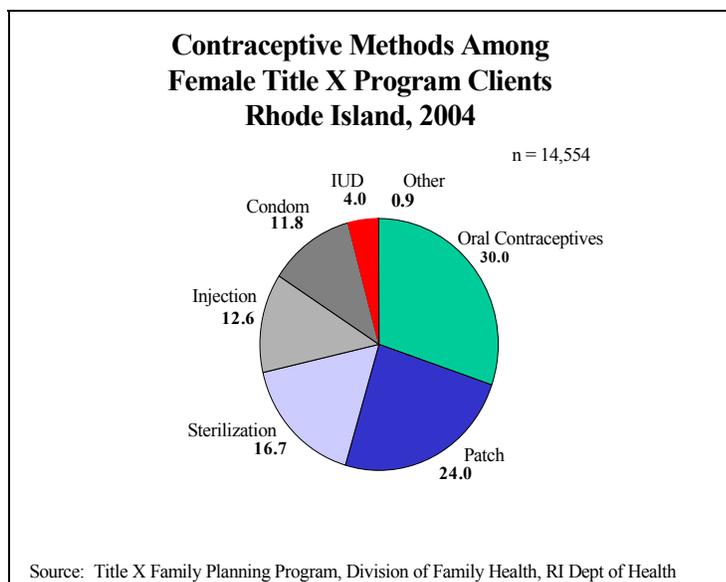
In addition to providing clients with a broad choice of contraceptive methods, the Title X Family Planning Program provides: sexually transmitted disease (STD) testing and treatment; HIV counseling, testing, and referral (CTR) services; cervical and breast cancer screening and follow-up services; and the information, education, and counseling clients need to avoid unintended pregnancies and disease. In CY2004, the Title X family planning sites provided 10,287 pap smears and 10,433 breast exams to female clients, 18,637 STD tests to male and female clients, and 2,872 HIV tests to male and female clients.

Rhode Island ranks third among the six New England states and higher than the nation in the provision of Title X family planning services to women and teen women in need. However, it still only serves 33.8% of women and 31.2% of teen women in need of publicly subsidized Title X family planning services. Like elsewhere in the nation, Rhode Island’s Title X Family Planning Program is significantly under-funded. Rhode Island has the lowest amount of public expenditures for contraceptive services per woman in need compared to the six New England states and the nation.

Rhode Island's Title X family planning agencies are increasingly impacted by the rising cost of contraceptives and rising prices for screening and diagnostic testing technologies. The per client cost of purchasing contraceptive supplies in the nation increased by 58% in 2001 over 1995. This increase was primarily due to the increasing cost of oral contraceptives and the higher relative cost of the newer contraceptive methods, such as the three-month injectable and the contraceptive patch. In addition, Title X providers have seen an increase in the cost of purchasing Pap tests. The newer liquid-based Pap test is rapidly becoming the standard of care in American gynecology despite the fact that, according to Title X providers, it is triple the cost of conventional tests.

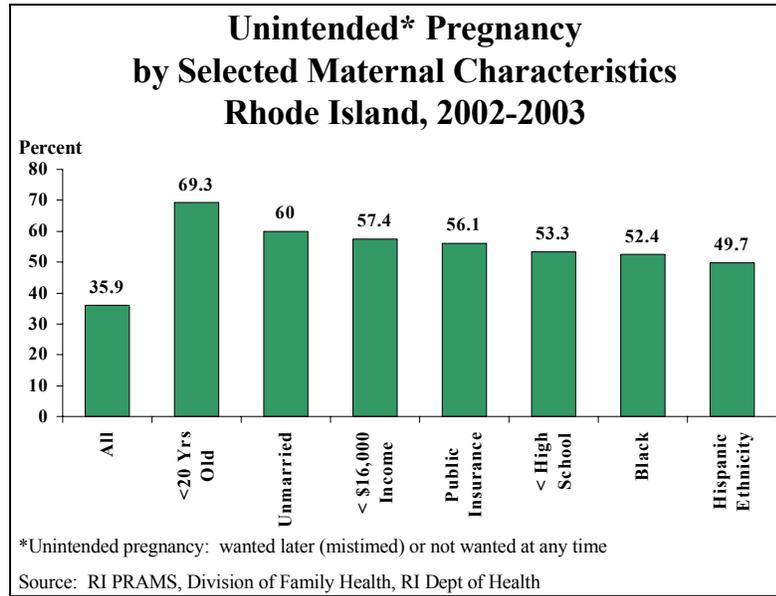
Figure 3 shows the most preferred methods of contraception among the 14,554 female clients who were not pregnant or trying to become pregnant. Oral contraception was the method most favored and used by nearly one-third (30.0%) of the female clients. The patch (24.0%), sterilization (16.7%), injection (12.6%), and condom (11.8%) were the next most preferred contraceptive methods among the female clients.

Figure 3



Data from the Rhode Island Pregnancy Risk Assessment Monitoring System (PRAMS) indicate that 35.9% of respondents who gave birth during 2002-2003 had wanted to be pregnant later or did not want to be pregnant then or at any time, when asked how they felt about becoming pregnant just before they got pregnant. Figure 4 shows that respondents were more likely to report their pregnancy was unintended if they: were aged less than 20 (69.3%), were not married (60.0%), had an annual household income less than \$16,000 (57.4%), had insurance coverage through Medicaid/Rite Care (56.1%), had less than a high school education (53.3%), had no health insurance (52.7%), were Black (52.4%), and were of Hispanic/Latino ethnicity (49.7%).

Figure 4

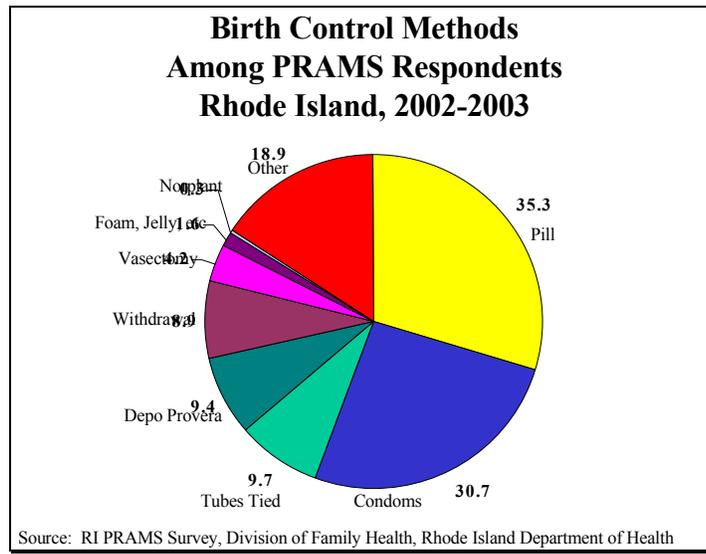


More than half (52.9%) of those whose pregnancy was unintended reported they were not using birth control prior to becoming pregnant. Primary reasons for not using birth control included: didn't mind if got pregnant (31.2%); thought they could not get pregnant at that time (29.6%); husband or partner didn't want to use anything (24.5%); side effects from birth control method (16.5%); problems getting birth control (8.1%); and thought husband/partner was sterile (7.2%).

When asked if they were currently doing anything to keep from getting pregnant (postpartum), 83.3% of PRAMS respondents indicated they or their partner were using birth control. Those not using birth control cited the following reasons: not having sex (34.1%), don't want to use birth control (29.4%), want to get pregnant (16.8%), husband or partner doesn't want to use anything (9.0%), don't think they can get pregnant (6.2%), currently pregnant (1.9%); or they can't pay for birth control (1.7%).

PRAMS respondents reported they or their husband/partner were using the following birth control methods at the time of the survey: pill (35.3%); condoms (30.7%); tubes tied (9.7%); withdrawal (9.4%); Depo-Provera (8.9%); vasectomy (4.2%); foam, jelly, cream (1.6%); Norplant (0.3%); and other (18.9%). (Figure 5)

Figure 5



Identification of Risks Among Women Receiving Pregnancy Tests

In 1997, the Rhode Island Women’s Health Screening and Referral Program (WHSRP) was developed to address four important health objectives: 1) to prevent unintended pregnancies; 2) to improve pregnancy outcomes by identifying risks and appropriate follow-up; 3) to identify gaps in the existing services delivery system; and 4) to create a risk responsive continuum of care for all women, regardless of pregnancy status.

The WHSRP provides no cost pregnancy testing, comprehensive health risk assessment and referral services to approximately 3,000 women annually in nine Title X family planning sites. The clinics are located in high need communities, where there are large concentrations of poverty and other public health concerns. All women receiving pregnancy tests are asked to fill out a voluntary 21-item “Care Questionnaire” survey while they are waiting for the results of their pregnancy test. The survey is available in English and Spanish.

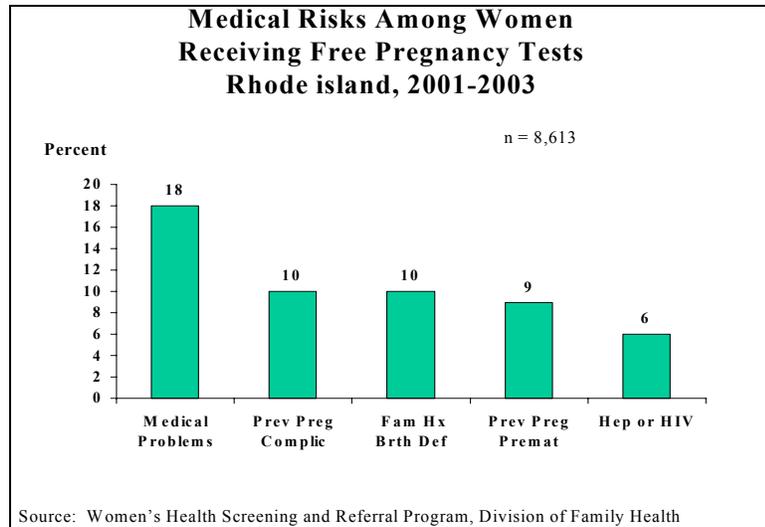
The survey is designed to flag significant risks to a woman’s health and pregnancy status. Women who are identified with one or more health risks through the WHSRP are provided with education and may be referred to one or more of the following services depending on the risk identified and the woman’s pregnancy status: family planning, smoking cessation, home visiting, substance abuse assessment, domestic violence assistance, HIV/STD screening, mental health services, heating assistance, genetics counseling, nutrition services, medical specialty care, or early prenatal care.

During 2001-2003, 8,613 women completed “Care Questionnaire” surveys. Thirty-nine percent (39%) of these women reported they had no health insurance and 36% were either less than 20 years old or greater than or equal to 40 years old. Two-thirds (67%) of the pregnancy tests were negative and 33% were positive. Among adults, 40% had positive tests and 60% tested negative, and among teens, 21% had positive tests and 79% tested negative. Although 81% of the women who completed a survey reported that their suspected pregnancy was

unplanned, only 67% were using birth control prior to the pregnancy test visit. Forty-two percent (42%) reported that, if pregnant, they would either raise the baby alone or put the child up for adoption.

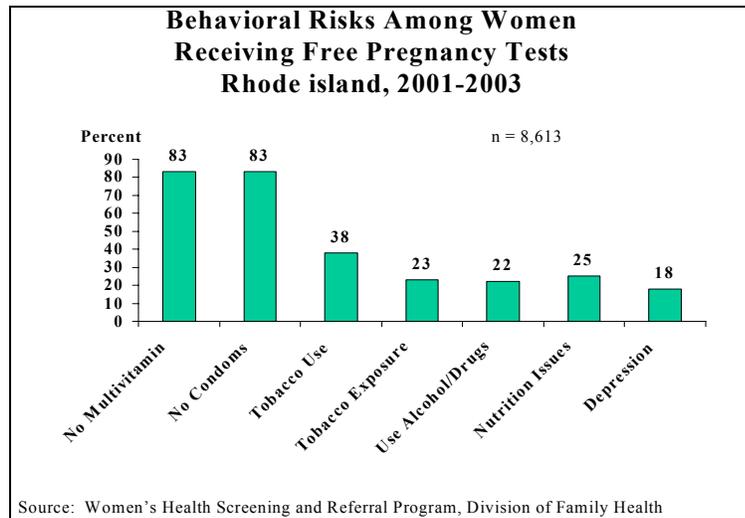
The “Care Questionnaire” includes 5 risks that can be considered “medical”; 7 “behavioral”, and 5 “socio-economic”. Figure 6 shows that in the “medical” risk category, 18% of respondents had medical or health problems; 10% experienced complications with a previous pregnancy; 10% reported birth defects, mental retardation, or developmental delay in their family or in their partner’s family; 9% reported they previously delivered a premature or sick baby, or had a baby who died; and 6% reported either they or their partner has Hepatitis and/or HIV.

Figure 6



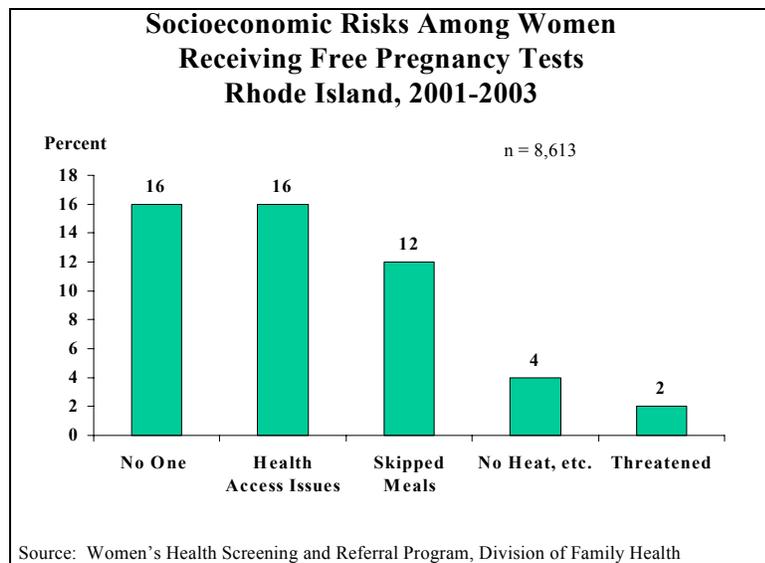
In the “behavioral” risk category, 83% reported they were not taking a multivitamin with folic acid daily; 83% did not use condoms consistently; 38% smoked tobacco, 23% reported they were exposed to secondhand smoke; 22% used alcohol and/or illegal drugs, 25% had concerns about nutrition or their diet; and 18% said that they were depressed or had other mental health concerns. (Figure 7)

Figure 7



In the “socioeconomic” risk category, 16% had no one at home to rely on if they were pregnant; 16% had difficulty accessing health care services due to transportation and/or child care issues; 12% said that they often skipped meals due to a shortage of money for food; 3% did not always have access to heat, hot water, electricity or phone; and 2% reported they sometimes felt physically or verbally threatened at home. (Figure 8)

Figure 8

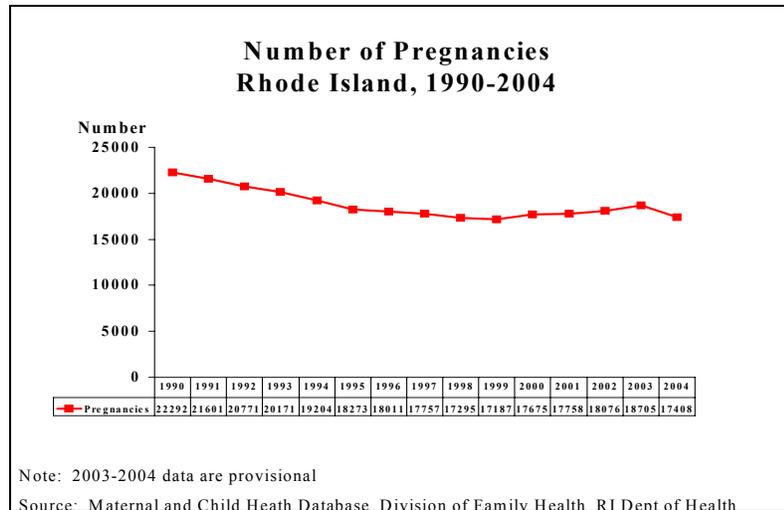


Many of the Care Questionnaire respondents reported having more than one risk where, 11% reported 1-2 risks; 32% reported 3-4 risks; and 1883 57% reported 5 or more risks.

Pregnancies/Births/Fertility Rates

During the 1990's, Rhode Island experienced a decrease in the number of pregnancies (live births, induced abortions, and spontaneous abortions) among its residents. Between 1990 and 1999, the total number of pregnancies among women of all ages decreased by 22.9%, from 22,922 to 17,187. However, along with the new millennium came more change and the number of pregnancies began to rise. Between 1999 and 2003, the number of pregnancies among Rhode Island residents increased by 8.8%, from 17,187 to 18,705. Figure 9 shows the trend in the number of pregnancies during 1990 to 2004 (births among RI residents that occurred out of state are estimated).

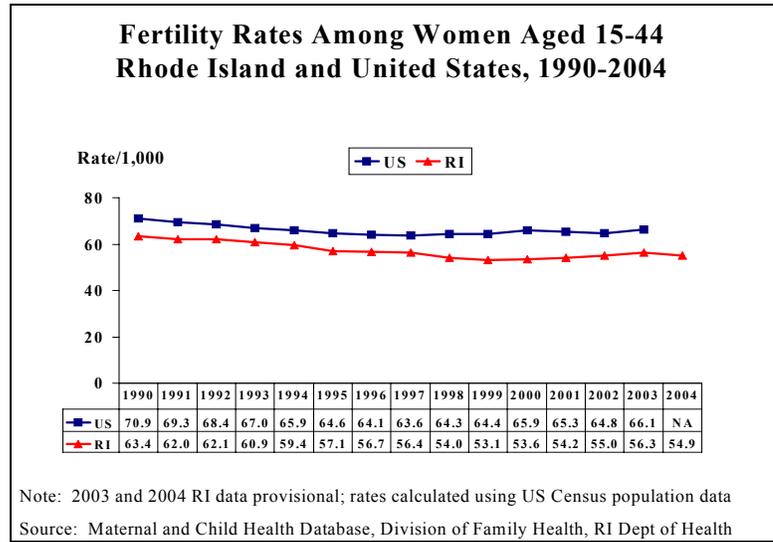
Figure 9



During 2004, there were a total of 17,408 pregnancies among women of childbearing age (15-44 years), of which there were: 12,818 (73.6%) live births, 3,697 (21.2%) induced abortions, and 893 (5.1%) spontaneous abortions. The pregnancy rate among women of childbearing age has decreased from 92.8 per 1,000 women in 1990 to 75.0 in 2004, a 19.2% decrease. During 1990-2004, live births decreased among Rhode Island women of childbearing age by 15.3%, induced abortions by 40.3%, and spontaneous abortions by 10.4%. Nationally, the pregnancy rate has also been decreasing. Between 1990 and 2000, the pregnancy rate among US women of childbearing age decreased by 11.2%, from 115.6 to 104.0.

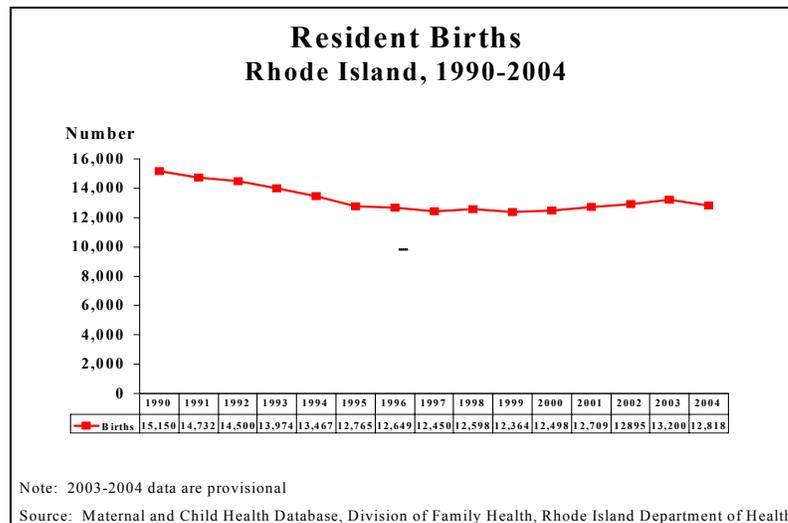
The number of births and the fertility rate among women of childbearing age decreased both in the United States and Rhode Island during the 1990's. However, by 1998, the number of births and the fertility rate began to rise in the country overall and in Rhode Island. Figure 10 compares the fertility rates of the United States and Rhode Island from 1990-2003 (estimated 2004 data are shown for Rhode Island). Rhode Island's rates have been lower and decreases in the rates sharper.

Figure 10



The total number of births among Rhode Island residents declined during the 1990 decade, but by 2000 this trend changed and births began to rise. Figure 11 shows there were a total of 15,190 births among Rhode Island residents in 1990 and by 1999, the number of births had dropped to 12,364, an 18.6% decrease. However, between 1999 and 2003, the number of births rose 6.8%, from 12,364 to 13,200. Preliminary data indicate that the number of births decreased in 2004, to 12,818 (estimated).

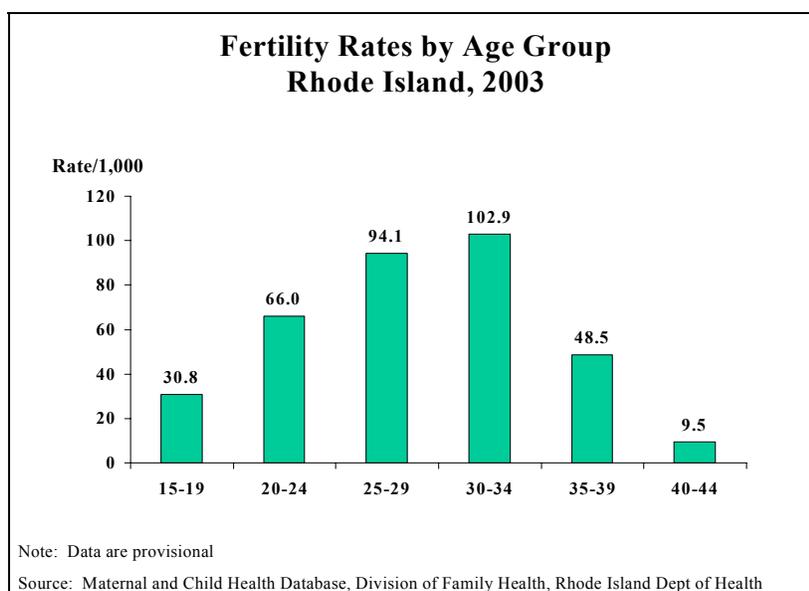
Figure 11



Although the number of women of childbearing age in Rhode Island had been rising during previous decades, the population has decreased since 1990. Between 1960 and 1990, the number of Rhode Island women aged 15-44 rose 41.2%, from 169,222 to 238,886. However, since 1990, the population of women of childbearing age in Rhode Island decreased by 2.8%. During 1990-2004, the fertility rate decreased 13.4%, from 63.4 to 54.9.

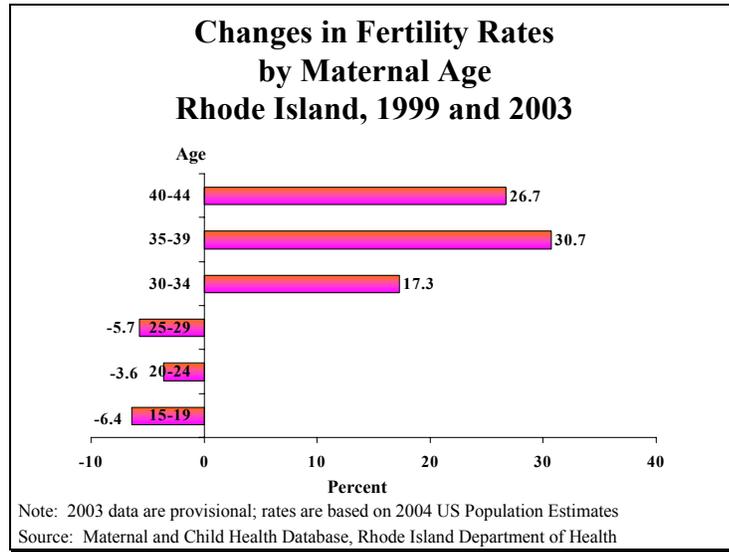
Figure 12 shows the differences in fertility rates by age during 2003. (Note: since 2004 data do not yet include births among Rhode Island residents that occurred out of state, 2003 data are being used for analyses of fertility rates by maternal characteristics). Women aged 30-34 had the highest fertility rate (102.9) followed by women aged 25-29 (94.1). Women aged 40-44 had the lowest fertility rate (9.5), although this rate has been increasing with the rising number of births among this age group as more women delay childbirth. Fewer teens are giving birth and this is reflected in this group's fertility rate of 30.8.

Figure 12



Over the past years, fertility rates among women of childbearing age have been changing and these changes differ by maternal age and race/ethnicity. Figure 13 shows that between 1999 and 2003, the fertility rate increased among older age groups (30-44) and decreased among those aged 15-29. Women aged 35-44 had the largest increases where rates grew by 30.7% among those aged 35-39 and 26.7% among those aged 40-44. Since 1990, births have been decreasing among teens aged 15-19. The age-specific fertility rate for teens aged 15-19 decreased 30.9%, from 44.6 in 1990 to 30.8 in 2003. Among women aged 25-29, the fertility rate decreased 20.1%, from 117.8 in 1990 to 94.1 in 2003. Women aged 40-44 experienced the largest increase, 59.6%, in their overall fertility rate between 1990 and 2000. Fertility rates among women aged 20-24 and 30-39, rose by 6.3% and 9.0%, respectively. Although the number of births among women aged 45 and older is very small in Rhode Island, they too have been on the rise, from 5 births in 1990 to 16 in 1998; the birth rate among these women rose 157%.

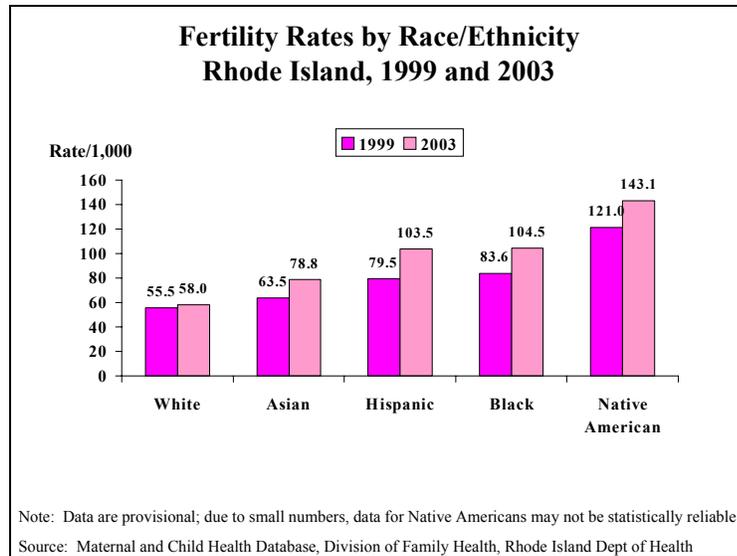
Figure 13



Racial Disparities

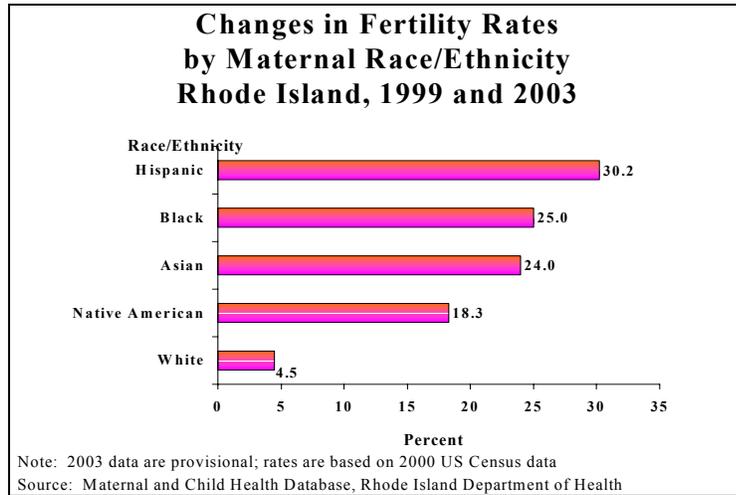
Fertility rates vary by race/ethnicity and 2003 data indicate that Whites had the lowest rate (58.0). (Figure 14). Although Native Americans had the highest rate (143.1), it should be noted that the total number of Native American females aged 15-44 in Rhode Island is small (n = 1,223), according to the 2000 US Census.

Figure 14



Although increases in fertility rates were seen among all racial/ethnic groups between 1999 and 2003, Figure 15 shows that the degree of change differs by race/ethnicity. Those of Hispanic/Latino ethnicity had the highest rate of change (30.2%) followed by Blacks/African Americans (25.0%), Asians (24.0%) and Native Americans (18.3%).

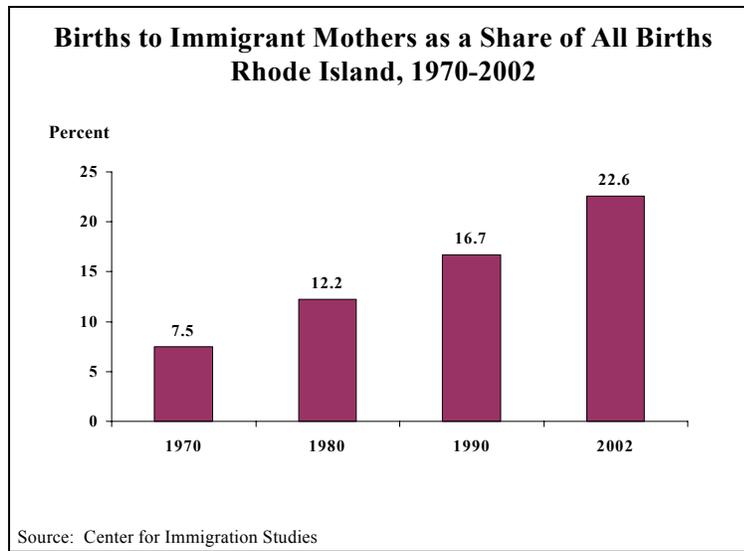
Figure 15



Births to Immigrant Mothers

The percentage of births to immigrant mothers had been rising steadily over the past decades. During 2002, nearly one-fourth, 2,916 (22.6%), of the 12,894 births among Rhode Island women were to immigrant mothers. This figure represents a three-fold increase since 1970, when 7.5% of Rhode Island births were to immigrant mothers (Figure 16).

Figure 16



Prenatal Care

Rhode Island continues to have high rates of early entry into prenatal care. In 1990, 86.7% of pregnant women received prenatal care in the first trimester and by 1999, the figure had increased to 91.1%, surpassing the Healthy People 2010 objective of 90%. Over the past ten years, the rate has risen slightly. During 1995-1999, 89.9%

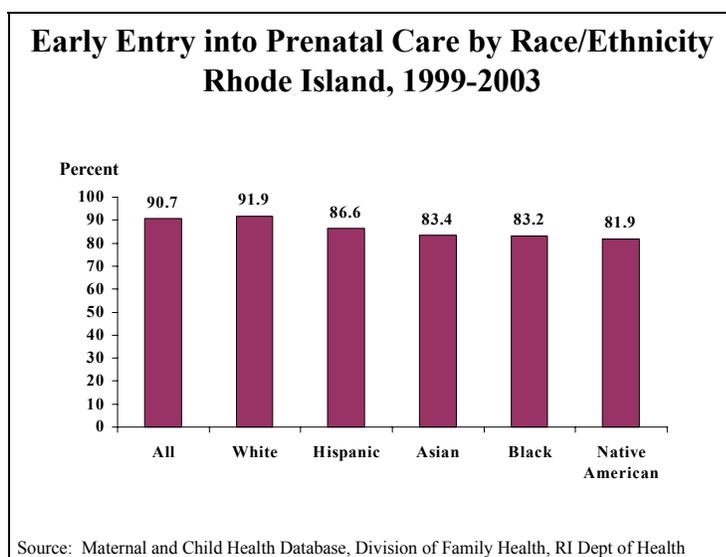
of pregnant women received prenatal care in the first trimester compared with 90.7% during 1999-2003. Provisional 2004 data indicate the rate continues to be fairly stable at 90.0%. These figures are derived from self-reported data on the birth certificate.

Racial Disparities

The rate of early entry into prenatal care varies among different population groups. Figure 17 shows that although 90.7% of pregnant women received prenatal care in the first trimester during 1999-2003, the rate was lower among certain racial/ethnic groups. For example, only 81.9% of Native Americans received prenatal care in the first trimester compared to 91.9% of Whites. Blacks (83.2%), Asians (83.4%) and those of Hispanic/Latino ethnicity (86.6%) also had rates that were lower than those for Whites.

Between 1999 and 2003, the rates of early entry into prenatal care remained fairly static among all racial/ethnic groups; any changes during this five-year period were less than one percent.

Figure 17



Geographic Disparities

Rates of early entry into prenatal care also differ among those living in lower socioeconomic areas (e.g., the core cities) and those living in the rest of the state (Figure 17). Women residing in the core cities were less likely to receive prenatal care in the first trimester (86.9%) compared with women living in the rest of the state (93.8%). For example, during 1999-2003, 82.4% of women living in Woonsocket received prenatal care in the first trimester compared to 97.5% of women living in Barrington, a community of high socioeconomic status. Figure 18 shows that variation exists among the core cities, with prenatal care rates ranging from 93.9% to 82.4%.

Figure 18

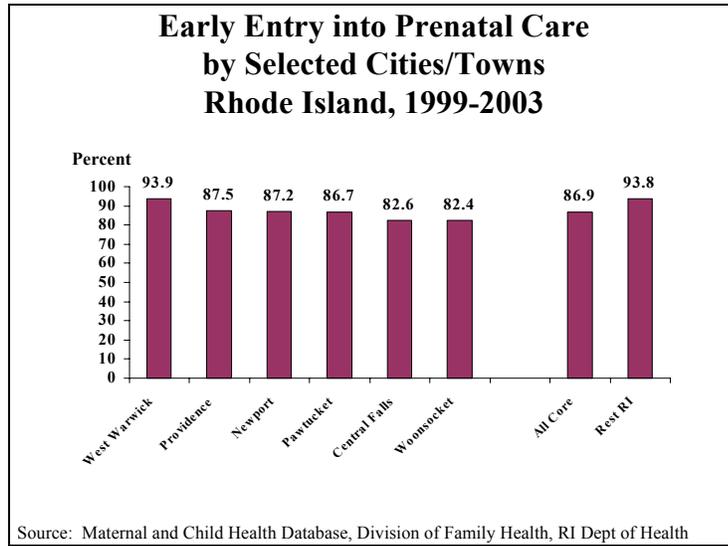
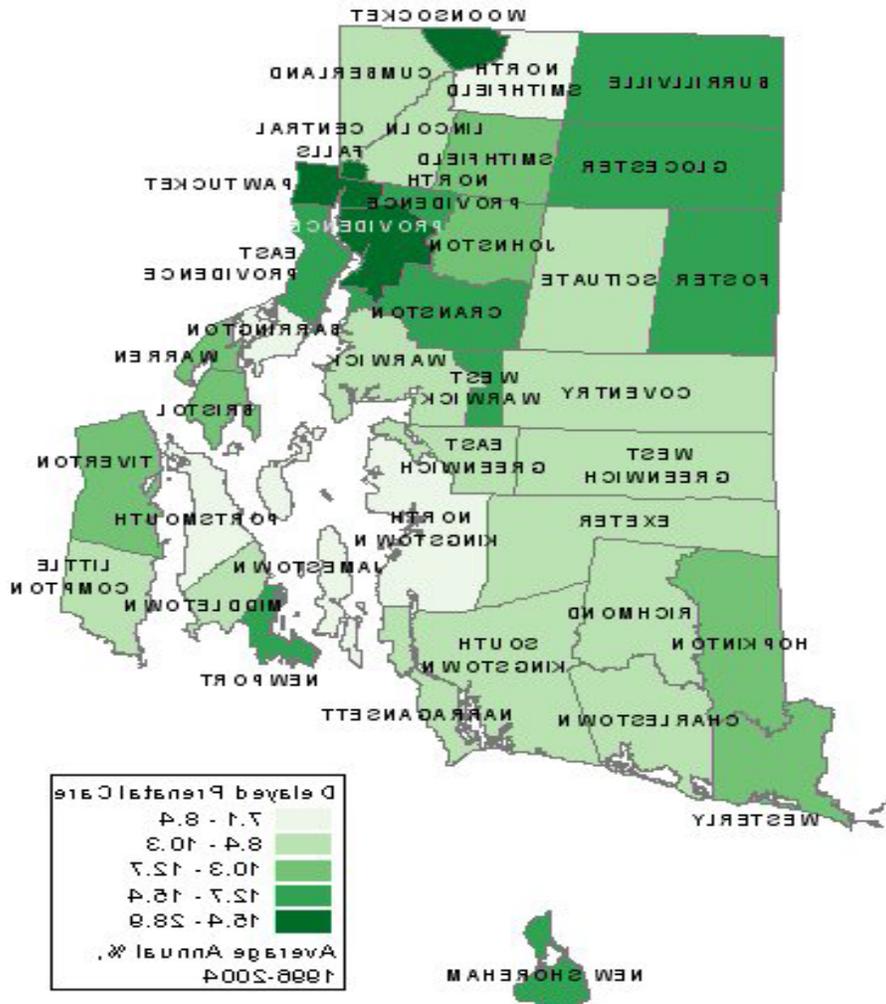


Figure 19 shows the proportion of communities whose residents began prenatal care after the first trimester or received no prenatal care during their pregnancy. The map utilizes birth data collected by the Newborn Developmental Risk Screening Program during 1996-2004. Central Falls, Pawtucket, Providence and Woonsocket had the highest rates (15.4%-28.9%) of delayed prenatal care during this period.

Figure 19

Delayed Prenatal Care by City/Town, Rhode Island, 1996-2004



Disparities by Insurance Status

Data from a study conducted by the Department of Human Services indicate that in 2003, 84.1% of women with public (Medicaid or RIte Care) insurance received early prenatal care compared with 95.0% of women with private insurance. Although women with public insurance are less likely to receive prenatal care in the first trimester compared to women with private insurance, during 1993 and 2003, greater improvements were seen in prenatal care rates among those with public insurance. Specifically, rates increased from 76.6% in 1993 to 84.1% in 2003 among those with public insurance, whereas, rates dropped slightly from 95.9% to 95% among those with private insurance.

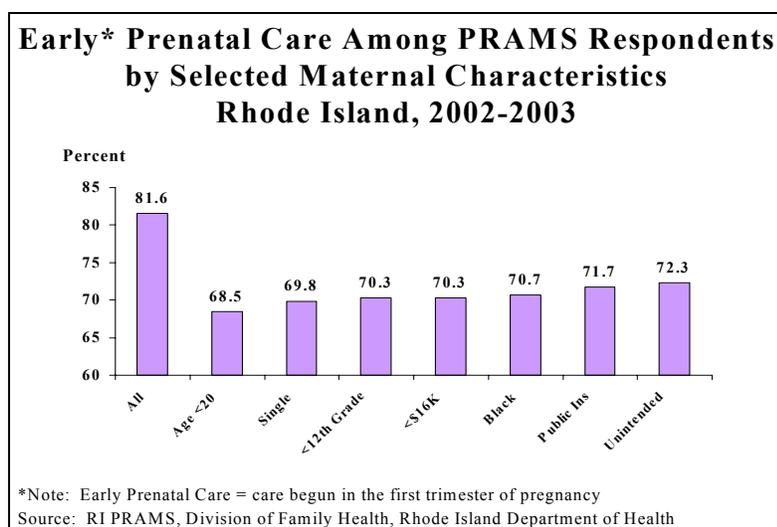
Maternal Characteristics

Data from the Rhode Island PRAMS survey indicate that among women who gave birth during 2002-2003, 81.6% started prenatal care in the first trimester. This figure differs from the data presented above which used birth certificate data. One of the main reasons for this difference is that the CDC PRAMS methodology defines first

trimester as ≤ 12 weeks, whereas the National Center for Health Statistics (NCHS) defines the first trimester as ≤ 13 weeks for birth certificate data. When PRAMS data are generated to include the 13th week, 92.2% of PRAMS respondents received prenatal care in the first trimester. Other factors that could contribute to the difference include different wording of the question on PRAMS vs. the birth certificate and possible recall bias of PRAMS respondents since the survey is not completed on average until 3 months after delivery. The data presented below represent characteristics of PRAMS respondents based on the PRAMS first trimester definition of ≤ 12 weeks.

Women were significantly ($p < .0001$) less likely to receive prenatal care in the first trimester if they: were aged less than 20 (68.5%); were single (67.2%); had less than a high school education (70.3%); had an annual household income less than \$16,000 (70.3%); were Black (70.7%); had public health insurance (71.7%); or if their pregnancy was unintended (72.3%). (Figure 20)

Figure 20



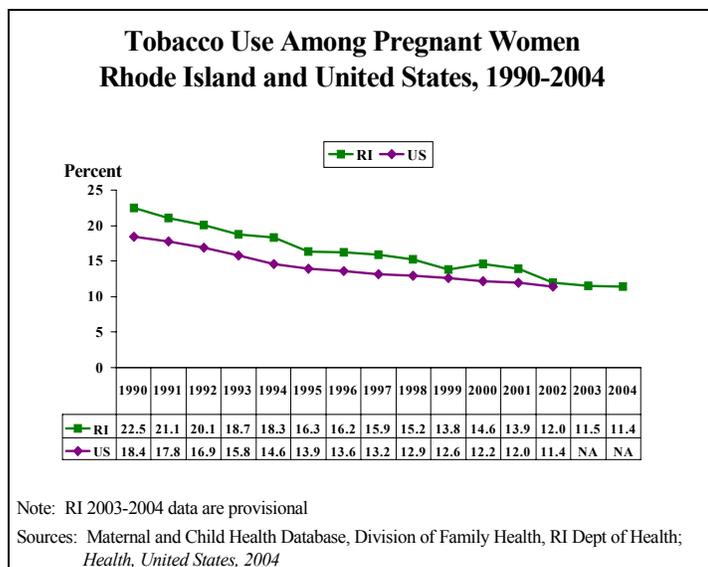
The following reasons were cited by respondents who gave birth during 2002-2003 for not getting prenatal care as early as they wanted: did not know they were pregnant (33.5%); couldn't get an appointment earlier (28.0%); their doctor/health plan would not start care earlier (15.7%); didn't have enough money or insurance to pay for the visits (14.5%); didn't have Medicaid/RIte Care card (9.3%); too many other things were going on (6.9%); didn't have a way to get to the clinic/doctor's office (4.5%); didn't have child care (2.4%); and other reasons (12.5%).

Tobacco Use During Pregnancy

Babies born to women who smoke while pregnant are at a higher risk for adverse birth outcomes, including low birth weight (less than 5.5 lbs) and prematurity (less than 37 weeks gestation). Although the percentage of Rhode Island women who reported they smoked during their pregnancy has been on the decline, rates vary by age, race/ethnicity and town of residence. Rhode Island's rates have also been higher than the nation, although the gap has been narrowing.

Figure 21 shows that over the past 15 years, tobacco use among pregnant women in Rhode Island has decreased by nearly 50%, from 22.5% in 1990 to 11.4% in 2004. A similar trend has been seen nationally, where rates have dropped by approximately 42%, from 19.5% in 1990 to 11.4% in 2002 (most current data available).

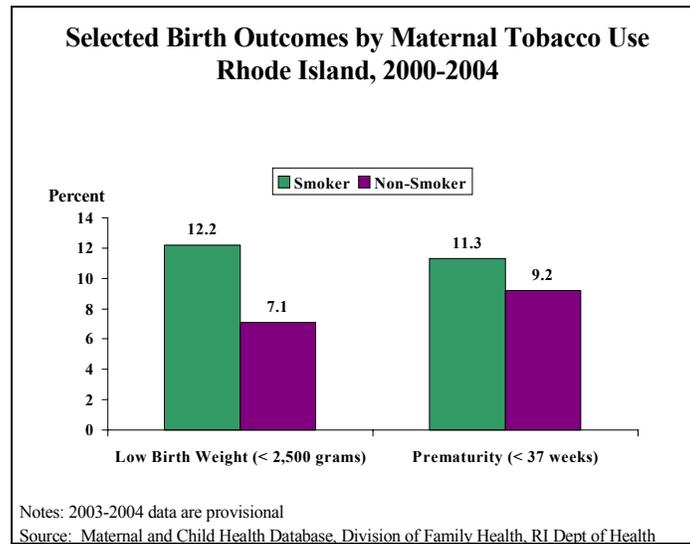
Figure 21



Rhode Island birth certificate data indicate that nearly one in eight women, who gave birth during 2000-2004, stated they smoked cigarettes while pregnant. During this period, there were 63,611 live births, and mother's smoking status was determined for 61,810 (97.2%). It should be noted that these data do not include approximately 500 births that occurred among Rhode Island women out of state during 2004. Nevertheless, a total of 7,854 (12.7%) mothers who gave birth during 2000-2004 reported they had smoked while pregnant. This figure represents a decline from the 1995-1999 period, when 15.7% of women reported they smoked during their pregnancy.

Figure 22 compares the rates of low birth weight and prematurity among smokers and non-smokers. Women who smoked were more likely to deliver a low birth weight baby than those who did not. During 2000-2004, 12.2% of babies born to women who smoked were born at low birth weights compared with 7.1% of babies born to women who did not. Similarly, during this period there were differences in rates of prematurity among women who smoked and those who did not, where 11.3% of women who smoked delivered premature babies compared with 9.2% of women who did not smoke while pregnant. Of the 4,997 babies born at low birth weight, 960 (19.2%) were born to women who smoked during their pregnancy. Similarly, of the 6,083 babies born prematurely, 889 (14.6%) were born to women who smoked during their pregnancy. It is important to note that during this period, the proportion of babies born at low birth weight or prematurely to smokers has been declining as the total number of babies born low birth weight and prematurely has been rising. Higher proportions of babies are being born at low birth weight or prematurely to women who did not smoke during their pregnancy. Both low birth weight and prematurity are discussed in more detail in later sections.

