

Guam

Maternal and Child Health Needs Assessment



Needs Assessment of the Maternal and Child Health Population

Introduction

Every five years the Maternal and Child Health Bureau (MCHB) requires States to conduct a Needs Assessment to assure the appropriateness of each State's Maternal and Child Health (MCH) Services.

The Office of Maternal and Child Health Services, Chief Public Health Office, Division of Public Health, Department of Public Health and Social Services, has prepared the following Needs Assessment that identifies, consistent with health status goals and National health objectives, the need for: preventive and primary care services for pregnant women, mothers and infants; preventive and primary care services for children; and services for children with special health care needs.

The annual Government budget process includes several stages that are very similar to the stages and functions of the MCH Needs Assessment. In preparation for the annual budget hearings, where the Department of Public Health and Social Service's budget priorities are presented to the Governor and the Legislature, the department reviews and summarizes programmatic activities, service capacity, budget and emerging issues. Activities, budget and priorities are justified in terms of standard health indicators and program evaluation data. This annual, several month process takes place at the program level, the division level, then the departmental level and is finally presented to the Governor and in turn, the Legislature.

Divisional and departmental strategic planning has also contributed to the Needs Assessment process. The development of strategic plans is an internal process to identify priority needs, establish performance measures set targets and develop detailed plans.

The ultimate goal of the Needs Assessment is to strengthen partnerships and collaboration efforts within the Department of Public Health and Social Services and other agencies and organizations involved with MCH.

II. Needs Assessment

A. *The Needs Assessment Process*

The mission of the Guam Department of Public Health and Social Services Maternal and Child Health Program is to protect and promote the health of Guam's women, children and families by assessing health status, establishing evidence-based priorities and providing leadership to assure the availability of individual, family and population-based services which include children with special health care needs and their families. The Needs Assessment is one part of Guam's ongoing process of interpreting and summarizing quantitative and qualitative information in order to obtain an overview of Guam's women of childbearing age, infants and children and the service and organizational components required to effectively implement and support community-based systems of care.

This section of the application contains the Year 2005 Needs Assessment of the Maternal and Child Health Population. It includes a report that describes the health and well-being of infants, children, adolescents, women and children with special health care needs. A broad range of data and measures provide an in-depth look at the health of these populations in Guam today.

The Needs Assessment process is further described below. The process included input sessions and meetings with stakeholders and advisory groups that identified the needs, assessed the capacity of the community to address the needs and select the top priorities to be addressed with Title V funding. The priorities that were selected as a result of the identification of needs and the assessment of capacity are presented in the section Selection of State Priority Needs. The priorities are followed by a description of the process for developing the performance and outcome measures and the process for setting the targets for those measures.

B. Five Year Needs Assessment

1. The Process for Conducting the Needs Assessment

Description of the Overall Process

While the product of the Needs Assessment is created at a point in time, the Guam process is ongoing and dynamic. Both quantitative and qualitative results of the activities of MCH services are accumulated to be used as resources for the Needs Assessment. Qualitative sources were obtained through interface with direct services provided, population-based activities that provide feedback and infrastructure-building activities that interface with the community via non-profit organizations whose time is dedicated to systems-building activities. Another important component is the feedback obtained through the Block Grant review, including focus groups and key informant interviews, which represent selected population subgroups or types of services that generally have limited resources.

Quantitative information was gathered from MCH supported sources, traditional public health data systems and external sources that interface with other public and private services. Surveillance and other survey systems generally target the entire population of MCH age groups; this better describes the need for services from a population-based perspective rather than looking only at the indigent groups that public health programs typically serve. Other data sources utilized include those of partner agencies including education, social services, mental health, health care, financing and university-based studies.

The Five Year Needs Assessment for 2005 has been an opportunity to enhance the annual planning process for a comprehensive assessment of the health status of the maternal and child health population.

Formal and Informal Collaboration Process

Early in 2004, MCH staff talked with stakeholders around Guam regarding their perceptions of the health needs that were current or emerging. The stakeholders included health professionals working within public health, health professionals working outside public health, individuals involved with non-profit and advocacy organizations as well as consumers. As a more formal input process followed, the stakeholders included public health agency staff, representatives from welfare, food stamps, the University of Guam, the Guam Department of Education, the Community Health Centers, consumers and non-profit organizations.

Quantitative and Qualitative Assessment Methods

As reported above, through formal and informal collaboration process, qualitative data was gathered through the stakeholder process. The purpose was to learn about needs that we had not tracking so we could seek out sources of data or information to better understand such issues. This process corroborated needs and topics, which were considered to be important.

The quantitative assessment was carried out utilizing the most current data available for factors that measured the health status of the maternal and child health populations. The main sources of data included:

- Vital Statistics

Guam vital statistics are compiled every year by the Office of Planning and Evaluation. This report contains both birth and death statistics, reported diseases and data on birth outcomes such as complications in labor and delivery, preterm delivery rates and low birth weight, as well as information on certain maternal risk factors and prenatal care. Statistics are presented by various ethnic groups as well as by village.

Strengths – The major strength of vital statistics data is that it is comprehensive population-based island wide data, and therefore, there are sufficient cases to break the data down by geographic region, ethnicity or other subcategories and retain reliability.

Weakness – Some weaknesses have been noted with birth data as it relates to identifying risk factor and some diagnostic information. Short hospital stays make it difficult to identify conditions before mothers and babies are discharged; some problems may not emerge until after hospital discharge, such as certain complications or birth defects.

- Census Data

A census is the process of obtaining information about every member of a population.

Strengths – The major strength of Census data is that it is comprehensive population-based data.

Weakness – A weakness with this source of data is that it is point-in-time data. The Census is conducted every ten years, after time the data loses some value.

- Hospital Discharge Data

Hospital discharge data identify those health threats, which are sufficiently serious to result in a adult/child being admitted to the hospital as an in-patient.

Strengths – Discharge data are useful both to identify major health issues and to monitor progress in combating morbidity associated with specific diseases and conditions.

Weakness – A weakness of this source is that the populations served by military facilities are not represented. While this is a rich source of data, the total population is not represented in the data.

- Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a random-digit dialed telephone survey of health risk behaviors. The survey is designed through a Cooperative Agreement between the Centers for Disease Control and Prevention and the Guam Department of Public Health and Social Services. The survey is broken into three sections: the first section contains questions on health risk behaviors, the second section contains demographic information and the third section contains optional modules.

Strengths – The strength of the survey is the data is population-based and allows for state and national comparison. Since it is done annually, it is possible to generate historical trends.

Weakness – It is likely the survey over-estimates socially desirable behaviors and under-estimates socially unacceptable behavior. In addition, households without telephones are not captured by the survey.

- Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) was developed by the Division of Adolescent and School Health of the Centers for Disease Control and prevention. The survey has been implemented nationally approximately every other year since 1990. There are areas that are surveyed to assess adolescent health. These areas include intentional and unintentional injuries, tobacco use, alcohol and drug use, sexual and dietary behaviors and physical activity.

Strengths – The results from the YRBS provide local information on teen health behaviors. This information enables programs to identify specific risks and design programs.

Weakness – Survey questions are predetermined, standard and close-ended which could result in a failure to identify new and emerging trends and the most important aspects of current problems and issues. School-based survey methods are not able to reach those who are not attending schools or are receiving home or private instruction.

- Uniform Crime Report

The Uniform Crime Report was developed in 1930 to serve as a tool for operational and administrative purposes. To facilitate the program, a standardized set of definitions for specific criminal acts was devised.

Strength – Participation in the system is mandatory. There is a standard set of definitions that has been established and used since 1973. The data presented are representative of the island.

Weakness – Only incidents reported to law enforcement are captured and many of the contributing factors are not analyzed.

- Focus Groups and Key Informant Interviews

The Title V Program conducted focus groups and key informant interviews in 2004 and 2005. A total of 45 people participated in group meetings and one-to-one interviews.

In focus groups, standardized questions were used. The facilitators focused on obtaining as much information as possible on each question. Questions were not asked if no one in the group had any knowledge or experience regarding the question topic.

Strengths – The use of focus groups allows the facilitator to solicit in-depth qualitative feedback from clients that otherwise would not be known.

Weakness – Since participation in the focus group relied heavily on the recruitment efforts of Title V staff, the likelihood of selection bias is high.

Following the quantitative assessment, a series of input sessions were conducted. This process allowed discussion during which the issues impacting maternal and child health were identified, discussed and ultimately ranked for importance. The first “ranking” exercise was a simple straw vote, based on the participant’s sense of the importance of the issue to the community or constituency that he/she was representing. Subsequently, after having a chance to view other comments of other participants and a summary of results of the initial ranking, a second exercise for ranking was conducted. Participants were again asked to rank the importance of the issues in terms of the number of people impacted or the severity of the problem, whether the issue was perceived as a public health responsibility, the political feasibility of addressing the issue and the availability of funds to address the issue.

The Guam Title V Program intends for the Needs Assessment process to be on-going throughout the five year cycle. The structure is in place to produce “Fact Sheets” that will be shared with stakeholders, representatives from public/private agencies and the community.

2. Needs Assessment Partnership Building and Collaboration

Guam’s MCH Program has well established relationships with many partners, enabling a collaborative approach that allows us to work toward meeting the priority needs of Guam, assessing those needs and to aide in the decision making to address the needs that are identified. Some of our partners with whom we have relationships with include: other Section within the Division of Public health such as Emergency Medical Services, Chronic Disease, Nursing, WIC, Communicable Disease, Vital Statistics, and the Community Health Centers, other government agencies such as the Department of Education, the University of Guam, the Guam Memorial Hospital Authority, the Department of Mental Health and Substance Abuse and private health care providers.

a. Methods of Collaboration

Information and guidance for identifying and prioritizing the needs of the MCH population was obtained through collaboration with partners and occurs in varying methods. This includes serving on committees and providing a leadership role. MCH Program staff also facilitates and participates in advisory groups aimed at specific MCH issues such as family planning and adolescent substance abuse. Many programs, such as the Hemophilia Program, have established steering committees where input from specialists and stakeholders are obtained.

b. Results of Collaboration

The results of these collaborative partnerships are a wide variety of indicators that were useful in our needs assessment process. In addition, through these collaborative efforts, MCH is well thought of and welcomed as a partner in many public health activities.

c. Strengths/Weaknesses of Collaboration

There are many positive outcomes from our collaborative efforts. Bringing people together from different agencies and organizations with different specializations, backgrounds and experience gives a much more understanding of MCH issues that we all share.

As with any group or agency that are downsides to achieving goals when working with a multitude of people. Although data sharing is a major strength, it can be problematic when “ownership” issues arise. Furthermore, the inconsistency of members participating in the advisory groups and committees contribute to meeting the targets established in a timely fashion.

A general weakness or challenge of the Needs Assessment process is recording the breadth and diversity of activities that could be included in the Comprehensive Needs Assessment. Guam’s Title V activities intersect with numerous other federal and local programs, making it difficult to identify what most appropriately falls under the Title V Needs Assessment and what does not. Many activities that come to the attention of MCH are relevant to the MCH population but may not be specifically administered or “formally” linked with relevance to the Title V Needs Assessment. There are numerous activities that other public and private organizations are involved with that affect the public health of MCH populations that are carried out with MCH involvement. Limitations in the scope of influence and accountability of MCH, limitations of staff and limitations of funding must be recognized. However, we believe that the major activities and priorities affecting MCH services are being recognized.

3. Assessment of Needs of the MCH Population Groups

The assessment of needs using the quantitative and qualitative methods is provided at the end of Section II. The report was designed as a stand-alone document.

4. MCH Program Capacity by Pyramid Levels

The following section describes priority needs based on the four levels of the MCH pyramid.

- A. Direct Health Care Services
- B. Enabling Services

Direct health care services are defined as basic health services. Such services are generally defined “one-to-one” between a health professional and a patient in an office, clinic or emergency room. Basic services include what most consider to be ordinary medical care, inpatient and outpatient services, allied health services, laboratory services, x-ray services, dental care and pharmaceutical products and services. The Title V Program supports services such as prenatal care, child health and family planning. Direct health care services also include health care services for children with special health care needs.

Enabling services are defined as services that allow or provide for access to and the derivation of benefits from the array of basic health care services. Enabling services include transportation, translation, outreach, respite care, health education, family support services, purchase of health insurance, case management and coordination of care. These kinds of services are especially necessary for the low-income population, which is disadvantaged, geographically or culturally isolated, and those with special or complicated health needs.

Access to direct health care services due to financial barriers, lack of public or private insurance, and limited availability of providers serving low income populations continues to be an issue for Guam’s residents.

Despite a relatively high number of licensed physicians on the island, Guam is considered a Health Professional Shortage Area and a Medically Underserved Area. This is especially true in the areas of obstetrics and pediatrics. The lack of specialists and the remoteness of the island mean that primary care physicians must take over those functions too, thus exacerbating the lack of accessible care. This shortage of specialty care extends to most fields, including orthopedics, dermatology, neurology, critical care and cardiology. In other areas, such as neurology, gastroenterology, allergy/immunology and all pediatric subspecialties, there is no on-island care available at all. Thus, all physicians must maintain high skill levels, despite a lack of easily accessible continuing medical education.

For pregnant women, there are a number of system constraints that affect this particular population. There are considerable financial constraints, such as inadequate or no health insurance. For many women and families, their personal income affects their ability to access care, as items such as food and housing take priority. There is a limited availability of maternity care providers willing to serve economically disadvantaged high-risk pregnant women and their children.