Figure 22

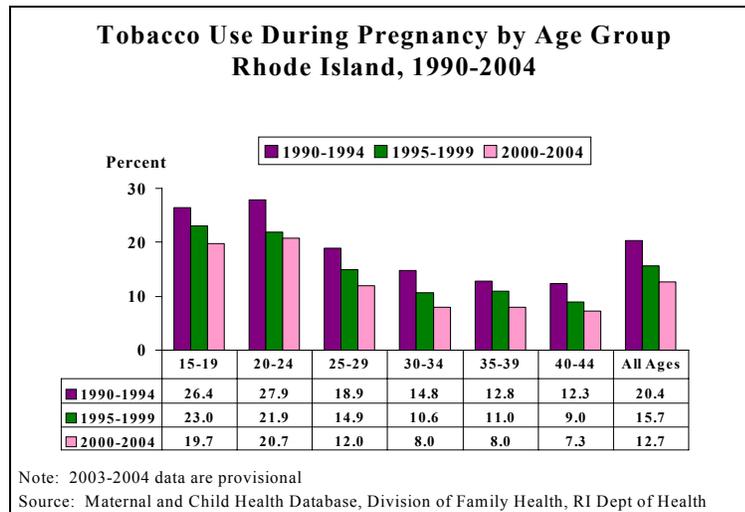


Between 1999 and 2004, the percentage of low birth weight babies born to women who smoked during their pregnancy rose from 11.0% in 1999 to 12.7% in 2004, a 15.5% increase. A similar increase was seen among those who did not smoke, where rates rose from 6.4% in 1999 to 7.4% in 2004, a 15.6% increase. Sharper increases were seen during this period among babies born prematurely. The percentage of babies born prematurely among those who smoked rose from 8.3% to 12.4%, a 49.4% increase; while rates among women who did not smoke during their pregnancy rose from 7.1% to 9.7%, a 36.6% increase.

Tobacco Use During Pregnancy by Age

Figure 23 compares smoking rates during pregnancy among different age groups for three five-year periods: 1990-1994, 1995-1999 and 2000-2004. Although rates of smoking among pregnant women have varied by age, they have declined among all age groups. The percentage of women who use tobacco during pregnancy also decreases with age. Teens aged 15-19 (19.7%) and women aged 20-24 (20.7%) had the highest rates of tobacco use during pregnancy, where approximately, one out of five smoked while they were pregnant. Women aged 40-44 had the lowest rate of smoking during pregnancy (7.3%).

Figure 23



When comparing the 1990-1994 and 2000-2004 periods, the rates of tobacco use among pregnant women in Rhode Island decreased by 37.7%. Although rates decreased among women in all age groups, women aged 30-34 experienced the largest decrease (45.9%). Women aged 40-44 experienced the second largest decrease in rates of maternal tobacco use (40.7%). Table 1 below compares the changes in smoking rates among different age groups.

Table 1:
**Changes in the Percent of Mothers Who Smoked During Pregnancy by Age of Mother
Rhode Island, 1990-1994 and 2000-2004**

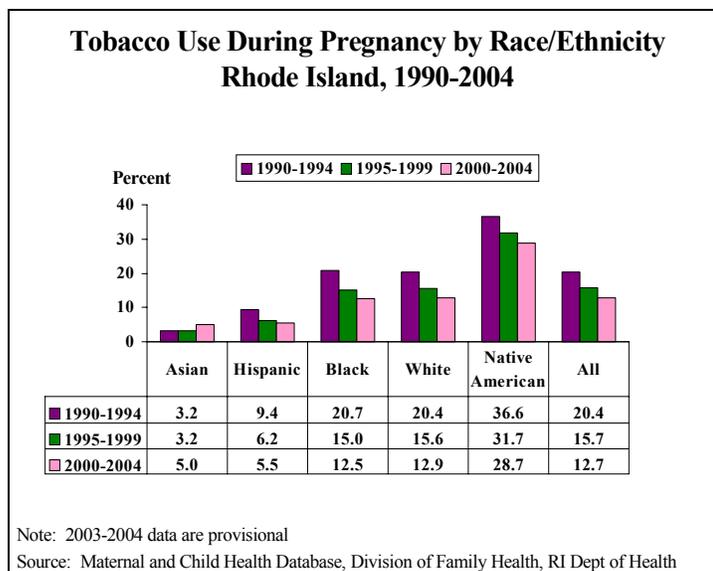
Age Group	1990-1994	2000-2004	%Change
15-19	26.4	19.7	-25.4
20-24	27.9	20.7	-25.8
25-29	18.9	12.0	-36.5
30-34	14.8	8.0	-45.9
35-39	12.8	8.0	-37.5
40+	12.3	7.3	-40.7
All Ages	20.4	12.7	-37.7

Tobacco Use During Pregnancy by Race/Ethnicity

Figure 24 compares the rates of smoking during pregnancy among racial/ethnic groups during three five-year periods: 1990-1994, 1995-1999 and 2000-2004. Native Americans continue to have the highest rate of maternal tobacco use (28.7%), while Asians and those of Hispanic/Latino ethnicity have the lowest rates (5.0% and 5.5%, respectively). Blacks/African Americans (12.5%) and Whites (12.9%) had rates that were very close to the statewide average (12.7%). As mentioned previously, the number of births that occur annually among Native Americans is small (~150) and therefore, rates may not be statistically reliable. Nevertheless, 2000-2004 data

indicate that the maternal tobacco rate among Native Americans continues to be significantly higher than the other racial/ethnic groups (nearly 6 times the rate for of Asians and Hispanics, and more than twice the rate for Blacks and Whites).

Figure 24

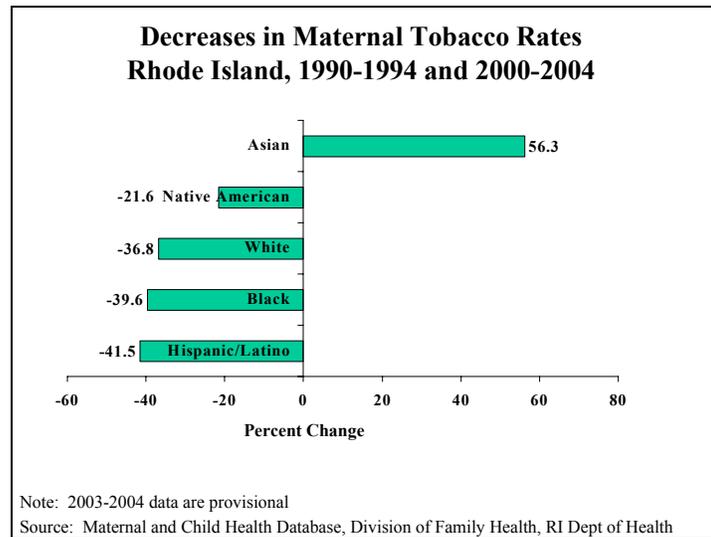


During the past 15 years (1990-2004), the maternal tobacco rate decreased among all racial/ethnic groups except Asians. Table 2 and Figure 25 compare the rates by race/ethnicity during 1990-2004 and 2000-2004. Those of Hispanic/Latino ethnicity experienced the largest decrease (41.5%), followed by Blacks/African Americans (39.6%), Whites (36.8%), and Native Americans 21.6%). Although Asians have had the lowest maternal tobacco rates compared to the other racial/groups, they were the only group that experienced an increase (56.3%) between 1990 and 2004, from 3.2% to 5.0%.

Table 2:
**Changes in the Percent of Mothers Who Smoked During Pregnancy by Maternal Race/Ethnicity
Rhode Island, 1990-1994 and 2000-2004**

Racial/Ethnic Group	1990-1994	2000-2004	% Change
Native American	36.6	28.7	-21.6
White	20.4	12.9	-36.8
Black/African American	20.7	12.5	-39.6
Hispanic/Latino	9.4	5.5	-41.5
Asian	3.2	5.0	+56.3
All Rhode Island	20.4	12.7	-37.7

Figure 25

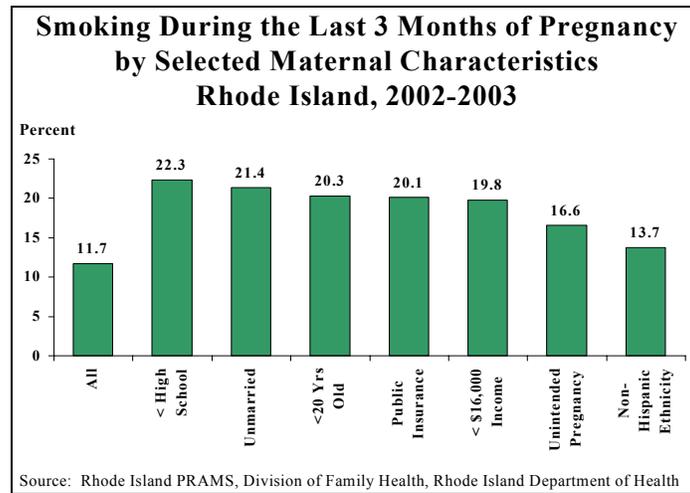


Characteristics of Women Who Smoked During Pregnancy

According to data from the Rhode Island PRAMS Survey, 21.5% of women who gave birth during 2002-2003 reported they had smoked three months before they became pregnant and 11.7% had smoked in the last three months of their pregnancy. The rate of smoking during pregnancy reported by PRAMS respondents (11.7%) corresponds to the rate reported on the birth certificate (11.8%) among women who gave birth during 2002-2003. Data from RI PRAMS show that rates of smoking during the last three months of pregnancy vary significantly by age, educational level, marital status, race/ethnicity, household income, and health insurance (Figure 26). For example:

- Respondents aged less than 20 (20.3%) were more than twice as likely to smoke than respondents aged 30 or older (7.9%);
- Women with less than a high school education (22.3%) were four times more likely to smoke during their pregnancy than women who had more than a high school education (5.5%);
- Single women (21.4%) were more than three times more likely to smoke than married women (6.5%);
- Non-Hispanic women (13.7%) were four times more likely to smoke during their pregnancy than Hispanic women (3.4%);
- Women with annual household incomes of less than \$14,000 (19.8%) were nearly four times more likely to smoke during their pregnancy than women with incomes of \$40,000 or more (5.3%);
- Women who had health insurance coverage through Medicaid/RIte Care (20.1) were three times more likely to smoke during their pregnancy than women with private insurance (6.6%);
- Women whose pregnancy was unintended (16.6%) were nearly twice as likely to smoke during their pregnancy than women whose pregnancy was intended (9.1%).

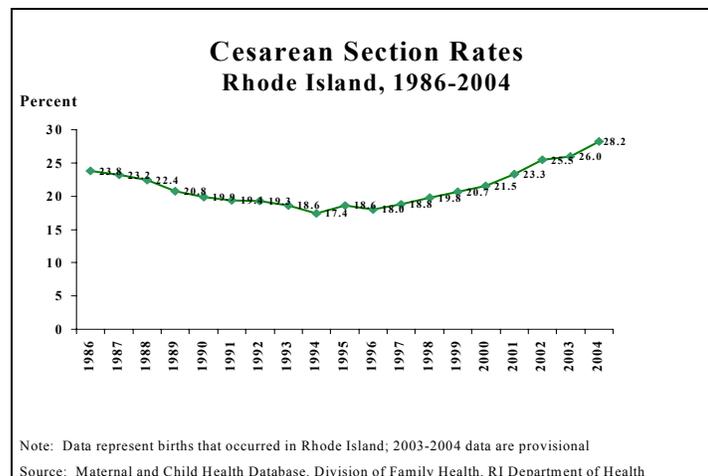
Figure 26



Cesarean Section Deliveries

During the late 1980's and early 1990's, the rate of cesarean section deliveries in Rhode Island decreased. In 1986, 23.8% of deliveries in Rhode Island were by C-section (3,166 C-sections among 13,284 deliveries) and by 1994, this figure dropped to a low of 17.3% (2,452 c-sections among 14,198 deliveries). This downward trend began to shift back up in 1995 and the c-section rate rose to a high of 28.2% in 2004 (Figure 27). Of the 13,322 deliveries that occurred in Rhode Island during 2004, 3,762 (28.2%) were delivered by c-section. Nearly one out of three babies born in Rhode Island is delivered by cesarean section. Contributing factors to the rise in c-section rates include increases in maternal age (delays in childbearing), increases in multiple births, and changes in policies or guidelines.

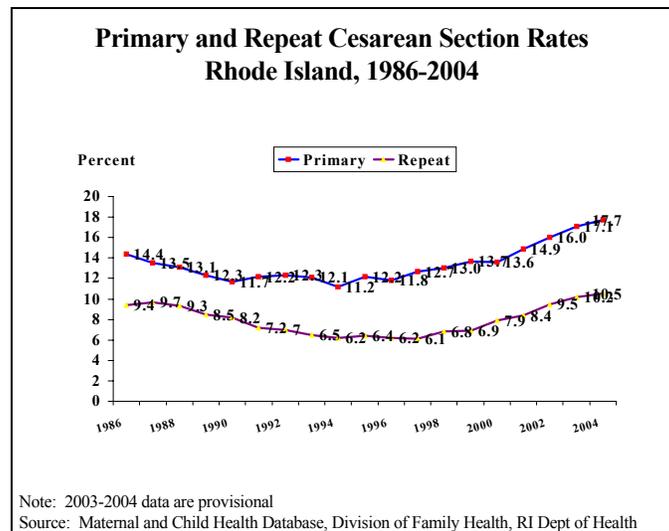
Figure 27



The primary and repeat c-section rates, which comprise the total c-section rate, have continued to change over the years (Figure 28). During 2004, of the 3,762 c-sections, 2,364 (17.7%) were primary and 1,398 (10.5%)

were repeat sections. These primary and repeat rates are higher than those reported in 1986, when the primary and repeat C-section rates were 14.4% and 9.4%, respectively. During 1986-1994, both primary and repeat rates had dropped to 11.2% and 6.1%. However, during 1994-2004, the primary rate rose by 58.0% and the repeat rate by 72.1%. Also, during this period, the number of vaginal births after c-sections (VBAC's) decreased from 735 (5.2% of deliveries) in 1994 to 292 (2.2% of deliveries) in 2004. This decrease in VBACs may be due to fear of malpractice lawsuits and changing opinions on their safety.

Figure 28



The rate of c-sections among individual hospitals in Rhode Island has varied and in 2004, rates ranged from 23.7% to 33.5%.

Some variation in c-section rates also exists among racial/ethnic groups and by insurance status. During 2004, Asians had the lowest C-section rate (23.5%) while Whites had the highest (29.1%). Women with public (Medicaid/Rite Care) health insurance were less likely to have a c-section (25.7%) than women with private insurance (30.8%). There was no difference between c-section rates among those who lived in the core cities and those who lived in the rest of the state.

2. INFANTS

Infant Mortality

Rhode Island's small population (and relatively small number of infant deaths) results in infant mortality rates that fluctuate from year to year (Figure 29). Although infant mortality rates declined during the 1970's and 1980's, and reached a low in 1994 of 5.0 (the lowest in the country that year), progress has slowed. The same trend can be seen nationally, where the infant mortality rate has been decreasing, but there has been little or no improvement since 1997. Although Rhode Island has experienced rates below 6.0 in 1994 (5.0), 1996 (5.2), 1999 (5.7) and 2004 (5.3 provisional), the annual fluctuations makes it difficult to predict whether Rhode Island will achieve and maintain the Healthy People 2010 objective of 4.5. (Figure 30)

Figure 29

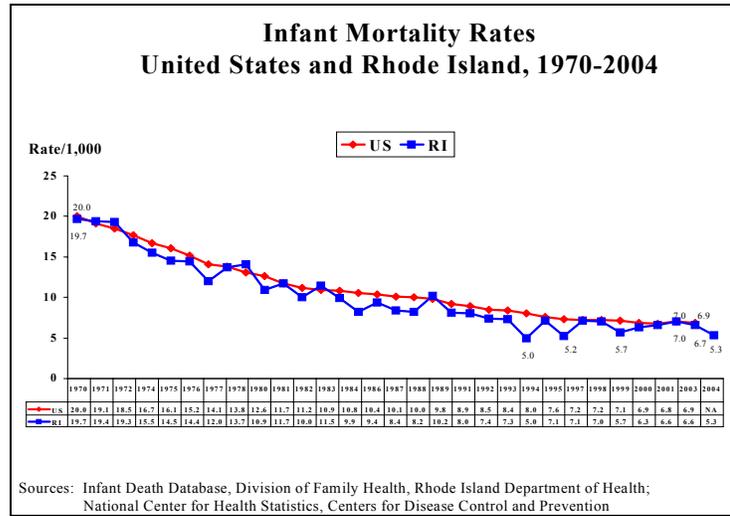
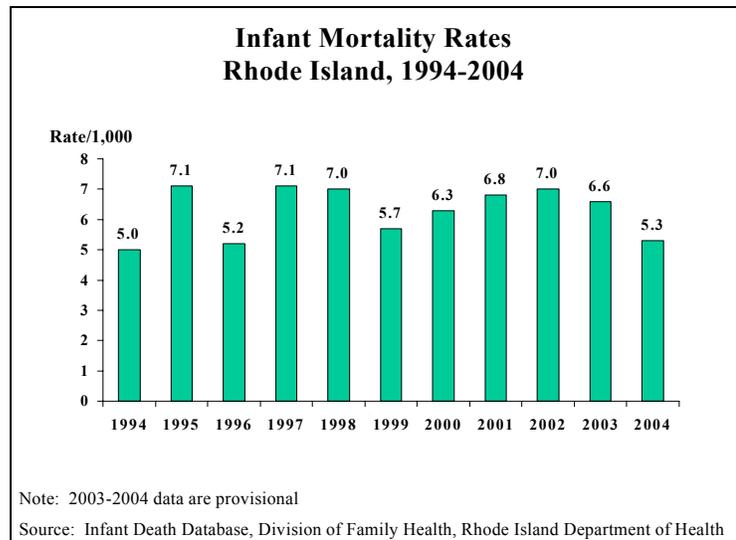
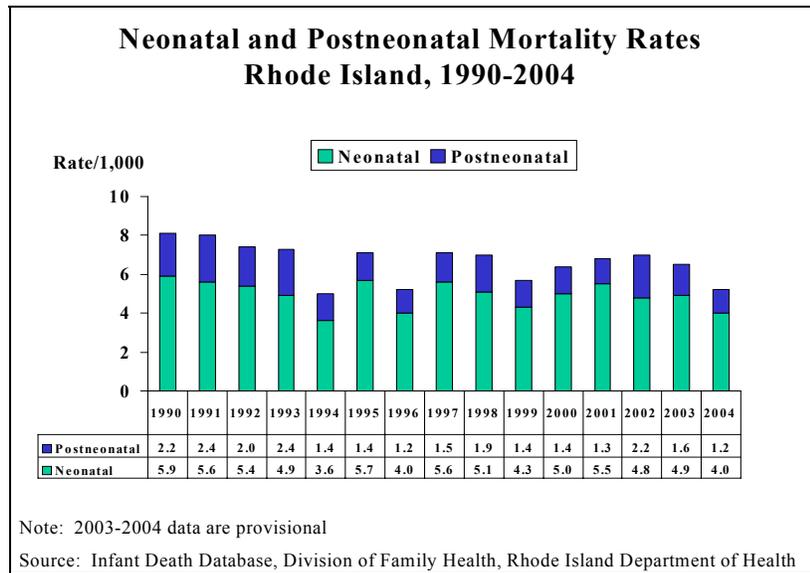


Figure 30



During 1990-2004, the neonatal mortality rates fluctuated from a high of 5.9 (1990) to a low of 3.6 (1994). Similarly the postneonatal rates have ranged from 2.4 (1991, 1993) to 1.2 (1996, 2004). Figure 31 shows the annual variation and illustrates that the years with the lowest neonatal mortality rates (1994, 1996 and 1999 and 2004) were the years with the lowest overall infant mortality rates. Neonatal mortality can be an indicator of access to prenatal and perinatal care and postneonatal mortality can be an indicator of access to pediatric care.

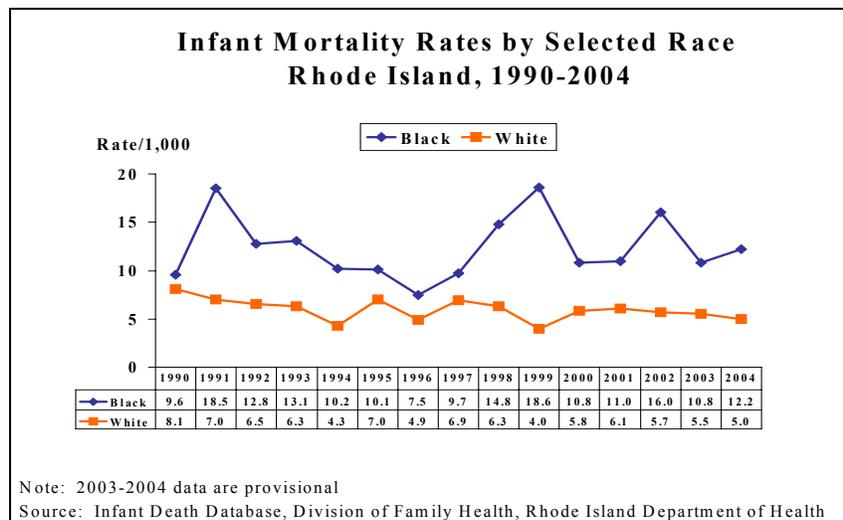
Figure 31



Racial Disparities

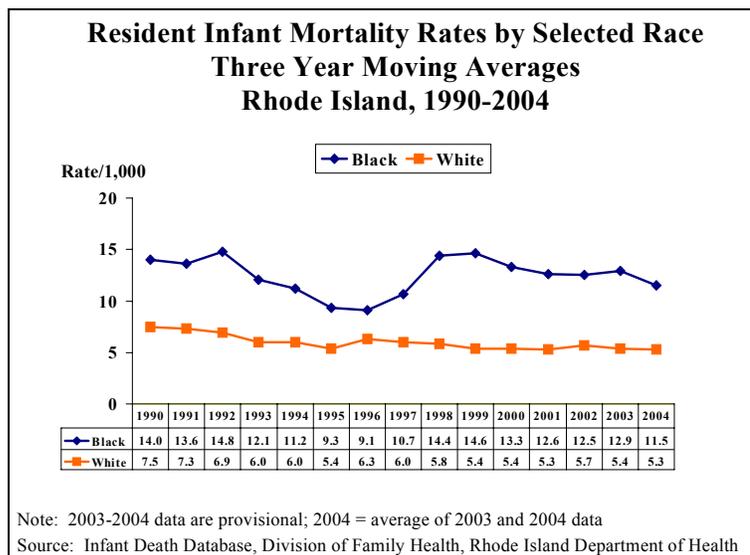
Substantial disparities exist in infant mortality rates among different racial/ethnic groups, with higher rates reported for Blacks/African Americans and lower rates among Asians and those of Hispanic/Latino ethnicity. These disparities have persisted over many years, and the rate for African Americans has remained about 1.5 to 2 times higher than the rate for Whites (Figure 32). During 1990-2004, the ratio of Black to White infant mortality rates peaked in 1999, when it rose to 4.6 (18.6:4.0). Although during 1995-1997, the gap appeared to be narrowing (to below , 2004 data (provisional) indicate that the infant mortality rate for Blacks was more than twice the rate for Whites, 12.2 compared with 5.0.

Figure 32



Annual Black/African American infant mortality rates are more likely to fluctuate than White rates due to the smaller number of births (~1150 per year) and deaths (~12-18 per year) among Blacks compared to Whites. Figure 33 shows the differences in trends and rates of infant mortality among Whites and Blacks using three-year moving averages for 1990-2004. Current data show that the ratio of Black to White infant mortality rates still remains high at 2.2.

Figure 33



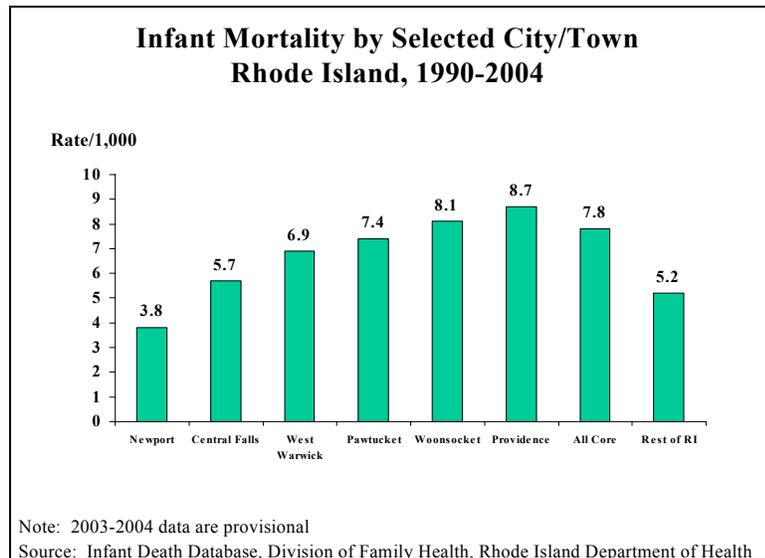
Factors contributing to the differences in infant mortality rates between Whites and Blacks include higher rates of prematurity and low birth weight among Blacks compared to Whites. These birth outcomes are discussed in more detail later.

During 2004, of the 14 Black infant deaths, 9 (64.3%) occurred during the neonatal period (< 28 days old); 9 (64.3%) were preterm births; 9 (64.3%) were low birth weight (less than 2,500 grams), 7 of whom were born weighing less than 1,000 grams. Among the 47 White infant deaths, 37 (78.7%) occurred during the neonatal period; 34 (72.3%) were preterm; 28 (59.6%) were low birth weight, 26 of whom were born weighing less than 1,000 grams. The relationship between low birth weight and infant mortality is discussed later in the low birth weight section. Low birth weight has been rising in Rhode Island and the rate among Blacks is nearly twice the rate for Whites.

Geographic Disparities

Infants born to mothers residing in the six core cities have a higher rate of mortality compared with those born in the rest of the state. More than half of the infants who died during 1990-2004 lived in the core cities. Of the 409 infant deaths that occurred during that period, 224 (54.8%) resided in the core cities, resulting in an infant mortality rate of 7.8 compared with 5.2 for the rest of the state. Infants were 1.5 times more likely to die before their first birthday if they lived in the core cities than if they lived in the rest of the state. Infant mortality rates also differed among the core cities, ranging from a low of 3.8 in Newport to a high of 8.7 in Providence (Figure 34).

Figure 34



Infant Mortality and Low Birth Weight

One of the factors contributing to the lack of improvement in the infant mortality rate in Rhode Island over the past decade may be the rise in the number of infants born at low birth weight. During 2000-2004, low birth weight (less than 2,500 grams) was associated with 71.1% of the infant deaths. Although very low birth weight infants (less than 1,500 grams) account for only one percent of all births in Rhode Island, they comprise 60.9% of all infant deaths in the state. Infants born under 500 grams comprise one-third (33.3%) of all infant deaths.

Provisional data for 2004 indicate that the proportion of deaths that were among Rhode Island infants with low birth weights decreased from 2003. Specifically, of the 67 infant deaths in 2004, 42 (62.7%) were born < 2,500 grams compared with 72.4% in 2003; 21 (49.3%) were < 1,500 grams compared with 63.2% in 2003; and 21 (31.3%) were less than <500 grams compared with 37.9% in 2003. (Note: these ranges overlap).

Infant Mortality and Multiple Births

The degree to which twin and higher order births have contributed to infant mortality has varied over the years. In 1994, 6 (8.8%) of the 68 resident infant deaths were twins (there were no triplet deaths) compared with 26 (29.9%) of the 87 resident infant deaths in 1998. Provisional 2004 data indicate that 8 (11.9%) of the 67 infant deaths were multiple births. All of the 8 multiple gestation infants had low birth weights. It is interesting to note that during the years when Rhode Island experienced its lowest infant mortality (1994, 1996, 1999 and 2004), fewer twin and triplet deaths accounted for the total infant deaths for those respective years. The impact of multiple births on the low birth weight rate is discussed in the following section on low birth weight.

Infant Mortality and Insurance Status

During 2001, an analysis of trends and causes of infant mortality by insurance status was conducted in partnership with the Department of Human Services. Since the 1990's were an important time for health care delivery system changes in Rhode Island (the expansion of health care coverage for low income, uninsured families through RItE Care), 1990-1999 linked birth/death data were used for the analysis. A total of 905 infant deaths were

analyzed by year, insurance status, cause of death and period of death. Rates were calculated using three year moving averages. Data indicate that from 1990 to 1999, the infant mortality rate declined by 30% for infants on Medicaid, from 11.0 to 7.7. Among infants with private insurance, the rate declined by 21.5%, from 6.5 in 1990 to 5.1 in 1999. The gap between the Medicaid and private rate was cut from 4.5 points in 1990 to 2.6 points in 1999. Prematurity/very low birth weight, congenital anomalies and Sudden Infant Death Syndrome (SIDS) were the top three causes of death among Rhode Island infants on both Medicaid and private insurance. The infant mortality rate was on average 1.6 times higher for infants on Medicaid for every cause of death. . The injury death rate (per 100,000 births) for infants on Medicaid (40.2) was five times higher than for infants with private insurance (8.1). The infant death rate for SIDS was four times higher for infants on Medicaid (115.6 per 100,000 births) than for infants with private insurance (29.9).

Perinatal Periods of Risk (PPOR)

It should be noted that the lack of improvement in infant mortality has occurred while smoking rates among pregnant women have been declining and rates of early entry into prenatal care have been improving in the United States and Rhode Island. Addressing maternal health issues such as, preconceptional health, health behaviors (e.g., tobacco use, drug abuse, etc.) and perinatal care may prevent deaths due to prematurity and very low birth weight. In addition, other factors such as stress, poverty, and nutrition, along with other elements of primary prevention, must be addressed

An analysis of Rhode Island's infant mortality data using the Perinatal Periods of Risk (PPOR) approach developed by Dr. Brian McCarthy and the World Health Organization, determined that the proportion of infant mortality in Rhode Island attributable to maternal health factors has increased in the past fifteen years. Factors contributing to this increase include an increase in the number of very low birth weight (<1,499 grams) infants; an overall increase in prematurity (babies born at less than 37 weeks gestation); and an increase in multiple gestation births. The growth of multiple gestation births has also contributed to the increase in premature and low birth weight births. Discussions of low birth weight, prematurity and multiple gestations follow the section on infant mortality.

An analysis of linked birth/death data was conducted for the 5-year periods 1990-1994, 1995-1999 and 2000-2004 using the PPOR approach for studying infant mortality in Rhode Island. During 1990-1994, the overall infant mortality rate was 7.2 and during both 1995-1999 and 2000-2004, the rate was 6.4. Data for both the 1995-1999 and 2000-2004 were similar. A comparison of 1990-1994 data with 2000-2004 follows.

Although the overall infant mortality rate was higher during 1990-1994 than in 2000-2004, the infant mortality rate due to maternal health was higher during 2000-2004 (3.9) compared to 1990-1994 (3.6). The newborn care and infant care categories were higher during 1990-1994 (0.9 and 2.0, respectively) compared to 2000-2004 (0.6 and 1.5, respectively).

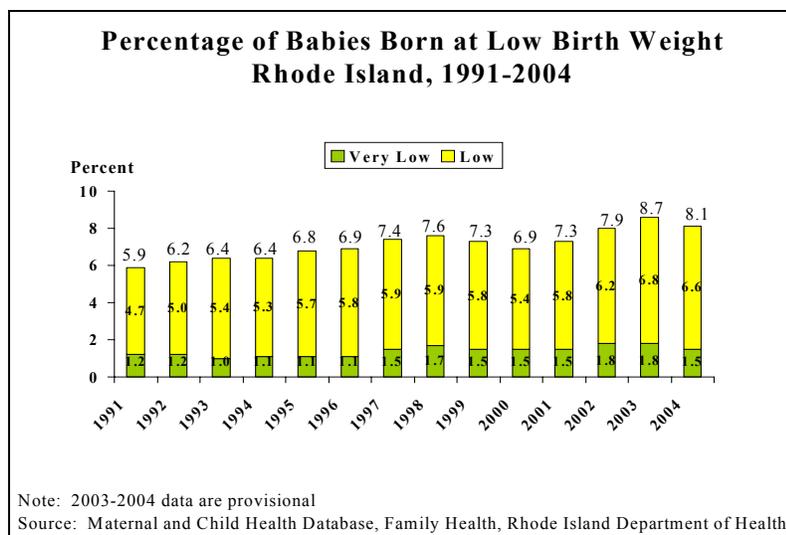
Data for 1990-1994 showed that there was a significant difference in the overall infant mortality rates between those with private insurance (5.6 per 1,000) and those with Medicaid (9.1). The infant mortality rate among those at very low birth weight during the early neonatal, late neonatal and postneonatal periods (maternal health) was 2.8 per 1,000 for those with private insurance vs. 4.3 among those with Medicaid, an excess mortality rate for Medicaid of 1.5. During 2000-2004, improvements were seen in the overall infant mortality rates among

both those on private (4.9) and Medicaid/Rite Care (7.2). There were no significant differences in the maternal health category between infants with private (3.3) and Medicaid/Rite Care (4.0) coverage, an excess mortality rate for Medicaid of 0.7. During both 1990-1994 and 2000-2004 periods, the infant care (low birth weight, 1500-2499 grams, who died during the post neonatal period and normal birth weight, \geq 2500 grams, who died during the late neonatal and post neonatal periods) category shows there were significant differences between private and Medicaid/Rite Care. During 1990-1994, the infant care rate was 1.3 among infants with private insurance compared with 3.4 among those with Medicaid/Rite Care, an excess mortality rate of 2.1. These differences were reduced during the 2000-2004 period, to 0.9 (private) and 2.2 (Medicaid/Rite Care), an excess rate of 1.3.

Low Birth Weight

During the 1990's, Rhode Island saw a rise in the percentage of babies born at low birth weight (less than 2,500 grams or 5.5 lbs). In 1991, babies born at low birth weights accounted for 5.9% of all births and by 2003, they accounted for 8.6% of all births. Provisional data indicate that the low birth weight dropped in 2004, to 8.1% (Figure 35). Specifically, of the 12,309 births among Rhode Island residents that occurred in state (data on the estimated 509 additional births that occurred out of state are not yet available), 186 (1.5%) weighed less than 1,500 grams and 816 (6.6%) weighed between 1,500 and 2,499 grams. These data represent a decrease from 2003, when the low birth weight rate was at its highest (8.6%) since the 1960's. (Figure 35) The percentage of babies born between 1,500 and 2,499 grams rose dramatically in 2003 to 6.8%, a 44.7% increase from 4.7% in 1991.

Figure 35

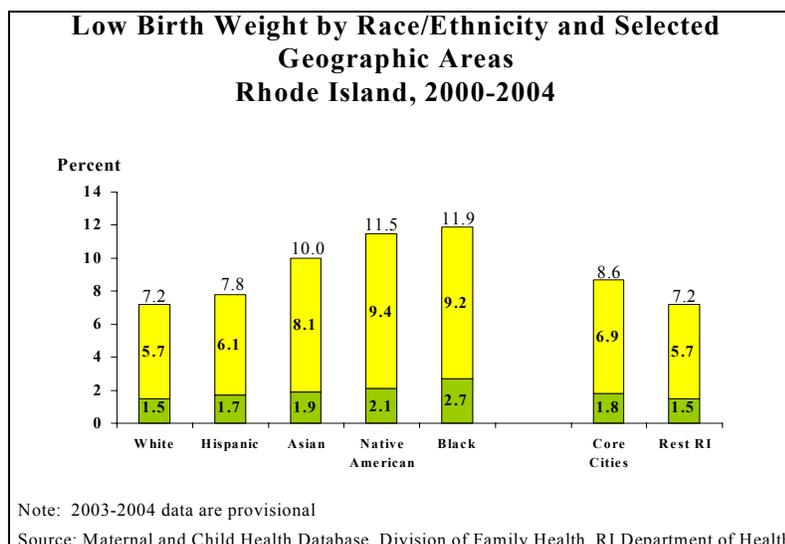


Low Birth Weight by Race/Ethnicity and Geographical Areas

There is much disparity within the low birth weight rates among different racial and ethnic groups (Figure 36). During 2000-2004, 7.9% of all babies born to Rhode Islanders were born at low birth weights. The low birth weight rate among Blacks/African Americans was the highest at 11.9% and was 1.7 times the rate for Whites (7.2%). Low birth weight rates were also higher among Native Americans (11.5%) and Asians (10.0%) compared to

Whites. Those of Hispanic/Latino ethnicity (7.8%) had rates that were only slightly above the White rate. Differences in low birth weight were also seen among those residing in the core cities (8.6%) compared to those residing in the rest of the state (7.2%). The proportion of births that were very low birth weight remains highest among Blacks/African Americans at 2.7%, nearly twice the rate for Whites (1.5%).

Figure 36



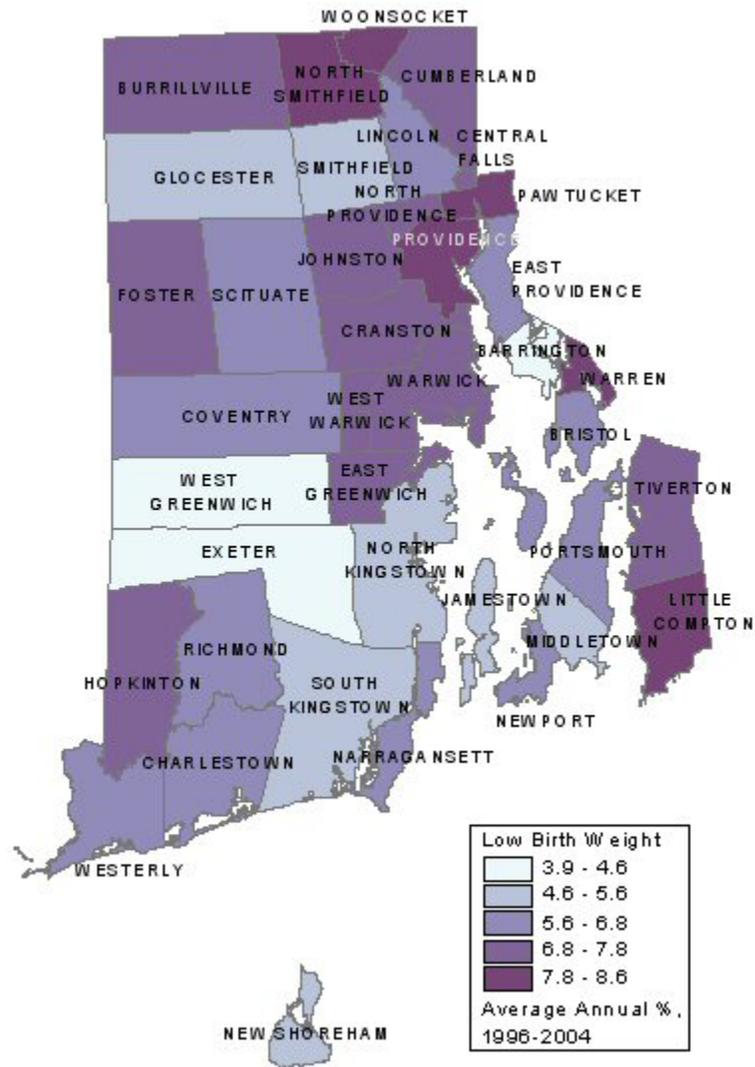
Between 2000 and 2004, the overall low birth weight rate rose among all racial/ethnic groups with the exception of Blacks/African Americans (13.2% to 11.7%) and Native Americans (11.0% to 10.2%). Although the very low birth weight (< 1,500 grams) rate has been highest among Blacks, it dropped from 3.6% in 2000 to 2.0% in 2004 (provisional). The very low birth weight rate also decreased among Native Americans (from 2.6% to 0.6%), however, due to small numbers of Native Americans (~160 births per year), annual rates for this population are not statistically reliable. Provisional data for 2004 indicate that the very low birth weight rate among Asians was the highest at 2.5% and represents an increase of 78.6% from the rate in 2000 (1.4%).

With the exception of Blacks, for whom the proportion of births that weighed 1,500-2,499 grams remained constant between 2000 and 2004 (9.7%), the percentage of births that weighed 1,500-2,499 grams rose among all racial/ethnic groups. The rate among Asians rose the most from 6.4% in 2000 to 8.7% in 2004, a 35.9% increase.

Figure 37 illustrates the distribution of low birth weight throughout the state. Although the core cities of Central Falls, Pawtucket, Providence and Woonsocket are show to have the highest rates of low birth weight (7.8%-8.6%), other communities, such as Warren, North Smithfield and Little Compton, also had high rates. It should be noted that Little Compton has a small number of births per year (approximately 35).

Figure 37

Low Birth Weight by City/Town, Rhode Island, 1996-2004

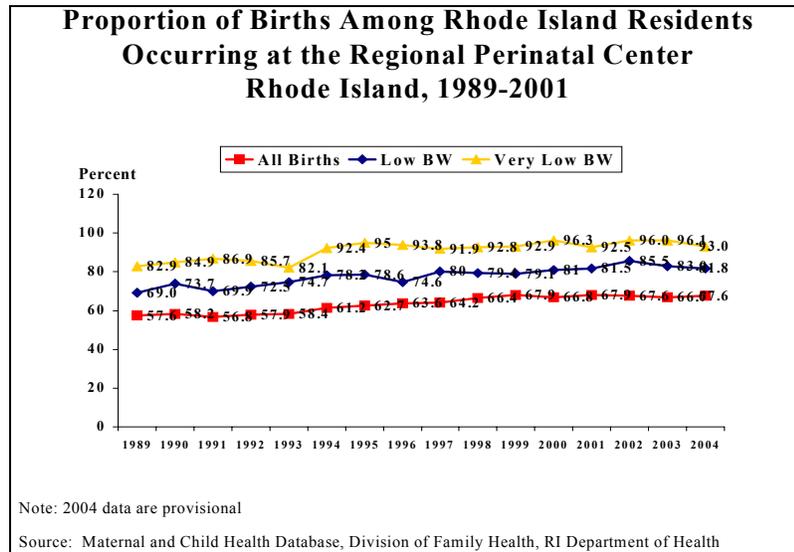


Low Birth Weight Babies Born at the Regional Perinatal Center

A high proportion of babies born at low birth weights is delivered at the regional perinatal center indicating that high risk pregnancies are being identified early and are being referred to the perinatal center. As previously described, the number of babies born at low birth weights to Rhode Islanders has been increasing. Over the past 15 years, the proportion of low birth weight babies born at the regional perinatal center has also increased. In 1989, 69% of low birth weight babies and 82.9% of very low birth weight babies were born at the regional perinatal center. By 2003, 915 (83.0%) of the 1,102 babies born at low birth weight, and 219 (92.0%) of the 238 babies born at very low birth weight, were born at the regional perinatal center. Provisional data for 2004 indicate that 81.8% of low birth weight and 93.0% of very low birth weight babies were delivered at the regional perinatal center. The majority of the births among Rhode Island residents occur at the regional perinatal center and this proportion has

also increased over the past 15 years. In 1989, 57.6% of births were delivered at the regional perinatal center, and by 2004, this proportion rose to 67.6%. (Figure 38).

Figure 38

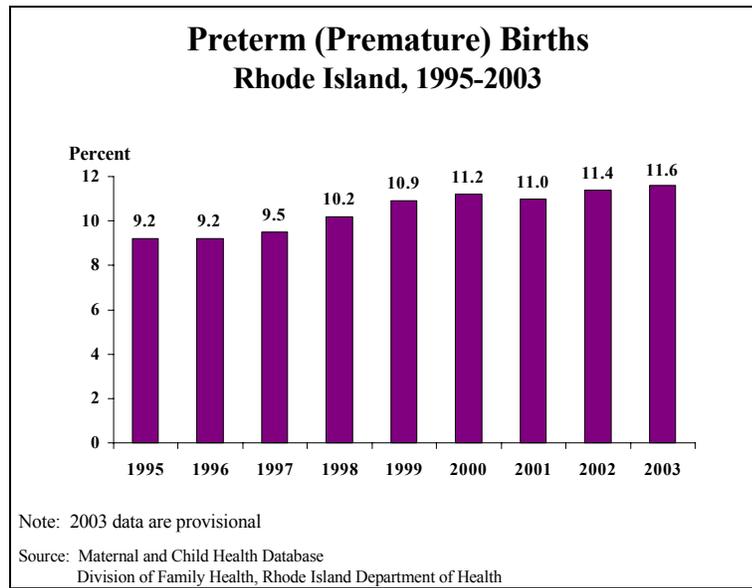


Preterm Births

Mirroring the trend of low birth weight, the percentage of babies born prior to 37 weeks or preterm has been rising in Rhode Island as in the nation. Preterm is the leading cause of infant mortality in Rhode Island; nationally, it is the second leading cause after birth defects. Babies born prematurely are more likely to have complications such as, breathing/lung problems, heart problems, anemia, jaundice, infections, etc. Although not all risk factors for preterm delivery are known, those that have been identified include multiple gestation pregnancy (twins, triplets or more), previous history of preterm delivery, maternal age, infections, diabetes, certain birth defects, assisted reproductive technology, etc.

Between 1995 and 2003, the percentage of preterm births rose among Rhode Island residents from 9.2% to 11.6%, a 26.1% increase (Figure 39). During 2003, of the 13,200 births, 1,525 (11.6%) were born preterm. This rate is 1.5 times the Healthy People 2010 objective of 7.6%.

Figure 39



Babies that are born less than 32 weeks gestation are considered very preterm and are at higher risk to develop complications. During 2003, 2.2% of Rhode Island babies (n = 294) fell into this category, which is nearly double the Healthy People 2010 objective of 1.1%.

The percentage of births that are preterm or very preterm vary by maternal age, race/ethnicity, and plurality (singletons, twins, triplets, etc.). During 2001-2003, women aged 40 or older were more likely to deliver a preterm baby (14.1%) than younger women. However, teens aged less than 20 had the highest proportion of very preterm babies (2.7%), followed by women aged 40 or older (2.3%), aged 20-29 (1.7%) and 30-39 (1.9%). Among racial/ethnic groups, Black/African American women had the highest preterm rate (15.7%), which was 1.6 times higher than the rate among those of Hispanic/Latino ethnicity (9.7%), the group with the lowest preterm rate, and 1.4 times higher than the rate for Whites (11.0%). Asians (14.7%) and Native Americans (13.4%) also had rates above the Hispanic/Latino and White rates. The rates of very preterm (<32 weeks) births mirror these distributions with Blacks having the highest rate of very preterm births (3.8%), more than double that of Whites (1.6%).

Multiple gestation births are approximately six times more likely to be born preterm than singleton births. During 2001-2003, 9.6% of singleton births were preterm compared with 57.0% of multiple gestation births.

Multiple Gestation Births

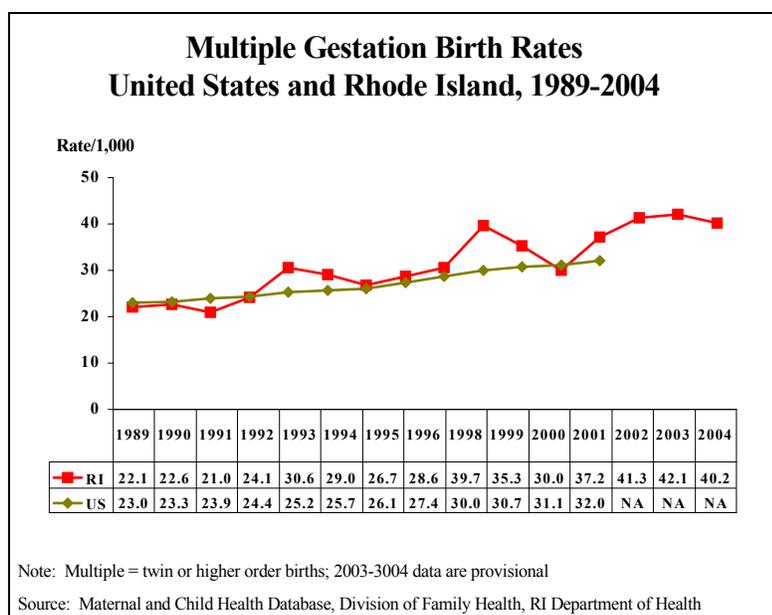
Babies born as multiple births (i.e., twins, triplets, and higher order births) are at a higher risk for low birth weight (less than 2,500 grams), prematurity (less than 37 weeks gestation) and infant death (deaths occurring within 364 days of birth) compared with singleton births. Over the past 15 years, Rhode Island has experienced an increase in the number and rate of multiple births, a trend that mirrors the rest of the nation.

In 1989, Rhode Island passed legislation requiring public and private insurers to provide coverage for medically necessary infertility diagnosis and treatments, including fertility drug therapies, *in vitro* fertilizations, and

other assisted reproductive technologies. Since then, Rhode Island has seen changes in its birth outcomes including a dramatic increase in multiple births and an increase in the percentage of babies born at low birth weight.

Between 1989 and 1998, the number of multiple births in Rhode Island rose from 327 births to 500 births, a 53% increase. The rate of multiple births increased more sharply from 22.1 per 1,000 live births to 39.7, an increase of 80%. Between 1998 and 2000, the rate decreased by 24.4%, from 39.7 to 30.0. However, since 2000, the multiple birth rate has been rising and reached a high in 2003 of 42.1, a 40.3% increase. Provisional 2004 data indicate the rate dropped slightly to 40.2. Rates of multiple births in Rhode Island have been higher than those for the nation. The largest gap in rates occurred in 1998, when Rhode Island's multiple birth rate was 39.7 compared to the national rate of 30.0. The most current national data available are for 2001, which indicate Rhode Island's multiple birth rate (37.2) continues to exceed the national rate (32.0) (Figure 40).

Figure 40



Between 1989 and 2003, the number of twin babies increased by 66.3%, from 320 to 532. Triplets and higher order births have also been rising during this period, though more dramatically. In 1989, there were 7 triplet/higher order births and by 2002 this figure peaked to 59. Provisional data for 2004, which do not include the estimated 509 births that occurred out of state, indicate there were 480 twin and 15 triplet births.

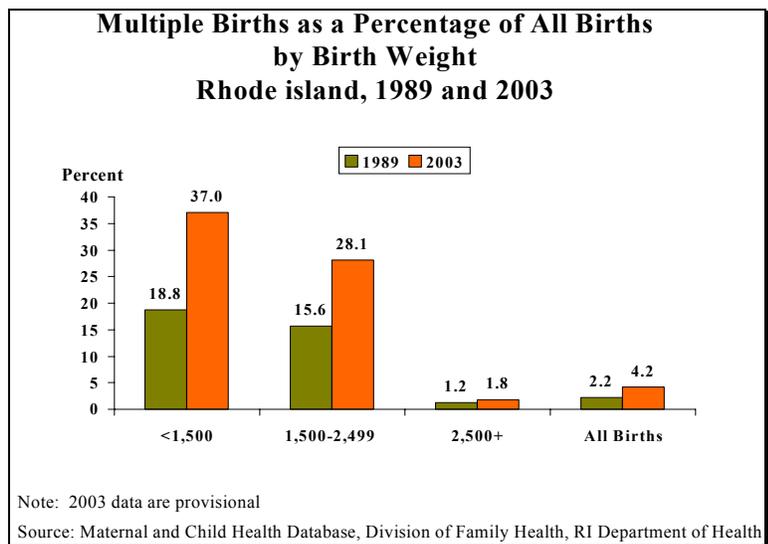
Multiple Births and Low Birth Weight

In Rhode Island, between 1989 and 2003, the percentage of all babies born at low birth weights rose from 6.2% to 8.6%. This increase has occurred while other perinatal indicators have been improving, e.g., a decline in the rates of teen births, maternal tobacco use and infant mortality.

In 1989, the 327 multiple births represented 2.2% of the 14,769 total births, 16.3% of low birth weight births, and 18.8% of all very low birth weight (less than 1,500 grams) births. Comparatively, in 2003, these figures have doubled or nearly doubled (Figure 41). During 2003, the 556 multiple births represented 4.2% of the 13,200

total births. Of the 556 multiple births in 2003, 341 (61.3%) were low birth weight, which accounted for 29.9% of the 1,139 low birth weight babies born statewide that year. More than one out of three (37.0%) of the 238 very low birth weight babies was a multiple birth, while 253 (28.1%) of the 901 babies between 1,500 and 2,499 grams were multiples (Figure 41).

Figure 41



The percentage of multiple births that were low birth weight and very low birth weight rose during 1989-2003. In 1989, 45.3% of multiple births were low birth weight and 10.4% were very low birth weight compared with 61.3% low birth weight and 15.8% very low birth weight in 2003. There was little change in the proportion of singleton births that were low birth weight or very low birth weight. In 1989, 5.7% of singleton births were low birth weight and 1.0% were very low birth weight compared to 6.3% and 1.2%, respectively, in 2003.

Multiple Births and Prematurity

During the 1989-2004 period, the percentage of babies born prematurely, i.e., prior to 37 weeks gestation, increased from 5.9% to 10.2%. However, the percentage of multiple births born prematurely more than doubled from 22% to 53.1%. In 1989, multiple births accounted for 8% of all premature births and in 2004 (provisional), they accounted for 21.0% of all premature births. During 2003, these figures were higher, where 332 (59.7%) of the 556 multiples were born prematurely, and more than one-quarter (25.9%) of the 1,282 premature babies were multiple births. In comparison, 950 (7.5%) of the 12,644 singleton births were premature.

Multiple Births and Infant Deaths

Infant mortality has declined in Rhode Island over the last decade as it has in the rest of the country. To account for the relatively small numbers of infant deaths in the state each year and the year-to-year fluctuations in the infant mortality rate, data have been analyzed for two five-year periods, 1989-1993 and 1994-1998. During the period 1989-1993, the infant mortality rate in Rhode Island was 8.2 compared with 6.5 during the 1999-2003 period, a 20.7% decrease. During these same periods the multiple infant mortality rate was cut nearly in half (47.5%) from 46.7 to 24.5. Nevertheless, the multiple death rate (24.5) was four times the infant death rate among singletons

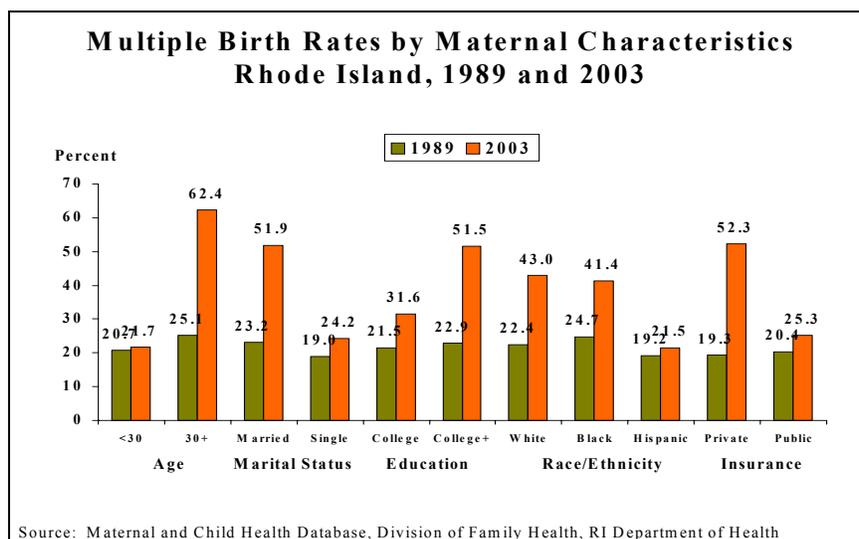
(5.8). The proportion of infant deaths that were among multiple births has remained fairly stable. During 1989-1993, 82 (13.6%) of the 602 infant deaths were among multiple births compared with 58 (14.1%) of the 412 infant deaths during 1999-2003.

Provisional 2004 data indicate that of the 67 infant deaths among Rhode Island residents, 8 (11.9%) were among multiple births. These 8 deaths represent an infant mortality rate of 16.2 per 1,000 multiple births (n = 495 multiple births) among Rhode Island residents. This rate represents a decrease from the 2003 infant mortality rate (among multiples) of 27.0.

Maternal Characteristics of Multiple Gestation Births

Figures 42 and 43 compares the changes in rates of multiple births between 1989 and 2003, by selected maternal characteristics, including age, marital status, education, race/ethnicity, and insurance. In fourteen years, multiple birth rates more than doubled among women who were aged 30 or older, college-educated, married, White, Black or privately insured.

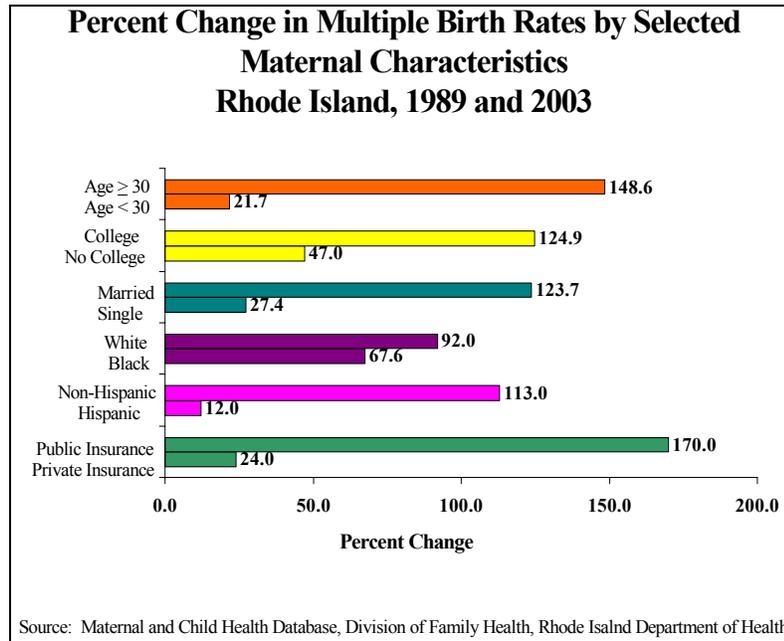
Figure 42



Between 1989 and 2003, the multiple birth rate among women aged 30 or older increased by 148.6%, from 25.1 to 62.4. In comparison, the rate increased only slightly (21.7%) among women aged less than 30, from 20.7 in 1989 to 25.2 in 2003. Although multiple birth rates remain higher among women with a higher education (beyond 12th grade), the multiple birth rate has increased among women with less than or equal to a high school education. During 1989, the multiple birth rate among those with less education (21.5) was similar to those with more education (22.9). However, by 2003, the rate among those with higher education had more than doubled to 51.5, representing an increase of 124.9%, whereas, the rate among those with less education rose by 47% to 31.6. The multiple birth rate among married women also more than doubled between 1989 and 2003, from 23.2 to 51.9, a 123.7% increase. Rates among single women increased far less, from 19.0 to 24.2, a 27.4% increase. Between 1989 and 2003, rates among Whites and Blacks nearly doubled, with sharper increases among Whites (92.0%) than Blacks (67.6%). Those of Hispanic/Latino ethnicity experienced little change in multiple birth rates, increasing by

just 12.0%, from 19.2 in 1989 to 21.5 in 2003. In comparison, the rate among non-Hispanics rose by 113%, from 23.0 to 49.0. Finally, the largest increase in multiple birth rates occurred among those with private insurance. The rate for this group rose by 170%, from 19.3 to 52.3. The rate among those with public insurance increased by 24.0% from 20.4 to 25.3.

Figure 43



Some of the increase in multiple births can be attributed to an increase in the use of fertility drugs and assisted reproductive technologies. The National Center for Health Statistics reports that about one-third of the increase in triplet births is due to the fact that more older women, who are more likely to have multiple births, are giving birth. About two-thirds of the increase is due to the increasing use of fertility treatments, independent of the mother's age.

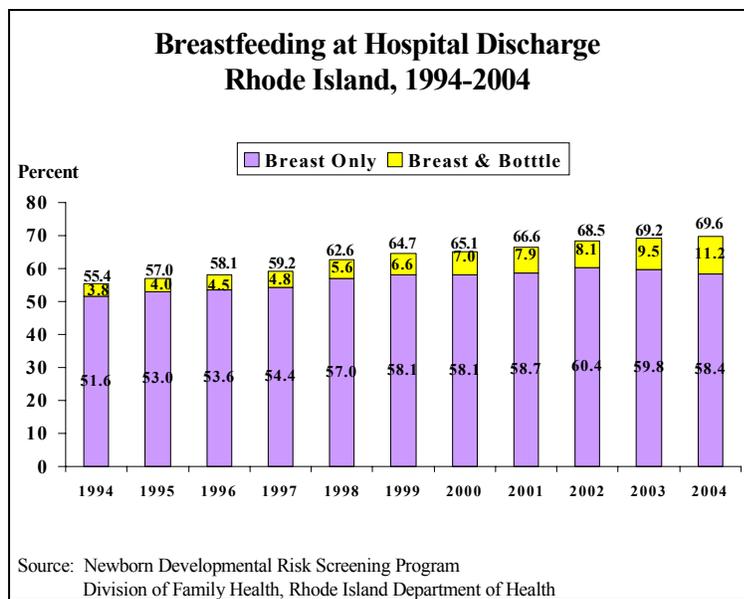
According to a recent article on assisted reproductive technology (ART) published in the CDC's *Morbidity and Mortality Weekly Report* (June 3, 2005, volume 54/no. SS-2), Rhode Island had the fifth highest ratio of the number of ART procedures started per population (million). In fact, Rhode Island's ratio (710.5/million) was nearly twice that for the nation (395.0/million). Of the 45,751 infants born through ART in the country, 53% (24,154) were born in multiple-birth deliveries. The risk for multiple births via ART varies depending on the type of transfer procedure performed, number of embryos transferred, embryo availability and mother's age. Risks for singleton births were also noted, where "... singleton infants conceived from ART are at increased risk for low birthweight and preterm delivery."

PRIORITY: PROMOTE HEALTHY LIFESTYLES AND HEALTHY WEIGHTS FOR ALL

Breastfeeding

According to Newborn Developmental Risk Screening (Level I) data, the exclusive breastfeeding rate (at hospital discharge) in Rhode Island has been slowly rising. In 1994, 51.6% of women were (or intended to) breastfeeding at hospital discharge and by 2004, this figure rose to 58.4% (Figure 44). However, between 2003 and 2004, the exclusive breastfeeding rate decreased from 59.8% to 58.4%. As the exclusive breastfeeding rates have been rising so have the rates of combined breast and bottle feeding. However, the combined methods rate has climbed more sharply. In 1994, 3.8% of women planned to feed their babies via breast and bottle and by 2003, this figure nearly tripled to 11.2%. Between 1994 and 2004, the overall combined feeding rates have risen from 55.4% to 69.6%, a 25.6% increase. Still, Rhode Island has a ways to go before achieving the Healthy People 2010 objective of 75%. Also, data from the 2003 National Immunization Survey (among children born in 2001) indicate that Rhode Island had the lowest breastfeeding rate (66.7%) compared to the other New England states and was below the national rate of 70.9%.

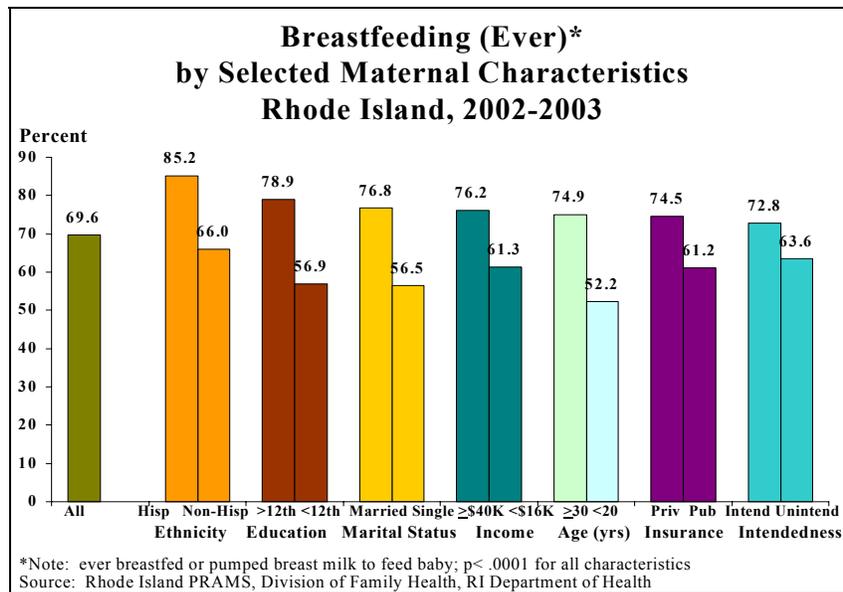
Figure 44



Rhode Island is also tracking breastfeeding rates and infant feeding practices with its Pregnancy Risk Assessment Monitoring System (PRAMS), which was implemented in 2002. Weighted data from the PRAMS survey indicate that among respondents who delivered a baby during 2002, 67% had “ever breastfed” their baby after delivery. This figure rose to 72.2% among women who gave birth in 2003. Combined 2002 and 2003 data yield an overall breastfeeding rate of 69.6%. During this period, 36.8% of all respondents indicated they were still breastfeeding at the time of the survey, 2-4 months after delivery.

Figure 45 below shows that women are more likely to breastfeed if they are of Hispanic/Latino ethnicity, have more than a high school education, are married, have annual household incomes of \$40,000 or more, are older, have private insurance or if their pregnancy was intended. Women of Hispanic/Latino ethnicity had the highest rate of breastfeeding (85.2%), which was significantly higher than the rate for non-Hispanics (66.0%). Women with an education level greater than high school had higher breastfeeding rates (78.9%) than women with less than a high school education (56.9%). More than three-fourths of married women indicated they breastfed (76.8%) compared with 56.5% of single women. Women with incomes of \$40,000 or more (76.2%) were more likely to breastfeed than women with annual household incomes of less than \$16,000 (61.3%). Women with private health insurance (74.5%) were more likely to breastfeed than women with public (Medicaid/Rite Care) health insurance (61.2%). Finally, breastfeeding rates were higher among women who indicated their pregnancy had been intended (72.8%) than women whose pregnancy was unintended (63.6%).

Figure 45

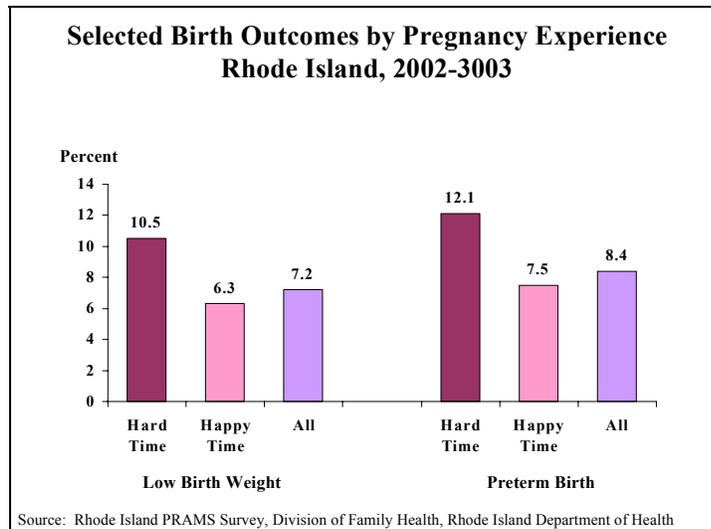


Reasons cited by PRAMS respondents for not breastfeeding include the following: did not like breastfeeding (45.4%); had other children to take care of (29.1%); went back to work or school (16.9%); wanted body back to herself (13.5%); had too many household duties (11.9%); did not want to be tied down (11.4%); embarrassed to breastfeed (10.1%); husband or partner did not want them to breastfeed (2.1%); and other reasons (32.6%).

Perinatal Depression

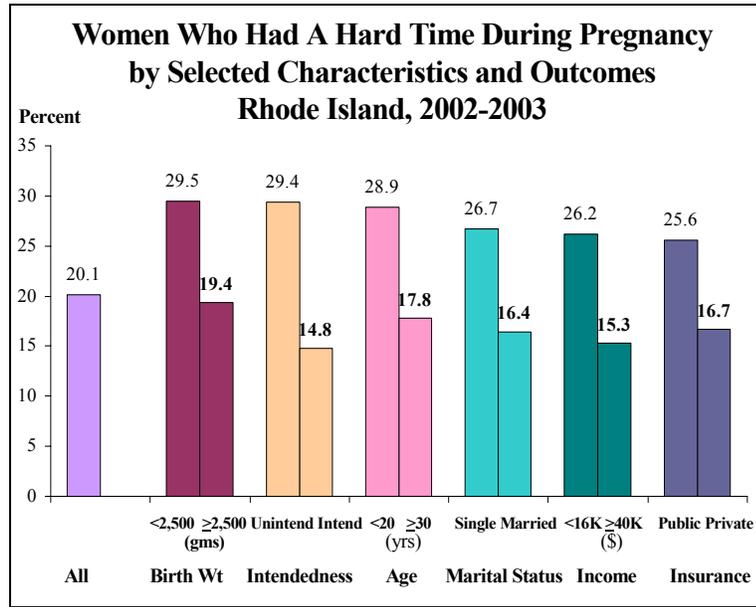
According to the Rhode Island PRAMS Survey, approximately one in five women reported they had a hard time during their pregnancy (20.1%) or were depressed after their pregnancy (19.2%). Women who described the time during their pregnancy as hard (moderately hard, very hard, or one of the worst times of their lives) were more likely to have a baby that was low birth weight (less than 2,500 grams) or preterm (before 37 weeks gestation) than women who described the time during their pregnancy as happy. Figure 46 shows that 10.5% of babies born to women who had a hard time during pregnancy were low birth weight compared to 6.3% to women who had a happy time during their pregnancy ($p < .0001$). Similarly, 12.1% of babies born to women who had a hard time during pregnancy were preterm compared with 7.5% among those who had a happy time during their pregnancy ($p < .0001$).

Figure 46



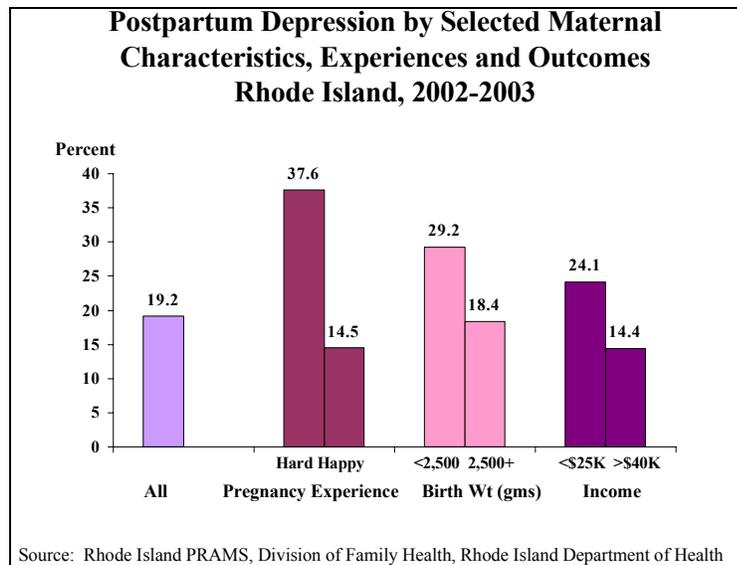
The percentage of women who reported having a hard time during pregnancy varied significantly ($p < .0001$) by infant's birth weight, intendedness of pregnancy, marital status, household income, and health insurance. Figure 47 shows that women who had low birth weight (< 2,500 grams) babies (29.5%) were 1.5 times more likely to have had a hard time during pregnancy compared to women who had normal weight (>2,500 grams) babies (19.4%). Women whose pregnancy was unintended were twice as likely to have had a hard time during their pregnancy (29.4%) compared to women whose pregnancy was intended (14.8%). Teenagers were more likely to have had a hard time during pregnancy (28.9%) compared to older women aged ≥ 30 (17.8%) ($p < .01$).

Figure 47



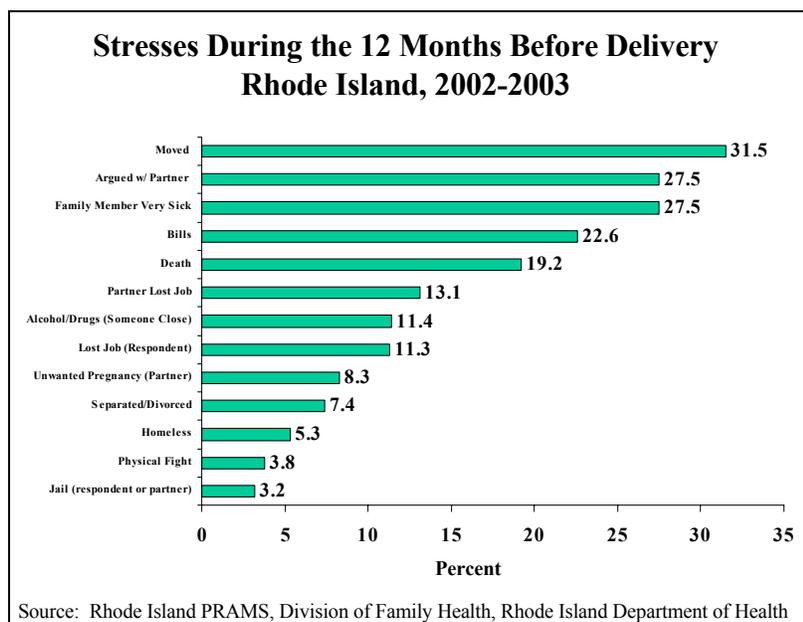
As mentioned previously, 19.2% of PRAMS respondents who gave birth during 2002-2003 indicated they had been depressed (moderately depressed, very depressed or very depressed and needed help) in the months after their delivery. Women who had a hard time during their pregnancy were more than twice as likely to have postpartum depression (37.6%) than women who had a happy time (14.5%). Women with low birth weight babies (29.2%) and/or household incomes of less than \$25,000 (24.1%) were more likely to have postpartum depression than their counterparts ($p < .0001$). (Figure 48).

Figure 48



Stress during pregnancy can also impact a woman’s pregnancy experience and postpartum depression. Rhode Island PRAMS asks about things that happened during the 12 months before their baby was born such as, illness of a family member, separation/divorce from husband/partner, a move to a new address, job loss, fight/argument, bills that couldn’t be paid, etc. Figure 49 shows the frequency of the stresses among respondents who gave birth during 2002-2003. The most common stress reported among respondents was moving where, nearly one in three (31.5%) indicated they had moved to a new address during the year before they gave birth. More than one in four (27.5%) respondents indicated they had argued with their partner more than usual or had a close family member become very sick. Approximately, one in five respondents had a lot of bills they could not pay or they had someone very close who died.

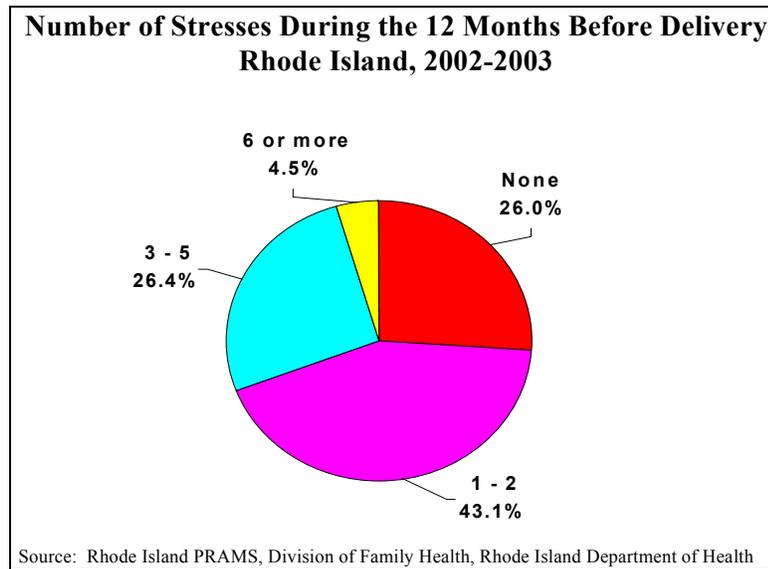
Figure 49



The frequency of these stresses varies by insurance coverage. Women who had public insurance (RItE Care/Medicaid) were more likely to report experiencing the stresses described above than women with private insurance. For example, 38.6% of women with public insurance had moved to a new address compared with 23.7% of those with private insurance. Women with public insurance were three times more likely to have problems paying bills (36.2%) compared with women with private coverage (11.9%). Although only 1.4% of respondents with private insurance were homeless during the 12 months before they gave birth, those with public insurance were 9 times more likely to be homeless (13.1%). Women with public insurance were five times more likely to have been in a physical fight (7.5%) than women with private insurance (1.5%).

Many of the respondents had multiple numbers of the 13 stresses asked and described in Figure 46. Although 26.0% of respondents did not have any of the stresses, 43.1% had 1-2, 26.5% had 3-5, and 4.5% had 6 or more (Figure 50).

Figure 50



Women who experienced five or more of the stresses were more likely to have a hard time during their pregnancy (47.7%) than women who did not have any stresses (7.7%). Similarly, 37.9% of women who experienced five or more stresses during the 12 months before their baby was born were depressed after the delivery compared with 8.6% of women who did not have any of the stresses.

Another factor that may impact postpartum depression is how easy the mother feels it is to calm her baby. Among women who gave birth during 2002-2003, 8.3% reported that it was somewhat or very difficult to calm their baby when he or she was crying or fussing. More than one-third (34.7%) of mothers with inconsolable infants also reported postpartum depression compared to 17.4% of women who said it was easy to calm their baby ($p < .0001$). Women were more likely to report difficulty calming their babies if the baby was $< 2,500$ grams (11.2%) than if the baby was $\geq 2,500$ grams (8.1%); $p < .0001$.

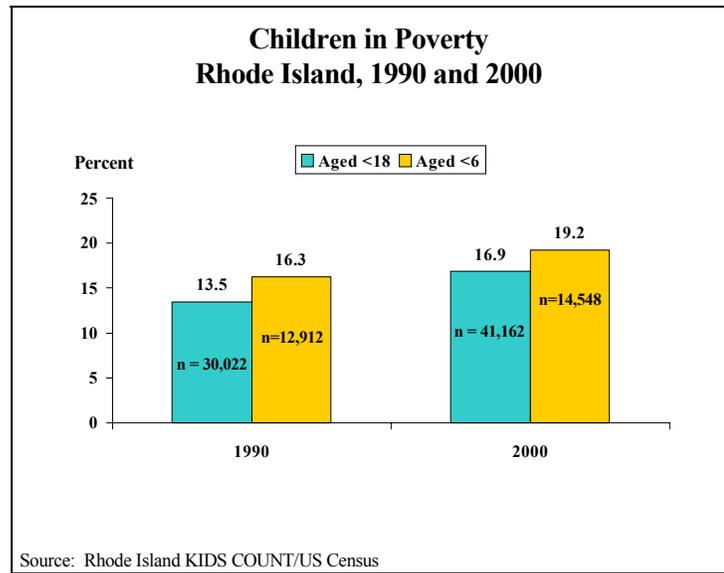
3A. CHILDREN

PRIORITY: ENGAGE, EMPOWER, SUPPORT AND INFORM PARENTS
PRIORITY: SUPPORT SAFE AND HEALTHY ENVIRONMENTS FOR CHILDREN AND FAMILIES

Children in Poverty

Between 1990 and 2000, the percentage of Rhode Island children aged less than eighteen living below poverty has risen from 13.5% to 16.9%, a 25.2% increase. Similar increases occurred among children aged less than six, although higher percentages of children aged less than six live in poverty. During the 1990s, the percentage of children aged less than six living below poverty rose from 16.3% to 19.2%, a 17.8% increase (Figure 51).

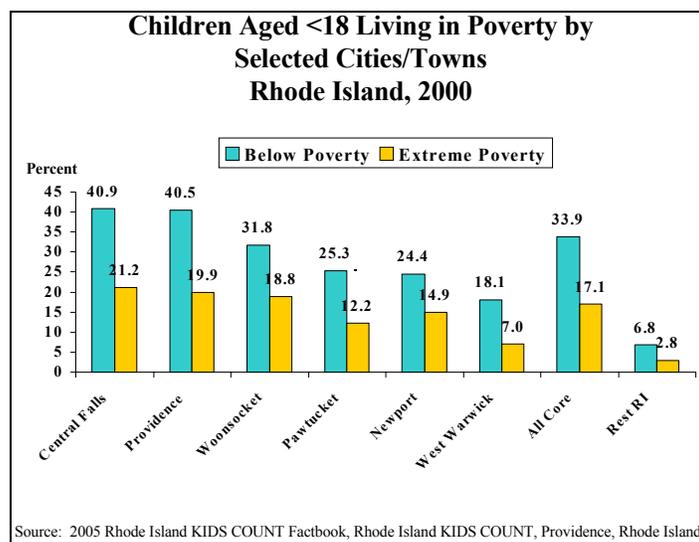
Figure 51



The proportion of children living in poverty varies by race/ethnicity. Approximately, half of Native American (51%) and Hispanic/Latino (47%) children live in poverty compared to 8% of White children. Black/African American (38%) and Asian (26%) children also were more likely to live in poverty than White children. Compared to the national rate (28%), Rhode Island has the largest percentage (47%) of Hispanic/Latino children living in poverty. Rhode Island also has the highest percentage of Black/African American children living in poverty (38%) compared to the other New England states.

Six of Rhode Island's 39 cities and towns have 15% or more of children living in poverty. These six cities have been designated as "core cities" by Rhode Island KIDS COUNT and are defined as communities in which 15% or more of the children live in families with income below the federal poverty level. More than one in three (33.9%) children aged less than 18 who reside in the core cities live below poverty and nearly one in five (17.1%) live in extreme poverty. These figures are higher for children aged less than six, who reside in the core cities, where 37.3% live below poverty and 19.5% live in extreme poverty. Figure 52 compares poverty rates among children living in core cities and children living in the rest of the state. Rates also vary among core cities, where children living in Central Falls (40.9%) and Providence (40.5%) had the highest rates of children living below poverty.

Figure 52



Children Enrolled in Family Independence and Food Stamps Programs

Rhode Island’s Family Independence Program (FIP) provides cash assistance and support to families with low incomes to help them transition from welfare to work. The FIP provides health insurance, subsidized child care and food stamps to help families obtain and keep a job. The FIP also provides assistance to children living in families with adults that are unable to work. According to the *2005 Rhode Island KIDS COUNT Factbook*, between 1995 and 2004, the number of adults and children enrolled in FIP decreased by 40.6%, from 57,477 to 34,148. During 2004, 23,917 children under age eighteen were enrolled in FIP, accounting for 70.0% of all FIP beneficiaries; 75% of these children were aged less than 12. Children living in the core cities represented 78.8% of all children enrolled in FIP and nearly half (48.5%) lived in Providence.

According to the *2005 Rhode Island KIDS COUNT Factbook*, since 1996, the number of children aged less than eighteen participating in the Rhode Island Food Stamp Program decreased by 14.5%, from 48,144 in 1996 to 41,162 in 2004. Point in time data indicate that as of October 1, 2004, of the 38,216 children who were receiving food stamps, 29,282 (76.6%) lived in the core cities. Three out of four children (75.7%) eligible for food stamps and living in the core cities were receiving food stamps compared to 59.4% of eligible children living in the rest of the state. The percentage of eligible children who were receiving food stamps ranged from a low of 18% among children residing in Barrington to 81% among those in Warwick.

Children’s Health Insurance

Data from the United States Census Bureau’s 2003 Current Population Survey indicate that fewer Rhode Island children aged less than eighteen are without health insurance (4.8%) compared to children nationally (11.6%). Since 1995, Rhode Island has experienced a large drop in the percentage of children without health insurance, from 10.9% to 4.8% in 2003, a 56.0% decrease. The rate of uninsured children aged less than 19 in Rhode Island (5.8%) is also much lower than the national rate (12.0%).

According to 2003 National Survey of Children’s Health, 94.4% of children under age eighteen had health insurance at the time of the survey. However, 10.2% of children were not insured for some period during the past year.

Rhode Island’s Medicaid managed care health insurance program, RItE Care/RItE Share, is available to children and families based on income. RItE Share provides benefits, such as co-pays for doctor visits and prescriptions, to eligible families who have access to insurance through their employers in order to facilitate their participation.

As of December 2004, 80,953 children aged less than 19 were enrolled in RItE Care and 53,749 (66.4%) of these children lived in the core cities. Another 10,685 children received Medical Assistance through the following programs: Social Security Income (SSI) Program (4,897), Katie Becket (1,330), adoption subsidies (2,324) and foster care (2,134). (Source: *2005 Rhode Island KIDS COUNT Factbook*)

Child Well-Being and Health Status

Rhode Island is ranked 19th (1 being the best) in the country for child well-being according to the *2004 Kids Count Data Book: State Profiles of Child Well-Being* published by the Annie E. Casey Foundation. Compared to the other New England states, Rhode Island ranks the lowest (Table 3).

Table 3: Overall Rankings of New England States for Child Well-Being (Based on 2001 Data)

State	Ranking (1 is the best)
New Hampshire	2
Vermont	6
Connecticut	7
Massachusetts	9
Maine	12
Rhode Island	19

According to the 2003 National Survey of Children’s Health, which surveyed the families of 2,019 Rhode Island children aged less than eighteen, 86.8% of children in Rhode Island are in excellent or very good health. This figure is slightly higher than the nation (84.1%). However, more children in Rhode Island have health problems that were rated as moderate or severe by their parents (9.3%) than children nationwide (7.9%).

PRIORITY: PROMOTE HEALTHY HUMAN DEVELOPMENT IN CHILDREN AND FAMILIES

Child Care

(Note: The source for the following information is from the *2005 Rhode Island KIDS COUNT Fact Book*, Rhode Island KIDS COUNT, Providence, RI)

Infant and Preschool Child Care

Child care has become a fundamental need for Rhode Island families over the past two decades. In 1997, legislation was passed to help families transition from welfare to employment. The legislation known as “Starting Right” was created to improve access for low income families to affordable and quality child care in Rhode Island. The implementation of Starting Right has led to significant growth in the availability of regulated child care. According to the US Census, during 2000 45,820 (62%) of Rhode Island children aged less than six had all parents in the workforce, higher than the national average (59%).

Over the past ten years, the availability of licensed and certified (regulated) child care for children under age six has increased by 70.8%, from 15,483 slots in 1995 to 26,448 in 2004. Estimates show that in Rhode Island during 2004, 25,885 children under age six were in need of regulated child care, and there were 26,448 regulated child care slots. In other words, there were 102 slots for every 100 children in need of regulated child care. This represents a large improvement (52% increase) since 1997 when there were 67 slots per 100 children in need. The supply of regulated child care varies by communities ranging from a high of 248 slots per 100 children in need (East Greenwich) to a low of 5 slots per 100 children (Hopkinton).

The percentage of nationally accredited child care centers, private preschools, and family child care homes is an indicator of quality child care. The National Association for the Education of Young Children (NAEYC) and the National Association for Family Child Care (NAFCC) accredit child care centers and family child care homes, respectively. NAYEC and NAFCC accreditation are often used as a marker for a higher level of quality in states that have quality rating systems. In Rhode Island, in January 2005, 10% of full-day child care centers or Head Start programs and 18% of the part-day preschools or Head Start programs were accredited by the NAYEC; and one percent of the certified family child care homes were NAFCC accredited.

Many Rhode Island children aged 3 and 4 who are eligible for Head Start are not enrolled in this early childhood program. In 2004, of the 4,848 children eligible for Head Start, only 2,780 (57.3%) were enrolled. Children residing in the core cities were even less likely to be enrolled in Head Start, where only 1,677 (45.4%) of the 3,695 eligible children were enrolled. However, nearly all (95.7%) of the eligible children living in the rest of the state were enrolled in Head Start. Since 1997, enrollment in Head Start has risen by 17.3%, from 2,369 children to 2,780 in 2004.

To address the issue of underserved children, the Comprehensive Child Care Services Programs were created (under Starting Right) to expand Head Start and provide education and support services to children and families in underserved communities. Comprehensive child care programs provide a developmentally-appropriate education program and link with other community programs to provide health, nutrition, mental health, and social services; services for children with special health care needs; and assistance with transition to kindergarten. As of January 2005, Comprehensive Child Care Services Programs were providing services to 300 children.

School-Age Child Care

During 2004-2005, 3,962 (44.9%) Rhode Island children attended full day kindergarten of 8,824 children who were in kindergarten programs. Children residing in the core cities were more likely to attend full day

kindergarten (78.9%) than children in the rest of the state (23.2%). Full day kindergartens have been shown to be beneficial to children especially to those from low-income families.

The supply of licensed child care for children ages 6-12 has more than doubled from 5,570 slots in 1995 to 14,006 slots in 2004, a 151% increase. Child care subsidies are provided by the Department of Human Services and can be used for after-school programs for children up through age 16. In 2004, of the 13,192 children receiving child care subsidies, 5,472 (41.5%) were aged 6-16. In 2004, two-thirds of Rhode Island families receiving child care subsidies chose licensed child care centers; 23% chose certified family child care homes and 10% chose a relative, friend or neighbor for their child care arrangements. More than three-fourths (76.5%) of the child care subsidies were used by low-income working families not enrolled in the Family Independence Program (FIP).

Child Care Choices

According to the 2003 National Survey of Children's Health, children regularly attend the following types of child care: child care center (37.8%); family-based child care outside the home (32.7%); child care in their home provided by a nanny or relative (21.3%); nursery school, preschool or kindergarten (63.1%); Head Start or Early Start program (11.6%). Overall, two-thirds (66.9%) of Rhode Island children aged 3-5 regularly attended preschool, kindergarten, Head Start or Early Start during the past month. Approximately one out of eight respondents (12.4%) indicated that they or someone in their family had to quit a job, not take a job or greatly change their job because of problems with child care.

After School Supervision

Data from the 2003-2004 Rhode Island *School Accountability for Learning and Teaching (SALT) Survey* indicate that, nearly one in five (18%) of Rhode Island middle school children in grades 5-8 were home after school without adult supervision for more than three hours on at least three days a week. An additional 4% were home without adult supervision for more than three hours on one or two days a week. Young people left on their own in the afternoon or evening hours are at significantly higher risk for becoming involved in substance abuse, sexual activity, crime, and violence than their peers who are engaged in constructive and supervised activities.

According to the National Survey on Children's Health, 14.6% of children aged 6-11 in Rhode Island stayed home alone during the past week.

Toddler Health: Toddler Wellness Overview Survey (TWOS)

During 2005, the Division of Family Health implemented a follow-up survey of PRAMS respondents who agreed to be re-contacted two years after completing the PRAMS survey. The Toddler Wellness Overview Survey (TWOS) was developed to learn more about the health status and well being of two year-olds and their families. On average, 80% of PRAMS respondents agree to participate in TWOS. It is anticipated that approximately 1,100 mothers of two year-olds will be sent a survey annually. Since March 2005, 290 (60.3%) responses have been received out of 481 surveys mailed. The questionnaire contains 58 questions that cover a range of topics including: diet/nutrition, oral health, behavior/development, sleeping habits, child care, activities, safety/injury, health insurance, health care, family planning, maternal depression, support services, mobility, etc. Preliminary data are incorporated throughout the assessment.

PRIORITY: ASSURE ALL RHODE ISLAND FAMILIES HAVE A MEDICAL HOME

Medical Home

Compared to the nation, more children in Rhode Island have a medical home. According to the 2003 National Survey of Children's Health, 60.4% of Rhode Island children have a medical home versus 46.1% of children nationally. More Rhode Island children also had a preventive medical visit in the past year (90.8%) than did children nationally (77.8%). Nearly all respondents (99.25%) stated their children had received all the medical care they needed during the past year. Although 89.8% of respondents have someone they think of as their child's personal doctor or nurse, nearly one in ten (9.8%) did not. The majority of respondents (96.1%) indicated their child's personal doctor or nurse always or usually explains things in an understandable way. A lower proportion of respondents (86.4%) stated their child's personal doctor or nurse always or usually spends enough time with their child. More than one in four (28.4%) respondents stated their child needed to see a specialist. However, 31.0% of those who needed a specialist reported that their child's doctor or other clinic staff did not help them to get the care from the specialist. Although nearly one out of three respondents (32.2%) stated they needed an interpreter to help speak to their child's doctors/nurses, only 70.5% of them were able to get someone other than a family member to help them speak with the doctors/nurses.