There have been some improvements in systems that provide prenatal care via the Department of Public Health and Social Services Women's Health Component of MCH. The goal of the component is to prevent maternal and infant deaths and other adverse perinatal outcomes by promoting preconception health; assuring early entry into prenatal care and improving perinatal care. However, the resources to provide those direct care services are limited but are sufficient to be able to provide only primary levels of care.

Women of all ages need continued access to comprehensive family planning services, including emergency contraception. Unplanned and unwanted infants are frequently the victims of abuse and neglect, and may permanently affect a women's or families economic advancement and future job opportunities.

Guam's Title X Family Planning Program promotes awareness of and ensures access to reproductive health benefits by encouraging individuals to make informed choices that provide opportunities for healthier lives. The program provides: 1) medical and non-medical counseling about methods of contraception; 2) medical examinations and provision of contraceptive methods and 3) pregnancy counseling and testing.

The program also provides blood pressure screening, clinical breast exams, cervical cancer screening, follow up of abnormal Pap screens, counseling and treatment of sexually transmitted diseases and preconceptual care.

The Breast and Cervical Cancer Early Detection Program is a major force in Guam's Cancer Control Initiative. Implemented through a grant from the Center's for Disease Control National Breast and Cervical Cancer Early Detection Program, the program's purpose is to reduce mortality from breast and cervical cancers by establishing, expanding, and improving community-based screening services. Many women face economic and insurance barriers that prevent them from participating in a regular program of screening. Components of the program include public and provider education, community assessment, outreach to high-risk populations, surveillance, screening, case management, and follow-up services.

Like the rest of the United States, Guam struggles with the problem of uninsured and indigent care. However, the safety nets provided by academic teaching hospitals, as well as charitable, religious and non-profit community health organizations do not exist on Guam. Guam's indigent populations seek care at he Guam Memorial Hospital Authority Emergency Room, the Department of Mental Health and Substance Abuse Outpatient Clinic and Inpatient Units, or at clinics provided by the Department of Public Health and Social Services. These include Title V MCH clinics to pregnant women and young children, as well as federally subsidized Community Heath Centers located at each end of the island, which provide comprehensive primary care services to all residents on a sliding scale fee basis.

For children, ages 0 – 21, with disabilities and chronic conditions, the Guam MCH Program provides preventive and primary care. The Children with Special Health Care Needs (CSHCN) component offers a system of family-centered, coordinated,

community-based, culturally competent care. Services are provided either directly through Title V or by referral to other agencies and programs that have the capacity to provide medical, social and support services to this population.

Orthopedic services are provided by Shriner's Hospital for Children in Honolulu who provide orthopedic screening and treatment services twice a year.

The Early Hearing Detection and Intervention (EHDI) Program, within the Guam Center for Excellence in Developmental Disabilities Education, Research and Service (Guam CEDDARS), University of Guam works closely with MCH to ensure hearing screening for all newborns. The EDHI Program conducts initial hearing screening at the Guam Memorial Hospital Authority (GMHA). Follow up is provided for all infants with an abnormal newborn hearing screening, as well as infants that have not had a screening test. EDHI staff provides training and technical support to hospital personnel and work with private providers to facilitate follow-up hearing evaluations.

The Title V Program works closely with the Early Intervention Program, which provides coordinated, comprehensive multidisciplinary services to enhance the growth and development of children from birth through 36 months of age who have developmental disabilities bad delays. Services include case coordination, developmental therapy, physical therapy speech therapy, vision services and audiological services.

C. Population Based Services

Population-based services are defined as services that are intended for and available to the entire population, rather than for a select group of individuals. Disease prevention, health promotion and outreach come under this heading. Oral health, injury prevention, nutrition and public education are topics, which also belong in this category. Population-based services are generally available for women and children regardless or whether they receive care in the public or private sector or whether or not they have health insurance.

The Title V Program works with the local village mayors and the media to publicize Community based nursing clinics each month. The clinics provide public information and education, immunizations, abstinence education to adolescents and reproductive health services to prevent HIV infection, sexually transmitted diseases and ways to prevent unwanted and unplanned pregnancies. Other services that are offered include blood pressure screening, blood glucose screening, cholesterol screening and pregnancy testing.

The Guam Newborn Screening Program ensures that all newborns are screened before discharge from the hospital and again at the first medical visit, if the baby was initially screened before 48 hours old. The newborn screening battery consists of tests for the detection of Phenylketonuria (PKU), Cystic Fibrosis, Congenital Adrenal Hyperplasia, Galactosemia, Hemoglobinopathies, Hypothyroidism, and Biotinidase Deficiency. For infants with abnormal tests staff assist the primary medical provider in follow up to

ensure timely and appropriate confirmatory testing and if determined to be diseased, treatment.

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MCH refers qualified individuals to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). WIC is a nutrition and education program benefiting infants, children under age five, pregnant, postpartum, and breastfeeding women with low to no moderate-income levels. The program provides supplemental foods and nutrition counseling as an adjunct to health care. Enrolled participants receive foods tailored to their particular needs at contracted vendors. Nutrition education is offered at least twice during the client's certification period. Individuals with specific nutrition related concerns receive additional nutrition education contacts from nutritionists.

Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Program for Guam. EPSDT services include: 1) one or more physical exams each year based upon an age dependent periodicity schedule; 2) dental services; 3) vision services; 4) immunizations; 5) hearing services; 6) laboratory tests; 7) treatment for any health problems discovered during the exams; 8) referral to other medical specialists for treatment; 9) a check of the child's growth and development; 10) follow-up check-ups; 11) health education and guidance; and 12) documentation of medical history.

The Guam Immunization Program purchases vaccines used to immunize the population of Guam. Additionally, the program maintains a surveillance effort to record childhood immunization levels among two year old and school-age children. They also assist in the investigation of outbreaks of vaccine-preventable diseases and the promotion of immunizations through island wide media and outreach campaigns.

The Dental Health Program is responsible for the implementation of Guam Public Law 24-196 mandating preventive dental services for children below the age of 17; providing basic dental treatment for eligible low income children and providing emergency dental care for relief of pain for senior citizens 55 years and older. Recently, the Dental Health Program was awarded a grant through the Health Resource Service Administration (HRSA) to 1) encourage pediatricians and general practitioners who are employed at Public Health to apply fluoride varnish on their child patients who come for their well-child visits; 2) physicians at Public Health are trained to do oral health screenings and how to detect caries; 3) parents enrolled in the WIC Program will be given dental health education while their children receive a fluoride varnish treatment; and 4) children in

the Head Start Program will receive dental health education and fluoride varnish applications on their teeth.

The MCH Injury Prevention Component's mission is to reduce the number and severity of injuries to residents of Guam, with special emphasis on injuries to children. Staff provides training, technical assistance, educational materials, and safety products during community outreach. Injury specific topics include child passenger safety, product safety, shaken baby syndrome awareness, and playground safety.

The growth of Guam's adolescent population and growing awareness of adolescence as an opportunity for the prevention of health risk behaviors that are the leading causes of death among this age group and major contributors to adult mortality have led Guam to expand its focus on adolescent health promotion.

The Adolescent Health Team was developed to implement strategies to enhance the overall health of youth; to promote services and policies that are formed from a holistic youth development approach; to address adolescent health disparity issues; to create partnerships among all public/private organizations that address adolescent health issues; and to track and assess the 21 Critical Objectives for Adolescent Health, Healthy People 2010. An adolescent health data report is in the process of being drafted and should be completed in the fall 2005.

Teen pregnancy is considered a public health problem for several reasons related to the health of both mother and newborn. Early sexual activity can result in a higher risk for sexually transmitted diseases, which could harm the fetus and affect the future fertility and health of the mother. Preventive interventions to address teen pregnancy through Guam's Title V Program include programs to delay the onset of sexual activity, promote abstinence as the social norm, reduce the number of adolescents who have sex at young ages and increase the number of sexually active adolescents who use contraceptives.

The Guam Abstinence Only Education Program, founded in the fall of 1998, was implemented through a collaborative effort between the Guam Department of Public Health and Social Services and non-profit community organization. The Program's goals are to reduce out-of-wedlock births and sexually transmitted diseases in teens and to encourage sexual abstinence until marriage by: 1) supporting abstinence-only education programs for school-age children, male and female, grades 5 through 12; 2) developing and implementing strategic, island wide communication efforts designed to increase awareness and acceptance of abstinence as a healthy choice and a positive lifestyle; and 3) involving parents and the community in the development and implementation of programs and activities that are accessible and promote abstinence decisions.

The Department of Public Health and Social Services has made great strides in building capacity to provide care that is linguistically and culturally acceptable to many Guam families who do not speak and understand English well. Many of the care providers and support staff are bilingual in Chamorro, Filipino, and English and are familiar with the cultural beliefs and health practices of those ethnicities. However, linguistic and

culturally appropriate care for people from other ethnic and language groups, however, is very limited.

D. Infrastructure Building Services

Infrastructure building services are defined as services that are directed at improving and maintaining the health status of a population. Included among those services are development and maintenance of health systems, standards and guidelines, training, data and planning. Needs assessment evaluation, policy development, quality assurance systems and applied research are all contained within the infrastructure umbrella.

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With the tremendous increase in minority and other multicultural persons across the island, the demographics of childbearing women have changed. Non-English speaking Maternal and Child Health populations have more than doubled in the past few years, making language capability a primary barrier or enabler to service. We are striving to hire bilingual staff and develop translation resources, however, this need has not been fully met, as it requires resources not always available. Communication entails more than speaking the client's native tongue. Cultural competency encompasses delivery of services in a manner, which is acceptable to diverse groups. With this new challenge, health department personnel are learning through experience and some professional educational programs. For some cultures, religion, male/female decision-making hierarchies, previous health care systems and confusion about the U.S. health care system pose significant issues, which can affect the provision of MCH services. These are areas where MCH must practice cultural understanding and transform its own health care delivery to minimize these barriers. Competently serving multicultural groups remains a great need, as these populations continue growing and needing publicly supported MCH services on Guam.

Helping communities and clients understand the benefits and importance of MCH services constitutes another challenge. Staff conveyed that education and information, as well as changing some cultural norms and attitudes, are needed to promote planned pregnancies. The impact of unplanned pregnancies is enormous on society. To attain the goal of planned fertility, staff employs the best-known counseling methods to effectively communicate this message. Those on the front lines recognize, however, the need to go beyond education and help clients incorporate new behaviors. In this endeavor,

numerous psychosocial barriers persist for audiences such as teens. For many women and men, the concept of planning a pregnancy has no realistic meaning. The challenge remains to present this ideal and its benefits within a framework, which is culturally acceptable, attainable and desirable. Success in this area hinges upon reaching males, as well as female. Community-based efforts through health fairs, educational programs and public awareness campaigns have been augmented in the past few years, with great emphasis on abstinence promoting the concept and development of healthy and planned families poses another piece with critical work to be accomplished.

Maternal and Child Health has long identified the need to bring “hard to reach” populations into services. These groups, which can include minorities, substance abusers, and adolescents, pose the highest risks for unintended pregnancies. The needs remain to successfully provide outreach to these groups, as evidenced by the small number of males receiving MCH services. The Program keeps striving to find effective outreach methods. Some strategies have included alternative clinic sites, outreach workers and community based education programs. Some have worked. Transportation, another long-standing barrier, remains a need. Providing MCH to “hard to reach” populations remains a need.

Nearly twenty years have passed since the first Title V awards enabled Guam to initiate targeted maternal and child health services for low-income women. Today those funds provide MCH resources for low-income women throughout the entire island. Over this time, many issues, both negative and positive, have affected family planning, such as the advent of HIV/AIDS and the introduction of newer, highly effective methods such as the injectable and the patch. Family Planning has witnessed some critical successes. Among these is a significant decline in teen pregnancy.

5. **Selection of State Priority Needs**

Guam's Title V Program created the original Title V listing of priority needs for the 2000 Block Grant Application submission. The listing of priority needs was based on the 1999 Needs Assessment of the MCH population, review and analysis of other programs/agencies needs assessments and staff discussions. The priority needs that were developed were: 1) to decrease adolescent substance abuse; 2) to decrease child abuse and maltreatment; 3) to reduce cervical cancer among childbearing age women; 4) to decrease the incidence of youth violence; 5) to decrease the incidence of STD's; 6) to decrease youth tobacco use; and 7) to develop a system of care for children with special health care needs.

Summary of Process

The process used to determine the State's priority needs incorporated the same steps followed in the FY 2000 Five Year Needs Assessment process, I.e., assessing the needs, examining the capacity, selecting the priority needs and performance measures and setting the targets. The methods for each step varied, however. In both 2000 and 2005, we began with a comprehensive study of current data on health status of the Maternal and Child Health populations and soliciting input with staff and stakeholders.

Summary of Partnership Building

Participants in the stakeholder input process was solicited from a broad range of public and private agencies, professionals and advocacy groups and organizations. The input from the stakeholders provided their perception of the importance of the issues for each population group through the ranking and the comments of the participants. While the ranking of importance was anonymous, some participants did identify themselves, which was informative in understanding their input. The inclusiveness of the process has its benefits in that some of the individuals who participated in the process have become invested in the outcomes to be achieved and are now involved in the development of activities.

New State Performance Measures

State Performance Measure # 1 – To reduce the percent of pregnant women who received no prenatal care.

Priority area- To decrease infant mortality and morbidity, preterm births and low birth weight.

MCH Pyramid level- Direct health care.

Related Outcome Measure – Infant mortality rate, neonatal mortality rate, post neonatal mortality rate, perinatal mortality rate, child death rate and low birth weight rate.

Prenatal care has been referred to as the “window of opportunity”: to improve pregnancy outcomes. The purpose of prenatal care is to decrease the number of infants born too soon, too small and to prevent mother and infant sickness and death.

Inadequate prenatal care is a risk factor for low birth weight and other adverse pregnancy outcomes. Pregnant women who receive inadequate prenatal care are at increased risk of bearing infants who are low birth weight, are stillborn, or die within the first year of life.

State Performance Measure #2 – Proportion of low-income women who receive reproductive health/family planning services.

Priority area – To decrease infant mortality and morbidity, preterm births and low birth weight.

MCH Pyramid level- Direct health care.

Related Outcome Measure – Infant mortality rate, neonatal mortality rate, post neonatal mortality rate, perinatal mortality rate, child death rate and low birth weight rate.

The U.S. Public Health Services, in Healthy People 2000, set a target of 60% for the proportion of primary care providers giving age-appropriate preconception care and counseling for the year 2000. Unfortunately, the follow-up publication Healthy People 2010 reports that the progress for meeting this target for age-appropriate preconception care and counseling is unknown and, perhaps, limited.

It is difficult to determine the economic cost/benefit of providing or not providing preconception and interconception care because cost effectiveness of family planning, prenatal care and genetic counseling services would need to be considered. While high infant mortality rates provide support to initiate prevention campaigns, other reproductive problems such as spontaneous abortion, fetal and infant mortality, remain very costly reminders of lost or impaired human potential.

State Performance Measure # 3 – To decrease the percentage of women who use alcohol, tobacco and other drugs during pregnancy.

Priority area – To assure early identification and referral of substance abuse, domestic violence and child abuse and neglect.

MCH Pyramid level – Population-based services

Related Outcome Measure – Infant mortality rate, neonatal mortality rate, post neonatal mortality rate, perinatal mortality rate, child death rate and low birth weight rate.

Alcohol use during pregnancy increases the risk of Fetal Alcohol Syndrome, stillbirth and miscarriage as well as compromising the mother’s health.

Tobacco use during pregnancy may result in the increased risk of premature rupture of membranes, abruptio placentae, placenta previa, miscarriage, stillbirth, low birth weight, preterm birth and intrauterine growth restriction.

Similarly, use of street drugs during pregnancy exposes the fetus to a range of conditions from addiction and withdrawal after birth to birth defects, still birth, miscarriage, low birth weight/preterm birth and a greater risk of infant death as well as compromising the mother’s health.

State Performance Measure #4 – Reduce the incidence of maltreatment of children younger than age 18.

Priority Area – To decrease intentional and unintentional injuries in the MCH population.

MCH Pyramid level – Population-based services

Related Outcome Measure – Infant mortality rate, neonatal mortality rate, post neonatal mortality rate, perinatal mortality rate, child death rate and low birth weight rate.

Child maltreatment is among the most prevalent and far-reaching form of violence on Guam. It includes physical, sexual and emotional neglect. It contributes to fatal and non-fatal injuries, disabilities and mental health disorders and is associated with a range of social and intergenerational issues, including substance abuse and youth suicide.

All children should be raised in safe, nurturing and loving families. If untreated, the physical and emotional scars of abuse and neglect can last a lifetime. It can prevent children from learning in school and make young people more vulnerable to violence and drug abuse.

State Performance Measure # 5 – The prevalence of intimate partner violence in adolescent relationships.

Priority Area – To decrease mortality and morbidity among adolescents

MCH Pyramid level – Enabling services

Related Outcome Measures – Child/adolescent death rate

Intimate partner violence includes physical, emotional or verbal abuse; forced isolation; threats; or intimidation between current or former spouses, dating heterosexual couples and those in gay or lesbian relationships.

Adolescence is the developmental period that marks the beginning of romantic (dating) attachments. Unfortunately, with many of these relationships comes the onset of dating aggressions as well.

State Performance Measure # 6 – The percent of Guam high school students who have engaged in sexual intercourse.

Priority Area – To reduce unintended and intended adolescent pregnancies.

MCH Pyramid level – Population-based services

Related Outcome Measure – Infant mortality rate, neonatal mortality rate, post neonatal mortality rate, perinatal mortality rate, child death rate and low birth weight rate.

Teenage childbearing is associated with unfavorable outcomes for young parents, their children and society. Teen mothers have a higher rate of birth complications, a greater likelihood of experiencing psychological problems related to higher levels of stress, despair, depression, feelings of hopelessness, low self-esteem, and a sense of personal failure.

State Performance Measure # 7 – The percent of Guam high school students who are overweight.

Priority Area – To reduce unhealthy and risk-taking behaviors among adolescents.

MCH Pyramid level – Population-based services

Related Outcome Measure – Child/adolescent death rate

Weight and eating disorders are increasing among adolescents. Good nutrition is essential for good health, for healthy growth and development, and for feeling well. People who develop poor eating patterns in childhood often continue these patterns into

adulthood, increasing their risk for poor health and developing chronic diseases. Poor diet increases the risk for heart disease, Type II diabetes and osteoporosis. A poor diet also can promote the development of disease risk factors such as obesity, high blood pressure and high cholesterol.

State Performance Measure # 8 – To decrease adolescent substance use.

Priority Area – To decrease mortality and morbidity among adolescent; to reduce unhealthy and risk-taking behavior among adolescents.

MCH Pyramid level – Enabling services

Related Outcome Measure – Child/adolescent death rate

Young people are living in a world in which alcohol, tobacco and other drugs are readily available. They are surrounded by messages that glamorize chemicals, and community norms that give the message that the use of alcohol and tobacco is a normal part of adolescence. Together, these influences have a significant impact on the use of alcohol, tobacco and other drugs by youth.

The use of alcohol, tobacco and other drugs by Guam adolescents causes problems that are pervasive and have a significant affect on their health and development. It contributes to chronic disease, injuries, violence, unsafe sexual behavior, unplanned pregnancy, decreased productivity, social and family disruption, lack of educational attainment, medical and insurance costs, and cost for treatment and law enforcement.

State Performance Measure # 9 – Percent of Children with Special Health Care Needs (CSHCN) who have age appropriate completed immunizations.

Priority Area- To assure the all Children with Special Health Care Needs (CSHCN) have a medical home for comprehensive primary and preventive health care with coordination of all health and support services.

MCH Pyramid level – Infrastructure-building services

Related Outcome Measure - Infant mortality rate, child/adolescent death rate

Infectious diseases remain important causes of preventable illness in the United States despite significant reduction in incidence in the past years. Vaccines are among the safest and most effective preventive measures.

Needs Assessment Summary

The new/revised list of priority needs for Maternal and Child Health on Guam encompasses all levels of the MCH health services pyramid and in some cases, span the pyramid levels. Throughout the process of selecting the priority needs, participants preferred that the priority needs be looked at as “opportunities for improvement” that should be looked at in equal importance. The priorities that follow and the specific performance measures related to each stem specifically from areas of unmet needs on Guam.

The following are Guam’s Maternal and Child Health priority needs for the next five years:

1. To decrease infant mortality and morbidity, preterm births and low birth weight.
2. To decrease mortality and morbidity among adolescents.
3. To decrease intentional and unintentional injuries in the MCH population.
4. To increase care coordination and public awareness for children with special health care needs.
5. To reduce unintended and intended adolescent pregnancies.
6. To reduce unhealthy and risk-taking behavior among adolescents.
7. To assure early identification and referral of substance abuse, domestic violence and child abuse and neglect.
8. To assure that all children with special health care needs have a medical home for comprehensive, primary and preventive health care with coordination of all health and support services.

Justification and Changes in the State Capacity

The eight priority needs were selected through consideration of the quantitative data provided by the analysis of current data. The data were organized by the population groups of maternal, infant, child, adolescent and children with special health care needs. Qualitative data were also obtained through the stakeholder process, which considered needs by population groups. The stakeholder input qualitative data were particularly helpful in identifying emerging issues of care for specific population, e.g. adolescent health issues.

It is well known that the adolescent years present challenges to maternal and child health. While teenagers are for the most part healthy and active, they may engage in risk-taking behaviors that can result in severe injury, loss of life or behaviors that lead well into adulthood.

D. Health Status Indicators

A brief discussion of the Health Status Indicators is provided below. Additional data may be found on Form 20.

Birth Weight Indicators:

Health Status Indicator # 01 A

The percent of live births weighing less than 2,500 grams

Health Status Indicator # 02 A

The percent of very low birth weight live births

Low birth weight is one of Guam's biggest maternal and child health problems. Low birth weight and preterm births are two of the leading causes of infant mortality and morbidity. Both low birth weight and very low birth weight are associated with numerous long-term disabilities, including cerebral palsy, autism, mental retardation and vision and/or hearing impairment.

Data provided from the Guam Office of Vital Statistics, Live Birth Certificate files, shows that on 2004, 8.46 percent of Guam's infants are born weighing less than 2,500 grams and 1.4 percent born weighing less than 1,500 grams.

Health Status Indicator # 01 B

The percent of live singleton births weighing less than 2,500 grams

Health Status Indicator # 02 B

The percent very low birth weight live singleton births

These health indicators remove the impact of multiple births on the low birth weight and very low birth weight rates. Guam's experience since 2000 shows that the low birth weight rate has also increased from 6.7 percent of singleton births being low birth weight to 7.4 percent in 2004.

In 2000, the percentage of very low birth weight singleton births was 0.9 percent and in 2004, the percentage was 1.2 percent.

A focus on the proportion of women with inadequate weight gain during pregnancy and a continued emphasis on smoking cessation in pregnancy constitute Guam's major response to these problems.

Fatal Injury Indicators:

Health Status Indicator # 03A

The death rate per 100,000 due to unintentional injuries among children aged 14 years or younger.

Health Status Indicator # 03 B

The death rate per 100,000 due to unintentional injuries due to motor vehicle crashes among children aged 14 years or younger.

Health Status Indicator # 03 C

The death rate per 100,000 due to unintentional injuries due to motor vehicle crashes among youth aged 15 through 24 years.

Nonfatal Injury Indicators:

Health Status Indicator # 04 A

The rate per 100,000 of all nonfatal injuries among children aged 14 years or younger.

Health Status Indicator # 04 B

The rate per 100,000 of nonfatal injuries due to motor vehicle crashes among children aged 14 years or younger.

Health Status Indicator # 04 C

The rate per 100,000 of nonfatal injuries due to motor vehicle crashes among youth aged 15 through 24 years

On Guam, unintentional injuries are among the leading causes of death among children 1 through age 14 years. Among all unintentional injuries, motor vehicle crashes claim the highest number of lives.

The death rate for children due to unintentional injuries was 31.6 in reporting year 2000. The rate in 2003 climbed to a high of 59.4.

The MCH Injury Prevention Component's mission is to reduce the number and severity of injuries to residents of Guam, with special emphasis on injuries to children. Staff provides training, technical assistance, educational materials, and safety products during community outreach. Injury specific topics include child passenger safety, product safety, shaken baby syndrome awareness, and playground safety.

The growth of Guam's adolescent population and growing awareness of adolescence as an opportunity for the prevention of health risk behaviors that are the leading causes of death among this age group and major contributors to adult mortality have led Guam to expand its focus on adolescent health promotion.

Chlamydia Case Rate:

Health Status Indicator # 05 A

The rate per 1,000 women aged 15 through 19 years with a reported case of Chlamydia.

Health Status Indicator # 05 B

The rate per 1,000 women aged 20 through 44 years with a reported case of Chlamydia.

Reported Chlamydia rates among Guam females of all age groups have significantly increased from year 2000 to year 2004.

The Chlamydia rate for 2004 was 53.9, based on 228 cases among 4,230 women aged 15 through 17 years. In 2000, the rate was 21.6, a difference of 32.3, and an increase of 149.5%.

The Chlamydia rate for the older age groups of women was 14.9 in 2004, based on 554 reported cases among 37,125 women. In 2000, the rate was 10.6, a difference of 4.3 and an increase of 40.6%.

The goal of the Guam Family Planning Program is to improve the health of women of reproductive age by assuring that comprehensive quality family planning and reproductive health care services are available and accessible to citizens in need. The target population includes citizens in need of family planning services, with special attention to those who are uninsured and those with incomes below federal mandates to lower the incidence of unintended pregnancy and promote the health of women of reproductive age (Title X of the U.S. Public Health Services Act of 1970).

Program activities include the following:

1. Assuring reproductive health care by providing an array of preventive health care services including contraceptive care, reproductive health education and counseling, sexually transmitted disease services, HIV/AIDS prevention services, breast and cervical cancer screening, cardiovascular risk screening, and referrals for indicated health and Social Services; and
2. Developing community-based outreach strategies for reaching and serving young people, both male and female, who are at risk for unintended pregnancies.

Demographic Data:

Health Status Indicator # 06A, 06B, 07A, 07B, 08A, 08B, 09A, 09B, 10, 11 and 12.

Data are provided in Form 21 on the population of children by age and race/ethnicity (#06A and 06B), the number of births by age of mother and race/ethnicity (#07A and 07B), and the number of death by age and race/ethnicity (08A and 08B).

Information on a number of variables describing children (drop-outs, number on Medicaid, etc) and the state program available to children and families is contained under 09A and 09B.

The remaining tables (10-12) provide data on the geographic distribution of children (urban/rural) and the poverty levels of the population and of children.