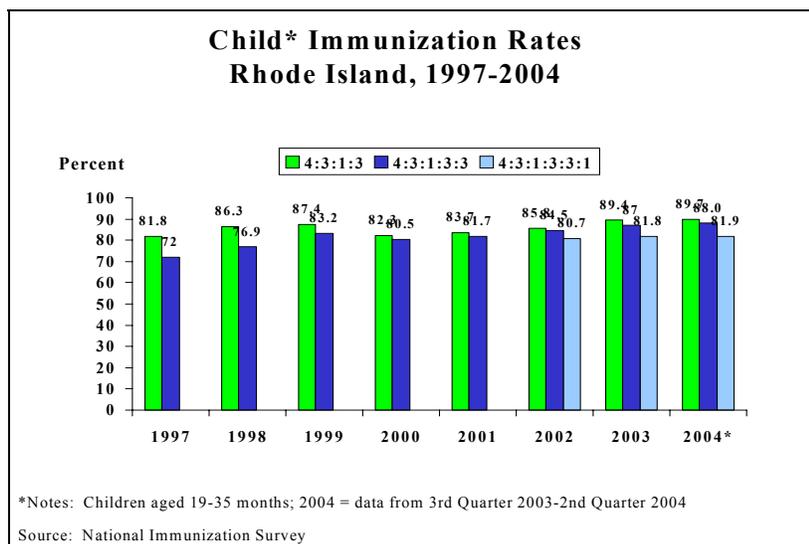
Other Sources for Medical Home Assessment

It should be noted that a set of medical home indicators has been developed by the Division of Family Health's Medical Home Work Group. Indicators were developed for each of the seven components of medical home as defined by the American Academy of Pediatrics: accessible, family-centered, continuous, comprehensive, compassionate, culturally effective and coordinated and were prioritized by their communication power, measurability and meaningfulness to the medical home definition. Available data sources were considered such as KIDSNET, National Survey of CSHCN, Rhode Island Health Interview Survey, Early Intervention Program, PRAMS, satisfaction surveys, etc. Input is currently being obtained from providers, community organizations, families and other medical home projects/initiatives in the state. Baseline data for the indicators will be collected during FY06.

Immunizations

Immunization rates among children aged 19-35 months have been rising in both Rhode Island and the nation. According to the National Immunization Survey, between 1997 and 2004, the percentage of children aged 19-35 months with complete vaccination coverage for the 4:3:1:3 series rose from 81.8% to 89.7%. The most recent survey conducted in 2003-2004, ranked Rhode Island second in the country for the highest rate of vaccination with the 4:3:1:3 series (89.7%), and third in the country for vaccinations with the 4:3:1:3:3 (88.0%) and 4:3:1:3:3:1 (81.9%) series. The NIS began including Varicella in the series of vaccinations (4:3:1:3:3:1) in 2002. The most current data show that Rhode Island had the fourth highest Varicella rate (91.6) and the highest 4+DTP rate (96.7%) in the country. Although Rhode Island has high rates of child immunizations, nearly one in five children has not completed the 4:3:1:3:3:1 series (Figure 53).

Figure 53



Disparities in Immunization Rates

Vaccination rates vary by race/ethnicity, poverty status and by WIC Program participation. Data from the 2003-2004 National Immunization Survey indicate that in Rhode Island immunization rates for the 4:3:1:3 series are lower among children of Hispanic/Latino ethnicity (86.6%) compared to White, non-Hispanic children (89.4%). Data were not available for other race categories (Black, Asian or Native American).

In Rhode Island, children living at or above the poverty level were more likely to have completed the 4:3:1 vaccination series (93.5%) compared with children living below the poverty level (91.6%).

Children enrolled in the Rhode Island WIC Program were more likely to have completed the 4:3:1:3:3 series (89.2%) than children who did not participate in WIC (86.9%).

Immunization Rates Among Kindergarteners

Immunization levels in Rhode Island for children entering kindergarten are also excellent. Results from the Statewide Immunization Assessment Survey conducted during the 2004-2005 school year indicate that 10,453 (84%) kindergarten children were surveyed among the 12,364 children in all kindergartens. Among those surveyed, 10,117 (96.8 %) had completed 3+ doses of polio vaccine; 10,086 (96.5%) completed 4+ doses of DtaP; 10,025 (95.9%) completed 2 doses of MMR; 10,282 (98.4%) completed 3 doses of Hepatitis B; and 10,300 (98.5%) completed 1+dose of Varicella.

Immunization Rates Among Children in Middle School

The Statewide Immunization Assessment Survey also collects data on children attending middle school in Rhode Island. Among 13,573 children surveyed, 9,888 (72.9%) received the Td Booster; 10,967 (78.8%) were up to date on Hep B; 13,334 (98.2%) were up to date on MMR2; and 11,371 (83.8%) were up to date on Varicella.

Immunization Rates Among Children in Day Care

In Rhode Island, children in day care and Head Start centers also have high immunization rates. During 2004-2005, immunization data for 13,977 children in day care centers and 1,964 in Head Start programs were assessed. Results show that 90.1% of children in day care centers and 94.9% of children in Head Start programs had completed the 4:3:1:3:3:1 (DTP/DtaP:Polio:MMR:Hib:HepB:Varicella) series of vaccinations.

Immunization Rates by Provider Type

Results from the 2003 provider assessment conducted by the Immunization Program indicate that children aged 12-24 months who receive care from private providers are more likely to be immunized than those who receive care at community health centers. During 2003, immunization records were reviewed from 59 private provider offices (n=1,363 records sampled) and 19 community health centers (n=807 records sampled). Results show that 83.9% of the children who received care at a community health center had completed the 3:2:2:2 series at 12 months of age compared with 88.9% of children who received care from a private provider. Only 72.2% of children aged 12-24 months who received care at a community health center were completely vaccinated for their age compared with 80.4% of children who received their care at private provider offices.

PRIORITY: SUPPORT SAFE AND HEALTHY ENVIRONMENTS FOR CHILDREN AND FAMILIES
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Lead Poisoning

The percentage of Rhode Island children aged less than six with lead poisoning (lead levels at or above 10ug/dL) has been decreasing and Rhode Island hopes to eliminate childhood lead poisoning by 2010. In order to achieve this goal, Rhode Island plans to decrease the proportion of new cases of lead poisoning to less than 5% in all Rhode Island communities without decreasing the availability of lead safe, affordable housing. It is believed that elimination of lead poisoning will not be achieved without addressing housing. Rhode Island's plan includes the following objectives: 1) to support the implementation of the Lead Hazard Mitigation Law; 2) to formulate innovative primary prevention strategies to achieve elimination; and 3) to maintain and re-evaluate secondary prevention efforts.

Between 1995 and 2004, the prevalence of lead poisoning among Rhode Island children aged less than six decreased by 75.6%, from 20.5% to 5.0% (Figure 54). Although these data reflect a positive trend, there were still 1,685 children who had lead poisoning in 2004, 1,167 (69.3%) of whom were newly poisoned. The proportion of new cases (incidence) of lead poisoning among children has decreased from 14.7% in 1995 to 3.7% in 2004, a 74.8% decrease. Between 2003 and 2004, the incidence rate remained the same at 3.7%. (Figure 55)

Figure 54

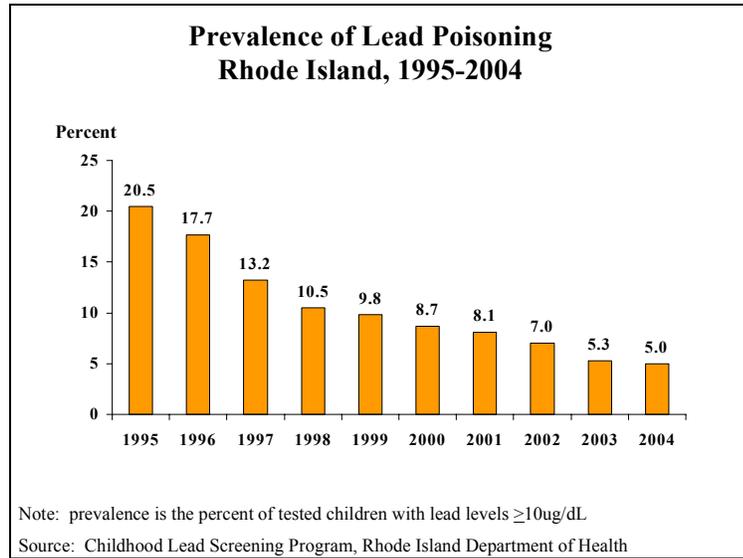
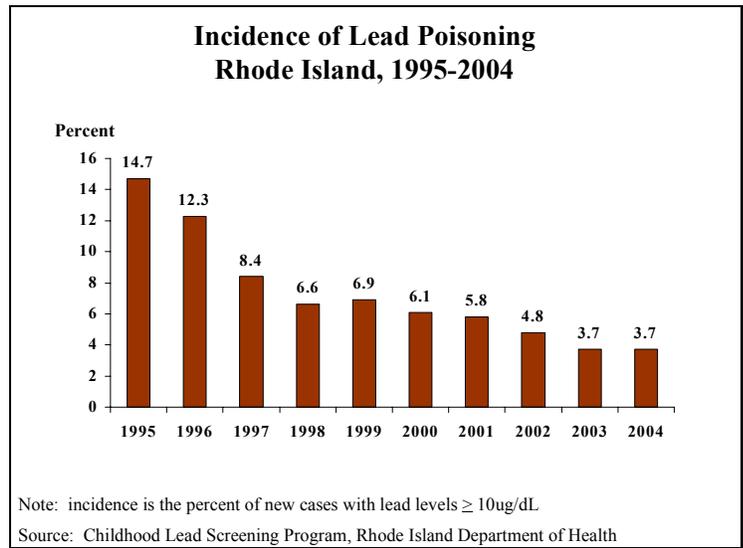


Figure 55



Geographic Disparities

The incidence of lead poisoning varies by geographic areas, with new cases of lead poisoning concentrated in the core cities (Figure 56). Although the incidence rates of lead poisoning have decreased in the core cities and the rest of the state by approximately the same degree (~75%) between 1995 and 2004, the gap in incidence rates among children in the core cities and the rest of the state persists. In 1995, the incidence of lead poisoning in the core cities (22.0%) was 2.6 times the rate for the rest of the state (8.4%). By 2004, children in the core cities were still 2.5 times as likely to be newly lead-poisoned (5.5%) than children residing in the rest of the state (2.2%) (Figure 57).

Figure 56

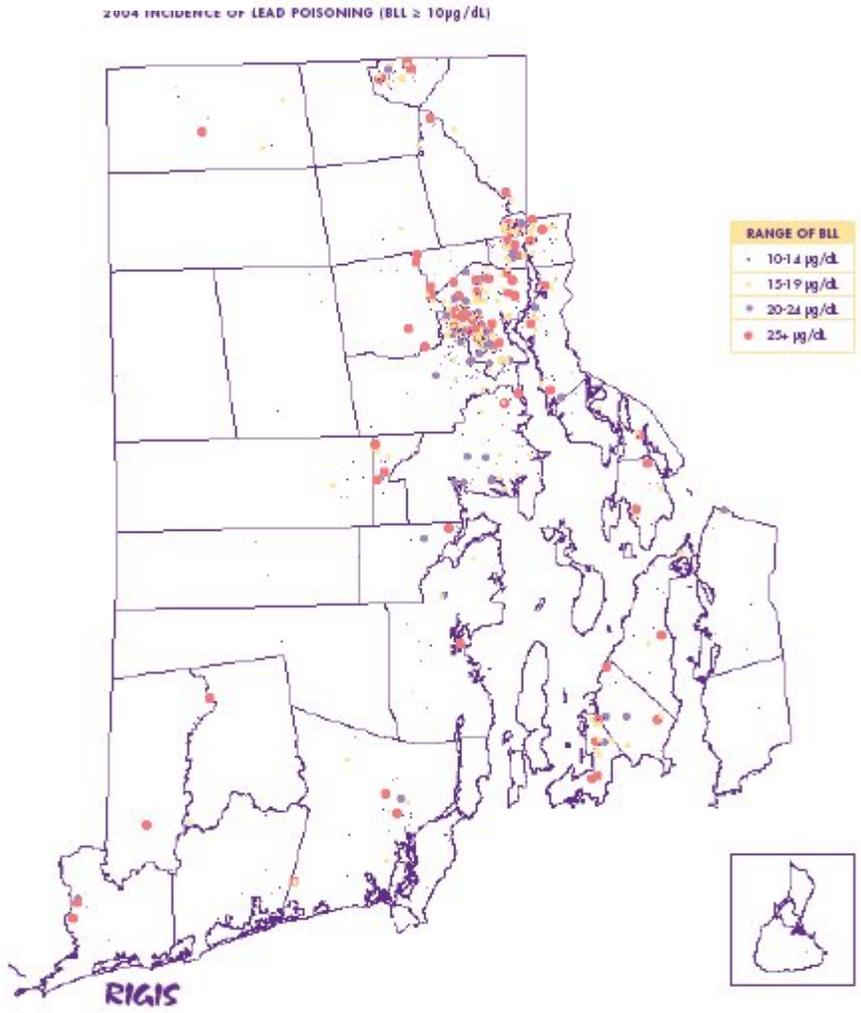
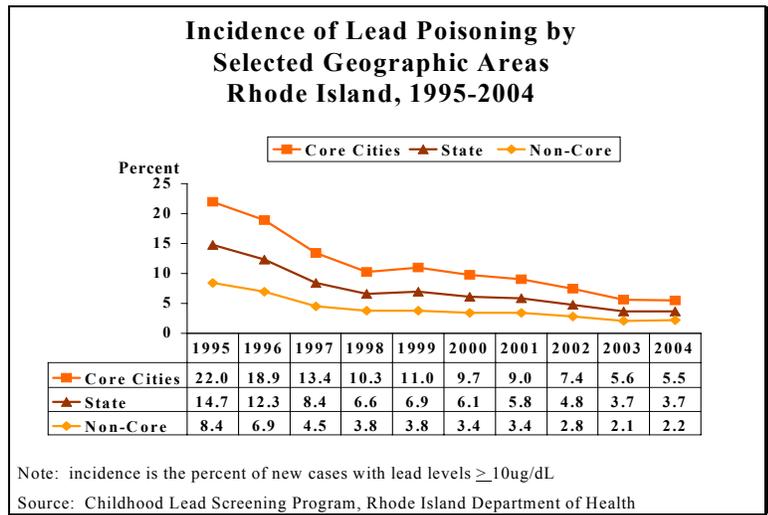


Figure 57



During 2004, of the 31,718 children screened with no previous elevated blood lead level, 1,167 (3.7%) had lead levels at or above 10ug/dL. Children living in Providence (7.7%) and Central Falls (6.3%) had the highest incidence rates of lead poisoning.

Lead Screening

In 2004, the number of children aged less than six screened for lead poisoning was 34,101, a slight decrease from 2002, when 34,907 children were screened. Although Rhode Island has high rates of screening among children by the time they are 18 months of age, screening rates decrease among children as they approach 36 months of age. Approximately, 75% of children born in 1998-2001 were screened for lead poisoning at least once by 18 months of age. However, only 52% of these children were screened at least twice by 36 months of age.

The number of children entering kindergarten who have ever had an elevated blood lead level had also been decreasing. Of the children who will be entering kindergarten in 2006, 8.4% have ever had a lead level at or above 10ug/dL, compared to 12.5% of children entering kindergarten in 2002.

Case Management

Significant lead poisoning among children aged less than six is defined as blood lead levels at or above 20ug/dL, or two blood lead tests ≥ 15 ug/dL, done between 90 and 365 days apart. Children with significant lead poisoning are referred to lead centers for case management services. The number of children with significant lead poisoning has been decreasing. In 2001, 261 children had significant lead poisoning and by 2004, this figure had decreased by 34.1% to 172 children.

Survey Data: Children in Day Care Centers and Kindergartens

The Rhode Island School Immunization Survey of day care centers and kindergartens includes a question regarding lead screening. During 2004-2005, 321 day care centers and 254 kindergartens were surveyed. Results indicate that of the 15,465 children aged 12-71 months attending the day care centers surveyed, 13,089 (84.6%) had evidence (documentation in their records) of a lead screening. Among the 2,136 children aged 12-71 months enrolled in Head Start programs, 1,820 (85.2%) had evidence of a lead screening. Children in the kindergartens that were surveyed had slightly lower lead screening rates, where of the 10,453 children surveyed, 8,753 (83.7%) had documentation of a lead screening in their records.

In order to validate the accuracy of the Immunization Survey data, a validation assessment is conducted from a sample of children across the state. During the spring 2005, 675 records were sampled from 28 kindergartens and reviewed for validation assessment. Among the 675 children, 569 (84.3%) had lead screening documentation.

Children who were seen in private provider offices had lower rates of lead screening compared with children who were seen at community health centers. During 2002, the Immunization Program reviewed 814 records of children aged 19-35 months who were seen at private provider offices and 535 records of children seen at community health centers. The review found that 639 (78.5%) of the children seen at private provider offices had a lead screening compared with 501 (93.6%) of the children seen at community health centers.

Hospitalizations Among Children

During 2004, there were 6,996 hospitalizations among Rhode Island children less than 18 years old. This figure represents an 8.1% increase since 2000, when there were 6,473 hospitalizations. Nearly, one in four, 1,631 (23.3%) of these hospitalizations were related to the respiratory system. Injuries and poisonings were the second leading cause (8.9%) of child hospitalizations. Children aged less than five represented half, 3,524 (50.4%) of all hospitalizations among children. The remaining hospitalizations were divided among children aged 5-12 (22.3%) and aged 13-17 (27.3%).

Overall, the most frequent diagnoses were acute respiratory infections (n=597, 8.5%); signs and symptoms (n=506, 7.2%); other infections (n=499, 7.1%); and asthma (n=470, 6.7%). Acute respiratory infections and asthma accounted for one-quarter (24.9%) of the hospitalizations among children aged less than 5. These diagnoses only accounted for 8% of hospitalizations among children aged 5-12 and for 3.5% among children aged 13-17. A discussion of asthma follows.

PRIORITY: SUPPORT SAFE AND HEALTHY ENVIRONMENTS FOR CHILDREN AND FAMILIES
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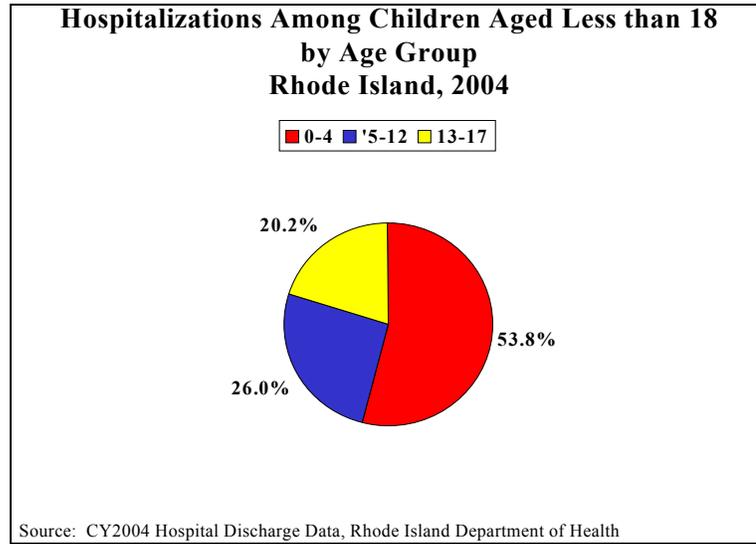
Asthma

Hospitalizations

According to the *2005 Rhode Island KIDS COUNT Factbook*, asthma is the number one chronic condition in children and the third-ranked cause of hospitalization in children under age 15. Asthma is also the leading cause of school absences resulting from chronic illness. Most cases of childhood asthma can be managed by the child's primary care physician and timely medical care can prevent severe episodes of asthma. Hospitalization for asthma may indicate that the child has not had adequate outpatient management for the disease.

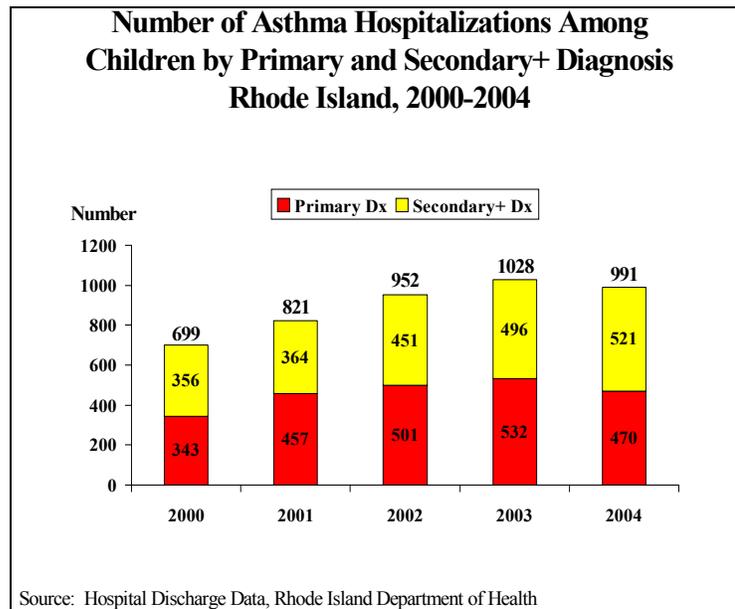
In Rhode Island during 2004, 470 children under the age of 18 were hospitalized with a primary diagnosis of asthma. This figure more than doubles when secondary or higher diagnoses are included resulting in an additional 521 hospitalizations. Of the total 991 asthma-related hospitalizations, children aged less than five represented over half, 533 (53.8%). Children aged 5-9 accounted for 258 hospitalizations (26.0%) and those aged 13-17 accounted for 200 hospitalizations (20.2%). (Figure 58). The asthma hospitalization rate (number of asthma-related hospitalizations per 1,000 children) was also highest among children aged less than five (8.1) compared to children aged 5-12 (2.2) and children aged 13-17 (2.9).

Figure 58



The number of asthma hospitalizations has been rising. Between 2000 and 2004, the number of asthma related hospitalizations among children increased by 41.8%, from 699 to 991 (Figure 59). However, between 2003 and 2004 the number of hospitalizations decreased by 3.6%, from 1,028 to 991. The decrease was attributed to fewer hospitalizations with primary diagnoses of asthma in 2004 (470) compared to 2003 (532). The number of hospitalizations with secondary or higher diagnoses of asthma continued to rise, however, from 496 in 2003 to 521 in 2004.

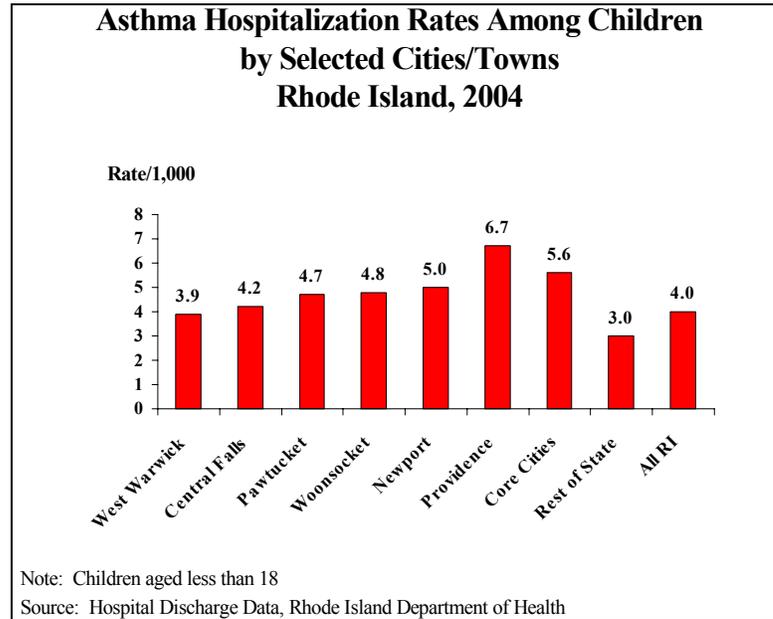
Figure 59



Geographic Disparities

During 2004, more than half, 518 (52.3%), of the 991 hospitalizations for asthma occurred among children residing in the core cities. Hospitalization rates for asthma were nearly twice as high among children residing in the core cities (5.6 per 1,000) than the rate for children living in the rest of the state (3.0 per 1,000). Figure 59 illustrates the range of asthma hospitalization rates among children in the core cities, 3.9 (West Warwick) to 6.7 (Providence).

Figure 60



Racial Disparities

The number and rate of asthma hospitalizations among children differs by racial/ethnic groups. Of the 991 child asthma hospitalizations, 582 (58.7%) were among Whites, 211 (21.3%) were among those of Hispanic/Latino ethnicity, 125 (12.6%) were among Blacks/African Americans, 14 (1.4%) were among Asians, and only one was among Native Americans. These percentages are far different from the proportion of the total population these racial/ethnic groups represent and, with the exception of Whites and Asians, all groups are over-represented in asthma hospitalizations. Among Rhode Island children aged less than eighteen, White children account for 77.6%, those of Hispanic/Latino ethnicity account for 14.1%, Black/African American children account for 6.3%, and Asian children account for 2.7%.

Disparities among racial/ethnic groups are more evident when the rate of asthma hospitalizations per 1,000 children aged less than eighteen are compared. The asthma hospitalization rate among Black/African American children (8.0) was nearly three times higher than the rate for Whites (3.0). Children of Hispanic/Latino ethnicity were twice as likely to have an asthma-related hospitalization (6.0) than White children. Asian children had the lowest asthma hospitalization rate (2.1), which was also far below the statewide rate of 4.0.

Asthma Hospitalizations by Insurance

According to the *2005 Rhode Island KIDS COUNT Factbook*, children with health insurance are more likely to receive care for asthma than uninsured children. Low-income and uninsured children are more likely to receive treatment in the emergency department or be hospitalized for conditions that could have been managed with outpatient care.

Among the 991 child hospitalizations for asthma, 434 (43.8%) were among those with private health insurance, 512 (51.7%) were among those with public health insurance and 13 (1.3%) had no insurance. The insurance status was unknown for 32 (3.2%).

Asthma Prevalence Determined through Surveys

National Survey of Children's Health

According to the 2003 National Survey of Children's Health, a slightly higher proportion of Rhode Island children have asthma (13.9%) than the nation (12.4%). However, fewer Rhode Island children are greatly or moderately affected by their asthma (13.6%) than children at the national level (16.3%).

Rhode Island Youth Tobacco Survey

Results from the 2003 Rhode Island Youth Risk Tobacco Survey (YTS) indicate that among the 2,023 high school students surveyed, one in five (20.9%) had been told by a health professional that they had asthma. A similar proportion of middle school (grades 6-8) students also had asthma. Among the 2,302 middle school students surveyed, 20.2% had been told by a health professional that they had asthma.

Rhode Island Health Interview Survey Data

Data from the 2001 Rhode Island Health Interview Survey indicate that of the 1,867 children under the age of 18 in households surveyed, 196 (10.5%) had asthma. (Weighted data indicate 9.9% of children had asthma). Children aged less than six accounted for 51 (26.0%) of the 196 children with asthma, children aged 6-12 accounted for 86 (43.9%), and children aged 13-17 accounted for 59 (30.1%). Of the children with asthma, 111 (56.6%) had a written management or action plan for their condition; 107 (54.6%) used a maintenance inhaler; and 84 (42.9%) used a rescue inhaler on a monthly basis or less.

Hospitalizations for Ambulatory Care Sensitive (ACS) Conditions

A study conducted by the Department of Health has shown that more than one in five (22.5%) hospitalizations among children are for ambulatory care sensitive conditions (ACS). These are conditions for which adequate ambulatory care can potentially prevent the need for hospitalization and/or prevent complications or more serious disease. They can also be used as indicators of access and quality in an ambulatory care system although factors outside the health care system can also impact whether hospitalization occurs.

In Rhode Island during 2001-2003, of the 24,976 hospital discharges among children aged less than 18, 5,627 (22.5%) were for ACS conditions. The percent of all hospitalizations that were for ACS conditions was highest for patients aged 65 or older (23.1%) and second highest among children aged less than 18. Among patients of all ages, 16.6% of all hospitalizations were for ACS conditions.

Among children aged less than 18, asthma was the leading ACS condition followed by dehydration and bacterial pneumonia.

Child Injuries

During 2004, among the 6,696 hospitalizations among children aged less than eighteen, 626 (8.9%) were related to injuries and poisonings. This represents a decrease from 1998, when 747 (10.9%) of the 6,837 hospitalizations were related to injuries and poisonings. Falls were the most frequent cause of these injury hospitalizations (27%), followed by other intentional causes (22%); motor vehicle accidents (18%); other vehicle-related accidents (7%); self-inflicted injuries (5%); and poisonings (5%).

According to the 2001 Rhode Island Health Interview Survey, 131 (7.0%) of the 1,867 children aged less than 18 in the households surveyed, had suffered from an injury or poisoning. Among the 131 children who were injured: 40 (30.5%) had incurred injuries from a fall; 21 (16.0%) had sports-related injuries; 16 (12.2%) were injured from a cut, slash or puncture; 14 (10.7%) were hit/struck by an object; 10 (7.6%) had been injured while using a skateboard, scooter, or rollerblades; 9 (6.9%) were involved in a motor vehicle crash; and 2 (1.5%) were poisoned.

Data from the 2003 National Survey of Children's Health indicate that nearly one out of 8 (12.0%) Rhode Island children had an injury that required medical attention in the past year. Among children who went to the emergency room within the past year (23% of all respondents), 46.5% were due to injuries or poisonings. In terms of prevention, just over half (52.6%) of respondents indicated that their child always wears a helmet when riding a bike, scooter, skateboard, roller skates, or rollerblades. Nearly one in five, 18.8%, reported their child never wears a helmet.

Preliminary data from the TWOS survey indicate that 17.8% of the toddlers had an accident or injury that needed to be checked by a doctor, nurse or other health care provider. Falls were the leading cause of injury among the toddlers (44.4%).

Poisoning

In January 2004, the Northeast Regional Injury Prevention Network published the Northeast Regional Poison Data Book, which contains poisoning data for 1995-1998 submitted by eight state health departments. Children aged less than five had the highest rates of unintentional poison-related hospitalizations (45.5 per 100,000). Teens aged 15-19 had the highest rate of self-inflicted poison-related hospitalizations (80.5 per 100,000). The leading agents in the poison-related hospitalizations among teens were: 1) analgesics, antipyretics and antirheumatics; and 2) tranquilizers/ other psychotropic agents.

PRIORITY: PROMOTE HEALTHY LIFESTYLES AND HEALTHY WEIGHTS FOR ALL

Children in the WIC Program

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is a preventive program providing nutritious food, nutrition education and improved access to health care. WIC serves pregnant women, infants and children under the age of five. Household income must be below 185% of the federal poverty level. Participants must have a specified health or nutritional risk (e.g., abnormal pregnancy weight gain, iron deficiency anemia, etc.). The WIC Farmer's Market Nutrition Program provides coupons to WIC participants for

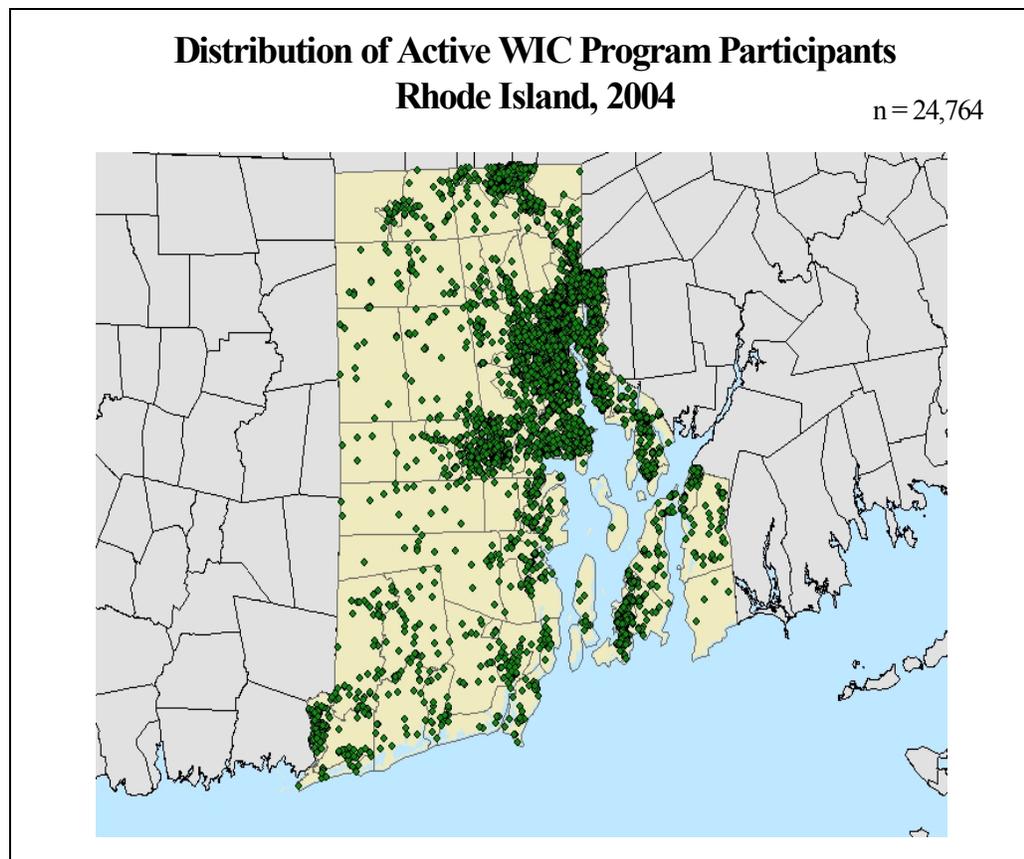
the purchase of fresh produce at local farmers' markets. In 2004, 17 farmers' markets provided produce to 21,116 WIC recipients.

WIC also promotes breastfeeding. Breastfeeding mothers qualify for a special food package and program eligibility is extended for one year. WIC has implemented breastfeeding support programs including the TLC (Lactation Consultant) hospital-based perinatal breastfeeding support program to assist low income breastfeeding women prior to hospital discharge and the Mother-to-Mother Peer Counseling Program which provides culturally competent breastfeeding support and promotion among WIC participants.

As of May 2005, the WIC Program served 21,370 women, infants and children including: 4,994 (23.4%) were women, 5,248 (24.6%) infants and 11,128 (52.1%) children aged 1-4. Of the 4,994 women, 2,735 (12.8% of all participants) were pregnant, 766 (3.6%) were breastfeeding and 1,493 (7.0%) were postpartum.

The WIC Program serves approximately 63% of those estimated to be eligible for the program statewide. Nearly three-fourths (71.6%) of WIC participants live in the core cities. Approximately, two-thirds (66%) of the core city residents eligible for WIC participated in the program. Figure 61 shows the distribution of active WIC clients throughout Rhode Island during 2004.

Figure 61



Nearly all of WIC participants have health insurance and the proportion enrolled in RIte Care continues to rise. Between 1998 and 2004, the percentage of WIC participants with insurance rose from 92.5% to 95.8% and the percentage of participants enrolled in RIte Care rose from 67% to 85.6%, a 28% increase.

WIC and Preventive Services

The WIC Program works closely with the Lead Poisoning Prevention and Immunization Programs. In 2001, a process was developed to ensure that: children who are lead poisoned receive WIC services, all families are educated on lead poisoning prevention and screening, and children are screened for lead poisoning. During the WIC certification process, children's lead screening results are reviewed using KIDS NET, and referrals are made based on the following algorithm:

- If no lead screening result is found, the family is referred for lead screening;
- If the child requires follow-up screening, they are referred for screening;
- If results show the child has elevated blood lead levels, the child is eligible for WIC.

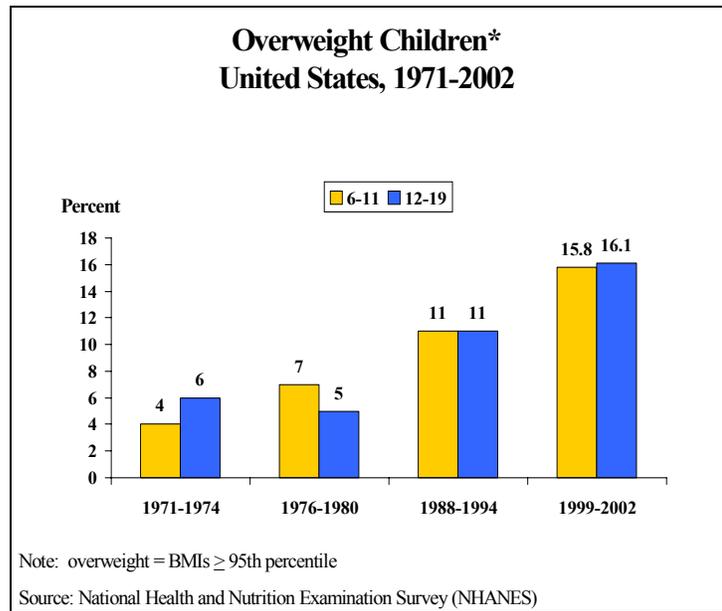
All families receive information on lead screening prevention. Families of children with elevated lead levels receive targeted nutrition education from the WIC nutritionist.

Since 2002, WIC has been screening the immunization status of WIC applicants under the age of two. WIC reviews immunization records and documents findings in the WIC chart. Children who are behind in their immunizations are referred to their health providers or free immunization clinics.

Childhood Obesity

Over the past decades, the percentage of children that are overweight ($\geq 95^{\text{th}}$ percentile) has been rising in the United States. Figure 62 shows that during 1971-1974 approximately 5% of children aged 6-19 were overweight and by 1999-2002 this figure had more than tripled to 16%. As in the nation, childhood obesity continues to be a significant health risk among children in Rhode Island. Data from multiple sources paint a bleak picture and indicate that more children in Rhode Island are overweight. These children are at higher risk for chronic diseases such as, type 2 diabetes, cardiovascular disease, hypertension, increased LDL cholesterol and asthma. Also, being overweight can impact some children's self esteem and/or lead to emotional health problems.

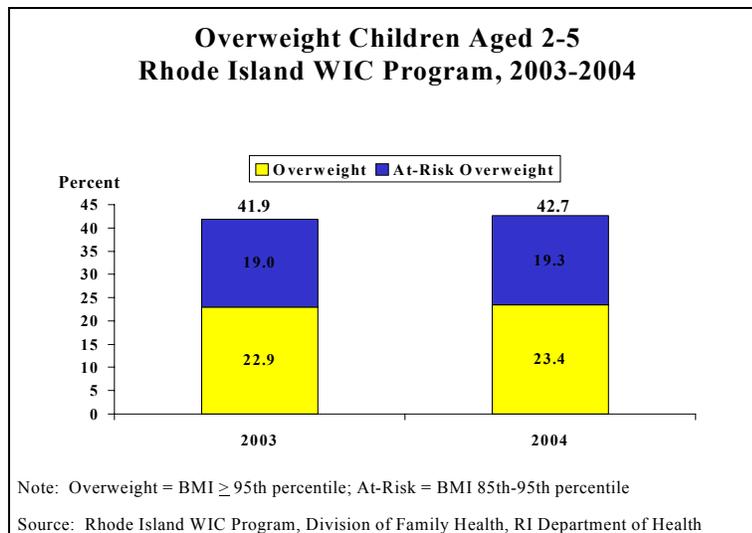
Figure 62



Children Aged 2-5: The Rhode Island WIC Program

Data from the Rhode Island WIC Program indicate that nearly one in four participants aged 2-5 is overweight. During 2004, of the 11,759 children aged 2-5 in WIC, 2,751 (23.4%) were overweight (had BMIs at or above the 95th percentile). An additional 2,269 (19.3%) children were at risk for overweight (had BMIs between the 85th and 95th percentile). These data remain consistent from 2003, when 22.9% of children were overweight and 19.0% were at risk for overweight. (Figure 63)

Figure 63

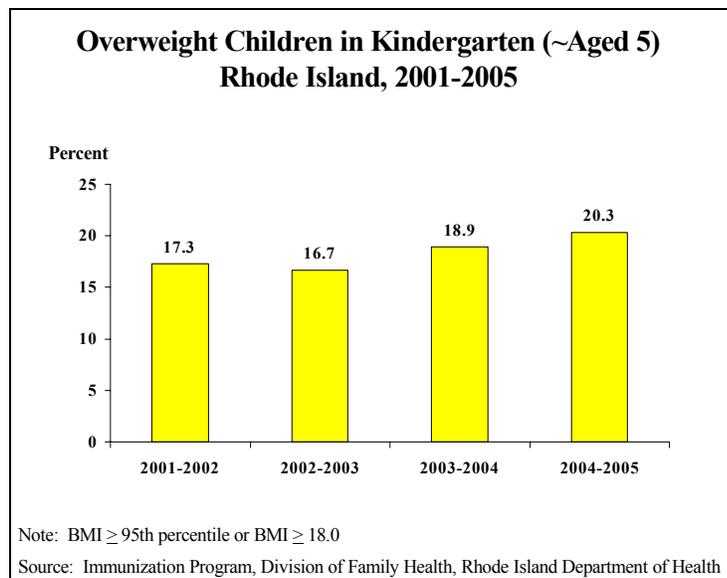


Child obesity has been the most frequently identified growth risk among children in WIC. Feeding habits, parenting skills, poor nutrition and lack of exercise contribute to this problem.

Children in Kindergarten (Aged 5): Immunization Program

Child obesity has also increased among children entering kindergarten. The Rhode Island Immunization Program collects height and weight data among the kindergarten children it samples. Based on CDC growth charts for boys and girls aged 5 at the 95th percentile, a BMI of 18.0 or greater was considered overweight or obese. Gender was not recorded during the data collection process. Of the 5556 children for whom data were collected, 113 (20.3%) had a BMI of 18.0 or greater. One in five children sampled had a BMI indicating they were overweight or obese. The Healthy People 2010 objective is 5%. Figure 64 shows that the percentage of kindergartners that are overweight has risen from 17.3% in 2001-2002 to 20.3% in 2004-2005, a 17.3% increase.

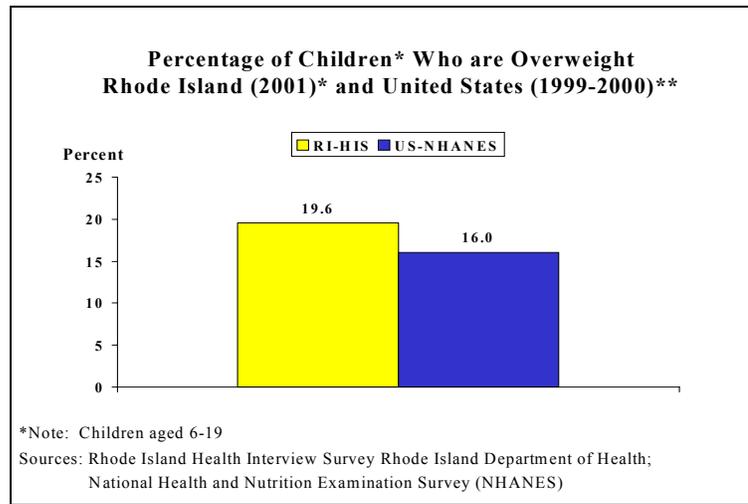
Figure 64



Children Aged 6-19: Rhode Island Health Interview Survey

According to the 2001 Rhode Island Health Interview Survey, one in five (19.6%) Rhode Island children and teenagers, aged 6-19, were overweight (BMI ≥ 95th percentile) and 14.8% were at risk for being overweight (85th-95th percentile). A higher proportion of children in Rhode Island is overweight than children nationally, where 16% of American children are overweight (Figure 65).

Figure 65

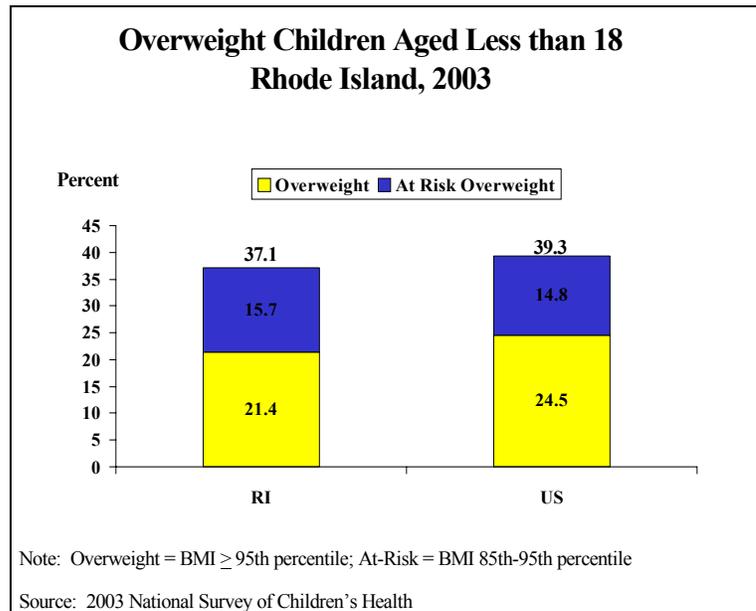


More than one third of Rhode Island children do not exercise. Results from the 2001 Rhode Island Health Interview Survey indicate that of the 1,867 children living in the households surveyed, 734 (39.3%) did not exercise.

Children Aged Less than 18: National Survey of Children's Health

Data from the 2003 National Survey of Children's Health indicate that although a lower proportion of Rhode Island children aged less than eighteen are overweight compared to the nation, more than one in five (21.4%) are overweight and 15.7% are at risk for overweight. Nationally, nearly one in four (24.5%) children are overweight and 14.8% were at risk. (Figure 66)

Figure 66



Food Security

Although child obesity has been rising, the rate of food insecurity in Rhode Island has also been rising. Approximately 115,000 Rhode Islanders are food insecure and one-third are children. Data published in *Household Food Security in the United States, 2003* indicate that during 2001-2003, 11.1% of Rhode Islanders were food insecure (with or without hunger), of whom 3.6% were food insecure with hunger. These figures represent an increase from 1996-1998, when 10.2% of Rhode Islanders were food insecure (with or without hunger), of whom 2.7% were food insecure with hunger.

According to the Rhode Island Community Food Bank, almost 44,000 individuals use the network of soup kitchens, pantries and shelters to feed their families each month. Of those who rely on “emergency food”, 43% are children under 18.

Rhode Island Food Security Survey

During spring 1999, the Rhode Island Department of Health first conducted a Food Security Survey among 410 households using the 18-item food security module developed by the USDA. The Rhode Island Food Security Survey included additional socio-demographic questions that included: respondent’s age, marital status, educational level, race/ethnicity, employment status, household size, and income. Households in Rhode Island’s 41 poverty census tracts were randomly selected utilizing a random digit dial telephone list. Only the person responsible for purchasing food for the household was interviewed and for this analysis will be referred to as the “head” of the household.

The survey was repeated during spring 2000 among 400 households, with 397 complete surveys obtained. Preliminary results from the 2000 survey indicate that of the 397 households surveyed, 98 (24.7%) were determined to be food insecure. Of these 98 food insecure households, 41 (10.3% of the total sample) were food insecure with hunger or severe hunger as defined by the USDA in the Household Food Security in the United States reports (see Figure 67).

Figure 67

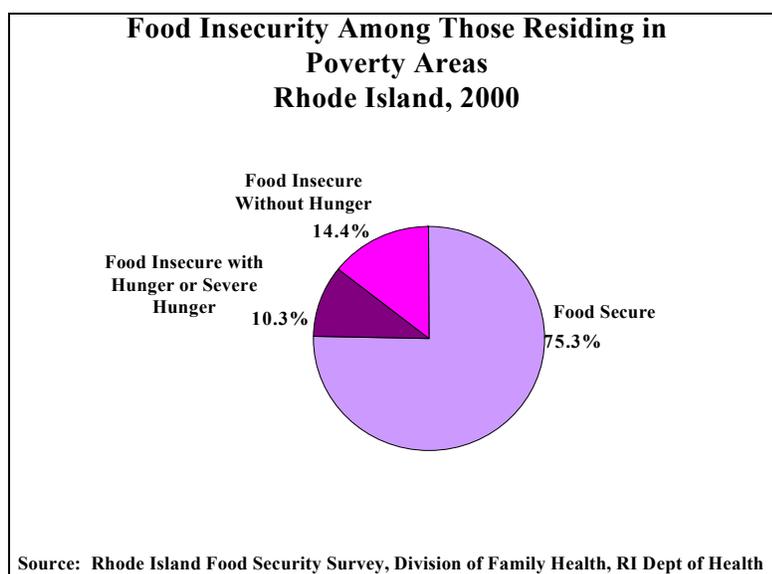


Figure 68 illustrates differences in the prevalence of food insecurity among households by education level, ethnicity, children under age 6, and marital status. The greater the education level, the less likely the household was food insecure (FI):

- of the 100 households where the head had less than a high school education, 38 (38.0%) were FI
- of the 157 households where the head had graduated from high school, 39 (24.8%) were FI; and
- of the 129 households where the head had some college education, 19 (14.7%) were FI.

Although there were differences in food security status among racial/ethnic groups, there were only significant differences between those of Hispanic/Latino ethnicity and those who were not. Of the 68 household heads who identified themselves as Hispanic, 28 (41.2%) were food insecure, compared with 66 (21.6%) of the 306 household heads who stated they were not of Hispanic ethnicity ($p < .001$).

Households with children, especially those with children aged less than six, were more likely to be food insecure than households with no children. Of the 162 households with children, 51 (31.5%) were assessed to be food insecure compared with 20.1% of the households with no children. ($p < .01$) Of the 82 households with children aged less than six, 25 (39.0%) were food insecure compared with 21.1% of households with no children aged less than six. ($p < .001$)

There were also differences in food security among those who were married (includes living with a partner) and those who were single (includes widowed, divorced, and separated). Of the 210 household heads who were single, 64 (30.5%) were food insecure compared with 17.5% of those who were married. Those who were single and had children in the household were more likely to be food insecure than those who were married with children in the household; 41.2% of single headed households with children were food insecure compared with 23.3% of married couples with children. ($p < .005$)

Although age did not appear to be a significant risk factor for food insecurity, older respondents aged 65 or older were less likely to be food insecure than younger respondents. Of the 43 respondents aged 17-24, 32.6% were food insecure while 15.6% of the 96 respondents aged 65 and older were food insecure.

Figure 68

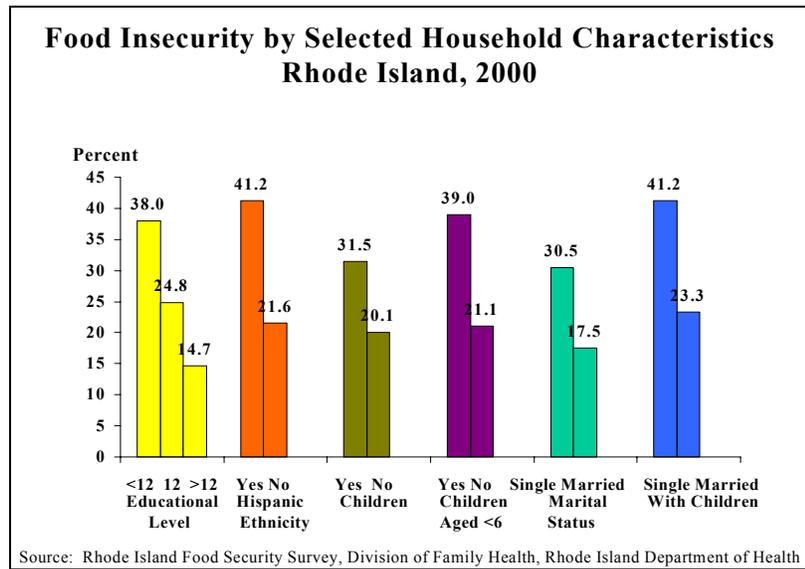


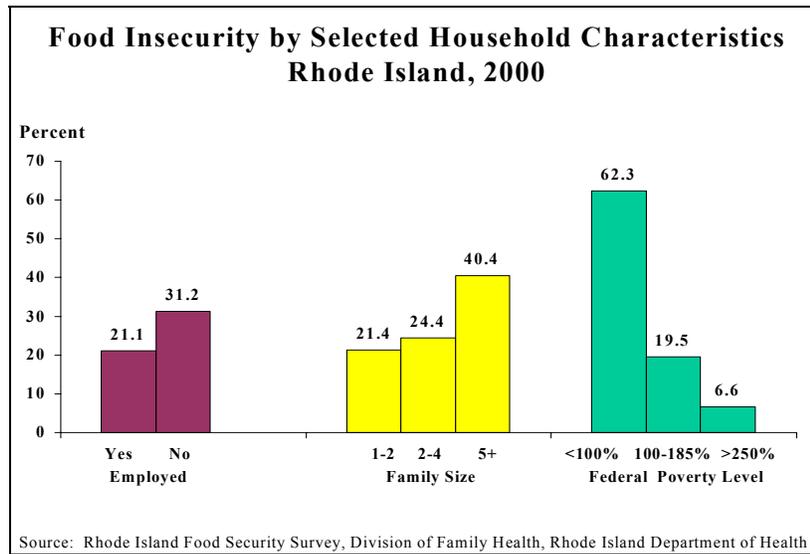
Figure 69 illustrates the differences in the prevalence of food insecurity among households by employment status, family size, and poverty level. Those households where no members were employed were more likely to be food insecure as those households where at least one member was employed at least part-time (20 hours per week or more). Of the 144 households where no one was employed, 45 (31.2%) were food insecure compared with 53 (21.1%) of the 251 households where at least one member was employed. ($p < .05$)

Larger households were nearly twice as likely to be food insecure compared to smaller households. Of the 52 households with 5 or more individuals, 40.4% were food insecure compared with 21.4% of households with 1-2 ($n=224$) and 24.4% of households with 3-4 individuals ($n=119$). ($p < .05$)

Households with annual incomes less than 100% of the Federal Poverty Level (FPL) were nearly 9 times more likely to be food insecure than households with incomes greater than 250% of the FPL. Of the 77 households with incomes less than 100% of the FPL, 48 (62.3%) were food insecure; whereas, 6.6% of the 137 households with incomes above 250% of the FPL, were food insecure. ($P < .001$). Of the 82 households with incomes between 185% and 250% of the FPL, 19.5% were food insecure.

Nearly one in ten ($n=36$) of the respondents had received food assistance from emergency food pantries or other programs. Households that received food assistance were three times as likely to be food insecure as households that did not receive assistance. Two-thirds or 66.7% of the households that received assistance were food insecure compared with 20.1% of the 360 households that did not receive any assistance.

Figure 69



Rhode Island Women, Infants and Children (WIC) Program Participant Survey Data

Data from the Rhode Island WIC Program indicate that many low-income families are struggling to provide adequate quantities and quality of food for their households. Participants in the WIC Program include pregnant and postpartum women, infants and children under the age of five who meet income eligibility criteria and have a nutritional risk. The WIC Program conducts an annual statewide survey that is completed by at least 1,000 participants and includes questions regarding how often they run out of food and have to rely on low-cost foods due to lack of money to buy food. Results from the survey conducted during 2004 show that 36.5% of respondents often (7.5%) or sometimes (29%) ran out of food and didn't have money to get more. Nearly half (44%) of the respondents indicated they often (8%) or sometimes (36%) relied on only a few kinds of low cost food to feed their children because they were running out of money to buy food.

Other Data

Preliminary data from the 2005 Rhode Island TWOS survey indicate that 3.4% of respondents did not have enough food for themselves and/or their children during the past year.

Food Stamps

The Food Stamp Program provides low-income families (households with an annual income of less than 130% of the federal poverty level) with the ability to obtain better nutrition through monthly benefits that can be used to purchase food. In October 2004, 40,074 children participated in the Food Stamp Program, which represents a 15.4% decrease from 48,144 children in 1996. Unfortunately, not all children who are eligible to receive food stamps participate in the program. On October 1, 2004, only 71.2% of income-eligible children statewide received food stamps. Participation rates were slightly higher among those living in the core cities (75.8%) compared to those in the rest of the state (59.4%). (Source: *2005 Rhode Island KIDS COUNT Factbook*).

School Breakfast

In the 2000 legislative session, the Rhode Island General Assembly strengthened the School Breakfast law that first passed in 1998 by expanding the program to include all public schools. Still, not all students participate. According to the *2005 Rhode Island KIDS COUNT Factbook*, during 2003-2004, 38 low-income students participated in the school breakfast program for every 100 that participated in the school lunch program. Rhode Island ranks 35th in the country for student participation in the School Breakfast Program. As of Fall 2004, 16,221 (30.8%) of 52,622 low-income students participated in school breakfast. In October 2004, of the 19,743 breakfasts that were served daily in Rhode Island schools, 15,728 (79.7%) were to low-income children eligible for free or reduced-price meals.

Universal school breakfast offers school breakfast free to all students, regardless of family income. Currently, there are four school districts (Central Falls, Cranston, Pawtucket and Providence) in Rhode Island that offer universal free school breakfast to every student in the public schools. (Source: *2005 Rhode Island KIDS COUNT Factbook*).

Oral Health

Research has shown that children with poor dental health are at increased risk for future dental caries in their permanent teeth, and that chronic dental problems in children and adolescents can negatively impact school performance, self image and school attendance. In the United States, 80% of the tooth decay occurs in 25% of the children. Children in families with incomes below the federal poverty level and minority children are more likely to have untreated dental problems. (*2005 Rhode Island KIDS COUNT Factbook*).

In Rhode Island, comprehensive dental services are a covered benefit under Medical Assistance. Dental services provided to those enrolled in RItE Care are paid on a fee-for-service basis, where Medical Assistance directly pays dentists who choose to participate in the program. During FY03, 30% of children enrolled in Rite Care received diagnostic services, 26% received preventive services and 16% received treatment services. Those with public insurance have more difficulty in getting dental care than those with private insurance because many private dentists do not accept Medical Assistance for payment. During FY03, there were 320 RItE Care members for each dental care provider who accepted Medical Assistance. (*2005 Rhode Island KIDS COUNT Factbook*).

The selected statistics below illustrate the status of oral health among children in Rhode Island.

National Survey of Children's Health

According to the 2003 National Survey of Children's Health, a higher proportion of Rhode Island children have dental insurance (85.5%) than children nationally (75.7%). Still, 13.2% of Rhode Island families reported their children had never seen a dentist; (14.0% among US children). Although compared to the nation, fewer Rhode Island children have cavities, nearly half (46.2%) of those surveyed reported their children had cavities; (54.4% among US children).

During 2003-2004, the Providence Smiles Program, a school-based prevention, screening and treatment services model, screened 1,368 children and found that among kindergartners, 42% had untreated dental decay and

34% had two or more teeth with dental caries. Results were worse among third graders, where 50% had untreated dental decay and 35% had two or more teeth with dental caries.

Only 43% of children enrolled in RIte Care, RIte Share or Medicaid fee-for-service in September 2004, received any dental service during FY2004 (*2005 Rhode Island KIDS COUNT Factbook*). Medicaid-eligible children experience twice the rate of untreated dental disease as higher-income children.

Health Interview Survey

Of the 580 children aged less than six, 136 (23.4%) fell asleep with a bottle in their mouth most or some of the time. Of the 1,287 children aged 6-18, 530 (41.2%) had sealants. One in three or 608 (34.0%) of the 1,789 children aged 1-18, had a filling in one or more teeth.

Hospitalizations

During 1998 and 2004, an average of 46 children aged less than 18 were hospitalized with a diagnosis that included an oral health condition. (13 of these had an oral health-related primary diagnosis).

Actions to Improve Oral Health in Rhode Island

In 2001, a Special Senate Commission on Oral Health issued 22 recommendations, which included the following: enhancement of Medicaid reimbursement for hospital based dental centers; establishment of a collaborative community effort to address barriers to early childhood oral disease; expansion of the Providence Smiles Program; establishment of pediatric and general practice dentistry programs in Rhode Island; and development of alternative models for dental assistant recruitment and training. In response, initiatives have been or are being developed such as: the Dental Assistant Training Partnership Program; an action plan to guide the Rhode Island Early Childhood Oral Health Coalition; and a public health education campaign regarding the dangers of early childhood tooth decay sponsored by Delta Dental of Rhode Island in partnership with the Rhode Island Department of Health, Rhode Island KIDS COUNT, Neighborhood Health Plan of Rhode Island, and medical and dental providers.

Mobility

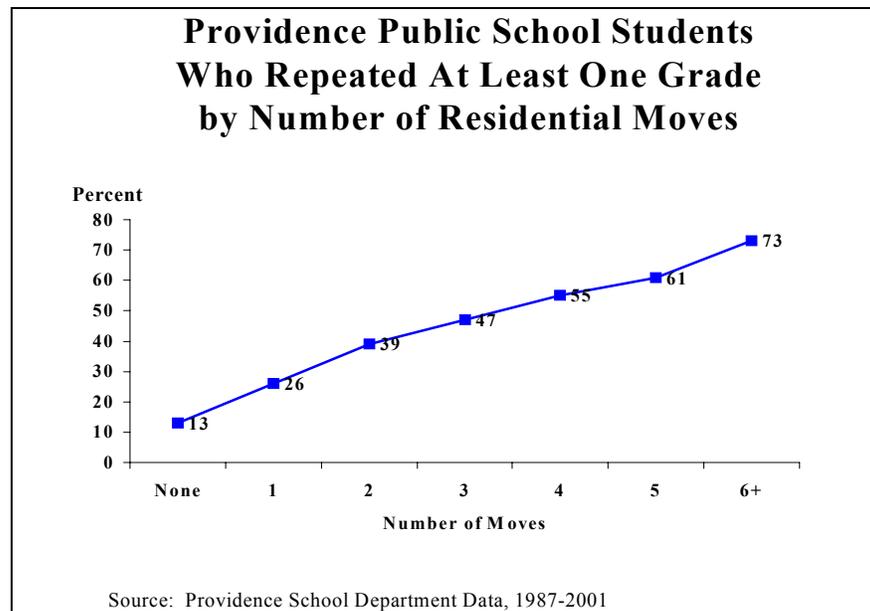
Children who move often are often at risk for poor health and educational outcomes. To better understand the impact of mobility on children's health and educational outcomes, the DFH conducted a Mobility Study in partnership with The Providence Plan in 2002. Data from the study revealed that the more residential moves a child makes increases their risk for poor educational outcomes. In fact, as the number of moves increases, the likelihood of repeating a grade increases. For example, Providence public school students who moved twice were three times more likely to repeat a grade than children who did not move (13%). Nearly half (47%) of Providence students who moved three times repeated a grade at least once. (Figure 70)

Children are more likely to be residentially mobile if they are born to women who: are non-White, are aged 15-19, are single, received less than a high school education, and/or received late or insufficient prenatal care. Data for 44,735 children born during 1997-2001 were analyzed to determine if residential mobility impacted frequency of care. Children in residentially mobile households are more likely to see more than one provider within the first five years of life than are residentially stable children. The number of visits for each birth cohort was determined (up to

10 were tracked). It was assumed that more visits were better since office visits are associated with immunizations and preventive care. The data showed that regardless of the number of moves, only a small number of children (11%) had three or less office visits.

The study also found that residential mobility does not appear to affect whether a child receives timely blood lead screenings (two screenings by age 3). Nearly all (96%) of the children in the sample received a second lead screening by age 3. Only 860 (4%) children reported a second screening above the age of 3.

Figure 70



The Mobility Study also found that students who move are absent more often than students who do not move. For example, 31% of students who did not move were absent for 16 or more days compared to 42% of students who moved at least once during the same period. Children who move are also more likely to perform worse on standardized tests than students who have not moved. Among the students who did not move, nearly two-thirds (66%) met the 4th Grade Reading Standards compared to 59% of students who moved once, 56% of students who moved twice and 48% of students who moved three or more times.

During 1997-2001, although nearly two-thirds (65%) of Rhode Island children aged less than six did not move, 47% of children living in the core cities moved at least once compared to 26% of children in rest of the state. Children living in Central Falls (25%), Providence (22%) and Woonsocket (21%) had the highest percentages of children who moved more than once.

Other Mobility Data

Rhode Island PRAMS data indicate that nearly one-third (31.9%) of respondents who gave birth during 2002-2003, had moved at least once in the past three years and approximately another third (31.6%) had moved two or more times. Nearly half (45.3%) of the respondents had plans to move within the next three years. Among those

who planned to move, 13.7% planned to stay in the same neighborhood, 12.6% planned to move from their neighborhood, but stay in the same city, and 19.0% planned to move to a different city.

Preliminary data from the Rhode Island TWOS survey indicate that 27.9% of families had moved at least once since their two year-old child was born.

Homeless Children

According to the *2005 Rhode Island KIDS COUNT Factbook*, during July 2003-June 2004 in Rhode Island, there were 1,564 children who received shelter from the emergency and domestic violence shelter system. This represents an increase of 57.3% since 1998-1999, when 994 children received shelter. Among the children who received shelter during 2003-2004, 1,325 (84.7%) were aged less than thirteen and 239 were aged 13-17. Homeless youth aged 13-17 are discussed in more detail later in the section on adolescents. Nearly half, 701 (44.8%) of the children were aged less than 6 and 624 (39.9%) were aged 6-12.

Homelessness is of concern since homeless children are more likely to get sick, develop mental health problems, have academic problems, have high rates of school mobility, have higher rates of learning disabilities diagnoses, be victims of violence, or exhibit delinquent and aggressive behavior. Homeless children are more likely to go hungry and experience illnesses such as asthma, stomach problems and ear infections. Infants, toddlers and preschoolers who are homeless develop more slowly and may develop serious emotional problems. Children under the age of 5 are 1.6 times as likely to be homeless (9.3 per 1,000) than all Rhode Islanders (5.8 per 1,000). (*2005 Rhode Island KIDS COUNT Factbook*).

Supportive Housing

In Rhode Island, the Supportive Housing Program provides services that include assistance with budgeting and paying rent, access to employment, medication monitoring, daily living skills, counseling and referrals to health and mental health programs. During 2004, 131 Rhode Island families with children were served in the Supportive Housing Program.

Children and Domestic Violence

According to the *2005 Rhode Island KIDS COUNT Factbook*, police reports indicate that in Rhode Island during 2003, children were present during 2,684 (32%) of the 8,389 reported domestic violence incidents. Between 1998 and 2003, the total number of domestic violence incidents rose from 6,628 to 8,389, a 26.6% increase. National surveys of mothers indicate that 80-90% of children have witnessed the abuse in homes where there is domestic violence. Children who experience adult domestic violence in their homes suffer trauma even if they, themselves, are not physically harmed. Exposure to domestic violence can limit children's cognitive development and their ability to form close attachments. Children who experience violence over a period of time are more likely to have serious emotional and behavioral problems, including violent behavior. Children in homes where a parent is abusive to a spouse are at increased risk for child abuse and neglect.

In Rhode Island, there are six shelter and advocacy programs that offer services to children who witness domestic violence. Services include group therapy, individual counseling, expressive arts therapy, and child care. In

2004, the six domestic violence agencies provided services to 755 Rhode Island children, 315 (41.7%) of whom spent time in a domestic violence shelter.

Child Abuse and Neglect

The Rhode Island Department of Children, Youth and Families (DCYF) has reported that during 2004, there were 2,095 indicated cases of child abuse and/or neglect, a 24.7% decrease since 1995, when there were 2,781 indicated cases. Cases can involve more than one child and in 2004, the 2,095 indicated cases involved 2,906 children of whom, 9% were under age 1, 28% aged 1-5, 32% aged 6-11 and 31% aged 12 or older. More than two-thirds (71%) of the cases are for neglect, 17% are for physical abuse, 5% are for sexual abuse, 2% are for medical neglect, 1% are for emotional abuse, and 4% are for other types of abuse. In 87% of cases, parents were the perpetrators, 6% were relatives or household members, 3% were child care providers, 2% were foster parents or residential facility staff and 2% had other relationships to the victims.

During 2004, 29 children were hospitalized with the diagnosis of child abuse and neglect. Between 1995 and 2004, 33 children died as a result of injuries due to abuse by a parent or caretaker.

Child Neglect

Of the 3,344 indicated allegations (confirmed claims) of child neglect in Rhode Island during 2004, 34% involved lack of supervision, illustrating the importance of adequate child care and early childhood and school age programs.

Child Sexual Abuse

During 2004, there were 223 indicated allegations of sexual abuse and of these, 168 (75.3%) were among females, and 67% were among children aged less than 12.

Geographic Disparities

During 2004, the rate of cases of child abuse/neglect per 1,000 children in Rhode Island was 7.0. However, the rate among children residing in the core cities was 10.1, twice the rate for children residing in the rest of the state (4.7). The rate of child abuse/neglect ranged from a low of 0.8 in Smithfield to a high of 13.1 in Woonsocket. Among the core cities, Providence had the lowest child abuse/neglect rate (8.8). More than half, 1,181 (56.4%) of the 2,095 child abuse/neglect cases in Rhode Island during 2004 were among children living in the core cities. More than one-third (39.0%) of the state's population of children under age 21 live in the core cities.

Families that become overwhelmed by personal, social or economic problems may not have adequate resources to meet their children's needs and may require a variety of services and interventions. It is critical that families are connected with economic supports and have access to mental health services in order to help prevent child abuse and neglect.

**PRIORITY: ADDRESS THE SOCIAL, EMOTIONAL AND BEHAVIORAL HEALTH NEEDS OF THE
MCH POPULATION**

Children's Mental Health

Mental health problems affect children of all backgrounds and can arise from biological or psychosocial causes. However, children are at increased risk if they live in poverty, experience child abuse/neglect or were exposed to alcohol or drugs during the prenatal period.

Data from the 2003 National Survey of Children's Health indicate that approximately one out of 13 (7.4%) Rhode Island children aged less than 18 have an emotional, developmental or behavioral problem for which they need treatment or counseling. Although a higher proportion of Rhode Island children with emotional, developmental or behavioral problems received some type of mental health care (67.5%) than children nationally (58.7%), one-third of Rhode Island children in need of mental health care are not receiving services. When respondents were asked about the extent their child's mental and emotional health puts a burden on the family, 7.9% reported a great deal and 22.2% reported a medium amount. Seven percent (7.0%) of respondents indicated that a doctor or health professional diagnosed their child with depression or anxiety problems; 8.7% were told their child has attention deficit disorder or attention deficit hyperactive disorder; and 4.9% were told their child has behavioral or conduct problems.

Respondents stated they were concerned a lot about the following: depression or anxiety (17.2%); respondents indicated they were concerned a lot about depression or anxiety; substance abuse (12.0%); and eating disorders (11.2%).

Mental Health Care: Community Mental Health Centers

According to the 2005 Rhode Island KIDS COUNT Factbook, during 2004, 7,533 children received services from the eight community mental health centers (CMHCs) in Rhode Island, which are the primary source of public mental health treatment services available in the state. One in five (21%) of the children receiving CMHC services had attention deficit disorder, 19% had depressive disorders, 15% had conduct disorders and 10% had anxiety disorders. Nearly half (48%) had diagnoses of serious mental illness.

Mental Health Care: Hospitals

During 2004, Bradley Hospital, Rhode Island's largest psychiatric center for children, admitted 892 children to the hospital. Another 75 children from the Developmental Disabilities Program were also admitted. Bradley's three schools for children with mental illness and developmental disabilities served an average of 190 students per day in 2004.

Butler Hospital, which provides a wide range of psychiatric services to children and adolescents, treated 853 children aged 18 and under during 2004, of whom 692 (81.1%) were admitted to the hospital. The remaining 161 were in partial hospital or outpatient programs. Teens aged 13-18 represented 80% of the services provided.

During 2004, Rhode Island Hospital provided 6,546 child psychiatry outpatient visits, which was a 33.1% decrease from 2003, when there were 9,786. This change is attributed to the decrease in the number of psychiatrists on staff.

Mental Health Care: Children's Intensive Services and Home Based Therapeutic Services

The Children's Intensive Services (CIS) Program at the Rhode Island Department of Children, Youth and Families (DCYF) allows children at the highest risk for out-of-home placement to remain at home in their community while receiving intensive, home-based psychotherapeutic and case management services by the CIS. During July-August 2004, of the 1,244 children served by CIS, 58% were aged 12-18, 35% were aged 5-11 and 10% were aged 3-5. Over 60% had a behavior diagnosis (including attention deficit disorder, post traumatic stress disorder and conduct disorder); 30% had a mood disorder; and 20% had an adjustment disorder. (Note: a child can have more than one disorder).

The Home-Based Therapeutic Services Program at the Rhode Island Department of Human Services provides intensive home and community services to children up to age 21 with severe behavioral health, developmental or physical disabilities. In 2004, 412 children received HBTS services and 10% of these children were aged less than 5, 33% were aged 5-9, 39% were aged 10-14 and 18% were aged 15-21.

Mental Health Care: Access to Services

There are waiting lists for many mental health services for children and families in Rhode Island. The wait time for general outpatient services at Bradley Hospital in 2004 was 8-12 weeks and the wait for residential services was 3-4 months. There were 280 children on waiting lists for the HBTS Program in 2004.

In 2004, approximately 356 children between the ages of 4-17 with a psychiatric diagnosis were "boarded" in emergency departments and/or medical floors at hospitals throughout Rhode Island due to the unavailability of inpatient child psychiatric beds in the state.

(Source: 2005 Rhode Island KIDS COUNT Factbook)

Mental health issues among adolescents are discussed later in Section 3b. *Adolescents*.

Child Deaths

During 1999-2003, 148 Rhode Island children aged 1-14 died. The child death rate during this period was 15.5 per 100,000. Nearly two-thirds of these deaths, 93 (62.8%), were due to illness. The remaining one-third or 55 deaths were due to injuries, 41 (27.7%) of which were unintentional. Of the 55 injury deaths, 16 involved motor vehicles, 12 were fire-related, 7 involved firearms, 5 were drownings, 1 was due to a fall, 1 involved a poisoning and 13 were due to other causes. There were 10 homicides and 2 suicides. When deaths due to illnesses are disaggregated by individual cause (e.g., malignant neoplasms, congenital anomalies, heart disease, etc.), then unintentional injuries become the leading cause of death among children aged 1-14 in Rhode Island.

According to the Annie E. Casey Foundation's *2004 KIDS COUNT Data Book*, Rhode Island had the third lowest child death rate in the country (based on 2001 data).

Protective Factors/Assets

National studies have shown that assets such as, family support, caring neighborhoods, school engagement, parent involvement, adult role models, self-esteem, youth programs, etc. can impact whether a child engages in substance abuse and other risky behaviors.

Data from the 2003 National Survey of Children's Health indicate that 84.1% of respondents feel they have a very close relationship with their child. More than half (53.3%) of those surveyed stated they or family members read aloud to their children (aged less than six) every day in the past week. This corresponds closely with preliminary data from the RI TWOS survey, where 51.7% of respondents reported they read stories to their child every day. Data from the National Survey of Children's Health also indicate that 82.9% of families have rules about what television programs their children can watch. More than half (59.6%) of the children were involved in community service or volunteer work at school, church or in the community; 52.1% participated in clubs or organizations, such as Scouts, religious group or Boy's/Girl's Club after school or on weekends; and 25.8% participated in organized events or activities. Respondents stated they were concerned a lot about the following: having enough time to spend with their child (29.9%); their relationship with their child 25.9%; their child's self-esteem (27.8%); how child copes with stressful things (29.6%); substance abuse (12.0%); child being bullied by classmates (12.3%); violence in the home, school or neighborhood (13.5%). Less than half (45.0%) of the respondents indicated that all the family members in the household ate a meal together every day in the past week. Nearly one-third (31.4%) reported someone in the household uses cigarettes, cigars or pipe tobacco.

Respondents definitely or somewhat agreed with the following about their neighborhood: people in their neighborhood help each other out (79.3%); people in the neighborhood watch out for each other's children (82.7%); there are people they can count on in the neighborhood (82.2%); there are people who might be a bad influence on their children (43.6%). In terms of safety, 71.4% of respondents always or usually feel their child is safe in their community or neighborhood and 87.8% always or usually feel their child is safe at school.

PRIORITY: ENGAGE, EMPOWER, SUPPORT AND INFORM PARENTS
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Parent(ing) Issues

Nearly all (98.1%) of respondents to the 2003 National Survey of Children's Health feel they are coping very or somewhat well with the day-to-day demands of parenthood and raising children and 86.8% had someone they could turn to for day-to-day emotional help with parenthood/raising children. Although 62.3% stated their mental and emotional health is excellent or very good, nearly one in seven (14.4%) stated their mental and emotional health was fair or poor. Nearly one in six (15.9%) respondents stated that during the past month, they always or usually felt they were giving up more of their life to meet their child's needs than they ever expected.

Maternal Depression

More than one out of four (26.6%) TWOS respondents indicated that in the past 12 months, they had felt sad, blue or depressed, or lost pleasure in things that they usually cared about or enjoyed for two or more weeks in a row. Approximately, one out of seven respondents (14.5%) reported they had been diagnosed with depression in the past 12 months; 15.9% had taken prescription medication for depression; and 10.7% had received counseling for their depression. In terms of the demands of raising children, 6.9% of TWOS respondents indicated they always or usually felt overwhelmed by the demands of their children in the past year.

Preliminary data from TWOS also indicate that mothers of toddlers experience many stresses while raising their children. For example, more than one in four (28.5%) of respondents indicated they had a close family member or friend who was very sick or died in the past year. Approximately, one in six (16.1%) reported that during the past 12 months, they had a lot of bills they could not pay. More than one in ten (10.7%) stated that someone close to them had a problem with drinking or drugs during the past year. TWOS respondents also reported whether the following had happened during the past year: their husband/partner had lost their job (8.1%), they themselves had lost their job (5.0%), they were very sick (6.7%) or they were without a telephone (5.7%).

Grandparents and Other Relatives Caring for Children

According to an Issue Brief published by the Rhode Island KIDS COUNT in May 2005, grandparents and other relative caregivers care for 39% of Rhode Island children in foster care. This reflects a growing reliance among child welfare agencies on family members to act as caregivers and foster parents. Placements with relatives may be on a temporary basis or may become a permanent living arrangement. Studies have shown that children do better if when they are able to live with relatives who care about them and with whom they feel safe. Data from the American Community Survey conducted by the US Census indicate that in Rhode Island during 2003, there were 15,952 grandparents living with their grandchildren. Of these, 4,176 (26%) grandparents were financially responsible for the children's needs. More than half (51%) of the grandparents who were financially responsible for their grandchildren had been responsible for the children for three or more years.

Data from the Department of Children, Youth and Families indicate that of the 1,199 children in foster homes, 465 (38.8%) were in 395 relative foster homes and 72% of the relative foster parents were aged 30-59.

In Rhode Island during 2004, 1,201 incarcerated parents reported having 2,589 children.

School-Based Health Centers

In Rhode Island, there are 9 school-based health centers (SBHCs): 4 are located in high schools, 4 are located in middle schools, and one is located in an elementary school. SBHCs are in 5 of the 6 core cities: Woonsocket (high, middle and elementary), Central Falls (high and middle), Pawtucket (high and middle), Providence (two high schools) and West Warwick (middle school, but also serves high school).

During the 2003-2004 school year, among the 9,235 students enrolled in the seven schools with health centers, less than half, 4,202 (45.5%) were enrolled in the health centers. Among those students enrolled in the health centers, more than half, 2,458 (58.5%) received services provided by the centers. More than half, 1,347 (54.8%) of the students who received SBHC services were insured through RIte Care or Medicaid, 531 (21.6%) had private insurance and 580 (23.6%) did not have health insurance.

School based health centers are uniquely positioned to deliver preventive health services, including behavioral health services, to a population that is under-served. The Department of Health is working with the Centers to develop strategies to increase the proportion of preventive services delivered.

School Environment and Community

In Rhode Island, a survey of all public school students, faculty and parents is conducted by the Rhode Island Department of Education to assess a variety of topics or issues including those pertaining to the school environment and family/community engagement. The *School Accountability for Learning and Teaching (SALT)* survey was first conducted in Rhode Island during the 1997-1998 academic year. Selected results from the most current survey conducted during the 2003-2004 academic year are described below.

Supportive Environment

- 17% of middle school students and 18% of high school students reported they feel they can talk to a teacher or other staff member about personal or family problems most of the time or always.
- 37% of middle school students and 46% of high school students reported they feel they can talk to a teacher or other staff member about academic issues most of the time or always
- 14% of middle school and high school students reported that getting along with teachers is a moderate to big problem.

School Safety

- 30% of middle school students and 26% of high school students reported they were robbed one or more times in school
- 11% of middle school students and 10% of high school students reported being teased or bothered by other students was a moderate to severe problem.
- 12% of middle school students and 30% of high school students reported that someone tried to sell them drugs one or more times in school.

3B. ADOLESCENTS

PRIORITY: PROMOTE HEALTHY HUMAN DEVELOPMENT IN CHILDREN, ADOLESCENTS AND FAMILIES

PRIORITY: PROMOTE HEALTHY LIFESTYLES AND HEALTHY WEIGHTS FOR ALL

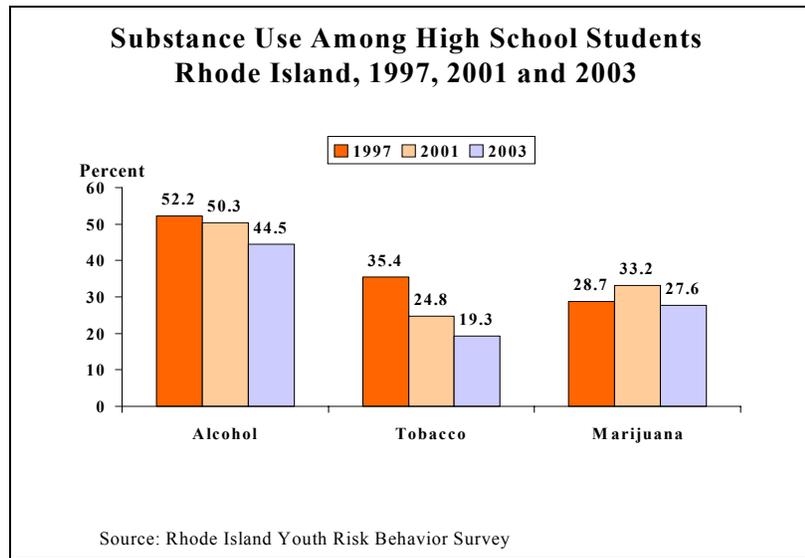
PRIORITY: MEET THE SOCIAL, EMOTIONAL AND BEHAVIORAL HEALTH NEEDS OF CHILDREN AND ADOLESCENTS

Teen Risk Behaviors

Alcohol, Drugs and Cigarettes

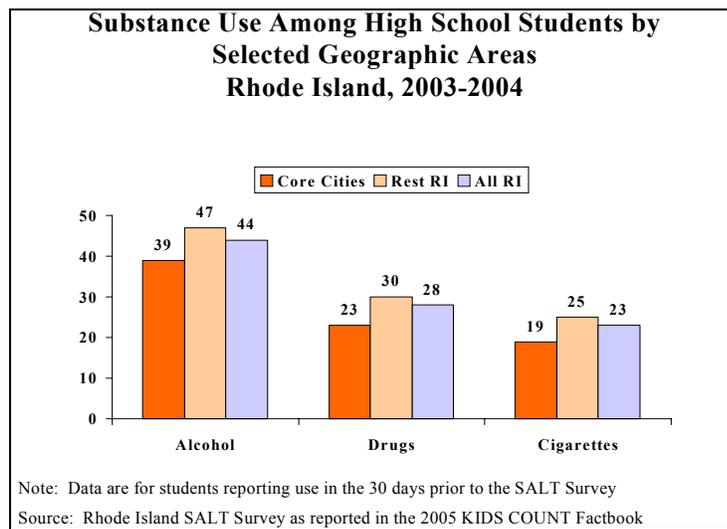
According to the 2003 Rhode Island Youth Risk Behavior Survey (YRBS), substance use among high school students has been declining. In 2003, 44.5% of the 1,717 high school students surveyed indicated they had drunk alcohol in the past 30 days compared to 50.3% in 2001 and 52.2% in 1997 (Figure 71). Between 1997 and 2003, the proportion of students that reported they smoked cigarettes in the past 30 days decreased by 45.5%, from 35.4% to 19.3%. There has been more fluctuation with marijuana use, where rates rose from 18.7% in 1997 to 33.2% in 2001, and then decreased to 27.6% in 2003.

Figure 71



The SALT Survey also collects data on substance use among middle school and high school students. Data from the 2003-2004 survey show that 44% of high school and 21% of middle school students reported using alcohol in the previous month. High school students living in the core cities reported lower rates of alcohol use (39%) than students in the rest of the state (47%). More than one in four (28%) high school students and one in ten (10%) middle school students reported using illegal drugs in the previous month. High school students living in the core cities reported lower rates of drug use (23%) compared to those living in the rest of the state (30%). Similar trends were seen with cigarette use. High school students living in the core cities reported lower rates of cigarette use (19%) than those living in the rest of the state (25%) (Figure 72). Nearly one out of ten (9%) of middle school students reported cigarette use in the previous month.

Figure 72



Additional Substance Abuse Data

Data from the 2002-2003 National Survey of Drug Use and Health indicate that more Rhode Island youth aged 12-17 have smoked cigarettes in the past month (13.7%) compared to youth nationally (12.6%). Nearly two-thirds (65.0%) of the Rhode Island youth surveyed perceived there are great risks with smoking one or more packs of cigarettes per day.

There were also higher rates of alcohol use in the past month among Rhode Island youth (22.1%) compared to rates among youth nationally (17.7%). Approximately, one-third (35.0%) of the youth surveyed perceived great risks with drinking five or more alcohol drinks once or twice a week. Many youth do not receive treatment they need for alcohol dependence or abuse. In Rhode Island, 6.3% of youth who needed treatment for alcohol use did not receive treatment.

Rhode Island youth are more likely to have used marijuana in the past month (10.9%) compared to youth nationally (8.0%). More than one quarter (25.9%) of the youth surveyed perceived a great risk with smoking marijuana once a month. Rhode Island youth were slightly less likely to have used illicit drugs (other than marijuana) in the past month (5.5%) compared to youth nationally (5.7%).

High school students (grades 9-12) are not only taking risks in the areas of tobacco, alcohol and drugs, but they are also taking risks with sexual intercourse and behaviors that may result in unintentional and intentional injuries.

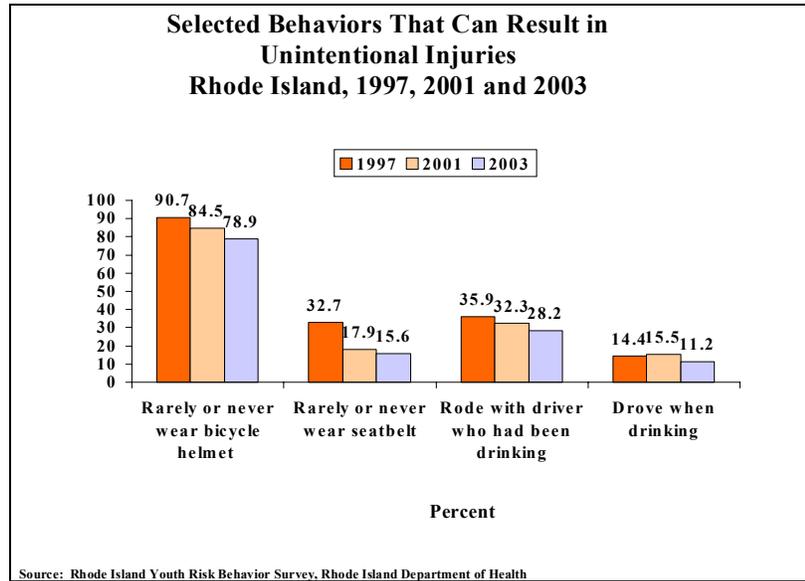
Sexual Behavior

According to the 2003 YRBS, 44.3% of respondents indicated they had sexual intercourse. Of the students who had sexual intercourse in the past three months, 63.0% reported they had used a condom. This represents an increase from 1997, when 52.4% reported condom use.

Behaviors Related to Unintentional Injuries

Figure 73 summarizes the responses to YRBS questions pertaining to behaviors that result in unintentional injuries, such as, bicycle helmet use, seatbelt use, riding with a driver that has been drinking alcohol, and driving a car when drinking alcohol. Data from the 2003 YRBS indicate that the percentage of high school students engaging in these behaviors has decreased or improved. During 1997, 90.7% of students indicated they never or rarely wore a bicycle helmet and by 2003, this figure decreased by 13.0% to 78.9%. The percentage of students who never or rarely use a seat belt decreased more than half (52.3%), from 32.7% in 1997 to 15.6% in 2003. Fewer higher school students reported they rode in a vehicle driven by someone who had been drinking alcohol during the past 30 days, where 35.9% had reported doing so in 1997 compared to 28.2% in 2003. The percentage of high school students that reported that in the past 30 days they had driven a car when they had been drinking alcohol decreased from 14.4% in 1997 to 11.2% in 2003.

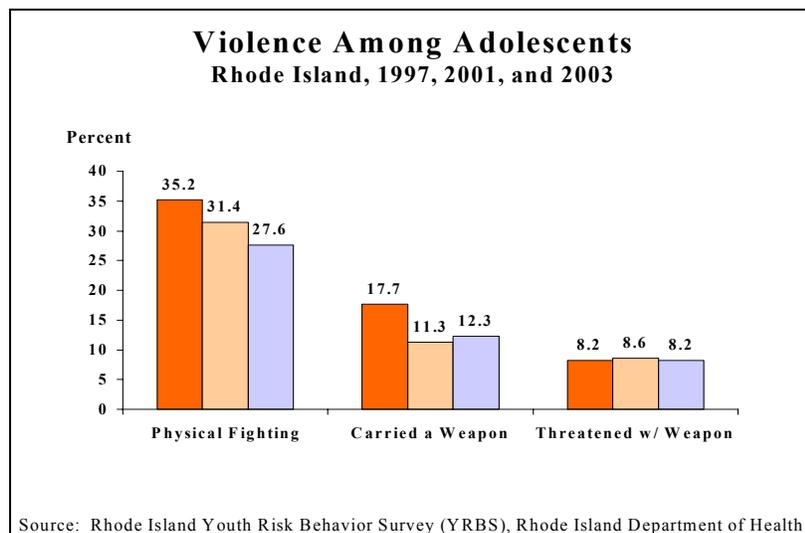
Figure 73



Violence among Adolescents

Data from the 2003 YRBS indicate that the percentage of students who were in a physical fight during the past 12 months has declined (Figure 74). In 1997, 35.2% of respondents reported they had been in a physical fight compared with 27.6% in 2003. Fewer students in 2003 reported they had carried a weapon such as a gun, knife, or club on one or more of the past 30 days (12.3%) than students did in 1997 (17.7%). Between 1997 and 2003, the percentage of students who had been threatened or injured with a weapon on school property remained the same (8.2%). 2003 YRBS data also indicate that 5.8% of students reported they did not go to school on one or more of the past 30 days because they felt unsafe at school or on their way to or from school.

Figure 74



Mental Health Issues Among Adolescents

According to the 2003 Rhode Island Youth Risk Behavior Survey, approximately one out of four adolescents (24.3%) report they have felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities. However, the percentage of high school students who seriously considered attempting suicide during the past 12 months has been decreasing. In 1997, 23.6% of YRBS respondents reported they had considered suicide compared with 14.1% in 2003. The percentage of respondents who attempted suicide also declined from 9.6% in 1997 to 8.3% in 2003 (Figure 75).

Figure 75

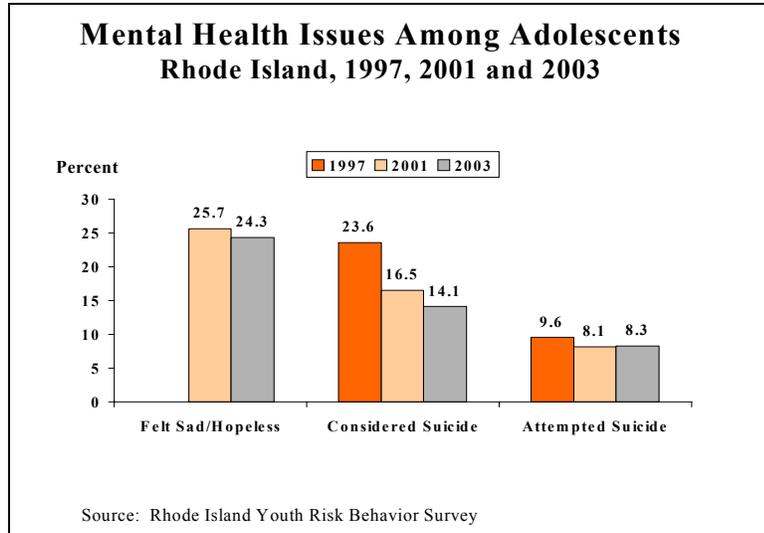
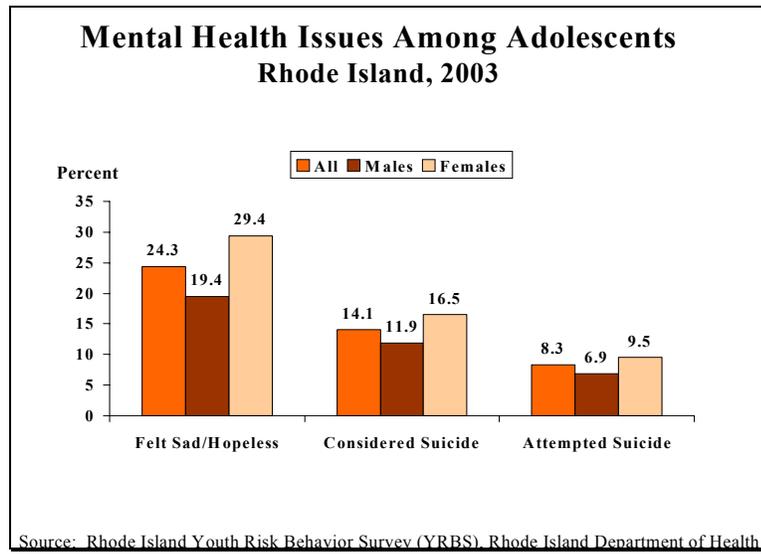


Figure 76 reflects the differences among male and female adolescents regarding feeling sad or hopeless, considering suicide and attempting suicide. YRBS data indicate that higher percentages of female respondents reported having these feelings compared to their male counterparts. In 2003, 29.4% of female YRBS respondents reported feeling sad or hopeless compared to 19.4% of males; 16.5% of females had considered suicide compared with 11.9% of males; and approximately one in ten (9.5%) females had attempted suicide in the past 12 months compared with 6.9% of males.