E. Outcome Measures – Federal and State

Outcome Measure #1: The infant mortality rate per 1,000 live births.

Guam's infant mortality rate for the Year 2004 was 12.3 per 1,000 live births. While the Healthy People 2010 Objective of 7.0 was met in the year 2000 (6.1 deaths per 1,000 live births), the 2010 goal now appears some distance away.

Outcome Measure # 2: The ratio of black infant mortality rate to the white infant mortality rate. (This measure is not applicable to Guam).

Outcome Measure # 3: The neonatal mortality rate per 1,000 live births.

Guam's neonatal mortality rate for the year 2004 was 7.6 per 1,000 live births. The lowest level was the Year 2000, which was 2.9 per 1,000 live births. The Healthy People 2010 objective is still quite far away, and the 2004 rate suggest that attainment of the objective may not be possible.

Outcome Measure # 4: The postneonatal mortality rate per 1,000 live births.

Guam's postneonatal mortality rate for the year 2004 was 4.4 per 1,000 live births. The highest level was the Year 2003, which was 6.1 per 1,000 live births. The Healthy People 2010 objective of 1.2 is still quite far away, and the 2004 rate suggest that attainment of the objective may not be possible.

Outcome Measure # 5: The perinatal mortality rate per 1,000 live births plus fetal deaths.

The perinatal mortality rate (fetal deaths plus neonatal deaths per 1,000 live births plus fetal deaths) was 16.0 in 2004. The State target of 15 was not met.

Outcome Measure # 6: The child death rate per 100,000 children aged 1 through 14.

The child death rate was 24.3/100,000 in 2004. The State's target had been set at 20 for 2004. The Healthy People 2010 objective of 15.7 was not met, and is still some distance away.

Summary of National Outcome Measures:

All six outcome measure shown above measure fatalities to infants and children. None of the six Healthy People 2010 Objectives were met by the island of Guam.

NP # 1 The Percent of Newborns who are screened and confirmed with condition(s) mandated by their State sponsored Newborn Screening Program (e.g. Phenylketonuria and Hemoglobinopathies) who receive appropriate follow up as defined by their state.

Background

Newborn screening is the process of checking all newborns for the possible presence of serious medical conditions. Newborn screening is important because a newborn can look healthy, but still have a serious disease that cannot be seen. If untreated, these diseases can lead to slow growth, blindness, mental retardation and possibly death.

Screening programs for newborns and children have shown to be cost-effective and successful and have been shown to prevent mortality and morbidity. Their success reflects the systems approach from early screening to appropriate early intervention and treatment.

Healthy People 2010 Objectives

Related to Objective 16.20: Ensure appropriate newborn bloodspot screening, follow-up, testing and referral.

Status in 2004: 75.1%

Highlights of Efforts Addressing Performance Measure

All infants born at the Guam Memorial Hospital Authority, the Naval Regional Medical Center and the Sagu Mañagu Birthing Center are screened for seven disorders: Biotinidase Deficiency, Congenital Adrenal Hyperplasia, Galactosemia, Cystic Fibrosis Phenylketonuria, Hypothyroidism and Hemoglobinopathies.

The Title V Program has oversight over the Newborn Metabolic System by ensuring blood specimens are obtained, ensuring blood specimens are transported off-island, ensuring physician notification and newborn tracking. The MCH Program ensures that all infants who are diagnosed with metabolic and other disorders, and abnormal and unsatisfactory screening results, transferred off-island or not screened are tracked.

One of the goals of the Newborn Metabolic System is the reduction of specimens submitted to the laboratory, which fail to meet the criteria established for a satisfactory specimen. Such failure results in compromised or no test results, making a repeat blood collection necessary, which is a great inconvenience to the patient, and a repeat test, which is time consuming and expensive for the laboratory. The two principal reasons for the repeat testing are: 1) the inadequacy of the specimen and 2) the collection of the initial specimen too soon after birth.

NP # 2 The Percent of Children with Special Health Care Needs Age 0 to 18 Years whose families partner in decision making at all levels and are satisfied with the services they receive.

Background

Family and professional partnerships have been incorporated into the Maternal and Child Health Bureau Block Grant Application and the Maternal and Child Health Bureau Strategic Plan. The Omnibus Budget Reconciliation Act of 1989 mandated that the states provide and promote family centered, community-based, coordinated care. When families and children are fully informed and understand their health care options, better decisions can be made regarding their individual treatment and services.

Healthy People 2010 Objectives:

Related to Objective 16.23: Increase the proportion of states and jurisdictions that have service systems for children with or at risk for chronic and disabling conditions as required by Public Law 101-239.

Status in 2004: 54.8%

Highlights of Efforts Addressing Performance Measure

The Guam Title V Program is addressing this measure through continuation and Strengthening existing linkages and referral networks.

Other strategies being employed are: expanding outreach and support to culturally diverse population, providers and community organizations; identification of barriers that prevent families from accessing health care and the promotion of the Medical Home concept.

NP # 3 The Percent of Children with Special Health Care Needs Age 0 to 18 Years who receive coordinated, ongoing, comprehensive care within a Medical Home.

Background

Children with a stable and continuous source of health care are more likely to receive appropriate preventive care and immunizations, are less likely to be hospitalized for preventable conditions, and are more likely to be diagnosed early for chronic and disabling conditions. The Maternal and Child Health Bureau uses the AAP definition of medical home which states that a medical home is the provision of accessible, family centered, continuous, comprehensive, coordinated, compassionate, and culturally competent health care services in a high-quality and cost effective manner.

Healthy People 2010 Objectives:

Related to Objective 16.22: Increase the proportion of children with special health care needs who have access to a medical home.

Status in 2004: 56.7%

Highlights of Efforts Addressing Performance Measure

In 2000, two pediatricians associated with the Title V Program applied for and were awarded a mini-grant through the American Academy of Pediatrics. One of the goals of the mini-grant was to establish a multi-disciplinary "Special Kids" Clinic, which would provide a medical home for special needs children who lack health insurance or a regular provider.

Although the mini-grant funding has been exhausted, the "Special Kids" clinic continues to be operational. The clinic is held at the Northern Regional Community Health Center once a week. During the six months the clinic was operational in 2003, 103 children were seen.

There is a demonstrated need for professional education and training in the Medical Home model based on the American Academy of Pediatrics guidelines. Training should include the core elements of the medical home concept, as they can be adapted for the territory to meet the comprehensive needs of children and their families.

The Title V Program will convene a Medical Home Task Force comprised of family members and individuals from programs and other disciplines serving CSHCN including medical providers to develop a consensus of the evidence-based definition of Medical Home.

NP # 4 The Percent of Children with Special Health Care Needs Age 0 to 18 Years whose families have adequate private insurance and/or private insurance to pay for services they need.

Background

Children with special health care needs often require an amount and type of care beyond that required by typically developing children and are more likely to incur devastating expenses. This population of children and families has disproportionately low incomes and therefore is at higher risk of being uninsured. Since children are more likely to obtain health care if they are insured, insurance coverage and the content of that coverage is an important indicator of access to care. Because children with special health care needs often require more and different services than typically developing children, underinsurance is a major factor in determining adequacy of coverage.

Healthy People 2010 Objectives:

Related to Objective 16.23: Increase the proportion of states and jurisdictions that have service systems for children with or at risk for chronic and disabling conditions as required by Public Law 101-239.

Status in 2004: 56.7%

Highlights of Efforts Addressing Performance Measure

Much of Guam is rural and there is a large part of the population who are uninsured. These families receive medical care through the three public health centers or in the emergency room of the only public hospital -- thus burdening the island's health resources. Guam has been receiving SCHIP funds since 1998. However, many families are not eligible because they are insured by other means (sometime inadequate) or they fail to meet the financial income criteria. Of those families who do have private insurance, many have plans that only provide rudimentary coverage and do not provide for the extraordinary needs of children with chronic health conditions.

The Department of Public Health and Social Services received a grant from the Centers for Medicare and Medicaid Services (CMS) for the Real Choice Systems Change Grant. The goal of this grant is to create improvements in community long-term support systems so that individuals of any age, who have a disability or long-term illness, have the choice and necessary support systems to live and participate in their communities.

The Real Choice grant addresses this goal through the development of an infrastructure that helps agencies; providers and consumers make the necessary changes that will support people with disabilities in the community.

NP # 5 The Percent of Children with Special Health Care Needs Age 0 to 18 Years whose families report the community based service system are organized so they can use them easily.

Background

Families, service agencies and the Federal Interagency Coordinating Council have identified major challenges confronting families accessing coordinated health and related services that families need for their children with special health care needs. Differing eligibility criteria, duplication and gaps in services, inflexible funding streams, and poor coordination among service agencies are concerns in most states. Addressing these issues will lead to more efficient use of public funds and reduced family stress.

Healthy People 2010 Objectives:

Related to Objective 16.23: Increase the proportion of states and jurisdictions that have service systems for children with or at risk for chronic and disabling conditions as required by Public Law 101-239.

Status in 2004: 56.7%

Highlights of Efforts Addressing Performance Measure

Children with Special Health Care Needs (CSHCN) social workers serve the program participants by providing a holistic approach to care coordination. Multi-disciplinary team members participate with the child/family in planning the most appropriate care needed for the child. The multi-disciplinary team includes the child/parent, physicians, nurses, social workers, the school system, and any community services that may be providing services for the child.

NP # 6 The Percent of youths with special health care needs who received the services necessary to make transition to all aspects of adult life.

Background

The transition of youths to adulthood has become a priority issue nationwide, as evidenced by the President's "New Freedom Initiative: Delivering on the Promise" (March 2002). Over 90% of children with special health care needs now live to adulthood, but are less likely than their non-disabled peers to complete high school, attend college, or to be employed.

Healthy People 2010 Objectives:

Related to Objective 16.23: Increase the proportion of states and jurisdictions that have service systems for children with or at risk for chronic and disabling conditions as required by Public Law 101-239.

Status in 2004: Unknown

Highlights of Efforts Addressing Performance Measure

In recent years it has become apparent that greater majorities of children with special health care needs are surviving into adulthood -- many of who are capable of going onto lead productive adult lives. This fact has caused the MCH Program to start planning the making of critical changes in the manner in which services are rendered to adolescents, young adults and their families.

On Guam, children and adolescents who are participating in the CSHCN component receive transition care planning. We begin to talk about plans for the future. Included in the planning, which is provided by our social workers, is discussion about careers, training needs, independent living and sexuality.

NP # 7 The percent of 19 to 35 months old who have received full schedule of age appropriate immunizations against Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza and Hepatitis B

Background

Infectious diseases remain important causes of preventable illness in the United States despite significant reductions in incidence in the past 100 years. Vaccines are among the safest and most effective preventive measures.

Healthy People 2010 Objectives:

Objective 14.24: Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least 5 years. Increase the proportion of children aged 19 through 35 months who receive all immunizations to 80%.

Status in 2004: 50.7%

Highlights of Efforts Addressing Performance Measure

Since 1994, there have been three Measles outbreaks on Guam. During the 1994 outbreak, there were a total of 228 confirmed cases and 3 deaths. During the 2002 outbreak, which occurred between March and May, there were a total of nine confirmed cases.

While still below the targeted performance objective set by Healthy People 2010, the percentage of children being fully immunized by the age of 2 years has increased substantially over time, but has been stagnant over the past few years.

The Guam Immunization Program is not housed in the Office of Maternal and Child Health Services, but rather in the Bureau of Communicable Disease with the DPHSS. This program works closely with WIC, the birthing center and the private practicing medical community and other early childhood programs in an effort to get as many children fully immunized as possible.

Immunization is a vital part of every primary and preventive care visit. All health centers and community health clinics provide immunization services. Immunization records are checked for completeness at every visit and parents receive a copy of the recommended CDC/AAP Guidelines for Childhood Immunizations.

Background

The Department of Health and Human Services has made lowering the rate of teen pregnancies (a major threat to healthy and productive lives) a priority goal in its strategic plan. Teen parenting is associated with the lack of high school completion and initiating a cycle of poverty for mothers.

Healthy People 2010 Objectives:

Objective 9.7: Reduce pregnancies among females aged 15-17 to no more than 46 per 1,000 females aged 15 through 17.

Status in 2004: 27.7%

Highlights of Efforts Addressing Performance Measure

Within the Office of Maternal and Child Health Services is the Title X Family Planning Program. The Family Planning Program provides voluntary services. The program enables individuals, mostly women of reproductive age, and families to achieve their goals for family size. The program works to improve adolescent's understanding of human sexuality and contraception. The program provides medical evaluations, human sexuality education, contraceptive counseling and devices, infertility management, genetic counseling, referrals and health education. In CY 2003, Family Planning Programs services were provided to 526 female teens and 51 male teens under the age of 19.

In 2002, there were 4,029 females between the age of 15 and 17 years. There were 121 live births, which occurred in this population, the teen birth rate was 30.03.

In 2003, there were 4,116 females between the ages of 15 and 17 years. There were 101 live births, which occurred in this population; hence, the birth rate was 24.54, a decrease of 18.3%.

Title V has collaborated closely with the Guam Department of Education to administer the Youth Risk Behavior Survey (YRBS) in Guam middle and high schools. The data from the YRBS will allow MCH to have current data on adolescent risk-taking behaviors to use in policy and program development and to share with partners in advocating for policy and programs to address prevention measures.

Furthermore, within the Office of Maternal and Child Health Services is the Abstinence Education program, which offers sexual abstinence as a healthy choice in the prevention of pregnancy and sexually transmitted disease. The program facilitates the adolescent population in making the decision to become or remain sexually abstinent.

NP # 9 The percent of third grade children who have received protective sealants on at least one permanent molar.

Background

Dental caries affect two thirds of children by the time they are 15 years of age. Developmental irregularities are the sites of 80-90% of childhood caries. Sealants selectively protect these vulnerable sites, which are found mostly in permanent molar teeth. Targeting sealants to those at greatest risk for caries has been shown to increase their cost-effectiveness. Although sealants have the potential to combine with fluorides to prevent almost all childhood tooth decay, they have been underutilized.

Healthy People 2010 Objectives:

Objective 21.8: Increase the proportion of children who have received dental sealants on their molar teeth to 50%.

Status in 2004: 49.0% (reporting year 2003)

Highlights of Efforts Addressing Performance Measure

The Dental Health Program had a School Busing Sealant Program in which children in 1st through 8th grade, from the various public and private schools were bused into the dental clinics at DPHSS. A dental exam was performed and if recommended, sealants were applied. This program was discontinued due to budget constraints, and increase in bus fees as well as a shortage of buses.

The Dental Health Program applied and received a grant to implement a fluoride varnish program in which children under age 6 are offered fluoride varnishes. Children from the MCH Well-Infant/Child Checkups, the WIC Program and the Head Start Program would be integrated into the program.

Fluoride varnish would be offered to children beginning at age nine months to 5 years old. The varnish would be applied at the beginning of the project. The children will be given a dental exam prior to the application of the fluoride varnish. The children would be brought back in four months and their teeth re-examined and the varnish re-applied.

Efforts will be made to have oral health education included in all population-based activities for perinatal and adolescents. The MCH Program recognizes that good oral health for children begins with pregnant women and women of childbearing age.

Title V staff will continue to collaborate with the Dental health Program, dental providers, pediatricians and community based programs serving young families to ensure that each child, including those with special needs has appropriate care.

NP # 10 The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children.

Background

About 50% of all deaths of children aged 14 and younger are due to injuries, and around 80% of those are from motor vehicle crashes. Injuries are the leading cause of mortality in this age group, and is the most significant health problem affecting the nation's children.

Healthy People 2010 Objectives:

Objective 15.15: Reduce deaths caused by motor vehicle crashes to 9.0 deaths per 100,000 population.

Status in 2004: 2. 0% (reporting year 2002)

Highlights of Efforts Addressing Performance Measure

The Title V Program offered child restraint technical assistance and educational outreach through health fairs, seminars and workshops. Community outreach was accomplished through dissemination of educational materials such as brochures, pamphlets and presentations to various groups such as child-care centers, health fairs, schools and faith-based groups.

The Emergency Medical Services for Children (EMSC) Program provided injury prevention, infant and child safety and motor vehicle passenger safety education to students, school staff and community organizations.

The MCH Program in collaboration with the EMSC Program is reviewing existing injury prevention resources from the National Highway Traffic and Safety Administration, American Academy of Pediatrics and the Centers for Disease Control. The information will be tailored to fit the specific needs of agencies and communities that serve school-age children on Guam.

The Department of Public Works, Highway Section along with the Guam Police Department Highway Division have been promoting and enforcing the island's mandatory seat belt and child safety seat laws through a "Click It or Ticket" campaign. Major public awareness campaigns on the mandatory seat belt laws in conjunction with increased enforcement, stopping motorists and at special roadblocks are being held.

NP # 11 The percentage of mothers who breastfeed their infant at hospital discharge.

Background

The advantages of breastfeeding are indisputable and include nutritional, immunological and psychological benefits to both infant and mother, as well as economic benefits.

Healthy People 2010 Objectives:

Objective 16.19a: Increase the proportion of mothers who breastfeed their babies in the early postpartum period to 75%.

Status in 2004: 3.1% (reporting year 2002)

Highlights of Efforts Addressing Performance Measure

While the latest data on breast-feeding indicates that a low percentage of women chose to breast-feed their infants, this should not be taken as an indication of little effort on the part of the Department of Public Health and Social Services or, in particular, the Office of Maternal and Child Health Services.

The Guam Breast-feeding Coalition was established in November 2003. Members include public health nurses, social workers, MCH staff, medical practitioners, WIC, community based organizations and consumers.

The Coalition established three areas of emphasis to increase the rate of breastfeeding mothers on Guam: 1) increase support for breastfeeding; 2) develop a legislative agenda targeted at improving support for breastfeeding; and 3) increase education of health care providers on effective strategies to promote breastfeeding.

Structured breastfeeding classes have been implemented at the Central Public Health facility to ensure that all prenatal clients receive at least one breastfeeding education class during their pregnancy.

Women and their partners are taught the benefits and proper techniques of breastfeeding. Information on anticipated problem women may encounter during breastfeeding such as cracked nipples, engorgement and infection are discussed.

NP # 12 The percentage of newborns who have been screened for hearing before hospital discharge.

Background

Babies with hearing loss who are identified and receive services before six months of age have significantly better language skills than those who do not. This may help reduce the need for special education services later in childhood and help ensure success in school and society.

Healthy People 2010 Objectives:

Objective 28.11: Increase the proportion of newborns who are screened for hearing loss by age one month, have audiologic evaluation by age three months, and are enrolled in appropriate intervention services by age six months.

Status in 2004: 75.1%

Highlights of Efforts Addressing Performance Measure

To ensure that all infants born on Guam have access to newborn hearing screening prior to hospital discharge, the Guam Early Hearing Detection and Intervention (GEHDI) Program was established. The program is housed through the Guam Early Intervention Services Program, Department of Education and collaborates with Title V.

The primary goals of GEHDI are:

1. All newborns will be screened and will have a diagnostic audio logical evaluation before hospital discharge.
2. All infants who fail the screening will have a diagnostic evaluation before 3 months of age.
3. All infants identified with a hearing loss will receive appropriate early intervention services before 6 months of age (medical, audio logical and early intervention).
4. To decrease the number of false positive referral rates.
5. All infants with a hearing loss will have a Medical Home and parent-to-parent support.

The data for Guam Memorial Hospital indicates that 75.09% of infants born are screened prior to discharge and 23.3% were not screened. The rate of screening at Guam Memorial Hospital has improved 28% from the initial implementation data.

For infants that are born at the Sagua Mañagu Birthing Center, the data shows that 90.9% of infants are screened, however, for infants that either mother or baby have had complications during the birth, they are immediately transferred to Guam Memorial Hospital Neonatal Intensive Care Unit and are indicated under "not screened" which is about 25% of the clients.

Background

There is well-documented association between insurance status and utilization of health care services among adults. Less is known about the utilization of services in children.

Healthy People 2010 Objectives:

Objective 1.1: Increase the proportion of persons with health insurance to 100%.

Status in 2004: 14.3%

Highlights of Efforts Addressing Performance Measure

Much of Guam is rural and there is a large part of the population who are uninsured. These families receive medical care through the three public health centers or in the emergency room of the only public hospital -- thus burdening the island's health resources. Guam has been receiving SCHIP funds since 1998. However, many families are not eligible because they are insured by other means (sometime inadequate) or they fail to meet the financial income criteria. Of those families who do have private insurance, many have plans that only provide rudimentary coverage and do not provide for the extraordinary needs of children with chronic health conditions.

In 2002, according to the Behavioral Risk Factor Surveillance System (BRFSS) survey instrument, 14.32% of children under 18 on Guam had no form of health insurance. This would equate to 8,163 children in 2002 and 8,238 in 2003.

In 2003, according to the BRFSS, 21% of adults reported themselves as having no health insurance, this translates to 21,773 individuals.

NP # 14 The percent of potentially Medicaid eligible children who have received a service paid by the Medicaid Program.

Background

Financial access to health care does not guarantee that all children will enroll and access care; however, insured children are more likely to get care.

Healthy People 2010 Objectives:

Objective 1.4b: Increase the proportion of children and youth aged 17 years and under who have a specific source of ongoing care to 96%.

Objective 1.6: Reduce the proportion of families that experience difficulties or delays in obtaining health care or do not receive needed care for one or more family members to 7%.

Status in 2004: 34.0% (report year 2002)

Highlights of Efforts Addressing Performance Measure

This Performance Measures is not fully applicable to Guam, due to the Medicaid cap. Unlike the funding received by U.S. states, the Medicaid and SCHIP funding are capped. Guam receives a maximum of \$6.68 million a year.

The Guam SCHIP is administered by the Bureau of Economic Security, Division of Public Welfare of the Department of Public Health and Social Services.

The Child Health Insurance Program Plan, which has been approved by the Centers for Medicare and Medicaid (CMS). Allows for payment of unpaid medical bills for Medicaid eligible children less than 19 years of age whose medical expenditures were not paid because the Federal cap was exceeded. The waiver was allowed by CMS because Congress did not approve enough Child Health Insurance Program (CHIP) monies for the territories that would have allowed a "regular" CHIP.

The lack of financial access for low-income families also restricts their ability to choose private or primary care providers, since many providers do not accept Medicaid clients.

Background

Prematurity is the leading cause of infant death. Many risk factors have been identified for low birth weight involving younger and older maternal age,, poverty, late entry into prenatal care, smoking and substance abuse.

Healthy People 2010 Objectives:

Objective 16.10b: Reduce very low birth weights to 0.9%.

Status in 2004: 1.4%

Highlights of Efforts Addressing Performance Measure

A very low birth weight infant is an outcome of a broad number of risk factors that may lead to a premature delivery. These factors include chronic health conditions, obstetric complications, multiple births, behavioral risk factors such as smoking, alcohol consumption, illicit drug use, domestic violence and stress and low BMI at the time of conception among others.

A comprehensive prenatal history and a thorough physical examination are the best tools that help in the identification of the pregnant women at risk of premature delivery.

The percent of very low birth weight infants has increased from .87% in 2002 to 1.33% in 2003.

The Title V Program provides pregnancy risk assessments for all eligible women. The risk assessments identify and then attempt to educate all pregnant women identified as being at risk for poor pregnancy outcomes. Pregnant women are routinely referred to the WIC Program.

Title V conducts an Early Prenatal Counseling Class (EPCC) that provides education and information to pregnant women and their partners on the adverse effects of alcohol, drug and tobacco usage during pregnancy. In 2003, there were 594 participants attending EPCC.

Title V plans will be to address several risk factors that may lead to a premature delivery. Among others, these include, but are not limited to:

- Promote the importance of early and continuous prenatal care not only among consumers, but also among providers.
- Identify and address personal and health care system barriers.

Background

Suicide is the third leading cause of death in the United States among youth aged 15 through 19, and in many states it ranks as the second leading cause of death in this population group.

Healthy People 2010 Objectives:

Objective 18.1: Reduce the suicide rate to 6.0 deaths per 100,000 population.

Objective 18.2: Reduce the rate of suicide attempts by adolescents in grades 9 through 12 to a 12-month average of 1%.

Status in 2004: 14.4%

Highlights of Efforts Addressing Performance Measure

Our nation is facing a public crisis in mental health care for infants, children and adolescents. One in ten children and adolescents nationally suffer from mental illness severe enough to cause impairment. Yet, in any given year about one in five receive specialty mental health services.

In 2002, there were 6 deaths by suicide among youth aged 15 through 19. There were 13,234 youth within the ages 15 through 19, the rate per 1,000 was .45.

In 2003, there were 3 suicide deaths among the targeted age group. The rate per 1,000 was .22.

The Adolescent Health Initiative, a component of Title V, addresses the most prevalent health risks facing youth by empowering the community and supporting efforts that build resiliency and strengthening families. The mission is to communicate to all citizens of Guam that all youth need to be surrounded with networks and individuals that provide them with support, opportunities, boundaries and structure.

The primary goal of the Initiative is to improve the health status, health related behavior, and availability/utilization of preventative, acute and chronic care services among the adolescent population of Guam.

NP # 17 The percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates

Background

Very low birth weight infants are more likely to survive and thrive if they are born and cared for in an appropriately staffed and equipped facility with a high volume of high-risk admissions.

Healthy People 2010 Objectives:

Objective 16.9: Increase the proportion of very low birth weight infants born at Level III hospitals or sub-specialty perinatal centers to 90%.

Status in 2004: N/A

Highlights of Efforts Addressing Performance Measure

This PM is not fully applicable to Guam

Nearly two years ago, Continental Micronesia Airlines phased out its DC-10s and replaced them with 767 aircraft. While the change meant enhanced service, it had a negative implication for health care. As the new planes were not equipped to provide medical transport for infants in need.

In January 2004, the arrival of a Medical Transport System especially fitted for the 767 aircraft arrived. The unit cost almost a quarter million dollars.

However, in order to install the unit for transport, 6 seats have to be removed from the aircraft. Patients are charged for the 6 coach seats, at a medical discount rate. The price tag for the family can cost between \$6 -- 10,000 and that is without the medical staff that must accompany the patient.

NP # 18 The percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

Background

Early identification of maternal disease and risks for complications of pregnancy or birth are the primary reasons for first trimester entry into prenatal care. This can help ensure that women with complex problems and women with chronic illness or other risks are seen by specialists.

Healthy People 2010 Objectives:

Objective 16.16a: Increase the proportion of pregnant women who receive early and adequate perinatal care beginning in the first trimester of pregnancy to 90%.