Figure 76



Additional Data on Mental Health

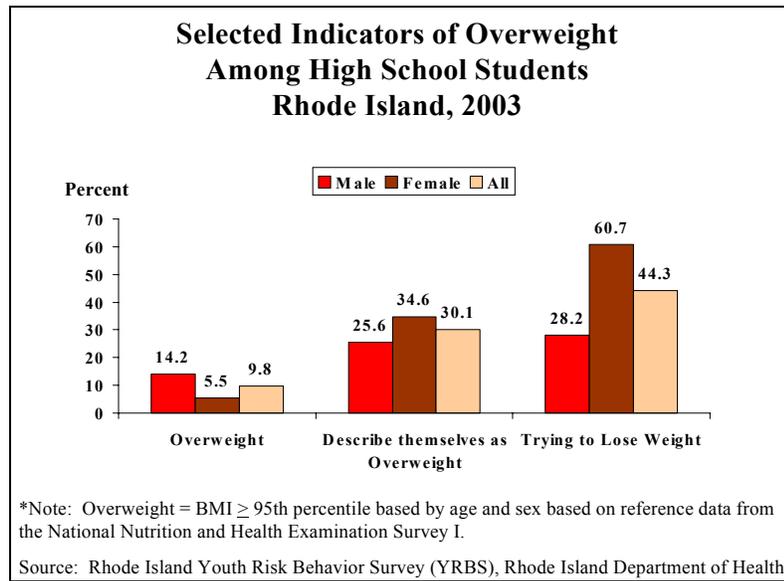
Data from the 2002-2003 National Survey of Drug Use and Health indicate that 13.6% of Rhode Island youth aged 12-17 had a serious mental illness in the past year, which is lower than the national estimate of 16.8%.

Nutrition and Exercise

Approximately one in ten (9.8%) high school students who participated in the 2003 YRBS were overweight (at or above the 95th percentile for body mass index by age and sex based on reference data from the National Health and Nutrition Examination Survey I. Overweight percentages are based on self-reported weight and height and may be underestimated.). More ninth graders (11.5%) were overweight than twelfth graders (9.1%). Males were 2.5 times more likely to be overweight (14.2%) than females (5.5%) and more males were overweight than females (5.5%).

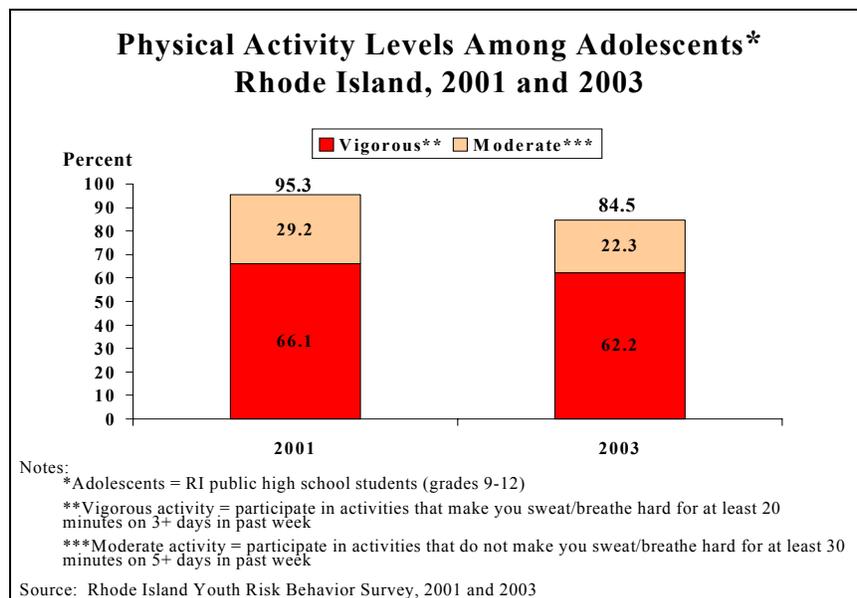
Nearly one in three students (30.1%) described themselves as slightly or very overweight. A higher proportion of female students (34.6%) described themselves as overweight compared with 25.6% of male students. Female students were twice as likely to report they were trying to lose weight (60.7%) than male students (28.2%).

Figure 77



The percentage of high school students who participate in vigorous or moderate physical activity has decreased. In 2001, 66.1% of YRBS respondents reported they participated in vigorous activity and 29.2% moderate activity compared to 62.2% and 22.3%, respectively in 2003 (Figure 78). With the rapid rise of obesity, it is critical to develop more activity options.

Figure 78



More than half (55.5%) of the students who participated in the 2003 YRBS indicated they played on one or more sports teams during the past year. However, nearly one in three (31.9%) students watched three or more hours

of television per day on an average school day. More than half (59.4%) of the students reported they exercised to lose weight to keep from gaining weight during the past 30 days. Female students were more likely to exercise to lose weight (69.7%) than males (49.4%).

Sexually Transmitted Diseases (STDs)

Chlamydia

During 2004, the chlamydia rate for all teens aged 15-19 (male and female) was 142.2 per 10,000. The rate among females (235.2) was 4.6 times that for males (51.0). The chlamydia rate among teens has been rising and between 2000 and 2004, the rate rose by 16.3%, from 122.3 to 142.2. Although rates are higher among females, the chlamydia rate rose more sharply among males (28.1%) than females (13.6%). Specifically, during 2000, there were 152 cases (39.8 per 10,000) among males and 771 cases (201.0 per 10,000) among females. By 2004, these figures increased to 195 cases (51.0) and 876 cases (235.2) for males and females, respectively.

Rates of chlamydia also vary by race/ethnicity. During 2004, non-Hispanic Black teens aged 15-19 (male and female) had the highest rate (730.5), which was more than ten times the rate for non-Hispanic Whites (71.3). The chlamydia rate among those of Hispanic/Latino ethnicity (379.0) was more than five times the rate for Whites and among Asians (164.2), the rate was nearly twice that for Whites.

Geographic disparities also exist among chlamydia rates. During 2004, of the 1,073 cases of chlamydia among Rhode Island teens aged 15-19, 729 (67.9%) were among those who lived in the core cities. The rate among those living in the core cities (239.0) was three times the rate among those who lived in the rest of the state (76.5). Rates varied among the core cities, where teens in West Warwick had the lowest rate (104.8) and those in Central Falls had the highest rate (284.5).

Gonorrhea

Between 2000 and 2004, the number of cases of gonorrhea among Rhode Island teens aged 15-19 decreased slightly, from 206 (27.3 per 10,000) to 197 (26.1 per 10,000), a 4.4% decrease. Rates are three times higher among females than males; during 2004, the gonorrhea rate was 39.5 among females and 13.1 among males. Rates vary by race/ethnicity similarly to chlamydia. During 2004, non-Hispanic Blacks had a rate (185.1) that was 14 times that of non-Hispanic Whites (13.2). Those of Hispanic/Latino ethnicity (46.2) and Asians (26.1) also had rates that were much higher than the rate for Whites. However, during 2000-2004, the gonorrhea rate among non-Hispanic Blacks decreased (from 229.5 to 185.1) by 19.3% while the rate for non-Hispanic Whites increased by 21.1% (from 10.9 to 13.1).

Gonorrhea rates also differed geographically, with higher rates among teens who reside in the core cities compared to those in the rest of the state. During 2004, of the 197 gonorrhea cases among teens, 109 (55.3%) were among those who lived in Providence. Teens residing in the core cities accounted for three-fourths (75.6%) or 149 of the total gonorrhea cases statewide. The gonorrhea rate among teens living in the core cities (48.8) was 4.6 times the rate for teens living in the rest of the state (10.7).

Teen Family Planning

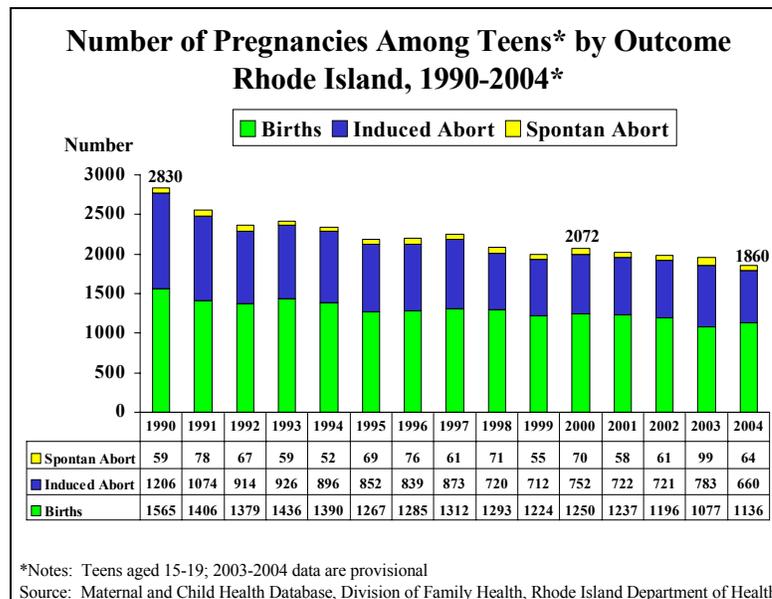
During 2004, 4,077 teens aged less than 20, received family planning services at a Title X-funded family planning clinic, representing over one-quarter (18.6%) of all family planning clients (n=21,892) during that period. The preferred choice of contraception among teens was the birth control pill, followed by the condom and depo provera. Because the preferred method of contraception can change during a given year and is counted each time, the following statistics may represent more than one method per teen.

More than one-third of the teens, 1,556 (38.2%) reported the birth control pill as the preferred contraceptive method. Condoms were preferred by 747 teens (18.3%), depo provera by 595 (14.6%) and abstinence by 468 (11.5%). Approximately, one in seven teens, 600 (14.7%), indicated they were not using any method of contraception. Among these teens, 51 reported they were trying to become pregnant. An additional 572 (14.0%) teens were already pregnant.

Teen Pregnancy

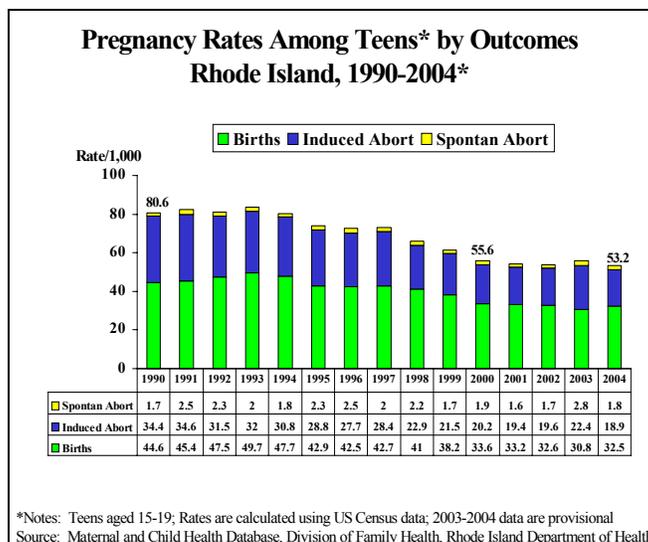
Since 1990, the number of pregnancies (live births, spontaneous abortions and induced abortions) among Rhode Island teens aged 15-19 has been declining. In 1990, there were 2,830 pregnancies and by 2000, this number had decreased by 26.8%, to 2,072. Between 2000 and 2004, the number of teen pregnancies continued to decline, although less sharply (10.6%), to 1,860 pregnancies (Figure 79). During this same period, the outcomes of teen pregnancies have changed, with more births and fewer abortions. In 1990, 1,565 (55.3%) of the pregnancies resulted in live births, 1,206 (42.6%) induced abortions, and 59 (2.1%) spontaneous abortions. Provisional data indicate that during 2004, 1,136 (61.1%) of the pregnancies were live births, 660 (35.5%) were induced abortions, and 64 (3.4%) were spontaneous abortions.

Figure 79



Rates of teen pregnancies have also declined during the past 15 years. The teen pregnancy rate is the number of pregnancies among teens aged 15-19 per 1,000 female teens aged 15-19. Rates presented are calculated using US Census Population Estimates. Between 1990 and 2000, the number of female teens aged 15-19 in Rhode Island increased by 6.1% from 35,098 to 37,246, but between 2000 and 2004, the number decreased by 6.1% from 37,246 to 34,976. In 1990, the teen pregnancy rate among 15-19 year-olds was 80.6 and by 2004, the rate dropped to 53.2 (provisional), a 34% decrease (Figure 80). During this period, the birth rate decreased by 27.1%, from 44.6 in 1990 to 32.5 in 2004, and the induced abortion rate fell by 45.1%, from 34.4 in 1990 to 18.9 in 2004.

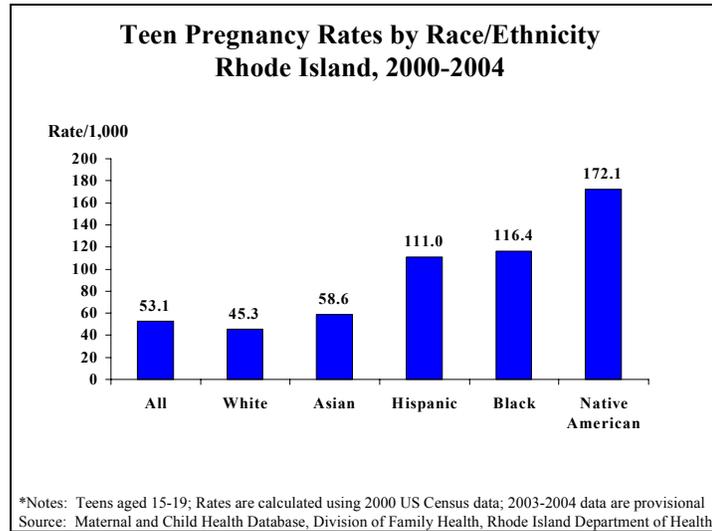
Figure 80



Racial/Ethnic Disparities

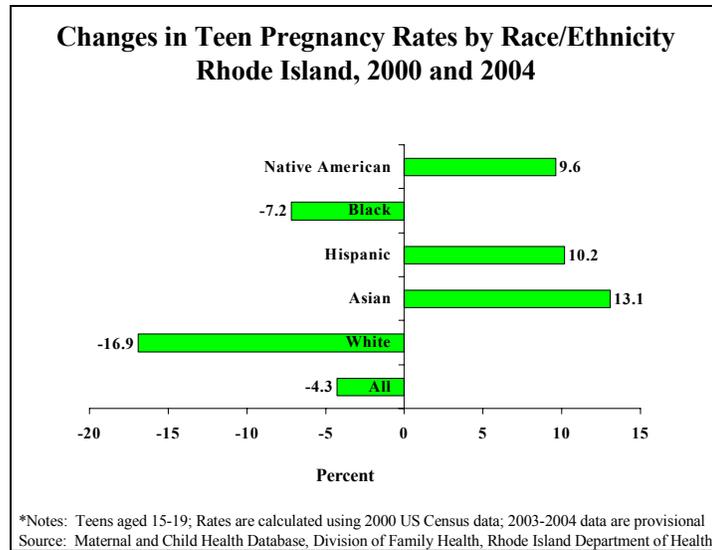
Although teen pregnancy rates have been decreasing, there is much variation among racial/ethnic groups. Figure 81 illustrates the differences in teen pregnancy rates by race/ethnicity during 2000-2004. Native Americans had the highest rate of teen pregnancy (172.1 per 1,000), a rate that was nearly four times the rate for Whites (46.3). However, it is important to note that since the number of Native American females aged 15-19 in Rhode Island is very small (~251 per year or 1,255 over five years), the teen pregnancy rates are statistically unreliable. Blacks/African Americans (116.4) and those of Hispanic/Latino ethnicity (111.0) also had high teen pregnancy rates that were approximately 2.5 times the rate for Whites. The teen pregnancy rate among Asians (58.6) was close to the statewide rate (53.1), but was still 27% higher than the rate for Whites.

Figure 81



Changes in teen pregnancy rates during 2000-2004 also differed by race/ethnicity (Figure 82). Between 2000 and 2004, Whites experienced the largest decrease (16.9%) in teen pregnancy rates and Blacks/African Americans also decreased to a lesser extent (7.2%). Asians had the largest increase in teen pregnancy rates (13.1%), followed by those of Hispanic/Latino ethnicity (10.1%) and Native Americans (9.6%).

Figure 82



Geographic Disparities

Nearly two-thirds, 6,438 (65.0%) of the 9,905 Rhode Island teenagers aged 15-19 who became pregnant during 2000-2004 lived in the core cities. Teens residing in the core cities (88.3) were nearly three times more likely to become pregnant compared to teens living in the rest of the state (30.6). Teens living in Pawtucket (158.8) and

Central Falls (129.5) had the highest pregnancy rates, 4 to 5 times the rate of the rest of the state (30.6). Teen pregnancy rates were also 2-3 times higher among those living in Woonsocket (96.9), Providence (81.6) and West Warwick (60.2) than those living in the rest of the state. Compared to the other core cities, teens residing in Newport had the lowest pregnancy rate (46.5), which was lower than the statewide average (53.2). (Figure 83)

Figure 83

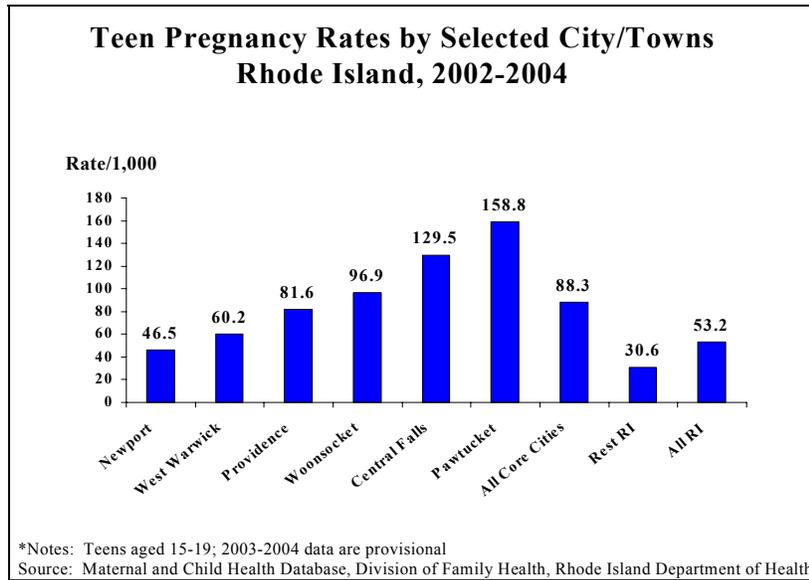
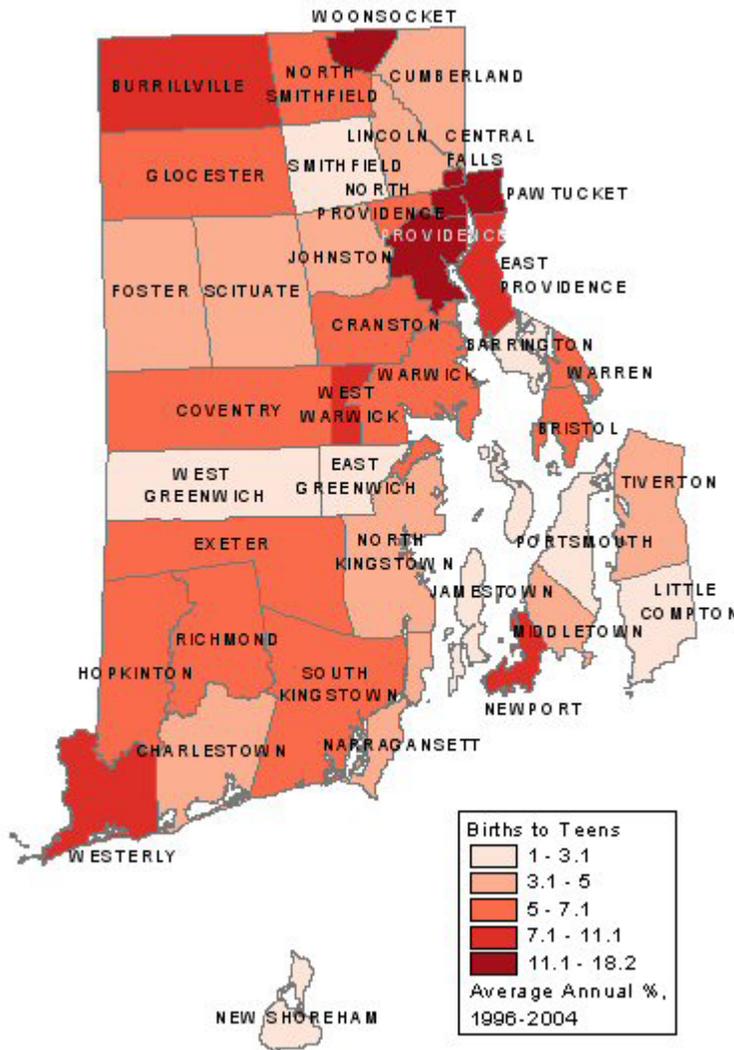


Figure 84

**Births Among Teens as a Proportion of All Births by City/Town
Rhode Island, 1996-2004**



Teen Pregnancies Among 15-17 Year-Olds

The number and rate of pregnancies among Rhode Island teens aged 15-17 declined during the 1990's. Between 1990 and 2004 the number of teen pregnancies decreased by 34.7%. In 1990, there were 908 pregnancies, of which 552 (60.8%) were live births, 338 (37.2%) were induced abortions, and 18 (2.0%) were spontaneous abortions. By 2004, there were 593 pregnancies, of which 356 (60.0%) were live births, 207 (34.9%) were induced abortions and 30 (5.1%) were spontaneous abortions. The rate of teen pregnancies among teens aged 15-17 decreased by 42.7%, from 52.5 per 1,000 in 1990 to 30.1 in 2004. During this same period, the birth rate decreased from by 43.6%, from 31.9 in 1990 to 18.0 in 2004.

Racial/ethnic and geographic disparities among pregnancy rates for 15-17 year olds and mirror those described previously for 15-19 year-olds. Native Americans, Blacks/African Americans and those of

Hispanic/Latino ethnicity had pregnancy rates that were higher than rates for Whites and Asians. Teens residing in the core cities (61.9) were nearly four times more likely to become pregnant than teens residing in the rest of the state (16.3).

According to the Annie E. Casey Foundation's *2004 KIDS COUNT Data Book*, Rhode Island had the 22nd lowest teen birth rate (births per 1,000 female teens aged 15-17) in the country. Compared to the other New England states, Rhode Island has the highest teen birth rate.

Nearly one in ten (9%) births to teens aged 15-17 and more than one in four (26%) births to teens aged 18-19 are repeat births, where the teen is already a mother.

Homeless Youth (Aged 13-17)

According to the *2005 Rhode Island KIDS COUNT Factbook*, in Rhode Island between July 2003 and June 2004, 239 youth between the ages of 13 and 17 received shelter through the emergency shelter system in Rhode Island. This is a 3.5 fold increase since 1998, when 68 youth entered the Rhode Island Emergency Shelter System. Since many of the emergency and domestic violence shelters do not accept unaccompanied children over the age of twelve, this figure is most likely an underestimate of the number of youth in need of shelter.

Rhode Island does not have an overnight emergency shelter system for runaway youth. During 2004, Crossroads Rhode Island provided crisis management services to 169 Rhode Island youth aged 13-17 and the Crossroads SAFELINE for runaway youth received 1,073 calls. The National Runaway Switchboard received 380 calls from Rhode Island and the Covenant House crisis hotline received 1,648 crisis calls from Rhode Island.

As of December 2004, there were 111 children under age 19 in DCYF care who were classified as unauthorized absences/runaways.

School Attendance/Suspensions

School Attendance

Poor school attendance affects school achievement and can lead to school failure. Research has shown that having established relationships between students and their teachers and their classmates can positively impact attendance. Students are more likely to stay in school if they are engaged and have a sense of belonging. According to the *2005 Rhode Island Kids Count Factbook*, In Rhode Island, during the 2003-2004 school year, 92.9% of students enrolled in public schools (kindergarten through 12th grade) attended school, based on average daily attendance. The attendance rates decrease by grade, where 95.0% of students in grades 1-5; 93.6% of students in grades 6-8; and 89.8% of students in grades 9-12 attended school. Attendance rates were lower among students residing in the core cities (90.5%) compared to students residing in the rest of the state (92.9%). Students enrolled in Providence schools had the lowest attendance rate of 89.2%. Specifically, attendance rates among Providence school students during the 2003-2004 academic year were 92.8% for those in grades 1-5; 89.4% for those in grades 6-8; and 83.6% for those in grades 9-12.

In terms of the number of school days missed, students residing in the core cities were twice as likely to miss over 20 days of school (22%) compared to students residing in the rest of the state (11%).

Suspensions

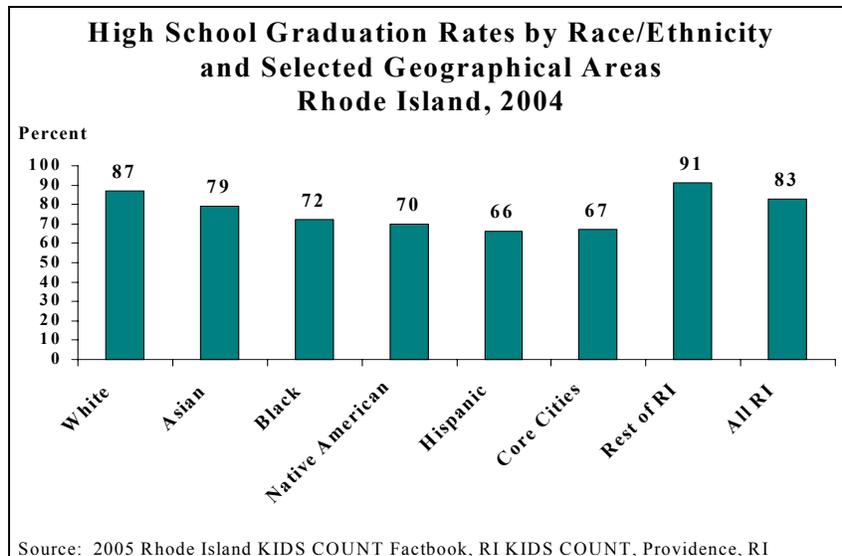
According to the *2005 Rhode Island KIDS COUNT Factbook*, during the 2003-2004 school year, there were 46,313 disciplinary actions or 30.2 per 100 students. These disciplinary actions were attributed to 17,867 students, an average of 2.6 actions per student. Two-thirds, 29,430 (63.5%) of the disciplinary actions were out-of-school suspensions. The number of actions per 100 students residing in the core cities (46.4) was more than twice that among students in the rest of the state (21.5). Woonsocket students had the highest rate of disciplinary actions, 90.1 per 100 students.

Attendance offenses was the leading type of infraction and accounted for 15,143 (32.7%) of the disciplinary actions. Disorderly conduct (16.8%), insubordination/disrespect (14.5%) and fighting (8.1%) were other major causes for the actions. During 2003-2004, more than one in four, 13,161 (28.4%), of the disciplinary actions in Rhode Island public schools were attributed to 4,629 students enrolled in special education, accounting for 25.9% of the total number of students disciplined.

High School Graduation

High school graduation rate is defined as the number of 2004 graduates divided by the estimated size of the twelfth grade class had no one dropped out. In Rhode Island during 2004, the high school graduation rate was 83%, but rates varied by race/ethnicity and geographical areas (Figure 85). Graduation rates were highest among White students (87%) and lowest among students of Hispanic/Latino ethnicity (66%). Asian students (79%), Black students (72%) and Native American students (70%) also had graduation rates that were lower than the rate for Whites. Students living in the core cities had the lowest graduation rates (67%) compared to students living in the rest of the state (91%). Specifically, students living in Providence (62%), Pawtucket (65%), West Warwick (72%) and Woonsocket (72 %) had the lowest graduation rates in the state.

Figure 85



According to the *2004 Kids Count Data Book: State Profiles of Child Well-Being*, published by the Annie E. Casey Foundation, Rhode Island is ranked 29th (1st is best) in the country for the percentage of teens aged 16-19 who are high school dropouts (10%). Rhode Island's percentage of teen dropouts is highest compared to the other New England states.

During 2002-2003, 26% of Rhode Island students with disabilities dropped out of high school. Nationally, in 2000-2001, more than 50% of students with emotional disturbances dropped out of school and 25% or less of students with other type of disabilities dropped out (*2005 Rhode Island KIDS COUNT Factbook*).

Teens Not in School and Not Working

Teens who are not in school and not working are at especially high risk for teen parenting, crime, risk behaviors, and limited economic prospects. In 2002, 4.8% of Rhode Island teens aged 16-19 were not enrolled in school and not working. This represents a 56.4% decrease from 1997, when 11% of teens were not in school and not working. According to the *2004 Kids Count Data Book: State Profiles of Child Well-Being*, published by the Annie E. Casey Foundation, Rhode Island is ranked 27th (1st is best) in the country for the percentage of teens not in school and not working. This ranking is based on an average of 2000-2002 data.

During 2000, 4,477 (7.3%) Rhode Island teens aged 16-19 were not in school and not working. This figure of teens not in school and not working varies by geographical area. Teens living in the core cities (10.7%) were more than twice as likely to be out of school and not working than those living in the rest of the state (4.9%). Specifically, teens living in Central Falls (16.5%) and Cranston (15.0%) had the highest rates.

Juveniles Referred to Family Court

Many risk factors discussed previously such as, poverty, family violence, substance abuse, mental health problems, poor school performance, etc. can lead to juvenile involvement with the justice system. Programs that focus on prevention, early intervention and positive youth development have been shown to be the most cost-effective approaches to reducing juvenile delinquency.

According to the *2005 Rhode Island KIDS COUNT Factbook*, the Rhode Island Family Court has jurisdiction over all juvenile offenders referred for wayward and delinquent offenses. All referrals to Family Court are from state and local law enforcement agencies, with the exception of truancy cases which are referred by local school departments.

In 2004, 5,309 juveniles aged 10-17 were referred to Juvenile Court for 9,124 offenses. Between 1998 and 2004, the number of juveniles referred to Family Court increased 13%, from 4,700 to 5,309 and the number of offenses decreased very slightly (1.6%), from 9,272 to 9,124. During 2004, 8% of juveniles referred to Family Court for wayward, delinquent and probation violations had been referred to Family Court at least twice before.

According to the *2005 Rhode Island KIDS COUNT Factbook*, of the 9,124 juvenile offenses, 29% were for property crimes. The next most frequent types of offenses are disorderly conduct (16%), status offenses (15%),

simple assault (11%), alcohol and drugs (9%), motor vehicle offenses (9%), violent offenses (5%) and weapon offenses (3%).

Disparities

Juveniles living in Providence account for nearly one-fourth (24%) of all juvenile offenses referred to Family Court. Nearly half (48%) of the juvenile offenses were committed by teens aged 16 and 17, 36% were by teens aged 14 and 15, 15% were by teens aged 13 or younger and only 1% were by teens aged 18 or older. More than half (54%) of the juvenile offenders were White, 16% were Black/African American, 12% were of Hispanic/Latino ethnicity and 2% were Asian.

Juvenile Offenders and Mental Health

According to the *2005 Rhode Island KIDS COUNT Factbook*, youth in the juvenile justice system experience higher rates of mental health disorders than youth in the general population. Two-thirds of youths in juvenile justice custody in the United States meet the criteria for one or more mental disorders and least one in five has mental health problems that are serious enough to interfere with their functioning. During 2004, 21% of youth at the Rhode Island Training School received psychiatric care and 18% were in the school's Residential Substance Abuse Treatment Program.

Juveniles at the Rhode Island Training School

Data presented in the *2005 Rhode Island KIDS COUNT Factbook* show that during 2004, a total of 1,609 youth up to age 21 were in the care and custody of the Rhode Island Training School, the state's residential detention facility for adjudicated youth and youth awaiting trial. Among these youth, 16% were female, 34% resided in Providence, and 24% had been admitted previously. The average age of students at the Training School during 2004 was 16.

Nearly half (44%) of the juveniles in custody during 2004 were in for less than 6 months, 24% were in for 6-12 months, 21% were in for 12-23 months and 11% were in for 24 months or more. More than one-third (39%) of the juveniles at the Training School were White, non-Hispanic, 27% were Black, non-Hispanic, 25% were Hispanic, 1% were Asian, and 1% were Native American.

Risk factors for youth being incarcerated in the Training School include school failure, mental health problems, substance abuse, learning disabilities, and family violence. As of December 2004, 53% of adjudicated students were receiving special education services, more than twice the rate of students receiving special education in Rhode Island's public schools. Most of the Training School students were receiving special education services due to behavior disorders (64%) and learning disabilities (26%). More than one in five (21%) Training School students were receiving psychiatric care and 18% were in the school's Residential Substance Abuse Treatment Program. Among the adjudicated youth in custody on December 31, 2004, 43% had been victims of documented child abuse or neglect at some point in their lives.

Research has shown that alternatives to incarcerating youth are more successful in preventing recidivism and cost-effective. Comprehensive, community-based, family-focused programs with counseling, treatment and

transition services for reintegration into the community are more effective in reducing re-offending rates than incarceration.

Teen Deaths

According to the Annie E. Casey Foundation's *2004 Kids Count Data Book, State Profiles of Child Well-Being*, Rhode Island has the second lowest rate of deaths (due to accidents, homicides and suicides) among teens in the country (based on 2001 data) and has the lowest teen death rate in New England.

As discussed earlier, individual, family, community and environmental factors can protect teens from the effects of risk behaviors and can reduce the teen death rate. Protective factors such as, parental involvement, feeling connected to adults in the community, having high self-esteem, access to and participation in extracurricular activities, and access to mental health services can help teens to manage their response to conflict and stress.

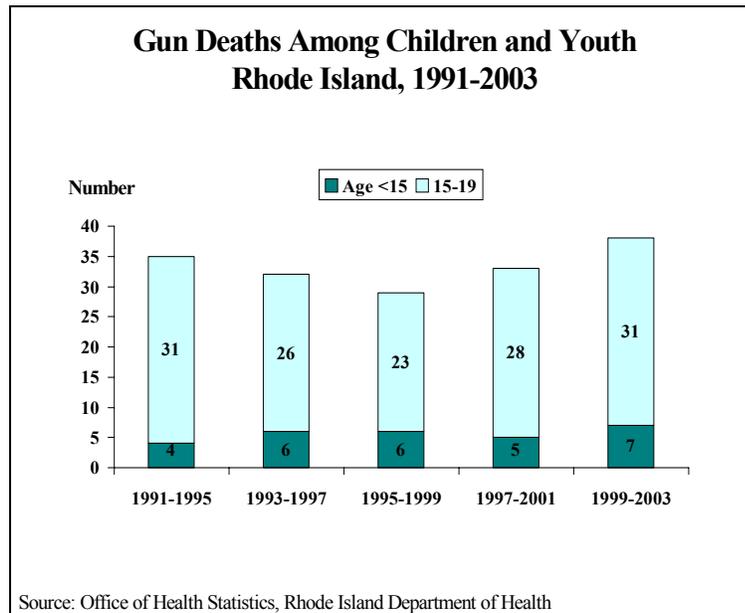
In Rhode Island during 1999-2003, 180 teens aged 15-19 died, resulting in a teen death rate of 51.2 deaths per 100,000 teens. This rate represents an 8.9% increase from 1995-1999, when there were 148 deaths and the rate was 47.0. During 1999-2003, deaths due to injuries accounted for 127 (70.6%) and illness accounted for 53 (29.4%) of the 180 teen deaths. Motor vehicle accidents were the leading cause of injury deaths (43.3%) among teens and accounted for the majority of the unintentional injury deaths. More than three-quarters, 55 (80.9%) of the 68 unintentional injury deaths were due to motor vehicle accidents. Firearms were involved in 31 (24.4%) of the 127 injury deaths. There were also 48 intentional injury deaths (30 homicides and 18 suicides) during 1999-2003.

The number and rate of deaths among Rhode Island teens aged 15-19 rose between 1999 and 2003. During 1999, 30 (39.8 per 100,000) teens died compared with 41 (54.3) in 2003, a 36.7% increase. Of the 41 teen deaths that occurred during 2003, 16 (39.0%) were due to illness, 15 (36.6%) were due to motor vehicle accidents, 3 (7.3%) were due to homicide, 2 (4.9%) to suicide, 1 (2.4%) was due to fire and 4 (9.8%) were a result of other injuries. Firearms were involved in 4 (9.8%) of the teen deaths during 2003.

Gun-Related Deaths and Hospitalizations

During 1999-2003, 31 Rhode Island teens aged 15-19 died as a result of guns and 59 were hospitalized. Younger children (aged less than 15) also died (n=7) or were hospitalized (n=5) as a result of guns during 1999-2003. Of the 38 gun deaths among children during 1999-2003, 7 (18.4%) were among those aged less than 15 and 31 (81.6%) were among those aged 15-19. Figure 86 shows the number of gun deaths among children and youth during 1991-2003 in five-year periods.

Figure 86



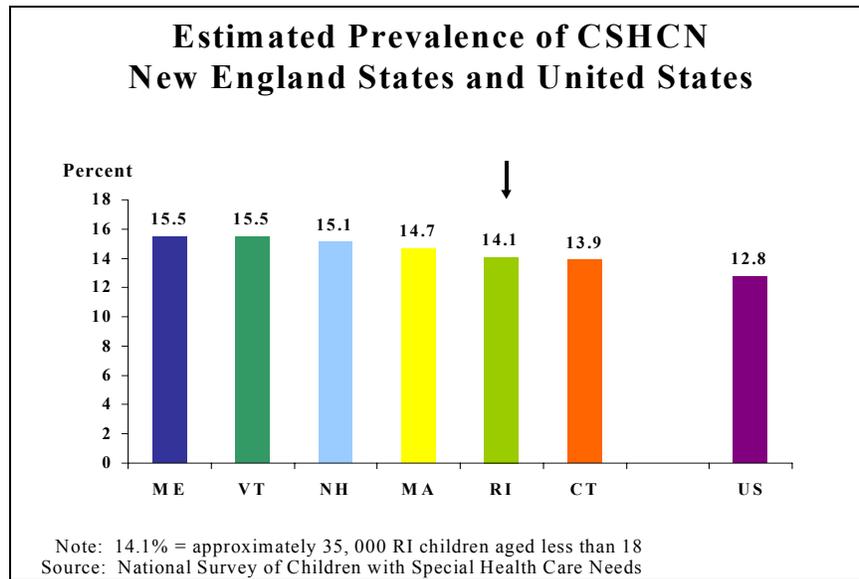
Among the children and youth hospitalized during 1999-2003 for gun-related injuries, 80% were residents of the core cities (70% were Providence residents).

According to the *2005 Rhode Island KIDS COUNT Factbook*, Rhode Island is one of five states with the lowest levels of gun ownership. Children living in states with the highest levels of gun ownership are 16 times more likely to die from unintentional firearm injury, 7 times more likely to die from firearm suicide, and 3 times more likely to die from homicide than children living in the states with the lowest levels of gun ownership.

4. CHILDREN WITH SPECIAL HEALTH CARE NEEDS

Data from the National Survey of Children with Special Health Care Needs conducted during October 2000-April 2002 indicate that 14.1% of Rhode Island children aged less than 18 have special health care needs. This figure is higher than the national estimate of 12.8% and lower than four of the New England states (see Figure 87). Based on this weighted estimate, approximately 35,000 children in Rhode Island have special health care needs.

Figure 87



PRIORITY: ASSURE THAT ALL RHODE ISLAND FAMILIES HAVE A MEDICAL HOME

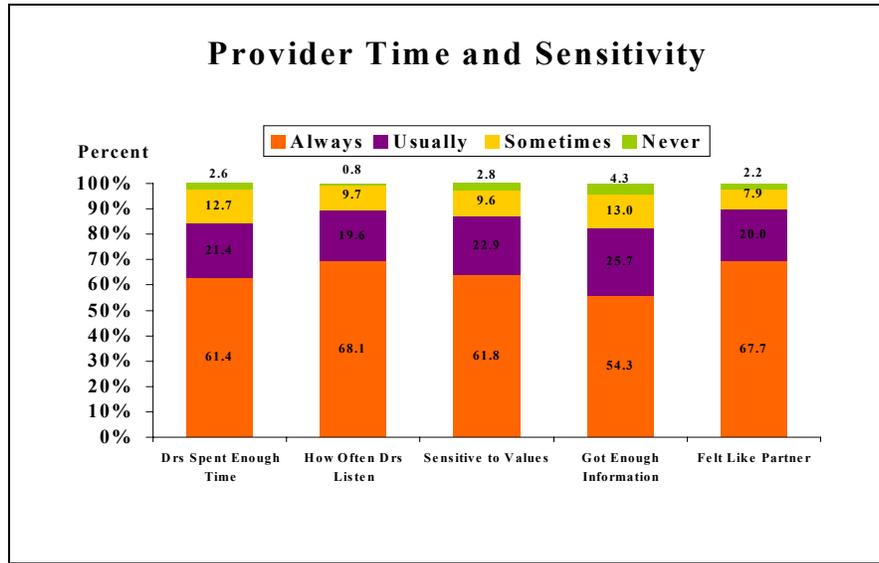
Medical Home

Data from the 2003 National Survey of Children’s Health show that Rhode Island children are more likely to have a medical home (60.4%) than children nationally (46.1%). However, children with special health care needs are less likely to have a medical home (54.3%) than children without special health care needs (61.9%).

Although 90.8% of all children had received a preventive health care visit in the past year, CSHCN were more likely to have had a preventive visit (94.5%) compared to 89.8% of children without special health care needs.

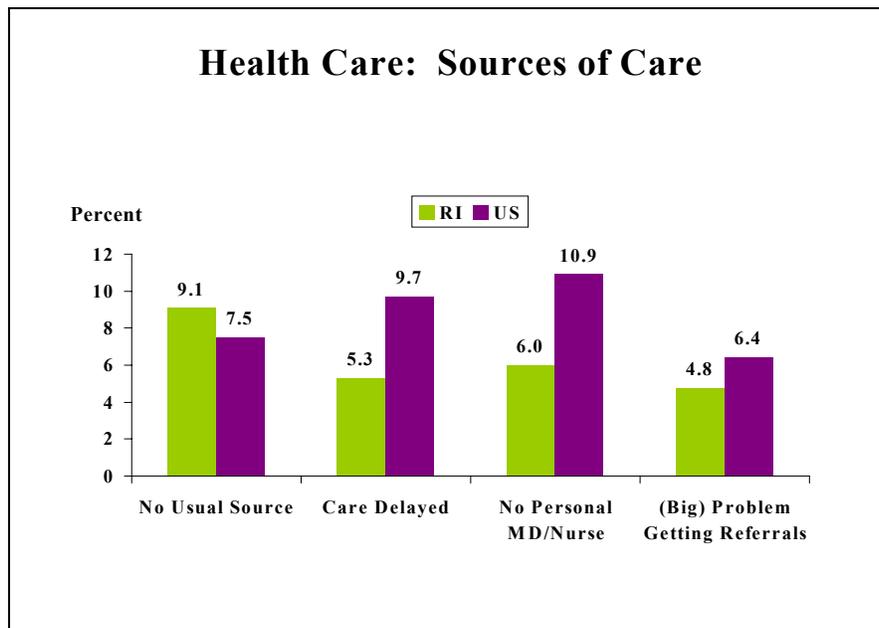
The CSHCN survey also found that the majority (87.7%) of Rhode Island families with CSHCN stated their child’s doctors or health care providers always or usually made them feel like a partner in the decision making for their child’s care, although 10% only sometimes or never felt like a partner. Survey respondents also reported high satisfaction rates (always or usually) with their health care providers in the following areas: providers spent enough time with respondent (82.8%); providers listened carefully to respondent (87.7%); providers were sensitive to respondent’s values/customs (84.7%); and provider gave information respondent needed (80.0%). Although these rates are high, 15.3% of respondents reported their providers only sometimes or never spent enough time with them; 10.5% reported their providers only sometimes or never listened to them; 12.5% reported their providers were only sometimes or never sensitive to their values/customs; 17.3% reported they only sometimes or never received information on their child’s health or health care that they needed; and 10.1% only sometimes or never felt like a partner. (Figure 88)

Figure 88



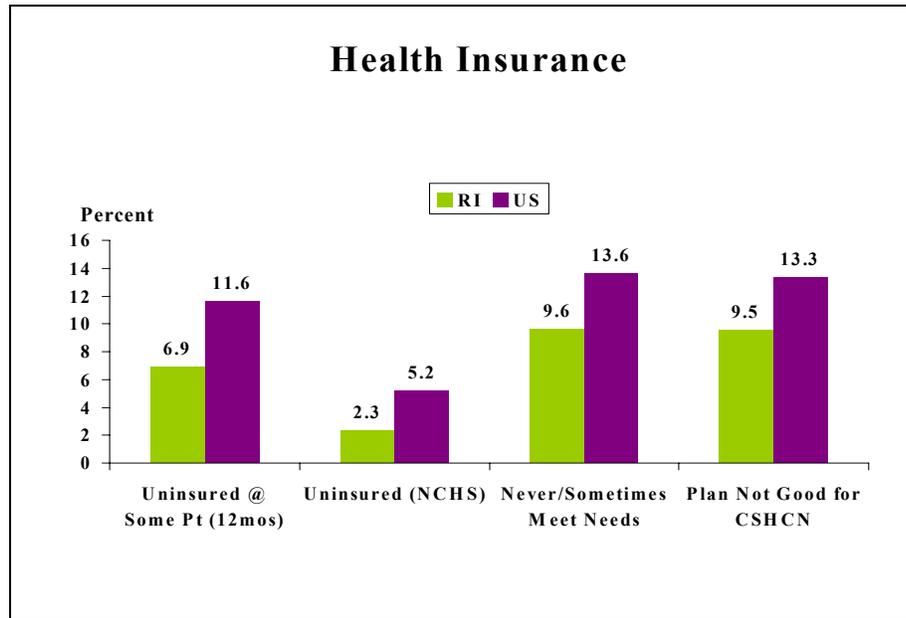
In Rhode Island, nearly one in ten (9.1%) families with CSHCN reported they did not have a usual source of health care; this figure is higher than the national figure of 7.5%. Only 5.3% of respondents indicated their child’s care had been delayed, nearly half the national rate (9.7%). A lower proportion of Rhode Island families (6.0%) reported they did not have a personal doctor or nurse compared to the national average (10.9%). Obtaining referrals was also less problematic for Rhode Island families with CSHCN, where 4.8% reported they had big problems getting referrals compared with 6.4% nationally. (Figure 89)

Figure 89



A lower percentage of Rhode Island families with CSHCN (6.9%) reported they had no health insurance coverage for their child compared with the nation (11.6%). However, approximately, one in ten families with coverage stated their health plan never or only sometimes met their needs and was not good for CSHCN. (Figure 90).

Figure 90



Other Sources for Medical Home Assessment

As mentioned previously, a set of medical home indicators has been developed by the Division of Family Health and baseline data for the indicators will be collected during FY06.

Medical Home Assessment for Children with Birth Defects

The Rhode Island Birth Defects Program (described in more detail later) has been identifying babies born with birth defects using hospital discharge data and linking them to KIDSNET in order to determine whether these babies receive appropriate preventive services, a proxy for medical home.

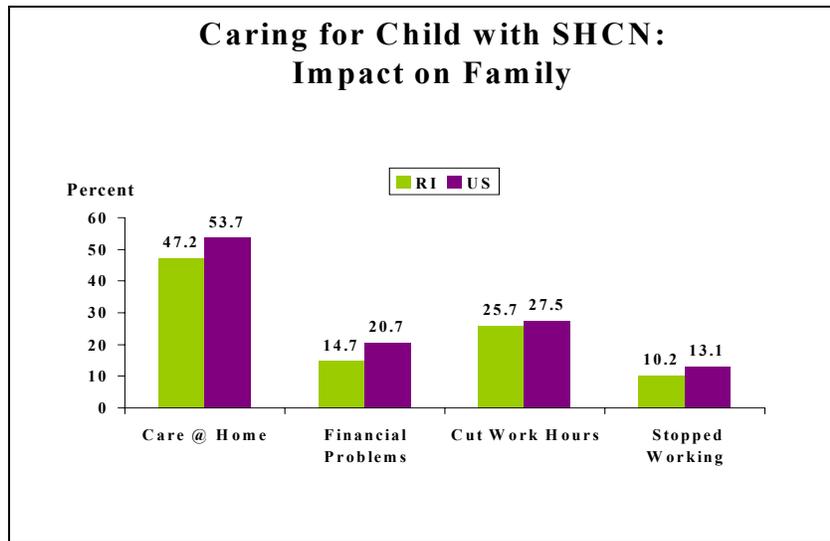
PRIORITY: ADDRESS THE SOCIAL, EMOTIONAL AND BEHAVIORAL HEALTH NEEDS OF THE MCH POPULATION

PRIORITY: ENGAGE , EMPOWER, SUPPORT AND INFORM PARENTS

Impact of Caring for CSHCN on Families

Nearly half (47.2%) of the Rhode Island families that participated in the National Survey of CSHCN care for their children with special health care needs at home. Many families with CSHCN have had financial problems (14.7%), have had to cut work hours (25.7%) or have had to stop working (10.2%). (Figure 91).

Figure 91



The impact of caring for a child with special health care needs on the family was further analyzed by income and insurance (Figures 92 and 93). Families with incomes below 200% of the federal poverty level or without insurance experience a stronger impact on their finances, employment and time than families at/above 200% of the federal poverty level or with insurance.

Figure 92

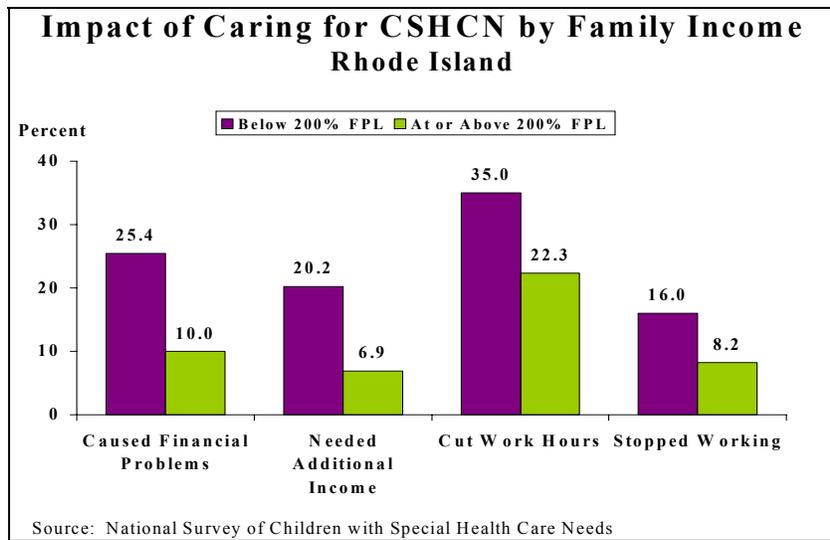
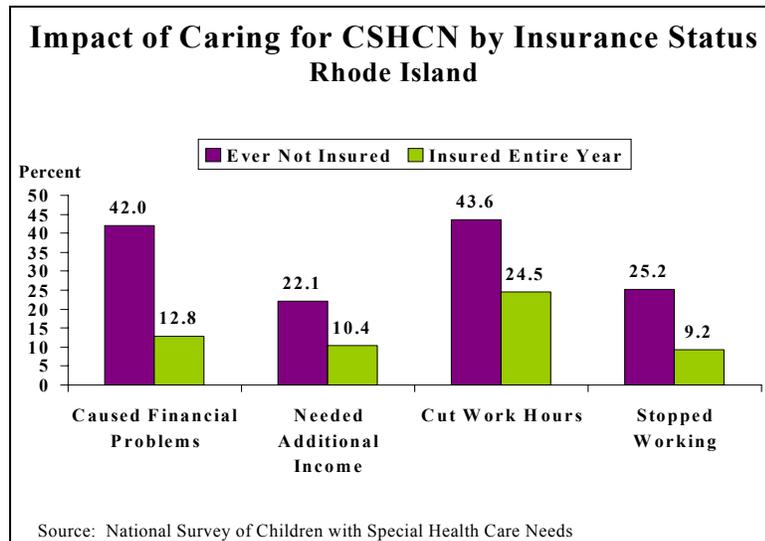


Figure 93



Overall Impact

One-third of Rhode Island families with CSHCN experienced financial and/or employment problems. The overall impact of caring for their CSHCN was lower among Rhode Island families (33.7%) compared to families nationally (40.4%). Nearly one in five (19.5%) of Rhode Island families reported that caring for their CSHCN had resulted in financial concerns compared with more than one in four (26.4%) families nationally. Similarly, 26.9% of Rhode Island families of CSHCN reported employment problems (had to cut work hours or stopped working) compared to 30.0% of families nationally.

Families impacted overall were more likely to have young children aged birth-five; have incomes less than 200% of the poverty level; and have children whose condition affected their activities. These families were approximately twice as likely to be impacted than families with teenagers, living at or above 200% poverty, or with children whose condition affected their activities. Families with children whose condition usually or always affected their activities (59.3%) were 3.2 times more likely to be impacted than families with children whose condition never affected their activities (18.5%).

Financial Problems

Financial problems were more likely to occur among families with young children aged birth-five; mothers with less than a high school education; families with incomes less than 200% of the poverty level; families with children whose condition affected their activities. Specifically, families with young children were more than twice as likely to have financial problems (31.6%) than families with teenagers (14.2%). More than one in three (34.6%) families with incomes below 200% poverty indicated financial problems compared to approximately one in eight (12.3%) families with incomes at or above 200%. The likelihood that a family experienced financial problems increased the more the child's condition limited their activities. Families with children whose condition sometimes affected their activities (23.1%) were 2.6 times more likely to have financial problems than families with children whose condition never affected their activities (9.0%). Families with children whose condition usually or always

affected their activities (37.6%) were 4.2 times more likely to have financial problems than families with children who were never affected (9.0%).

Employment Problems

Factors associated with employment problems were similar to those described for financial problems. Employment problems were more likely to occur among families with young children; with incomes less than 200% of the poverty level; and with children whose condition affected their activities. These families were approximately twice as likely to have employment problems than families with teenagers, living at or above 200% poverty, or with children whose condition never affected their activities. Families with children whose condition usually or always affected their activities were even more likely to have employment problems. More than half of these families (52.1%) reported having to cut their work hours or stop working. These families were 3.6 times more likely to have employment problems than families whose condition never affected their activities (14.4%). Families with male children were also more likely to experience employment problems although not financial problems. These families were 1.5 times more likely to have employment problems (31.0%) than families with female children (20.4%).

Survey of Rhode Island Families Raising Children with Special Health Care Needs

During the winter 2005, the Office for Raising Children with Special Health Care Needs, Data and Evaluation Unit and Family Voices of Rhode Island developed a survey to be conducted by Family Voices among families with CSHCN. The purpose of the survey was to learn more about the impacts and challenges that these families are facing. A total of 242 families completed the surveys. Among those who had other children (n=158), 130 (82.3%) reported that caring for their child with special needs affects the time they spend with their other children. Three out of five respondents (60.8%) agreed that caring for their child with special needs creates stress on important relationships (e.g., marriage, partner, etc.). More than two-thirds, 171 (70.7%), of the respondents agreed that caring for their child creates financial problems for the family. A higher proportion of respondents, 195 (80.6%), felt that caring for their child does not permit them to work as much as they would like. Similarly, 200 (82.6%) respondents felt that caring for their child with special needs affects the kinds of activities they are able to with their family. Approximately, the same number of respondents, 201 (83.1%) feel overwhelmed a lot of the time and 156 (64.5%) said that caring for their child has caused a decline in their physical or mental health. Finally, two-thirds (67.8%) of those surveyed reported that caring for their child with special needs has limited their support system (e.g., family, friends, etc.). Approximately half, 124 (51.2%) of the respondents were insured by RIte Care or Medicaid. More than two-thirds, 173 (71.5%) were married and 130 (53.7%) had more than a high school education.

PRIORITY: IMPROVE PREGNANCY OUTCOMES

Genetic Counseling and Testing

According to the National Survey of CSHCN, 6.8% of respondents stated they had needed genetic counseling services during the past 12 months, of whom 1.3% did not receive all the services they needed.

Results from medical record reviews conducted by the Rhode Island Birth Defects Program indicate that approximately one-third (32.2%) of women who had a baby with a birth defect were referred to and/or received genetic counseling services.

Data from the Rhode Island PRAMS survey indicate that 74.1% of respondents were aware that their babies were tested in the hospital for “conditions that run in families, such as sickle cell disease and PKU”.

Prevention of Birth Defects: Folic Acid Consumption

Among Rhode Island PRAMS survey respondents who gave birth during 2002-2003, 81.6% were aware that taking folic acid can help prevent birth defects, while only 51.2% reported they had not taken a multivitamin during the month before they got pregnant.

Data from the Women’s Health Screening and Referral Program indicate that 83% of women who completed a Care Questionnaire (while waiting for their pregnancy test results) were not taking a multivitamin with folic acid daily.

The WIC Program also collects data on folic acid consumption among its participants since inadequate folic acid (< 400 micrograms daily) intake is one of their risk criteria. During May 2004, among the 2,769 pregnant women enrolled in WIC, 126 (4.6%) were identified with inadequate daily folic acid intake.

Birth Defects Surveillance

Birth Defects and Infant Mortality

Approximately 20% of all infant deaths in the United States are due to birth defects. Compared to the United States, a slightly higher proportion of Rhode Island infant deaths (nearly one in four) were a result of a birth defect. Of the 91 infants who died in Rhode Island during 2002, 22 of the deaths (24.2%) were attributed to a birth defect. During 1998-2002, the proportion of infant deaths resulting from a birth defect and the birth defects specific infant mortality rate have decreased. Specifically, in 1998, 24 of the 88 infant deaths (27.3%) among Rhode Island infants resulted from a birth defect, yielding a birth defects specific infant mortality rate of 190.5 per 100,000 live births. Since then, the Rhode Island birth defects specific infant mortality rate decreased by 10.6% to 170.3 in 2002.

Many infants who are born preterm (prior to 37 weeks gestation) also have birth defects. Research is currently being conducted nationally to determine the association of preterm births and birth defects. In Rhode Island, 158 (10.9%) of the 1,454 babies born preterm in 2002, had a birth defect. Preterm births are also the leading cause of infant deaths in Rhode Island. Of the 91 infant deaths in 2002, 25 (27.5%) were a result of prematurity. Although not the cause of death, 65 (71.4%) of the infants who died in Rhode Island were born preterm, and 56 (61.5%) were born weighing less than 1,500 grams (3lbs 5oz).

The Rhode Island Birth Defects Program

The Rhode Island Birth Defects Program’s highest priorities are:

- 1) Understanding the overall prevalence and demographics of children with birth defects in Rhode Island
- 2) Assuring that children and their families receive appropriate services and referrals
- 3) Identifying and closing gaps in services and systems for families of children with birth defects

The Program has been using hospital discharge data to identify babies born with birth defects because it is the only data set that captures diagnoses coded by the International Classification of Diseases (ICD) system. This coding system, which is in its 9th Clinical Modification (ICD 9-CM), provides more specificity on the type of birth defect. Although the birth certificate contains some information on birth defects, it does not capture all of them and does not include ICD codes. A higher number of babies with birth defects have been identified using the hospital discharge database than the birth certificate. For example, during 2000, 781 babies were identified with birth defects using hospital discharge data compared with 372 using birth certificate data.

In addition to collecting data through the hospital discharge database, the Birth Defects Program is also working with Women and Infants Hospital, Rhode Island Hospital and Hasbro Children’s Hospital to obtain additional cases of birth defects and information on services provided to families of children with birth defects.

In an effort to determine whether children with birth defects receive appropriate preventive services, the Birth Defects Program links children identified with birth defects to KIDSNET. Since KIDSNET maintains information from 9 program databases, children who are not receiving services can be identified and provided outreach and referrals.

The Prevalence of Birth Defects in Rhode Island

Hospital discharge data indicate that during 1999-2003, 3,529 (5.7%) of the 61,420 babies born to Rhode Island residents in Rhode Island maternity hospitals, had at least one birth defect. Figures 94 and 95 show that overall, the number and rate of birth defects in Rhode Island have remained fairly stable over the past five years. Of Rhode Island’s 13,000 annual births, approximately 700 babies are born with birth defects. This is an average birth defect rate of 575 babies per 10,000. Provisional 2004 data indicate there were 681 (553 per 10,000) Rhode Island babies born with birth defects.

Figure 94

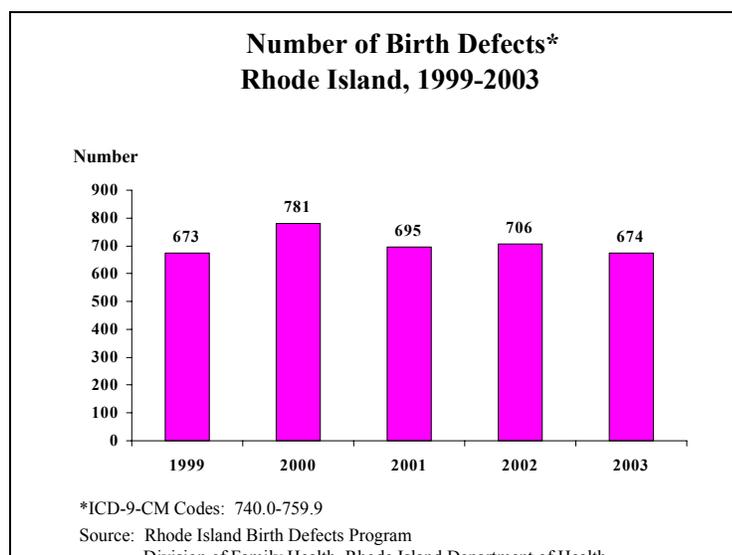
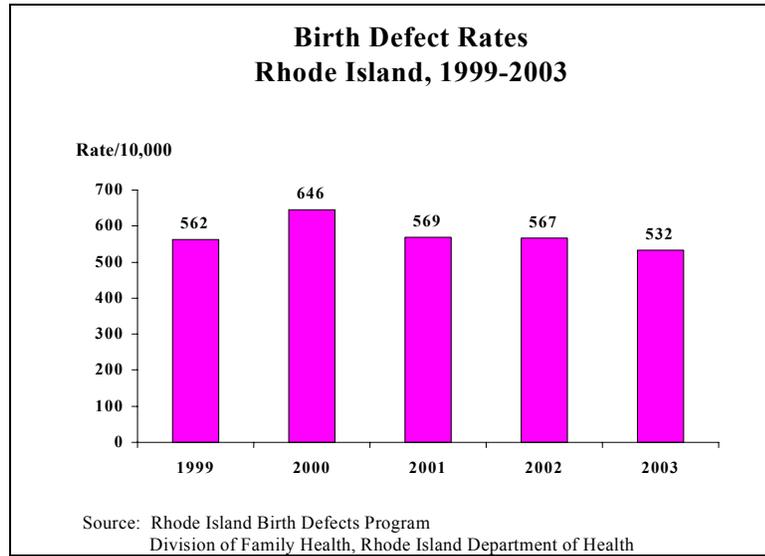


Figure 95



Tables 4 and 5 show the number and rate of selected birth defects among Rhode Island residents by organ system. The most frequent birth defects are those related to the cardiovascular system. The most common types of heart defects include: ventricular and atrial septal defects, endocardial cushion defect, and pulmonary valve atresia or stenosis. One out of every 39 Rhode Island babies born in Rhode Island are born with a defect related to the cardiovascular system.

**Table 4: Birth Defects by Body System
Rhode Island, 1999-2003**

Organ System	Number	Rate per 10,000
Cardiovascular	1562	254.3
Musculoskeletal/Integumental	1368	213.3
Genitourinary	805	138.2
Gastrointestinal	232	36.1
Eye, Ear, Face and Neck	176	33.5
Central Nervous System	105	18.7
Chromosomal	105	16.4
Respiratory	72	12.0

Table 5:

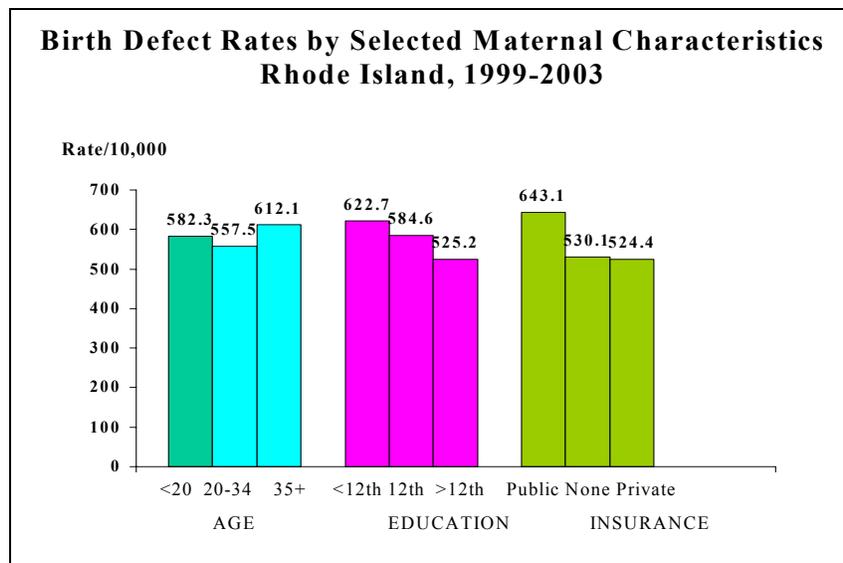
**Selected Birth Defects
Rhode Island, 1999-2003**

Birth Defect	Number	Rate per 10,000 live births
Central Nervous System		
Spina Bifida	20	3.3
Anencephaly	2	0.3
Encephalocele	2	0.3
Eye		
Congenital cataract	7	1.1
Anophthalmos and microphthalmus	3	0.5
Ear		
Microtia	5	0.8
Cardiovascular		
Transposition of great arteries	11	1.8
Tetralogy of Fallot	20	3.3
Ventricular septal defect	263	42.8
Atrial septal defect	297	48.4
Endocardial cushion defect	7	1.1
Pulmonary valve atresia/stenosis	79	12.9
Tricuspid valve atresia	6	1.0
Aortic valve stenosis	10	1.6
Hypoplastic left heart syndrome	9	1.5
Coarctation of aorta	8	1.3
Orofacial		
Choanal atresia	11	1.8
Cleft lip with and without palate	16	2.6
Cleft palate	48	7.8
Gastrointestinal		
Esophageal atresia/tracheoesophageal fistula	10	1.6
Rectal and large intestinal atresia/stenosis	20	3.3
Gastroschisis/omphalocele	33	5.4
Genitourinary		
Hypospadias and epispadias	229	37.3
Renal agenesis/hypoplasia	15	2.4
Obstructive genitourinary defect	160	26.1
Musculoskeletal		
Club foot	133	21.7
Reduction deformity, upper limbs	11	1.8
Reduction deformity, lower limbs	4	0.7
Diaphragmatic hernia	8	1.3
Chromosomal		
Down Syndrome	69	11.2
Trisomy 13	5	0.8
Trisomy 18	5	0.8
All Birth Defects	3259	574.6

Maternal Characteristics

Babies born to older women (aged 35 or greater), women with less than a high school education or with publicly funded health insurance are at a higher risk for birth defects (Figure 96). During 1999-2003, the birth defect rate among women aged 35 or greater was 612.1 compared with 557.5 among women aged 20-34. Similarly, the birth defects rate among women with less than a high school education (622.7) was 1.2 times that of the rate among women with more than a high school education (525.2). Women who were insured through public programs such as, RIte Care and Medicaid, were 1.2 times more likely to have a baby with a birth defect than women who were insured by commercial or private providers such as, Blue Cross and United HealthCare. The birth defect rate among babies born to women insured publicly was 643.1 compared with a rate of 524.4 among women with private insurance.

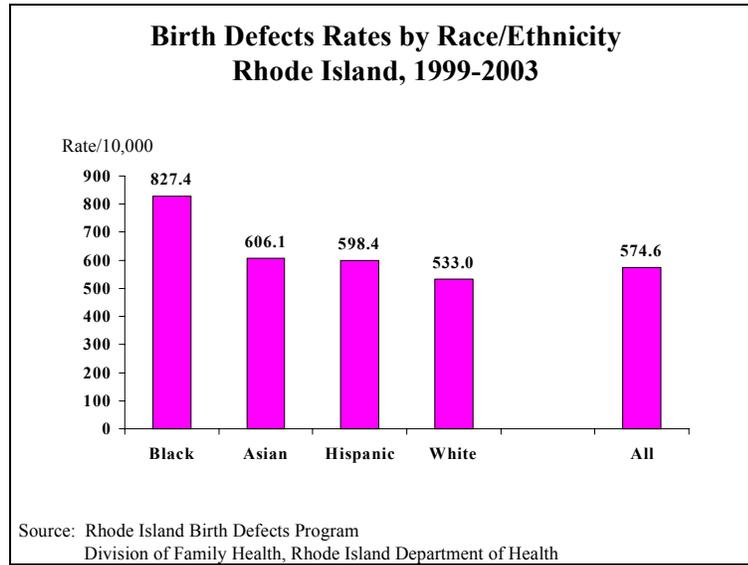
Figure 96



Racial/Ethnic and Geographic Disparities

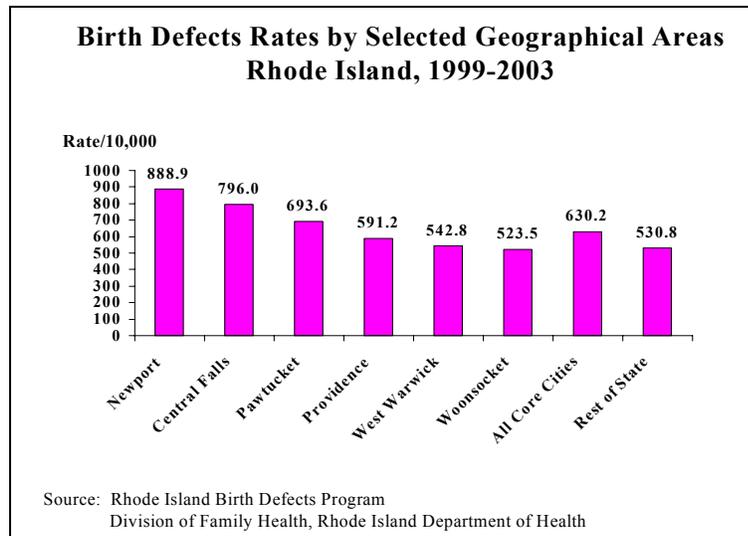
Birth defect rates vary by race/ethnicity and geographical area. During 1999-2003, the average birth defect rate among African Americans was 827.4, 1.6 times the rate for Whites (533.0). Asians and those of Hispanic/Latino ethnicity also had birth defect rates that were higher than the rate for Whites (606.1 and 598.4, respectively). Figure 97 compares birth defect rates by race/ethnicity and geographical areas.

Figure 97



Birth defect rates were also higher among those who reside in the core cities than those who live in the rest of the state (Figure 98). Babies born to residents of the core cities were 1.2 times more likely to have a birth defect than those born in the rest of the state (630.2 versus 530.8). Specifically, babies born to Newport residents had the highest birth defect rate, 888.9.

Figure 98

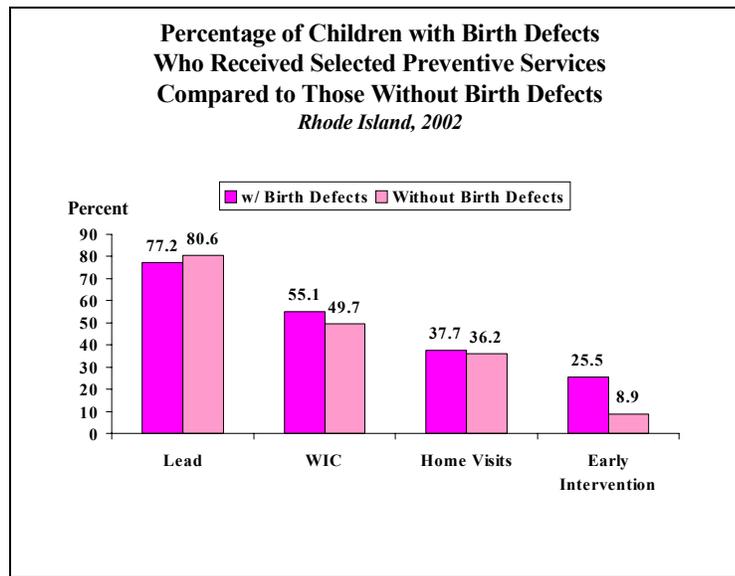


Preventive Services

Data indicate that among Rhode Island children born in state during 2002, a slightly lower proportion of children with birth defects (77.2%) received at least one lead screening compared to children without birth defects (80.6%). These data also show that more than half (55.1%) of the 706 infants born with birth defects in 2002 were

enrolled in the WIC Program compared with 49.7% of those without birth defects. Similarly, children with birth defects were slightly more likely to receive a home visit (37.7%) than children without a birth defect (36.2%). However, significant differences were seen in EI Program enrollment. Children with birth defects were nearly three times more likely to be enrolled in EI (25.5%) than children without birth defects (8.9%). (Figure 99)

Figure 99



Sentinel Conditions

The Birth Defects Advisory Council identified a set of conditions for targeted outreach and follow-up to help assure appropriate services and referrals are made. The selection was based on criteria that included the following: number of children affected; timeliness of identification; severity; service availability; resource intensity; recurrence risk; and availability of prevention strategies. The purpose of creating this list is to assure that families of children with these conditions are provided information and resources.

Table 6: Rhode Island Birth Defects Program Sentinel Conditions List

<i>Condition</i>	<i>ICD-9-CM Code</i>
Neural Tube Defects	
➤ Anencephaly	740.0-740.1
➤ Spina Bifida	741.0-741.9
Eye	
➤ Anophthalmia/microphthalmia	743.0, 743.1
➤ Congenital cataract	743.30-743.34
➤ Aniridia	743.45
Congenital Heart Disease	745-747
Cleft Lip/Palate	749
Esophageal Atresia/Stenosis	750.3

Atresia/Stenosis of Large Intestine, Rectum and Anal Canal	751.2
Genital Anomalies	752
Renal Anomalies	753.0-753.1
Reduction Deformities of Limbs	755.20-755.39
Congenital Diaphragmatic Hernia	756.6
Gastroschisis/Omphalocele	756.79
Chromosomal Anomalies	758
Ear	
➤ Anotia/microtia	744.01, 744.23
➤ Hearing Loss	(referral via RI Hearing Assessment Program)
Lung	
➤ Congenital Cystic Lung	748.4
➤ Agenesis, Hypoplasia and Dysplasia of Lung	748.5
Congenital Tumors	140-239
Developmental Conditions	
Autism	299.0

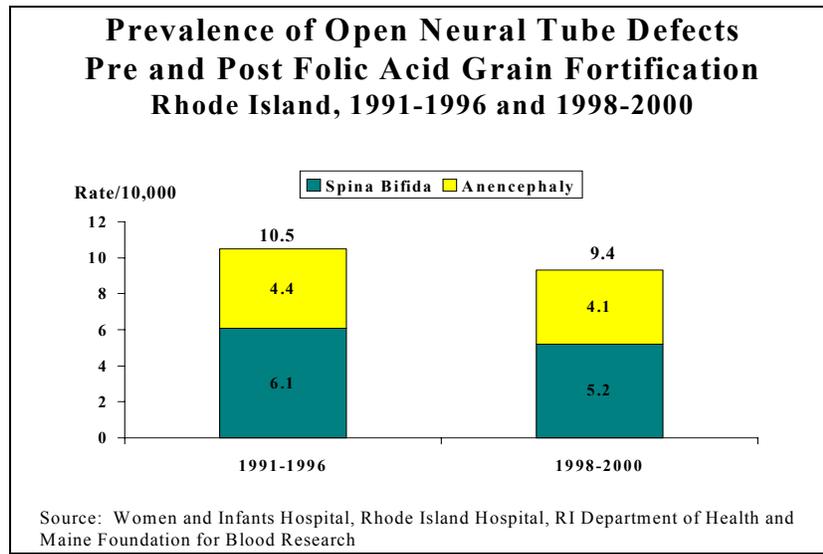
Collaborative Research

Neural Tube Defects Study

Studies have shown that folic acid supplementation can reduce the occurrence of neural tube defects (open spina bifida and anencephaly). A neural tube defects study was conducted in Rhode Island to determine the prevalence of neural tube defects, the impact of screening on prevalence, and the impact of folic acid fortification, which was introduced in 1997. The project was coordinated by the Foundation for Blood Research in Maine and was a collaboration between Maine researchers, Women and Infants Hospital, Rhode Island Hospital and the Rhode Island Department of Health. Screening, termination (induced abortion), and live birth data were compared for two periods: 1991-1996 and 1998-2000. Data show that the rate of neural tube defects in Rhode Island decreased by 10.5%, from 10.5/10,000 before folate fortification (1991-1996) to 9.4 after folic acid fortification (1998-2000). Specifically, the prevalence of spina bifida decreased by 14.8%, from 6.1 to 5.2 and anencephaly decreased by 6.8%, from 4.4 to 4.1. (Figure 100)

Maine’s neural tube defects rate remained static, although they decided to exclude 1991-1992 due to under-ascertainment issues. They concluded that “further reductions in the incidence in neural tube defects might be achievable by more aggressive fortification of grain products and/or efforts to increase the rates of supplementation.” They also recommended further increases in folic acid intake, perhaps 5000 mcg per day.

Figure 100



National and International Studies

The Rhode Island Birth Defects Program is participating in a variety of national and international collaborative studies to gain a better understanding of specific birth defects, their trends and associated factors. Examples of these collaborative research studies, their organizational sponsor and purpose are described in Table 7.

Table 7: National and International Collaborative Research Studies

Study/Project	Sponsor	Purpose/Research Questions
International Database on Craniofacial Anomalies (IDCFA)	World Health Organization (WHO)	To collect and disseminate data on craniofacial anomalies (oral clefts) to stimulate research for the development of prevention strategies and a better understanding of the characteristics associated with these anomalies.
Preterm Births and Birth Defects	National Birth Defects Prevention Network (NBDPN)	To determine what percentage of preterm and low birth weight births have birth defects; and whether there is an increased rate of preterm delivery for infants born with birth defects.
Neural Tube Defects and Infant Mortality	National Birth Defects Prevention Network (NBDPN)	To examine the impact of folic acid fortification on neural tube defect-specific infant mortality; whether a decline in neural tube defect –specific infant mortality has contributed to the decline in overall infant mortality; and if the severity of neural tube defects has changed over time.
Gastroschisis/Ventral Wall Defects	National Birth Defects Prevention Network (NBDPN)	To determine the prevalence and trends of specific ventral wall defects in the United States
National Prevalence Estimates	National Birth Defects Prevention Network (NBDPN)	To monitor trends and determine differences between states and regions.

Resources

Many children with birth defects are evaluated and followed at the Genetics Counseling and Child Development Centers at Rhode Island Hospital. Clinics are available for most birth defects, including meningomyelocele, Down Syndrome, inborn errors of metabolism, and other syndromes. The Cardiology Clinic is a pediatric specialty clinic at Hasbro Children’s Hospital. Rare conditions are referred to Boston specialists.

Identification of Babies at Risk: Newborn Developmental Risk Screening

Data from the Newborn Developmental Risk Screening Program indicate that in 2004, among the 12,324 Rhode Island babies screened for developmental risks, 6,877 (55.8%) were determined to be at risk for developmental delays. A baby is determined to be at risk if they have any one of the following criteria: a known established condition; birth weight less than 1,500 grams; a neonatal intensive care unit (NICU) hospitalization greater than 48 hours; or the mother is Hepatitis B Surface Antigen (HBSG) positive. A baby may also be determined to be at risk if they meet at least two of the following criteria: mother’s age is less than nineteen or greater than 37; mother’s and/or father’s education is less than 11th grade; mother is not married; no previous live births; five previous live births; presence of at least one family history risk factor; number of prenatal visits before 36 weeks is less than 6 or total number of prenatal visits is less than 10; no prenatal care visits before the fifth month; gestational age is greater than 37 weeks and birth weight is between 1,500 and 2,500 grams; APGAR scores are less than 7 at one and five minutes.

Geographic Disparities

Babies born to families residing in the core cities were more likely determined to be at risk for developmental factors than those residing in the rest of the state (Figure 101). Nearly three out of four (73.5%) babies born to families living in the core cities were at risk compared to 40.7% of babies in the rest of the state. The percentage of babies at risk also differs among the core cities. More than 5 out of 6 (84.3%) babies born to Central Falls residents were at risk compared to just over half (51.9%) of the babies born to West Warwick residents, which was lower than the statewide average (55.8%).

Figure 102 shows the distribution of at-risk newborns throughout the state during 1996-2004. As described previously, Central Falls, Providence, Woonsocket and Pawtucket have the highest rates followed by Newport and West Warwick.

Figure 101

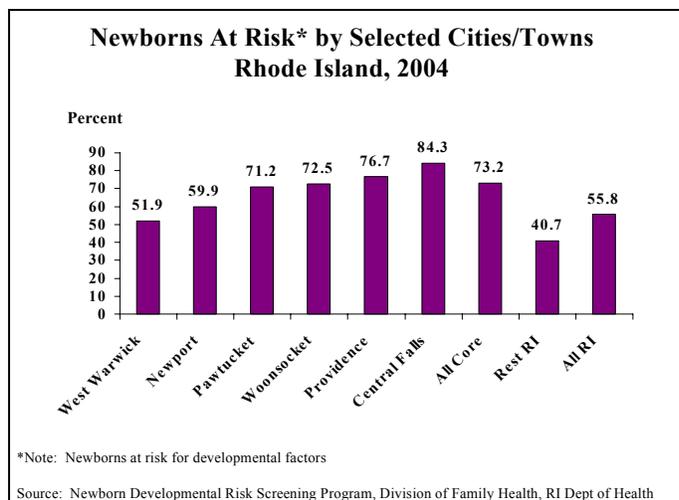
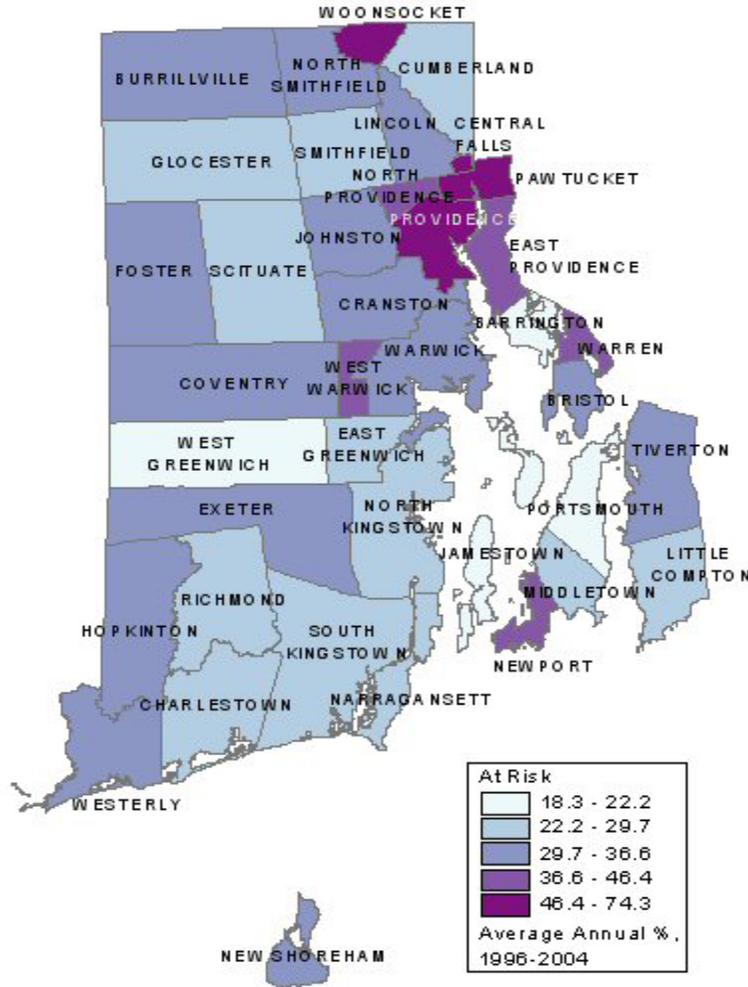


Figure 102

**Newborns At-Risk for Developmental Factors
Rhode Island, 2004**



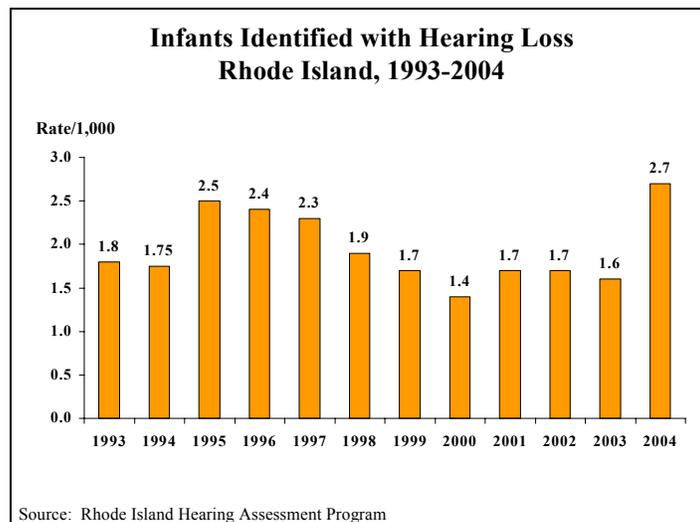
Home Visiting

Newborns who are determined to be at risk are offered home visits and are provided referrals to appropriate services. During 2004, of the 6,877 at-risk babies, 4,096 (59.6%) received a home visit during the first three months of life. An additional 125 babies received a home visit within one year of birth resulting in a total of 4,231 (61.5%) at risk babies who were visited.

Universal Newborn Hearing Assessment

In Rhode Island, 99% of babies receive hearing assessments. Data from the Rhode Island Hearing Assessment Program (RIHAP) show that between 1995 and 2000, the rate of newborns identified with hearing loss decreased from 2.5 per 1,000 to 1.4 per 1,000 (Figure 103). These rates then increased slightly between 2000 and 2003. However, between 2003 and 2004, the rate of hearing loss among infants increased by 69%, from 1.6 to 2.7, and the number of cases rose from 24 to 37. Women and Infants Hospital and RIHAP are currently investigating these cases and data.

Figure 103



During 2002-2004, 40,821 babies born in Rhode Island were screened for hearing and among these babies, 3,684 (9.0%) were in the NICU. In 2002, among the 24 infants with hearing loss, 17 (70.8%) had sensorineural hearing loss and 14 (58.3%) had bilateral hearing loss. These rates were slightly higher among infants born in 2003 where, 16 (72.7%) of the 22 infants with hearing loss had sensorineural hearing loss and 16 (72.7%) had bilateral hearing loss. The percentage of infants with sensorineural hearing loss continued to increase in 2004 where, 30 (81.1%) of the 37 infants had this type of hearing loss and 23 (62.2%) had bilateral hearing loss.

The leading risk factors for hearing loss among the 37 infants born with hearing loss in 2004 were extremely low birth weight (n=16) and being on a ventilator for more than five days (n=16). Other risk factors include syndromes (n=7), family history (n=6), and congenital malformations (n=3).

Diagnostic Audiologic Evaluations

During 2003, of the 13,767 infants screened for hearing loss, 74 (5.4 per 1,000) were referred for a Diagnostic Audiologic Evaluation (DAE) and 70 (94.6%) received a DAE. More than two-thirds of the infants who received a DAE, 49 (70%) were evaluated before three months of age. The average age of the 22 infants identified with permanent hearing loss was 2.9 months.

Awareness of Testing for Hearing Loss

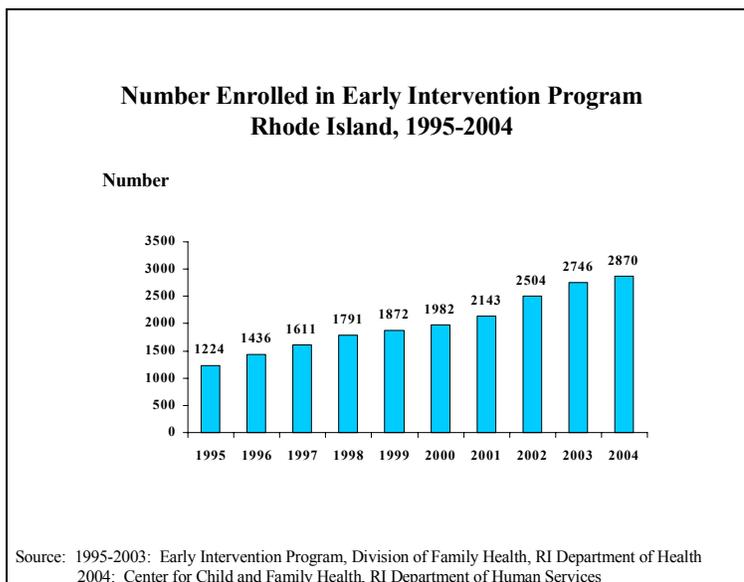
Rhode Island PRAMS survey data indicate that 89.4% of respondents who gave birth during 2002-2003 were aware that babies are tested in the hospital for hearing loss.

Early Intervention (EI)

The number of children, aged birth to three, enrolled in the Early Intervention (EI) Program has continued to rise. In 1995, 1,224 children were enrolled in the program and by 2004, the number had more than doubled to 2,870 children (Figure 104). During 2004, 7.6% of Rhode Island's children aged birth to three were enrolled in EI. Many factors have resulted in this increase, including earlier identification of children requiring early intervention

services. Programs such as Newborn Developmental Risk Screening and Family Outreach have contributed to the early identification and referral of children to the Early Intervention Program. Additionally, the survival of very low birth weight infants and the increase in multiple gestation births have also contributed to the increases in EI enrollment. It should be noted that in the Fall 2004, the EI Program was transferred from the Department of Health to the Department of Human Services.

Figure 104



According to a study conducted by the The Zero to Three Policy Center, Rhode Island has the highest percentage of children under age 12 months enrolled in Early Intervention. During the period 7/1/02-6/30/03, 1.8% of all Rhode Island infants aged less than one were enrolled in EI. During calendar year 2004, 31% of those enrolled in EI were aged less than one.

Children are eligible for Early Intervention if they have an established risk (e.g., Down Syndrome), biological/medical risk (e.g., failure to thrive), and environmental risk (e.g., poverty). During 2004, more than half (58%) of the children enrolled in EI had significant developmental delays. One-fourth, (25%) had a single established mental or physical condition, 6% had multiple established conditions, 6% were enrolled based on professional judgement, and the remaining 5% were either no longer eligible or the reason for their eligibility was not available.

During 2003, 812 children were discharged from EI at the time they reached age three. Of these children, 594 (73.1%) were referred to the local school district to continue necessary special education services. An additional 158 (19.5%) were discharged because they achieved the goals of their Individual Family Services Plan (IFSP) and 49 (6.0%) were discharged because they refused services, moved out of state or were unreachable. An additional 11 (1.4%) children were discharged for unknown reasons.

Between 2002 and 2003, the percentage of children in EI with an IFSP who were discharged to Special Education and for whom an Individual Education Plan (IEP) was developed rose from 68.1% to 80.5%. During

2003, of the 606 children discharged to Special Education, 488 had an IEP. This represents an increase from 2002, when 333 (68.1%) of 489 children discharged to Special Education had an IEP.