Status in 2004: 59.8%

Highlights of Efforts Addressing Performance Measure

The Women's Health/MCH Clinics provide primary and preventive care to pregnant women, mothers and infants. Women are able to receive comprehensive reproductive health care including:

- Pregnancy testing
- Prenatal care and counseling
- Complete history and physical, including social, medical, behavioral and emotional risk factor assessment
- Complete physical examination
- Breast self examination instructions
- Health education
- Laboratory and diagnostic services
- Nutrition counseling, including education on lactation and breastfeeding
- WIC referral

MCH works in conjunction with the Title X Program to provide referrals to prenatal care for women who have positive pregnancy tests and assist them with access to early care. Title V plans will be to address several risk factors that may lead to a premature delivery. Among others, these include, but are not limited to:

- Promote the importance of early and continuous prenatal care not only among consumers, but also among providers.
- Identify and address personal and health care system barriers.

Background

All countries of the world measure the infant mortality rate as an indicator of general health status. The United States has made progress in reducing this rate, but the rate of decline has slowed in the last 10 years. Rates are much higher in the lower social class and in the lowest income groups across all populations.

Healthy People 2010 Objectives:

Objective 16.1c: Reduction of infant deaths (within one year) to 4.5 per 1,000 live births.

Status in 2004:

Guam's infant mortality rate for the Year 2004 was 12.3 per 1,000 live births. While the Healthy People 2010 Objective of 7.0 was met in the year 2000 (6.1 deaths per 1,000 live births), the 2010 goal now appears some distance away.

Highlights of Efforts Addressing Outcome Measure

A comprehensive prenatal history and a thorough physical examination are the best tools that help in the identification of the pregnant women at risk of premature delivery.

The Title V Program provides pregnancy risk assessments for all eligible women. The risk assessments identify and then attempt to educate all pregnant women identified as being at risk for poor pregnancy outcomes. Pregnant women are routinely referred to the WIC Program.

Title V conducts an Early Prenatal Counseling Class (EPCC) that provides education and information to pregnant women and their partners on the adverse effects of alcohol, drug and tobacco usage during pregnancy.

Title V plans will be to address several risk factors that may lead to a premature delivery. Among others, these include, but are not limited to:

- Promote the importance of early and continuous prenatal care not only among consumers, but also among providers.
- Identify and address personal and health care system barriers.

Outcome Measure # 2 The ratio of black infant mortality rate to the white infant mortality rate.

Background

The rate for black infant mortality is over twice the white rate. Black women are twice as likely as white women to experience prematurity, low birth weight and fetal death.

Healthy People 2010 Objectives:

Objective 16.1c: Reduction of infant deaths (within one year) to 4.5 per 1,000 live births.

Objective 16.1d: Reduce all neonatal deaths (within the first 28 days of life) to 2.9 per 1,000 live births.

Objective 16.1e: Reduce all post-neonatal deaths (between 29 days and one year) to 1.5 per 1,000 live births.

Status in 2004: N/A

This measure is not applicable to Guam

Outcome Measure # 3 The neonatal mortality rate per 1,000 live births.

Background

Neonatal mortality is a reflection of the health of the newborn and reflects health status and treatment of the pregnant mother and of the baby after birth.

Healthy People 2010 Objectives:

Objective 16.1d: Reduce all neonatal deaths (within the first 28 days of life) to 2.9 per 1,000 live births.

Status in 2004:

Guam's neonatal mortality rate for the year 2004 was 7.6 per 1,000 live births. The lowest level was the Year 2000, which was 2.9 per 1,000 live births. The Healthy People 2010 objective is still quite far away, and the 2004 rate suggest that attainment of the objective may not be possible.

Highlights of Efforts Addressing Outcome Measure

The Title V Program provides pregnancy risk assessments for all eligible women. The risk assessments identify and then attempt to educate all pregnant women identified as being at risk for poor pregnancy outcomes. Pregnant women are routinely referred to the WIC Program.

Title V conducts an Early Prenatal Counseling Class (EPCC) that provides education and information to pregnant women and their partners on the adverse effects of alcohol, drug and tobacco usage during pregnancy.

Background

The postneonatal period of mortality reflect the environment and the care infants receive. SIDS deaths occur during this period and have been recently reduced due to new infant positioning in the United States. Poverty and lack of access to timely care are also related to infant deaths.

Healthy People 2010 Objectives:

Objective 16.1e: Reduce all post-neonatal deaths (between 29 days and one year) to 1.5 per 1,000 live births.

Status in 2004:

Guam's postneonatal mortality rate for the year 2004 was 4.4 per 1,000 live births. The highest level was the Year 2003, which was 6.1 per 1,000 live births. The Healthy People 2010 objective of 1.2 is still quite far away, and the 2004 rate suggest that attainment of the objective may not be possible.

Highlights of Efforts Addressing Outcome Measure

The Title V Program provides pregnancy risk assessments for all eligible women. The risk assessments identify and then attempt to educate all pregnant women identified as being at risk for poor pregnancy outcomes. Pregnant women are routinely referred to the WIC Program.

Title V conducts an Early Prenatal Counseling Class (EPCC) that provides education and information to pregnant women and their partners on the adverse effects of alcohol, drug and tobacco usage during pregnancy. In 2003, there were 594 participants attending EPCC.

Title V plans will be to address several risk factors that may lead to a premature delivery. Among others, these include, but are not limited to:

- Promote the importance of early and continuous prenatal care not only among consumers, but also among providers.
- Identify and address personal and health care system barriers.

Outcome Measure # 5 The perinatal mortality rate per 1,000 live births plus fetal deaths.

Background

Perinatal mortality is a reflection of the health of the pregnant women and newborn and reflects the pregnancy environment and early newborn care.

Healthy People 2010 Objectives:

Objective 16.1b: Reduce the death rate during the perinatal period (28 weeks of gestation to 7 days or less after birth) to 4.5 per 1,000 births plus fetal deaths.

Status in 2004:

The perinatal mortality rate (fetal deaths plus neonatal deaths per 1,000 live births plus fetal deaths) was 16.0 in 2004.

Highlights of Efforts Addressing Outcome Measure

The Title V Program provides pregnancy risk assessments for all eligible women. The risk assessments identify and then attempt to educate all pregnant women identified as being at risk for poor pregnancy outcomes. Pregnant women are routinely referred to the WIC Program.

Title V conducts an Early Prenatal Counseling Class (EPCC) that provides education and information to pregnant women and their partners on the adverse effects of alcohol, drug and tobacco usage during pregnancy. In 2003, there were 594 participants attending EPCC.

Title V plans will be to address several risk factors that may lead to a premature delivery. Among others, these include, but are not limited to:

- Promote the importance of early and continuous prenatal care not only among consumers, but also among providers.
- Identify and address personal and health care system barriers.

Outcome Measure # 6 The child death rate per 100,000 children aged 1 through 14.

Background

Children's likelihood of survival increase dramatically after the first year of life. The Department of Health and Human Services strategic plan identifies improvements in the rates of preventable death as part of the primary goals for children and youth.

Healthy People 2010 Objectives:

Objective 16.2a: Reduce deaths in children aged one to four years to 25.0 per 100,000 in that age group.

Objective 16.2b: Reduce deaths in children aged five to nine years to 14.3 per 100,000 in the that age group.

Status in 2004:

The child death rate was 24.3/100,000 in 2004.

Highlights of Efforts Addressing Outcome Measure

The Title V Program offered child restraint technical assistance and educational outreach through health fairs, seminars and workshops. Community outreach was accomplished through dissemination of educational materials such as brochures, pamphlets and presentations to various groups such as child-care centers, health fairs, schools and faith-based groups.

The Emergency Medical Services for Children (EMSC) Program provided injury prevention, infant and child safety and motor vehicle passenger safety education to students, school staff and community organizations.

The MCH Program in collaboration with the EMSC Program is reviewing existing injury prevention resources from the National Highway Traffic and Safety Administration, American Academy of Pediatrics and the Centers for Disease Control. The information will be tailored to fit the specific needs of agencies and communities that serve school-age children on Guam.

The Department of Public Works, Highway Section along with the Guam Police Department Highway Division have been promoting and enforcing the island's mandatory seat belt and child safety seat laws through a "Click It or Ticket" campaign. Major public awareness campaigns on the mandatory seat belt laws in conjunction with increased enforcement, stopping motorists and at special roadblocks are being held.

Introduction

The island of Guam is located in the Pacific Ocean approximately 1,200 miles east of the Philippine Islands at 13 °28' north latitude and 144 ° 45' east longitude. Guam is part of an underwater range of mountains running southward from Japan. Situated in the Western Pacific, across the international dateline, it is the largest of more than 2,000 islands scattered between Hawaii and the Philippines. Guam is the southernmost and largest island in the Mariana Archipelago with a total land area of approximately 212 square miles. The island is 30 miles long and has a width varying from approximately 8.5 miles in the north, to 4 miles at its center to 11.5 miles in the south. Active reefs and 12 small-uninhabited limestone islands surround the island.

Guam's tropical climate features warm temperatures and high humidity throughout the year. There is a marked seasonal variation in rainfall, with July through December the rainy season, although some rain occurs during the dry season. March is the driest month, with an average of less than 2.5 inches of rain. The average humidity varies from an early morning high of 86% to an afternoon low of 72%. The atmosphere's high moisture content during the wet season, combined with the warm temperatures, contributes to the rapid deterioration of man-made materials through rust, rot, and mildew.

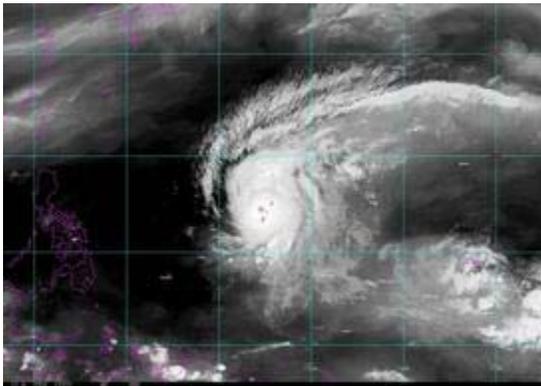


Typhoons, the most intense tropical cyclones observed anywhere, form over the open ocean of the Western Pacific. Most of these tropical cyclones are in their formative stages while near Guam. Although these systems often influence Guam's weather, they rarely strike the island. Because Guam is in the middle of tropical ocean waters, it is no stranger to tropical depressions, tropical storms, and typhoons. A tropical depression is a tropical low-pressure system with sustained winds usually greater than 29 mph, but less than 39 mph. A tropical storm is the same thing, except with sustained winds between 39 and 74 mph. Typhoons have sustained winds of 74 mph or greater. Especially intense typhoons with sustained wind speeds near 150 mph or more are "Super typhoons". Each year, the Pacific can expect about 30 such storms.

Although it is a less frequent occurrence, Guam has experienced direct hits from some very serious storms.

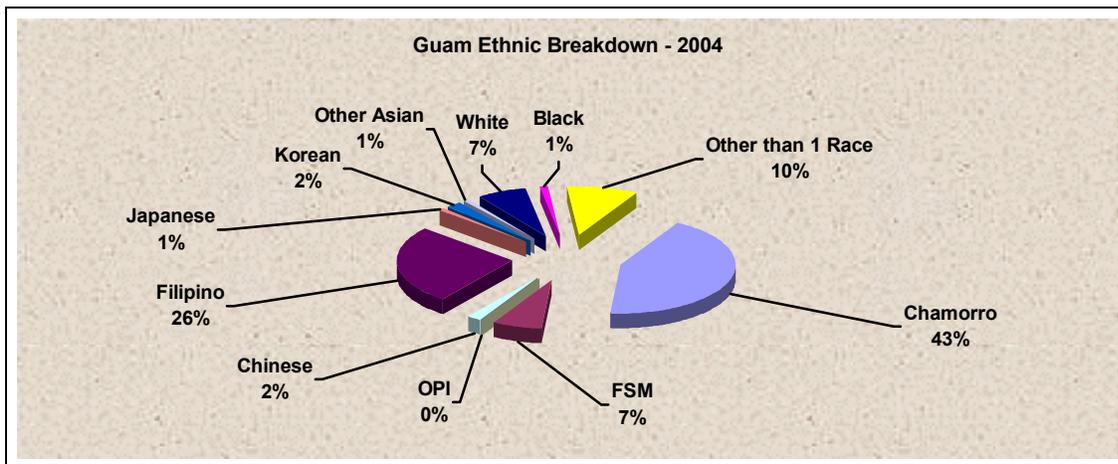
Typhoon Chata'an battered Guam in July 2002 with sustained winds of 110 miles per hour and gusts to 120 miles per hour. The storm caused massive damage, leaving the island powerless and with low to no water pressure in some areas. Hundreds of residents were left homeless.

Five months later, in December 2002, Super Typhoon Pongsona savaged the island. Pongsona was one of the worst typhoons to ever strike the island. It was Guam's third most intense storm with sustained winds of 144 miles per hour and gusts over 180 miles per hour. Damage estimates totaled more than \$700 million.



Source: National Weather Service

Guam is a cosmopolitan tropical island. The indigenous people of Guam are “Chamorros” with the balance of the population a mixture of “stateside” Americans, Chinese, Filipinos, Japanese, Koreans, Micronesians, and others. Though English is dominant, Guam is a melting pot where you will hear the languages of Chamorro, Japanese, Tagalog, Korean, and others.



Source: Guam Office of Planning and Evaluation, DPHSS

With over 160,000 residents, Guam is the most populated island in the geographical area known as Micronesia. Guam is only three jet hours away from the Asian capitals of Tokyo, Taipei, and Manila.

Guam's number one industry is tourism. In fact, significant to the island's history, Guam has received more than one million visitors each year. The number is expected to be higher in the years to come. Often called "Hotel Row," Tumon is Guam's scaled-down version of Waikiki Beach, Hawaii. The majority of the island's hotel rooms line breathtaking Tumon Bay. Japanese tourists keep most of the hotel rooms full. Offering great diving, golfing, and shopping, Guam is also becoming a popular vacation choice for many people in the Asian market. The island also has become the Western Pacific's major education, transportation, and communications center.

History

The Portuguese navigator Ferdinand Magellan discovered the island of Guam in 1521. The island was formally claimed by Spain in 1565 and its people were forced into submission and conversion to Roman Catholicism beginning in 1668.

In 1898, Spanish rule on Guam came to a halt when Captain Henry Glass captured the island at the start of the Spanish-American War. On December 10, 1898, Guam was ceded to the United States from Spain by the Treaty of Paris, to be administered under the Department of the Navy. The following February, the United States officially took possession of Guam. U.S. Naval Station, Guam was established in August of that year with the entire island designated as a Naval Station.

Naval Station controlled Guam until it surrendered to the Japanese December 10, 1941. The people of Guam experienced something that is unique in the American framework. Guam was the only American territory with civilians who lived on it that was occupied by a foreign power since the War of 1812. During World War II, the Aleutian Islands of Attu and Kiska were occupied by the Japanese, but before that the civilians of those islands were evacuated by the military. In the case of Guam, approximately 20,000 native Guamanians were considered U.S. nationals. They were not aliens. They were non-U.S. citizens, but they were considered U.S. nationals.

The people of Guam endured 32 months of Japanese occupation. The occupation of Guam was especially brutal for two reasons. First, the Japanese were occupying an American territory with American nationals whose loyalty to the United States would not bend; and second, the Chamorros, the indigenous people of Guam, dared to defy the occupiers by assisting American sailors who hid and evaded initial capture by the enemy by providing food and shelter. In the final months of the occupation, the brutalities increased. Thousands of Chamorros were made to perform forced labor by building defenses and runways for the enemy. Others were put into labor in rice paddies. On at least two occasions, Chamorros were herded into caves and live grenades thrown in by their Japanese captors. The war in the Pacific turned for the worse for the Japanese occupiers, and in the final weeks, the pre-invasion bombardment by American planes and ships signaled the beginning of the end.

The island remained under Japanese rule until July 21, 1944 when U.S. forces returned to liberate the island. This day is now annually celebrated as “Liberation Day”.

In 1944, the Commander in Chief of the U.S. Pacific Fleet arrived and defeated the Japanese Imperial Forces on the island, aiding American efforts to end the war. During the battle to liberate Guam, over 80% of the buildings were destroyed. The village of Agana (capital of Guam) and the village of Sumay were completely annihilated.

Once the island was secured, Guam became the forward operating base for the subsequent invasions of the Philippines, Iwo Jima, and Okinawa. Over 45% of the land mass of the island was acquired for the war effort and over 20,000 military personnel came to Guam to fight the war against Japan. The Chamorros were temporarily housed in refugee camps. From 1944 to 1949 was an era of military government, the officers who served as Commander, U.S. Naval Forces Marianas were also charged with civil responsibilities such as Governor.

In 1950, Congress passed the Organic Act under which Guam became an organized unincorporated territory of the United States. The governor was appointed by the President, and the administration fell under the jurisdiction of the Department of the Interior. Guam’s first popularly elected governor took office in 1971 and Guam elected its first non-voting delegate to the U.S. Congress in 1962.

Compact Impact

The Compact of Free Association Act of 1985(P.L. 99-239), implemented in 1986, established the relationship between the United States and the Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI). The Compact of Free Association Act of 1985(P.L. 99-658), implemented in November 1994, establishes the relationship between the United States and The Republic of Palau. The Compact of Free Association Amendments Act of 2003(P.L. 108-188) renewed the original Compacts of Free Association (P.L. 99-239) between the United States and the Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI). Compact immigration provisions authorize unrestricted immigration into the United States, its territories and possessions, enabling citizens of these nations to enter into, lawfully engage in occupations, and establish residence as non-immigrant aliens.

In recognition of the possible adverse impact to Guam’s economy of providing health care, education, job training, and public assistance to the peoples of a foreign nation not domiciled on Guam, Congress promised to appropriate sums to cover costs incurred by Guam resulting from any increased demands placed on educational and social services by immigrants from the Marshall Islands, the Federated States of Micronesia, and Palau (collectively known as the Freely Associated States). Annual reports are to be submitted to the Secretary of the Department of the Interior who “shall review and forward any such reports to the Congress with the comments of the Administration.”

A provision in Public Law 108-188 authorizes the President of the United States, at the request of the Governors of Guam and the Commonwealth of the Northern Mariana Islands, to release, reduce, or waive, in whole or in part, any amounts owed to the United States government as an offset for past un-reimbursed compact impact costs by their respective governments. Guam's Compact Impact Reconciliation Report and the attestation by an independent accounting firm were submitted to the Department of the Interior on April 13, 2004. The un-reimbursed Compact Impact costs for the period FY 1997 to FY 2003, which could be supported by documentation, totaled \$269 million. The un-reimbursed cost includes \$178 million for education, \$48 million for health, welfare, and labor, and \$43 million for public safety.

Income

Income is related to health for a variety of reasons. For example, financial resources allow residents to pay for health care, as well as for food and other goods and services that can have an impact on health. In addition, those with higher income may have better access to education and information about their health, may engage in fewer health risk behaviors and more preventive health behaviors, and may have higher self-esteem and feelings of efficacy that can affect their health.

The Guam Census 2000 reported the median household income to be \$39,617. The income median has slightly increased to \$41,196 in 2003 due to a slight upward trend in the economy. Prices for goods, however, continue to increase considerably due to the high cost for travel, shipping, and fuel.

Per Capita Income for 2003 was \$11,254 an increase of \$382 or 3.5% from calendar year 2001. The Mean Earner's Income for 2003 was \$21,778, which was \$176 or 0.8% above the calendar year 2001 amount.

Unemployment

Civilian unemployment includes those individuals 16 years of age and older who are not working but are able, available, and looking for work. Individuals who are waiting to be recalled from a layoff and individuals waiting to report to a new job within 30 days are also considered to be unemployed.

Employers often contribute to health care coverage, which can improve access to health care for those who are employed. In addition, unemployment reduces one's income, which is related to health in a variety of ways. Because employment is often associated with being a responsible and valued member of society, unemployment can result in feelings of personal inadequacy that have a profound effect on one's health and the health of one's family.

A tourist-driven economy has made Guam dependent on the rise and fall of economies of other countries within relatively close proximity to the island. In the early 2000's, two major hotels closed due to a decreased demand for accommodations, which resulted in approximately 400 jobs eliminated. The hotel closures added an additional strain on

the social services provided to the local community. Today, Guam's economy is seeing an increase in tourist arrivals contributing to the decrease in the employment rate from 15.3% in July 2000 to 7.7% in March 2004. However, the unemployment rate on Guam continues to be reported at a higher rate than the U.S. national average.

Poverty

The Federal government's 2005 poverty guidelines define \$19,350 as poverty level income for a family of four (poverty level income varies with family size). Many of those living in poverty are working, but earning minimum wage and/or working part-time. Others are receiving public assistance.

There is a relationship between income and health. Individuals living in poverty tend to be those most chronically and severely affected by stresses. For many in this category, access to health care is limited by the lack of private health insurance, or for those receiving public health insurance, by the unwillingness of many private health care providers to accept public health insurance. Access can also be limited by other factors, such as lack of access to public transportation.

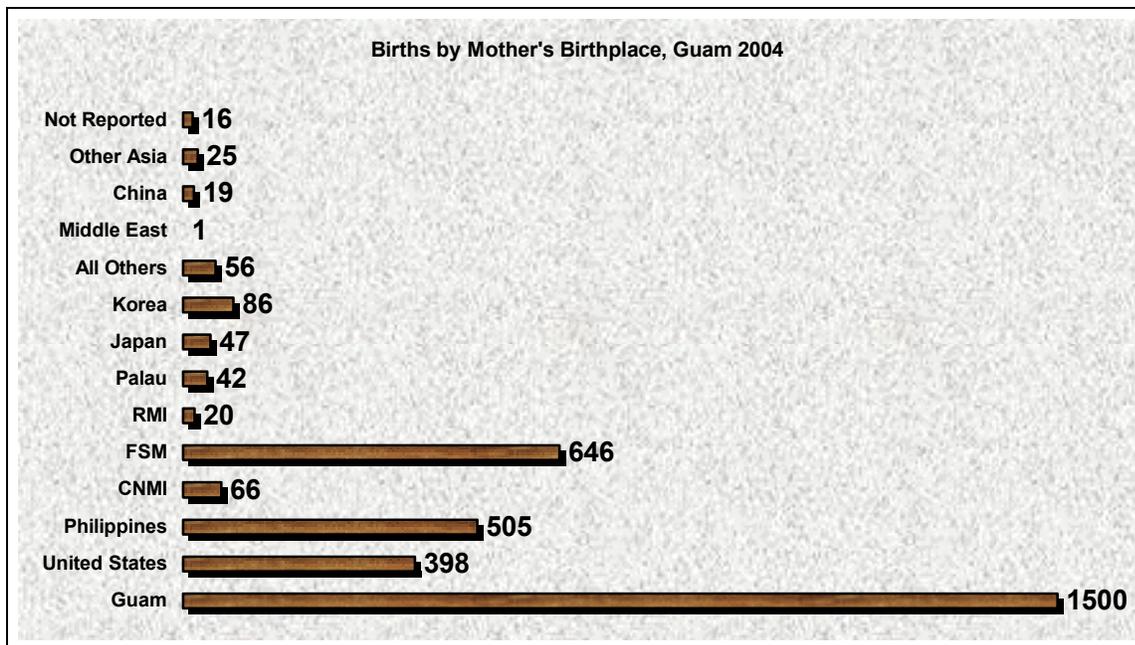
According to the U.S. Census Bureau, between 1989 and 1999, the number of children living in families with incomes below the poverty line grew 77%, from 8,756 to 15,509. The percentage of children in poor families increased from 19% in 1989 to 29% in 1999.

Race/Ethnicity and Birth Rates

A person is classified as white/Anglo, Hispanic/Latino, Black/African American, Indian/Native American or Asian/Pacific Islander as they have identified themselves on the census.

Birth rates are calculated as the number of births to women of a particular race/ethnicity divided by the population of women aged 15 through 44 of that race/ethnicity.

Racial and ethnic designations are proxies first for socioeconomic status and secondly for living conditions of groups of people. Finally, they act as proxies for certain cultural, and behavioral patterns and health disparities.



Source: Office of Vital Statistics, DPHSS

Characteristics of Births and Deaths Guam 2000 - 2004

	2004	2003	2002	2001	2000
Total Births	3427	3298	3222	3583	3787
Males per 100 Females	108.5	104.1	110.6	108.1	104.2
Percent Illegitimate Births	57.2	55.4	55.1	55.8	54.6
Total Deaths	691	700	658	691	667
Males per 100 females	160.8	156.4	136.7	171	163.6
Infant deaths under 1 year	42	37	20	35	23
Fetal Deaths	N/a	43	42	49	35
Rate per 1000 deliveries	N/a	12.9	12.9	13.5	9.2

Source: Office of Vital Statistics, DPHSS

Live Births, Deaths and Natural Increase of the Population Guam 2000 - 2004

	2004	2003	2002	2001	2000
Live Births	3427	3298	3222	3583	3787
Deaths	691	700	658	691	667
Natural Increase	2736	2598	2564	2892	3120
Birth Rate	20.6	20.2	20	22.6	24.5
Death Rate	4.2	4.3	4.1	4.4	4.3
Percent Increase	16.5	15.9	15.9	18.2	20.2

Source: Office of Vital Statistics, DPHSS

**Age Specific Fertility Rates Guam
2003**

	Females	Births	Age-Specific Fertility Rates
Total fertility rate			2.70
Total	53,227	3295	0.539196
10-14 years	7,597	3	0.000395
15-19 years	6,654	355	0.053351
20-24 years	5,990	883	0.147412
25-29 years	5,841	854	0.146208
30-34 years	6,439	717	0.111353
35-39 years	6,113	389	0.063635
40-44 years	5,671	87	0.015341
45-49 years	4,757	6	0.001261
50-54 years	4,165	1	0.000240

Source: Office of Vital Statistics, DPHSS

Infant Mortality

Healthy People 2010 Objective: By 2010, reduce the infant mortality rate to no more than 7 per 1,000 live births.

What is it?

Infant mortality is the death of a child less than one year of age. Infant mortality is commonly separated into two components: neonatal mortality (deaths during the first 0-27 days of life) and post neonatal mortality (death at 28 days of age or later, but within the first year of life).

Significance:

The infant mortality rate is generally regarded as a quality of life indicator of both the health and welfare of the population.

Neonatal mortality tends to be closely associated with low birth weight and with influences occurring prenatal, during birth, and in the newborn period – such as poor maternal nutrition, and health habits, lack of high-quality obstetric and neonatal health services, and congenital defects not compatible with life. Post neonatal mortality generally tends to be associated with environmental circumstances for the infant, particularly those linked to poverty—such as inadequate food or sanitation, unsafe housing, lack of health care services and inadequate supervision.