Special Education

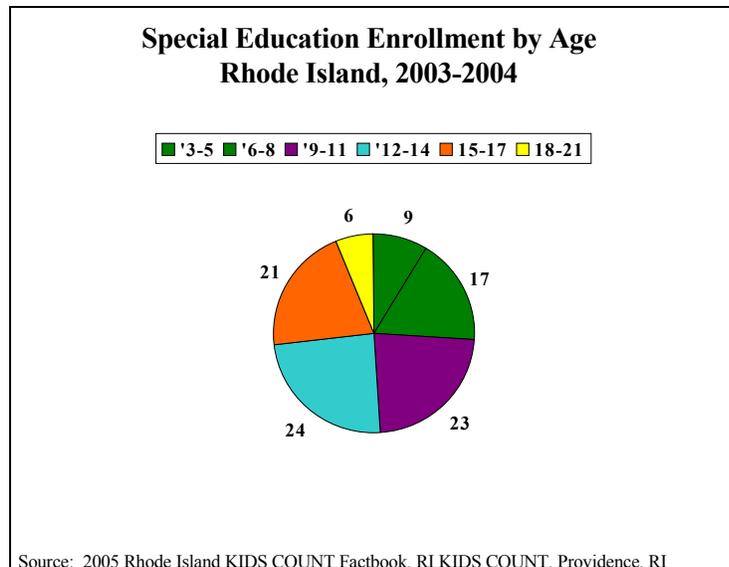
According to the *2005 Rhode Island KIDS COUNT Factbook*, during the 2003-2004 school year, there were 32,925 Rhode Island children, aged 3-21, with disabilities who received special education services. This figure represents 21.4% of the 153,977 total student population. Between the 1992-1993 and 2003-2004 academic years, enrollment in special education rose from 16% to 21%.

Of those who received special education services, more than two-fifths, 14,152 (43.0%) were classified as learning disabled. This represents a decrease from the 1998-1999 academic year, when 69.7% of special education students were classified as learning disabled. Other special education students were enrolled during 2003-2004 because they had speech disorders (21.6%), were health impaired (12.8%); had emotional disturbance (10.0%); were mentally retarded (3.9%); were developmentally delayed (3.9%); were autistic (2.2%).

In 2004, children between the ages of 3 and 8 years old accounted for more than one-quarter (26%) of all children enrolled in special education (Figure 105). The age distribution of students aged 9-21 are as follows: ages 9-11 (23%), ages 12-14 (24%), ages 15-17 (21%) and ages 18-21 (6%).

The local school system is responsible for identifying and evaluating students between the ages of 3 and 22 with disabilities and who might require special education.

Figure 105



Rhode Island Pediatric Practice Enhancement Project (PPEP)

The Pediatric Practice Enhancement Project is a collaborative initiative between the Department of Health, Department of Human Services and eight pediatric practices across the state. Parent consultants are assigned a practice and use their knowledge to educate, advocate and assist families of children with special health care needs

in accessing community resources. These parent consultants also have a relationship with each CEDARR Family Center to facilitate timely assessment and a fast track to coordinated care.

Preliminary data from PPEP indicate that the most common support services needed for families with CSHCN are for education. More than one in three (35.7%) of the 263 families served by PPEP needed education services. Other support services needed by families with CSHCN included mental/behavioral health services (26.2%); specialty evaluations (13.3%); health insurance (12.9%); medical issues (9.9%); and general parenting (9.5%).

Children with Disabilities

The Rhode Island Medicaid program purchases health, behavioral health, and residential services for children with disabilities. Children with disabilities include children with: physical disabilities, developmental disabilities, serious emotional disturbances, and foster children with disabilities. Children with disabilities experience a broad range of chronic conditions that include differences in clinical manifestation, severity, and impact on age-appropriate activities such as growth, play, and learning. Children with the following diagnoses are among those who meet the SSI criteria for disability:

- AIDS
- Spina bifida
- Cerebral palsy
- Down's Syndrome
- Serious emotional disturbances
- Autism
- Brain injury
- Severe asthma
- Leukemia
- Cystic fibrosis
- Multiple congenital anomalies
- Juvenile diabetes
- Severe depression
- Severe respiratory disease

Approximately 5% of children with disabilities are newborns or infants under the age of one. Many of these children are placed in NICUs at birth, and the majority has some kind of physical disability. Another 18% are pre-school aged and receive services in the community through early intervention programs or kindergartens. The vast majority of children with disabilities (78%) are school-aged children and receive services from their families, the medical care system, and the school system. Most of these children have some form of developmental disability. Within the school-age group, a large number (23%) of children with disabilities in Rhode Island are older adolescents between the ages of fifteen and seventeen. The older children are more likely to have a serious emotional disturbance. One of the biggest challenges in serving these children is preparing them for life as young adults, maximizing their potential to work and live independently.

Children with disabilities often receive a broad range of services that often include home and community-based services; behavioral health services; and/or hospital-based acute care services. They receive services from a range of pediatric specialists, and most of these services are provided at tertiary care centers, specifically teaching hospitals. Because their care needs are often very complex, many children with disabilities do not have community-based primary care providers, but rely on specialists for much of their primary care.

Another area where children with disabilities seem to receive fewer services than other children, or even other adults with disabilities is dental care. Only 22% of the children received dental services in six months. Even if this number doubled over a twelve-month period, it still means fewer than half of all children with disabilities would receive dental care.

Characteristics of Children with Disabilities

During 2004, 3,817 children aged birth-21 with special needs were enrolled in Neighborhood Health Plan of Rhode Island (NHPRI). Among these children, 17.3% were aged birth-5; 26.8% were aged 6-10; 25.2% were aged 11-14; and 30.7% were aged 15-21. More than one-third (38.5%) of these children were White, non-Hispanic; 23.7% were of Hispanic/Latino ethnicity; 14.2% were Black/African American; 1.4% were Asian; and less than one percent were Native Americans. Children who live in the core cities account for 2,294 (60.1%) of the children with special needs enrolled in NHPRI. Specifically, children living in Providence represent 30.2% of those with special needs.

Survey Data on Children with Disabilities including Behavioral Health

Data from the 2003 National Survey of Children's Health indicate that: nearly one in seven (13.9%) Rhode Island children has asthma; 6.0% have/had frequent or severe headaches, including migraines; 4.7% have speech problems; 3.4% have bone, joint or muscle problems; 3.3% have a developmental delay or physical impairment; 2.8% have hearing or vision problems; 0.5% have autism; and 0.3% have diabetes. It should be noted that a child could have more than one of these conditions. The survey also found that 5.8% of parents would describe their child's health condition as severe.

Additional survey data show that approximately one in ten (9.6%) Rhode Island children aged 3-17 had moderate or severe difficulties in the area of emotions, concentration, behavior or getting along with others. However, CSHCN were seven times more likely to have these difficulties (30.0%) than children without special health care needs (4.0%). Nearly one out of ten Rhode Island children (9.1%) received mental health care or counseling in the past year. Among children with current emotional, developmental or behavioral problems, CSHCN were nearly twice as likely to have received some type of mental health care during the past year (72.0%) compared to children without special health care needs (39.5%). The survey data also indicate that 7.4% of Rhode Island children have an emotional, developmental or behavioral problem for which treatment or counseling was needed. Specifically, 4.9% of respondents were told by a health professional that their child has behavioral or conduct problems and 7.0% have been diagnosed with depression or have anxiety problems.

One out of ten children in Rhode Island (10.6%) has a learning disability and 8.7% have attention deficit disorder (ADD) or attention deficit hyperactive disorder (ADHD). Among the children with ADD or ADHD, 59.4% were taking medication for their condition. Approximately one-third, 30.1% of respondents reported that their child's mental and emotional health puts a burden on their family a great deal (7.9%) or a medium amount (22.2%).

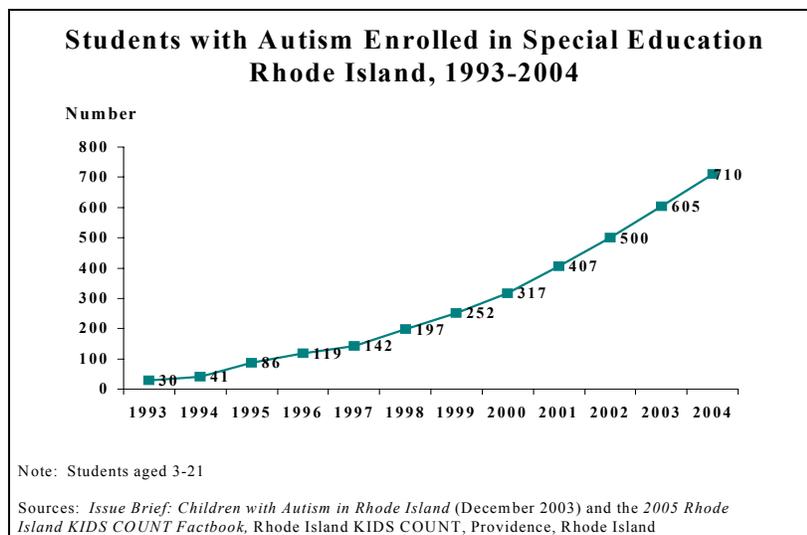
Autism

More children in Rhode Island and nationally are being diagnosed with autism, which is a neurological disorder that affects a child's ability to communicate, process and respond to sensory information, and form social relationships. Those diagnosed with Autism Spectrum Disorders (ASDs) have a range of symptoms and abilities and experience challenges that range widely in severity.

Children Aged 3-21

In Rhode Island between 1993 and 2004, the number of children aged 3-21 with autism and enrolled in special education rose from 30 to 710 (Figure 106). The reasons for the increasing numbers and rates of autism are not yet understood. They could be a result from improved awareness and diagnosis, a broadened definition, increased prevalence, or a combination of factors. According to the Rhode Island KIDS COUNT Issue Brief: “*The Prevalence of Autism in Rhode Island*” (December 2003), during the past ten years in Rhode Island, there has not been a decline in other categories of disability in the special education census of a magnitude that might account for the increase in autism rates.

Figure 106



The number of children identified with autism for purposes of special education peaks between age 6 and 13, raising concerns about early identification and the appropriateness of services provided to younger children with autism.

Data from the 2001-2002 special education census show that the majority of students with autism are White (92%), although they are only 73% of the total student population. Only 3% of Black students were autistic although they represent 8% of the total student population, and 3% of Hispanic students were autistic although they represent 15% of the total student population.

Children Aged Birth to 3

Among children aged less than 3, of 3,950 children enrolled in Early Intervention between March 2000 and September 2002, 48 (1.2%) children were identified with a diagnosis of autism. Many children are not identified with autism until after age 3.

Survey Data

Data from the National Survey on Children’s Health indicate that 0.49% or 4.9 per 1,000 children in Rhode Island have autism which compares closely to the national figure of 0.46% or 4.6 per 1,000.

Autism as a Sentinel Condition in the RI Birth Defects Program

The Rhode Island Birth Defects Program has identified a set of sentinel conditions for outreach and follow-up. Autism has been included as one of the sentinel conditions. As described earlier, the Birth Defects Program identifies and follows children with birth defects until age five. The Birth Defects Program is working closely with the Office for Families Raising Children with Special Health Care Needs and health care providers to improve identification of these children to assure they receive the services they need.

Transition of Adolescents with Special Health Care Needs to Adult Health Care

During 2004, the Department of Health, in partnership with community pediatricians, conducted a survey of primary care pediatric practices to evaluate the process of health care transition and transfer of adolescents from primary care pediatrics to adult health care providers. Another objective of the survey was to identify any differences in transition and transfer methods or policies among the providers for adolescents with and without special health care needs. Surveys were sent to the 170 primary care pediatricians practicing in Rhode Island and 103 (60.6%) responded.

The majority of respondents reported that transition should begin at ages later than those recommended in the AAP's Consensus Statement on Health Care Transitions, with only 2.9% recommending that the transition should begin in early adolescence. Nearly two-thirds (63.7%) of the physicians recommended that transition begin one year prior to transfer; 28.4% recommended the transfer process should begin at the time of transfer and not before; and 4.9% had other recommendations.

A transition age of 18 was favored by 44% of the respondents, whereas, 28% recommended that adolescents move to adult health at 21 years of age. One-third of the pediatricians reported having patients over the age of 22 with all patients over the age of 24 having special health care needs.

More than two-thirds (70%) of respondents reported having no difficulty in identifying sources of adult care for all adolescents, although fewer (51%) reported having no difficulty transferring patients with special health care needs. Only 13% of respondents had a written policy for the transition and transfer of adolescents. Less than one in five (18%) respondents communicated with the adolescent's new adult health care provider after the transfer. Only 2.9% of respondents reported that health insurers were helpful in the transfer to adult care.

The pediatricians also reported the following methods for transferring their adolescent patients from their practices: age out (age limit determined by practice); drop out (adolescent stops coming for care); forced out (adolescent leaves practice for reasons uncontrolled by practice or patient); hang out (adolescent continues with practice after the usual age limit; move out (adolescent leaves the practice for another provider); transfer out (adolescent leaves the practice for adult care as part of an active coordinated transfer process). Similar proportions of adolescents with and without special health care needs "aged out" of the practices (26.7% and 29.5%, respectively). Adolescents with special health care needs were less likely to "drop out" of practices (7.0%) than all adolescents (19.1%). Fewer adolescents with special health care needs were "forced out" of practices (7.9%) compared with all adolescents (11.4%). Adolescents with special health care needs were more four times more likely to "hang out" (28.4%) compared to all adolescents (6.6%). Although more than one in five adolescents

(22.1%) “moved out” of practices, only 13.4% of adolescents with special health care needs did. Finally, adolescents with special health care needs were more likely to “transfer out” of practices (16.6%) compared to all adolescents (11.4%).

These survey findings show there is a need for more education on transition for both pediatric and adult providers. Many issues need to be addressed regarding the transition and transfer of adolescents to adult care including the identification of barriers; the role of health care plans; revisiting the AAP recommendation; and increasing the number of practices with a transition policy.

Other Needs Assessment Data: Community Input

Although Rhode Island has excellent data for its needs assessment, we believe statistics only present a partial picture of family health needs in Rhode Island. To truly understand the needs of Rhode Islanders, we need their input. Our community input is gathered from community meetings, a public hearing, and family surveys.

Community Meetings/Public Hearing

During Spring 2005, Division staff presented key maternal and child health data and priorities to a variety of community and professional organizations, and families, in order to solicit their input. Additionally, we held a public hearing, the results of which are described in the Public Input Section of the Application.

Surveys

As discussed earlier, the Division has enhanced its capacity to conduct surveys on specific maternal and child health issues. Specifically, Rhode Island PRAMS provides a mechanism to obtain information from mothers regarding their perinatal behaviors and experiences. It also provides an opportunity for these women to provide their comments and feedback regarding MCH issues. The information collected will address many national and state performance measures, including those related to prenatal care, breastfeeding, genetic services, lead screening, immunization, and health insurance. Our new toddler follow-up survey, the Toddler Wellness Overview Survey (TWOS), will provide information on the health and well-being of two year-old and their mothers. Because these data can be linked to PRAMS, this survey will provide an opportunity to examine the relationship between outcomes of young children and their mother’s earlier experiences.

C. MCH PROGRAM CAPACITY BY PYRAMID LEVELS

1. Direct Health Care Services

Although the Department of Health and the Title V program have not been major providers of clinical care services for several decades in Rhode Island, we have been heavily engaged in the long term development and monitoring of the health care system’s organization and performance. We have made strategic investments and policy commitments to an integrated community primary care capacity for all (widespread community health centers, statewide home visiting, school based preventive investments, etc.). These community networks, to provide primary care, family support, early intervention, school services, etc., are, we believe, the foundation for Rhode

Island's good results in maternal and child health. These coordinated community health resources remain in place, but many of them are quite dependent on patient and revenue flows that are changing rapidly with managed care.

Although several of our programs continue to provide direct services to vulnerable populations (e.g., WIC, Women's Health Screening and Referral Program, Family Planning,, School-Based Health Centers, etc.), through contracts with community partners, they have also matured over time. The Division of Family Health now focuses much of its resources and efforts on strengthening community-based infrastructures, building sustainable systems of care, and assuring effective ongoing quality improvement activities (e.g., Family Resource Counselor Program).

2. Enabling Services

Enabling services are seen as part of a seamless comprehensive health care system that includes primary and specialty physicians, nursing, nutrition, social work, dental care, and all the special skills required for children with significant disabilities. Most managed care contracts, especially RItE Care, reflect this broad inclusion of enabling services, although there are specific system capacity and access issues (for dental care, physical and occupational therapy, and a few medical specialties) our overall health system capacity and availability appears good.

The Division of Family Health works to provide families with information and resources that will help them receive the services they need. Provider education and training (e.g., school nurse teacher conferences, immunization videos, etc.), culturally competent program materials, home visiting, etc. have been areas that DFH has focused on to achieve this goal.

Oral Health (see also Infrastructure Building Services)

Access to oral health services for low income children is a problem in Rhode Island. Problems with transportation, communication, and child care often prevent Medicaid recipients from keeping their scheduled appointments. Long distances between the home and the dental offices accepting Medicaid clients combined with a reliance on public transportation creates difficulties for some individuals in making their scheduled appointments. In addition, as many as 30% of Medicaid households in Rhode Island do not have telephone service, and approximately 20% of Rhode Island households that receive Medicaid do not use English as their primary language. These barriers may contribute to a high number of missed appointments.

Many dentists feel that Medicaid reimbursement rates for dental services are inadequate. As a result, many dentists are unwilling to accept Medicaid patients, at least to any significant degree. In addition to low reimbursement rates, the reasons cited by Rhode Island dentists for not participating in the Medicaid program include an excessive number of patients who fail to keep appointments; excessive paperwork; payment delays; poor communication with the state agencies; and patients with complicated medical, social, and behavioral problems.

According to a Rhode Island KIDS COUNT Issue Brief on "Access to Dental Care for Children in Rhode Island" (October 2004), during FY03, there were 320 RItE Care members for each dental provider who accepted Medical Assistance payment. In a 2004 survey of parents of children enrolled in RItE Care, dental care was rated as the number one unmet health care need. More than one ten (11%) of respondents with continuous RItE Care coverage during the previous year reported being unable to get dental care and additional 16% were able to get it,

but experienced problems in obtaining it. Among those with intermittent RIte Care coverage, nearly 38% reported difficulties (including 21% who were unable to get care).

In FY03, 55% of licensed dentists in Rhode Island were paid for providing at least one service to at least one recipient of Medical Assistance. However, only 30% of licensed dentists provided services to at least 50 unduplicated Medical Assistance patients and only 25% of dentist were paid in excess of \$10,000 for services rendered to Medical Assistance patients during that time period. According to dentists and agencies who make referrals, there is an acute shortage of oral surgeons who are willing to accept patients with Medical Assistance.

Nevertheless, private dental practices continue to be the largest provider of dental services to those with Medical Assistance. During 2003, private dental practices accounted for nearly two-thirds (66%) of all Medical Assistance dental expenditures for children aged less than 21. However, private dentists accounted for 72% of expenditures in 2000, which may reflect both a reduction in private dentists who accept Medical Assistance and the increasing service capacity of Federally Qualified Health Centers (FQHC's) and hospital-based dental centers. FQHC's accounted for 12% and hospital based dental centers for 21% of Medical Assistance dental expenditures for children aged less than 21 during 2003.

As of June 2004, there were 551 actively licensed practicing dentists in Rhode Island, working in approximately 400 offices. Among these dentists, 412 (74.8%) were general dentists and 139 (25.2%) were dental specialists (e.g., orthodontists, oral surgeons, periodontists, etc.). Over half (53%) of the practicing dentists in Rhode Island are aged 50 or older. Since the average age of retirement for US dentists is 62.5, it is anticipated that approximately 300 dentists in Rhode Island will be at or close to retirement in the next 10-15 years. There also has been little growth in the number of dentists in Rhode Island in the past several years. Rhode Island does not have a dental school and 8 Rhode Island residents were enrolled in out-of-state dental schools during the 2002-2003 academic year. However, a small pediatric residency program was established in 2003 at St. Joseph Hospital in collaboration with Lutheran Medical Center in Brooklyn, New York will graduate two pediatric dentists each year beginning in 2005. A general practice residency program planned at Rhode Island Hospital will graduate two dentists annually starting in 2006. (Source: Rhode Island KIDS COUNT Issue Brief on "Access to Dental Care for Children in Rhode Island". October 2004)

There were approximately 600 hygienists and 920 dental assistants practicing in Rhode Island in 2003. Both of these occupations are projected to grow over the next five years.

In Rhode Island dental practices can be found in almost every city and town. However, the availability of dental services varies considerably between localities. In some areas of Rhode Island there are shortages of dentists. There are eight "Dental Health Professional Shortage Areas" (DHPSAs) in Rhode Island (Table 7).

Table 7: Rhode Island Dental Health Professional Shortage Areas (HPSAs)

City/Town and Service Area	DHSPA Type/Population
Central Falls/Pawtucket (All Census Tracts)	Low-Income Population
Charlestown (Narragansett Indian Tribe)	Native American Population
Cranston (Adult Corrections Institute)	Correctional Facility
Hopkinton/ Hope Valley (Wood River Health Services, Inc.)	Non-Profit Dental Facility
Newport/Middletown (Census Tracts: 402, 403.02, 403.03, 405-408, 410, 412)	Low-Income population
Providence (all census tracts)	Low-Income Population
South Kingstown (Wakefield)	Non-Profit Dental Facility
Woonsocket/Northwest Providence County (Burrillville, Foster, Glocester, North Smithfield) (Census Tracts 129-130.02, 133, 131.01, 131.02, 128.01-128.03, 173-185)	Low-Income Population

3. Population-Based Services

Although we do not provide clinical care, and we are very selective in our support of medical services in a state with high levels of comprehensive insurance, the Rhode Island Department of Health does maintain key population prevention and surveillance services. We provide the full package of vaccines free of charge to all children. We finance lead screening for all children. Within our Communications and Policy Unit, we continue to maintain our Family Health Information Line, which receives nearly 2,500 calls per year. Information Line staff respond to questions and information requests and also are able to survey Rhode Islanders on key issues. The Communication and Policy Unit has also worked with Family Health program staff to develop media campaigns on topics including immunizations, lead poisoning, and adolescents.

The Department is deeply committed to maintaining the information base and timely interactive surveillance capacity, as part of a larger core public health agenda to assure knowledge for health decisions and quality of health services. In these matters, we work closely with a variety of cabinet level policy forums. We are also deeply committed to Rhode Island KIDS COUNT, which has become the shared information environment for children’s policy development statewide, and the dissemination arm for Title V needs assessment data. Rhode Island KIDS COUNT is an autonomous 501c3 organization, with broad roots in universities, business, and medical leadership, as well as state cabinet linkages.

4. Infrastructure Building

The majority of the Division of Family Health's investments are in infrastructure building. To assure a statewide system of family-centered, community-based, culturally competent and coordinated services to preserve, protect, and promote the health and development of children and their families, the Department has committed to a parent development and local systems development strategy. Our emphasis is on public engagement, parent education, and the broad integration of our WIC, Family Planning, Successful Start, CATCH initiatives, and other investments into community systems building forums. By combining these efforts with school-based and linked health services and a variety of other growing commitments to adolescent and young adult prevention, we have a strategy at the neighborhood level to assure success and safety, so that all youth shall leave school prepared to lead productive lives.

Finally, we are deeply engaged with many colleagues in both state and community forums to assure that all families shall be safe in their homes, neighborhoods, and schools. In these forums, we bring the Title V, Part C of IDEA, SSDI, WIC, and school health mandates. Most of these forums include representation from the Department of Human Services (Medicaid, Child Care, Welfare Reform) and the Department of Children, Youth and Families (Child Welfare, Children's Mental Health) and the Department of Education. They also include the academies and colleges of medical specialization, and often a representation of major community provider agencies. In general, we are attempting to avoid categorical and discipline-specific system development and policy forums, in favor of more broadly integrating all the stakeholders and contributors. This is reflected in our community family service development forums, and our state level policy forums. As a small state with no county structure, even state forums are often remarkably local in their focus. Although the overall Children's Cabinet outcomes and strategic commitments are well described, there are still a variety of forums in which policy discussions occur and there is not always a sense of coordination or even meaningful participation of all stakeholders when decisions are made. We continue to struggle with this challenge.

Oral Health

According to the 2003 National Survey of Children's Health, 85.5% of Rhode Island children have dental insurance. The Rhode Island Medical Assistance Program offers dental coverage for child and adult recipients, although children have greater benefits due to the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) requirements. EPSDT mandates that states provide comprehensive, preventive, restorative and emergency dental services furnished according to state-defined periodicity schedules to eligible children up to age 21.

In addition, Rhode Island State Law (16-21-9) requires that school children receive dental examinations regularly. Every student in kindergarten through sixth grade is required to have an annual dental examination by a dentist. But thereafter every student is required to be examined only once at the secondary level (examinations are available annually). In addition, the federal Head Start and Medicaid programs require that children receive regular dental screenings and treatment when necessary.

The Medicaid dental benefit is operated under a fee-for-service system for all Medicaid recipients, including those enrolled in RItE Care. Rhode Island has one of the highest Medicaid utilization rates at 33%, however, this is still considered low by non-Medicaid standards. One major reason for low utilization, as cited by

dentists, is the low Medicaid reimbursement rates. Rhode Island Medicaid dental reimbursement rates are approximately 45% of dentists' usual, customary, and reasonable (UCR) fee levels compared to a reimbursement rate of 75% by commercial insurers.

Community Health Centers with Dental Clinics

Eight community health centers in Rhode Island currently provide dental services for children and adults. Crossroads Rhode Island operates a volunteer dental clinic for adolescents and adults who are homeless or at risk for homelessness. The dental clinic is staffed with seven volunteer dentists, one dental hygienist, one full-time dental assistant and one full-time dentist assigned for three years by the National Public Health Service Corps Ready Responder Program. Bayside Family Healthcare, Northwest Health Center and Thundermist Health Center opened within the past three years. Providence Community Health Center just re-established its dental practice in late 2004. The other community health centers offering dental services include Blackstone Valley Health Care, East Bay Community Action Program and Wood River Health Services.

Hospital-Based Dental Clinics

The two hospital-based dental clinics in the state are located at Rhode Island Hospital and St. Joseph's Hospital. The Samuels Dental Clinic at Rhode Island Hospital provides dental services for all children and specializes in treating children and adults with special health care needs such as autism, cerebral palsy, Down syndrome and other medical, psychiatric and /or behavioral conditions. Approximately 60% of patients served are children. In 2003, the Center provided 8,500 on-site visits and 150 consults to in-house patients. The average wait time for a routine dental hygiene visit is over two months.

Mental Health

Children's Behavioral Health

Publicly-funded mental health services for children (birth through age 21) are provided by the Rhode Island Department of Children, Youth and Families (DCYF) through contracts with private organizations and clinicians, and by the Department of Human Services through contracts with the health plans that participate in the RIte Care program.

DCYF arranges and monitors a continuum of therapeutic and clinical services for seriously emotionally/behaviorally disturbed children and youth. It also provides an array of community-based therapeutic/supportive services aimed at maintaining healthy family functioning. Children who are placed in the custody of the Department due to abuse, neglect, and dependency, as well as children, who remain in the custody of their parents or legal guardians, are eligible for these services. Most services are delivered in community-based settings and are accessed primarily through the eight Community Mental Health Centers (CMHCs).

Components of the publicly supported mental health system for children include: certified mental health clinicians, day treatment programs, residential counseling centers, residential treatment, children's intensive services, psychiatric hospitalization, purchase of service, and diagnostic assessment services.

Medicaid is a major payer for mental health services in Rhode Island and an important source of support for the CMHCs. As described above, Medicaid funding is directed to the public mental health provider network

primarily via MHRH on behalf of adults with serious and persistent mental illness and by DCYF on behalf of children with severe emotional or behavioral disorders.

Mental health services are also provided through RItE Care as part of the managed care benefit plan. Each health plan provides and manages mental health services to its enrollees through its own in-house provider network. The State and the health plans share the risk of covered high cost mental health services via stop-loss provisions in the RItE Care contract. Annually, more than 6,000 RItE Care enrollees receive mental health services through their plan.

Community Mental Health Centers (CMHCs)

In Rhode Island, CMHCs are the backbone of the publicly funded mental health system. The CMHCs are private non-profit agencies that provide mental health services with a particular emphasis on community-based alternatives to institutionalization. Each CMHC is governed by a board of directors. There are eight CMHCs in Rhode Island plus three additional entities (Riverwood, North American Family Institute, and Fellowship Health Resources) that contract with the State to serve persons with SPMI. Each CMHC is responsible for providing non-inpatient mental health services in its catchment area to priority populations as defined by MHRH and DCYF. Additionally, the CMHCs have protocols in place to ensure cooperation and linkages with other public providers of mental health services statewide. CMHCs act as “gatekeeper” for all adult inpatient services.

Psychiatrists and Other Behavioral Health Care Providers

Addressing behavioral health needs may involve a multiple disciplines such as, psychiatry, psychology, counseling, social work and nursing. Also, sometimes behavioral health and physical health problems overlap. In some behavioral health disorder cases, mental health conditions can co-occur with substance abuse. According to a study of behavioral health care in the state by the Rhode Island Statewide Health Assessment Planning and Evaluation (SHAPE) Foundation, “Difficult Seas: Navigating Behavioral Healthcare in Rhode Island”, there are several key barriers to access behavioral care. These barriers include: lack of insurance, social stigma, fragmentation, communication barriers, lack of intermediate services and underfunding.

Rhode Island has approximately 50 child psychiatrists, but they are unable to meet the community needs. Compared to physical health services, behavioral health services have been underfunded. Behavioral health providers are reimbursed at lower rates than physical health providers, insurance plans place more restrictions on behavioral health benefits than physical health benefits. According to the *SHAPE Phase II Physician Workforce Study: Analysis of Supply, Demand and Potential Gaps*, published in December 2004, 36% of psychiatrists in Rhode Island are not accepting new patients.

The SHAPE Study projected that by 2006, the State’s 319 projected psychiatric beds are expected to be operating above capacity.

Health Professional Shortage Areas for Mental Health

Table 8 shows the six health professional shortage areas for mental health in Rhode Island.

Table 8: Health Professional Shortage Areas in Rhode Island: Mental Health

City/Town and Service Area	HPSA Type
Charlestown (Narragansett Indian Tribe)	Native American Population
Cranston (Adult Corrections Institute)	Correctional Facility
Cranston (Eleanor Slater Hospital)	Facility
Newport County (Portsmouth, Middletown, Newport, Jamestown, Little Compton, and Tiverton)	Geographic (Single County)
Northern Rhode Island (Cumberland, Lincoln, North Smithfield, Burrillville, and Woonsocket)	Geographic
Providence, Pawtucket and Central Falls (All Census Tracts)	Low-Income Population

Physician Supply and Distribution

Population per-physician ratios have been steadily decreasing over the past decade, suggesting that the growth in physician supply is outpacing the growth in the general population. According to the Rhode Island SHAPE Study sponsored by Blue Cross/Blue Shield of Rhode Island and published in 2002, this trend is evident nationally and in Rhode Island. Although Rhode Island appears to have an adequate supply of licensed physicians, issues remain regarding the number working in patient care activities and their geographic distribution. With 288 physicians working in patient care per 100,000 population (or ~3,123 physicians), Rhode Island exceeds the current US average by 25%. However, Rhode Island is below the New England average of 304 physicians per 100,000 residents. Although the SHAPE Study projects an adequate supply of physicians in Rhode Island by 2006, there are some regions in the state with potential areas of under-supply. In fact, there are ten areas (encompassing 14 cities/towns) in Rhode Island that have been designated as Primary Care Health Professional Shortage Areas in Rhode Island (see Table 9). Approximately 60% of licensed physicians are located in and around Providence. It should be noted that the number of licensed physicians is not the same as the number of full-time physicians working in patient care activities.

According to the Rhode Island SHAPE Study, Rhode Islanders visit their physicians 43% more often than US averages and 23% more than the Northeast region. Visits to primary care doctors constitute over 75% of office visits for children under age 18. It is estimated that Rhode Islanders visit a physician 4.3 times per year, which translates into 4.5 million office visits per year. Nearly half (47%) of these visits are for adult primary care, 34% are for specialty care and 19% are for pediatric primary care. Women account for nearly 60% of visits, principally to primary care physicians and physicians specializing in obstetrics/gynecology.

The study also found that the percentage of physicians accepting new patients vary by specialty with psychiatry being the lowest (64%) and obstetrics/gynecology specialties being one of the highest (100%); 87% of

pediatric primary care and 66% of family practice/general practice physicians were accepting new patients. The wait times for physician appointments also vary by specialty. For example, the current average wait time for family practice/general practice was the lowest at less than a week (0.83), pediatric primary care was 1.20 weeks, pediatric specialties was 1.64 weeks, and obstetric/gynecology primary care was the highest at 2.45weeks. A reasonable wait time is considered to be two weeks.

The *SHAPE Phase II Physician Workforce Study: Analysis of Supply, Demand and Potential Gaps*, published in December 2004, found that although more physicians have entered practices in Rhode Island than the number leaving the state, some specialties (including pediatric specialties) have experienced net outflows. The Study also determined that 23% of physicians under age 60 plan to stop practicing in Rhode Island in the next 3 years. In the future, the retirement outflow along with the number of physicians who plan to leave the state could result in more physicians leaving practice in Rhode Island than those coming into practice. Reimbursement rates and malpractice insurance costs have been cited as key factors for future physician out-migration. The study also projects that by 2020, the demand for Rhode Island physicians’ services will increase due to the aging of the state’s population. An increase of 32% in Rhode Island’s 65+ population by 2020 has been projected.

Table 9: Health Professional Shortage Areas in Rhode Island: Primary Care

City/Town and Service Area	HPSA Type
Burrillville, Foster, Glocester (Northwest Providence County)	Geographic
Central Falls and Pawtucket (All Census Tracts)	Low-Income Population
Charlestown (Narragansett Indian Tribe)	Native American Population
Cranston (Adult Corrections Institute)	Correctional Facility
East Providence (All Census Tracts)	Low-Income Population
Hopkinton (Hope Valley) (Wood River Health Services, Inc.)	Non-Profit Medical Facility
Newport and Middletown (Census Tracts: 402, 403.02, 405-408, 410, 412)	Low-Income Population
Providence (All Census Tracts)	Low-Income Population
South Kingstown (Wakefield) Health Center of South County	Non-Profit Medical Facility
Woonsocket (Census Tracts: 172, 174, 176, 178-182)	Geographic

Community Health Centers (CHCs)

Since their inception about 35 years ago, Community Health Centers (CHCs) have delivered community-based primary care to medically underserved populations, including the uninsured. A major portion of the funding for CHC operations comes from two federal grant programs and the Medicaid and Medicare programs. The remaining portion derives from state and local governments, patient fees that are set on a sliding-scale basis according to income and family size, private insurance, and other contributions. Overall, grants tend to offset the difference between the actual costs of providing care and the amount collected from third-party payments and fees. These grants usually pay for the care of the uninsured and medically underserved, as well as essential support services (e.g., transportation, translation, outreach, case management) not covered by traditional insurers. These support services are intended to improve the health outcomes of this socially and economically stressed population.

Rhode Island has 12 health centers spread over 22 sites throughout the state. Medical services provided by the centers include prenatal and obstetrical care, family planning, gynecology, pediatrics, family medicine, adult internal medicine, optometry, podiatry, nutritional counseling, and dental care.

Neighborhood Health Plan of Rhode Island (NHP-RI), an HMO created by the CHCs, contracts with RItE Care to help keep a critical mass of Medicaid recipients in the CHC system. (NHP-RI is one of 27 HMO-like plans in the country that are owned in whole or in part by Health Centers.)

Physician Assistants (PAs)/Nurse Practitioners (NPs)

There are 400 Physician Assistants (PAs) practicing in Rhode Island and of these, 187 have privileges to prescribe controlled substances. There are no PA training programs in Rhode Island. The two schools from which Rhode Island PAs have graduated most frequently are Northeastern University in Boston and Yale University in New Haven.

In 2005, there were 504 Nurse Practitioners and 106 Certified Nurse Midwives in Rhode Island.

Nursing Supply

According to a nursing workforce study published by the Statewide Health Assessment Planning and Evaluation (SHAPE) Study in October 2004, there are approximately 12,000 nurse full-time equivalents (FTEs) in Rhode Island. Specifically, there are 17,260 registered nurses and 2,573 practical nurses licensed in Rhode Island. However, only 72% of nurses are working in Rhode Island, with only 12,486 RNs and 1,865 LPNs. This translates into 10,000-11,000 RN FTEs and 1,550-1,650 LPN FTEs. Among the nurses working in Rhode Island, 8,385 RNs and 1,489 LPNs worked in direct patient care.

Physical Therapists

Allied health professionals are formally trained, licensed health care providers who practice in a variety of settings. They include psychologists, social workers, podiatrists, physical therapists, occupational therapists, speech therapists, and others. As of July 2005, there were 1,118 physical therapists practicing in Rhode Island. The number of licensed physical therapists in Rhode Island has increased over the past years.

Currently there is only one accredited educational program for the physical therapy profession in the state of Rhode Island. The University of Rhode Island offers a Professional Master's Degree Program. Although the number of graduates from all physical therapy programs is expected to continue to grow over the next several years, most programs only admit a very small percentage of applicants into the program. A lack of properly trained physical therapy faculty has forced most programs to put a cap on the number of students in each class.

Occupational Therapists

Occupational therapists provide rehabilitation services to individuals with physical, psychological, or developmental impairments. There are currently 584 occupational therapists employed in Rhode Island. The number of licensed occupational therapists in Rhode Island has increased significantly over the past decade. In 1997, there were 227 occupational therapists and by 2005, the number was 2.6 times higher (584).

Currently, most licensed occupational therapists in Rhode Island are employed by hospitals. The other settings in which occupational therapists practice include community mental health centers, schools for handicapped children, adult day care programs, outpatient clinics, rehabilitation facilities, nursing homes, sheltered workshops, and research facilities. However, no data exist currently regarding the number of occupational therapists in Rhode Island that practice in these settings. There are no occupational therapy programs in Rhode Island. Like physical therapy, occupational therapy is considered one of the fastest growing allied health professions.

The increased demand for occupational therapy services is attributed to advances in medicine that allow physicians to save lives that may have previously been lost, such as very low birth weight infants, children with birth defects, and victims of accidents and disease.

Speech Therapists

The number of speech-language pathologists and audiologists employed in Rhode Island has remained relatively stable. In 1999, there were 436 speech therapists and by 2005, there were 470 speech therapists. Schools employ almost 60% of all practicing speech pathologists in Rhode Island. The University of Rhode Island is the sole training institution in the state offering an accredited master's degree program as well as an undergraduate training program for speech-language pathology. Although the URI master's degree program enrolls no more than 50 students at any time regardless of demand for entry, the number of students completing the undergraduate program at URI has more than doubled in less than a decade. There has been a steady increase in the number of graduates from the URI speech pathology undergraduate and master's programs.

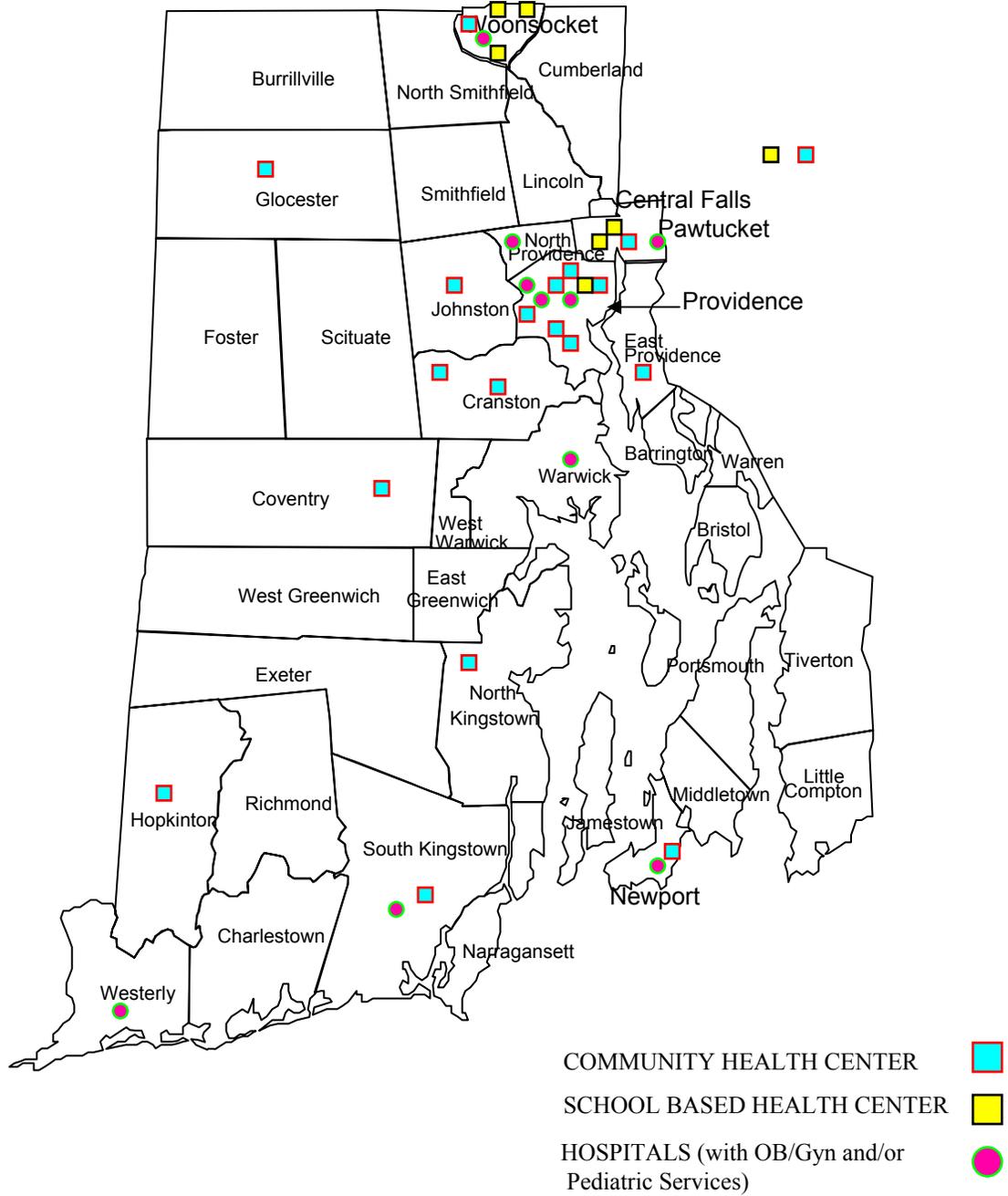
Hospitals

In Rhode Island there are fourteen hospitals and one inpatient treatment center licensed by the State of Rhode Island. Together these facilities comprise 3,928 beds, of which 700 were in a government-operated institution primarily providing care for chronic disease patients, 165 were in psychiatric hospitals and 82 were in a dedicated rehabilitation facility. Of the 14 hospitals, 11 are community general hospitals

and they report patient level data to the Department of Health. Nine of the community general hospitals provide obstetric/gynecologic and/or pediatric services. The location of these hospitals is shown on Figure 107.

Figure 107

Geographic Locations of Selected Health Care Providers RHODE ISLAND



Selection of State Priority Needs

Results from the statewide needs assessment, state and national performance measures, capacity indicators, and community-stakeholder provide a comprehensive picture of the MCH needs in Rhode Island. From this combination of quantitative and qualitative information, the DFH identified 10 priorities in 1999. Linked to these priorities are state and national performance measures. Together, the priorities represent each of the four levels of MCH services and all MCH population groups. Because the priorities relate to more than one level of services, the service level assigned to the priority was determined by its performance measure.

The DFH has developed new priorities and state performance measures for FY06 based on its comprehensive needs assessment and the community input received during FY05. The DFH's new priorities and state performance measures are listed below:

Family Health Performance Priority Needs and Draft Performance Measures

Priorities and Measures	Data Source
Priority 1: Improve Maternal Health through the Reproductive Lifespan	
<ul style="list-style-type: none"> ● % PRAMS respondents who report a diagnosis of depression before, during or after pregnancy 	PRAMS
Priority #2: Promote Healthy Lifestyles and Healthy Weights for All	
<ul style="list-style-type: none"> ● % children aged 2-5 with BMI's >95th percentile 	WIC
Priority #3: Engage, Empower, Support and Inform Parents	
<ul style="list-style-type: none"> ● % families with at-risk newborns that received a home visit 	Newborn Developmental Risk Screening (Level 1)
Priority #4: Support Safe and Healthy Environments for Children and Families	
<ul style="list-style-type: none"> ● % children with ≥ 10mg/dL who reside in core cities 	Lead Program
Priority #5: Address Social, Emotional and Behavioral Health Needs of the MCH Population	
% children who received a behavioral health service among children who received any school based health services	School-Based Health Centers
Priority #6: Improve Pregnancy Outcomes	
<ul style="list-style-type: none"> ● Ratio of the Black prematurity rate to the White prematurity rate 	Vital Records
<ul style="list-style-type: none"> ● % PRAMS respondents who report taking a multivitamin 	PRAMS
Priority #7: Assure all Rhode Island Families have a Medical Home	
% children (who have had at least one immunization) with complete immunization series (4:3:1:3) and at least one lead screening by age 2	KIDSNET
Priority #8: Enhance MCH Programs	
% at-risk newborns who live in a neighborhood/community with MCH community systems building partnerships (e.g., CATCH)	Newborn Developmental Risk Screening (Level 1)
Priority #9: Promote Healthy Human Development in Children, Adolescents and Families	
Regional Performance Measure: <i>Not finalized</i>	Survey
<ul style="list-style-type: none"> ● % licensed child care providers with on-site health consultants 	

The DFH's priorities and performance measures builds upon families' strengths and assets. New research in public health promotion is beginning to document how building a population's strengths and social capital can promote positive outcomes and avoid or mitigate negative ones.¹ In addition, asset-based community development activities throughout the country have also shown how empowerment, resiliency, and the ability of communities to build on their asset base can contribute to achieving desired changes. The asset-based measurement approach can complement more traditional measures of needs, morbidity, and remediation by highlighting capacity-building strategies to promote a population's strengths and minimize deficits. For instance, family resource centers (FRCs) can be effective multi-service delivery platforms with high degrees of family participation, trust and satisfaction. Measuring the prevalence of FRCs, identifying common elements of and services offered by an FRC, and gleaning best practices from the child and family outcomes related to use of an FRC can provide incentives and strategies to develop FRCs in new and existing service delivery models.

The DFH will discuss how its new priorities, national performance measures, new state performance measures, and program activities relate to the four levels of MCH services and all MCH population groups in detail in the Fy07 Title V MCH Application.

¹ Murphey, D., Lamonda, K., Carney, J., Duncan, P. Relationships of a brief measure of youth assets to health-promoting and risk behaviors. Journal of Adolescent Health. 2004, 34:184-191.