Life style risk factors contribute to fetal and infant deaths. The use of alcohol, tobacco and drugs during pregnancy is a major risk factor for low birth weight and is linked to preterm delivery, SIDS and respiratory problems in newborns.

How are we doing?

From 2000 to 2004, Guam's infant death rate rose from 6.07 to 12.25 deaths per 1,000 live births. The increase was gradual through the five-year period, and was not confined to any particular age or ethnic group. Further research using a ten-year linked birth and infant death record file is beginning, to study maternal characteristics that may lead to infant deaths on Guam.

Low Birth Weight and Very Low Birth Weight

Healthy People 2020 Objective: By 2010, reduce low birth weight to no more than 5% of live births.

By 2010, reduce very low birth weight to no more than 0.9% of live births.

What is it?

Low birth weight (LBW) infants are live births weighing less than 2500 grams (5.5 lbs) at birth. Very low birth weight (VLBW) infants weigh less than 1500 grams (3.5 lbs) at birth.

LBW and VLBW infants fall into two categories: those who are small because they are born prematurely (fewer than 37 weeks gestation) and those who are full-term but are small for their gestational age.

Significance:

Low birth weight and preterm births are two of the leading causes of infant mortality and morbidity. Both LBW and VLBW are associated with numerous long-term disabilities, including cerebral palsy, autism, mental retardation, and vision and/or hearing impairment.

A number of risk factors for low birth weight have been identified, including younger and older maternal age, poor reproductive history (especially history of low birth weight births), high parity, low level of education, late entry into prenatal care, low socioeconomic status, low pregnancy weight, smoking and substance abuse.

How are we doing?

Low birth weight and prematurity continue to be a challenge for Guam's mothers and infants. Data provided from Guam Office of Vital Statistics, Live Birth Certificate files, show that in the year 2000, 6.7% of Guam's infants were born weighing less than 2,500 grams and just under 1% were born weighing less than 1,500 grams. By 2004, 8.46% of Guam's infants were of low birth weight and 1.4% were of very low birth weight. Like infant deaths, the increase was steady over the five year period. Further research into causes of low and very low birth weight will parallel that of research into infant death.. Preterm births (defined as live births at less than 28 weeks gestation) were 6.65% of all births.

Children without Health Insurance

Healthy People 2010 Objective: By 2010, increase the proportion of persons with health insurance to 100%.

What is it?

According to the American Academy of Pediatrics, medical care for infants, children and adolescents should be accessible, continuous, comprehensive, family-centered, coordinated, culturally sensitive and compassionate. The Academy believes that physicians and families should be in long-term relationships characterized by mutual responsibility and trust. Services provided should include preventive, primary and acute care, and inpatient hospital and ambulatory care extended over a duration that is available 24 hours a day, 7 days a week. The goal of these services is to establish a "medical home."

Significance:

Children without access to health care pay a price in lower school achievement, greater and more complex health problems late in life and diminished opportunities for success. Children are at increased risk for developing preventable conditions if appropriate health maintenance, diagnosis and treatment are not provided in timely manner.

Reasons for the lack of health care insurance are many. Some of the reasons include: families are unaware of public insurance programs, do not know that their children may be eligible, or believe that the insurance is not needed; enrollment requirements are complex; stigma associated with public health insurance; language and cultural barriers; breaks in coverage due to renewals not being sent in or incorrectly completed by the parent or the program.

How are we doing?

As reported by the Public Welfare Division, DPHSS, May 2005, there were 60,687 children and teens, birth through age 18, living on Guam of which 8,690 or 14% were without health insurance. Of the 8,690 children without health insurance, 2,433 or 28% are children birth through age 4. Guam reports a higher percentage of young children without health insurance compared to the U.S. national average of 11%. As shown below, between 2000 and 2004, there was an increase of 6% in the number of children and teens without health insurance. During this period, unemployment reached its greatest numbers on Guam, up to 15% of the working age population. Since most health insurance is linked to employment, the lack of employment probably contributed to the lack of insurance coverage for children.

Hearing Impairment

Healthy People 2010 Objective: By 2010, reduce the average age at which children with significant hearing impairment are identified to no more than 12 months.

What is it?

Hearing impairment is a defect in the perception of sound by the brain. The two major categories of hearing loss are:

- Sensor neural, or neurological impairment; and
- Loss due to malfunction of the physical apparatus of the ear.

Significance:

The future of a child born with a significant hearing impairment depends to a very large degree on early identification (i.e. audiological diagnosis of infants and toddlers birth through age 2) followed by immediate and appropriate intervention. If hearing impaired children are not identified early, it is difficult, if not impossible, for many of them to

acquire the fundamental language, social and cognitive skills that provide the foundation for later schooling and success in society. When early identification and intervention occur, hearing-impaired children make remarkable progress, are more successful in school and become more productive members of society.

How are we doing?

The data for Guam Memorial Hospital Authority (GMHA) indicate that 75.9% of infants born are screened before discharge and 23.3% are not screened. The rate of screening at GMHA has improved 28% from the initial implementation of the Guam Early Hearing Detection and Intervention Program. For infants that are born at Sagua Managu (Guam’s birthing center) the data show that 90.9% of infants are screened, however for infants that either mother or baby had complications during birth, they are immediately transferred to GMHA neonatal intensive care and are indicated under “not screened”. The Naval Hospital data indicates that 85.9% of infants were screened prior to discharge and 14% of infants are not screened.

Birthing Sites	Implementation Dates	# Of live births	% Screened	% Not screened
GMHA	11/2002 – 1/2004	3039	75.9	23.3
Sagua Managu	3/2003 – 1/2004	377	90.9	9.0
Guam USNH	8/2003 – 1/2004	210	85.9	14

Source: Guam Early Hearing Detection and Intervention Program

Newborn Screening

Healthy People 2010 Objective: By 2010, increase to at least 95% the proportion of newborns screened by State-sponsored programs for genetic disorders and other disabling conditions and to 90% the proportion of newborns testing positive for a disease that receive appropriate treatment.

What is it?

Newborn screening is the process of testing newborn babies for treatable genetic, endocrinologic, metabolic and hematologic abnormalities. Specimens are drawn with a heel prick, and blood spots are put on a special filter paper collection kit for testing.

Significance:

Conditions identified through newborn screening procedures are ones that are otherwise difficult to detect. Most infants with disorders identified through screening appear perfectly healthy at birth. There are disorders that when undetected, may be life-threatening, lead to slowed physical development, mental retardation or other health problems.

How are we doing?

All infants born at the Guam Memorial Hospital Authority, the Naval Regional Medical Center and the Sagua Mañagu Birthing Center are screened for seven disorders: Biotinidase Deficiency, Congenital Adrenal Hyperplasia, Galactosemia, Cystic Fibrosis, Phenylketonuria, Hypothyroidism and Hemoglobinopathies.

In 2002, there were 3,222 births at the Guam Memorial Hospital Authority (GMHA); 73.40% of the newborns had received a newborn metabolic screen, with 6.13% having a presumptive positive screen. In 2003, there were 3,298 births with 72.89% receiving a newborn screening test and 6.9% presumptive positive screen. In 2004, there were 3,427 births on Guam and GMHA tested 75.10% of the newborns with 6.37% presumptive positive.

Breastfeeding

Healthy People 2010 Objective: By 2010, increase to at least 75% the proportion of women who exclusively or partially breastfeed their babies in the early postpartum period and to at least 50% the proportion of women who continue breastfeeding until their babies are 6 months old.

What is it?

Breastfeeding is defined as the mother/infant pair ever breastfed at all or breastfed during a specified time period.

Significance:

Lactation is the physiological completion of the reproductive cycle. The mother's breasts, body and psyche prepare for lactation during pregnancy, and the newborn infant is prepared to suckle at the breast at birth. Breastfeeding delivers the ideal balance of nutrients, providing many forms of immunity and creates the opportunity for maternal bonding with the infant. Human milk is the ideal food for promoting growth and development in the human infant.

How are we doing?

The Guam Breast-feeding Coalition was established in November 2003. Members include public health nurses, social workers, MCH staff, medical practitioners, WIC, community based organizations and consumers.

The Coalition established three areas of emphasis to increase the rate of breastfeeding mothers on Guam: 1) increase support for breastfeeding; 2) develop a legislative agenda targeted at improving support for breastfeeding; and 3) increase education of health care providers on effective strategies to promote breastfeeding.

Asthma

Healthy People 2010 Objective: By 2010, reduce the rate of children hospitalized for asthma to no more than 25 per 10,000 children less than 5 years old and 7.7 per 10,000 children ages 5 to 18 years old.

What is it?

Asthma is a chronic disease with symptoms that include tightness in the chest, shortness of breath, and wheezing, from air being forced out of the lungs. A person's airway is essentially blocked- either due to a spasm of the airways or due to swelling of the airways. The causes of asthma are many including allergies, genes, environment, infection and socioeconomic status.

Significance:

Asthma is one of the 10 leading chronic conditions that restrict activity. Approximately 15 million people in the United States are reported to have asthma. Among these, 5 million are children

In addition to being a child, living in poverty is a condition under which the risk for suffering from asthma is higher. Poor housing, limited access to appropriate medical care and inadequate nutrition can make an already vulnerable population even more susceptible to developing and experiencing more severe asthma.

How are we doing?

Discharge Data (Diagnosis code is Asthma)	Age 0-12 months old	Age 13 months – 9 years old	Age 10-19 years
Calendar year 2002	168 (est. rate 497/10,000)	471 (est. rate: 155/10,000)	208 (rate: 73/10,000)
Calendar year 2003	124 (est. rate: 388/10,000)	343 (est. rate:113/10,000)	135 (rate: 46/10,000)
Calendar Year 2004	251 (est. rate: 787/10,000)	381 (est. rate: 125/10,000)	116 (rate: 39/10,000)

Source: GMHA Medical Records

Discharge data from GMHA show that Guam has not met the objectives . Several environmental factors contribute to the high asthma hospitalizations, including high mold growth due to Guam's high humidity, potential allergens in the air conditioning systems in Guam's buildings, including school buildings, and a lack of health insurance and regular doctor visits for children.

Prenatal Care

Healthy People 2010 Objective: By 2010, increase to at least 90% the proportion of all pregnant women who begin prenatal care in the first trimester of pregnancy.

What is it?

Prenatal care is health care and other services available to pregnant women. Pregnant women may use prenatal care services during pregnancy to promote positive lifestyle behaviors including risk-specific referral and obstetrical care until the onset of labor and delivery.

“Adequate” prenatal care is usually defined as starting care in the first three months of pregnancy and at least 9 visits for women giving birth to full term infants after 40 weeks.

“Inadequate” prenatal care is defined as care that began during the third trimester (between the sixth and ninth months of pregnancy) or as care that included fewer than five prenatal visits.

Significance:

The prenatal care that women receive is the second most important determinant of birth outcome, after socioeconomic status. Pregnant women who receive inadequate prenatal care are at increased risk of bearing infants who are low birth weight, are stillborn, or die within the first year of life. An expectant mother with no prenatal care is three times as likely to have a low birth weight baby. Despite the importance of early prenatal care in protecting against low birth weight and infant mortality, many pregnant women do not enter care during the first trimester of pregnancy.

Factors frequently associated with delayed entry into prenatal care include low income, less than a high school education, young maternal age, lack of transportation, maternal substance abuse, unwanted pregnancy and lack of knowledge regarding the importance of seeking medical care in early pregnancy. Other factors, such as lack of insurance and decreased access to appointments and providers, also affect entry into prenatal care.

How are we doing?

The data show that the percent of women seeking prenatal care in the first trimester decreased from 62.6% in 2003 to 60.5% in 2004. Overall, there has been a 2.2% decrease from 2000 data.

In focus group discussions, the following points were brought forward regarding prenatal care:

- Getting pregnant women to seek early prenatal care is a significant island wide problem.

- Access to prenatal care is a priority.

A lack of OB-GYNs and appointment hours contributes to the overall lack of access to prenatal care, as does limited public transportation.

Perinatal Substance Abuse

Healthy People 2010 Objective: By 2010, increase abstinence from alcohol, cigarettes and illicit drugs among pregnant women to:

- Alcohol 90%
- Cigarettes 99%
- Illicit drugs 100%

What is it?

Substance abuse refers to maternal use of tobacco, alcohol or illicit drugs during the course of a pregnancy. Either excessive or moderate use of these can result in poor infant health outcomes.

Significance:

Substance abuse is harmful to fetal development and child health. Fetal development is a sensitive period during which substance exposure can lead to lifelong physical and neurological disabilities. Infants born to substance using women can begin life experiencing physical dependency and withdrawal. Many experience poverty, neglect and poor parenting skills in the hands of a caretaker who is actively abusing alcohol and/or substance.

How are doing?

Despite prenatal advice on not smoking or using other substances during pregnancy, substance abuse during pregnancy on Guam has risen significantly. In 2000, there were 294 low birth weight babies with 11.9% of those births occurring with a mother who used some harmful substance during pregnancy. In 2004, there were 290 low birth weight babies, with 12.5% born with a mother using substances during her pregnancy. Tobacco was the most commonly used substance during pregnancy.

Unintended Pregnancies

Healthy People 2010 Objective: By 2010, increase the proportion of pregnancies that are intended.

What is it?

Unintended pregnancy includes those that are not planned, but desired (mistimed), and those that are unplanned and not desired (unwanted).

Significance:

Women with an unintended pregnancy are less likely to seek early prenatal care or receive adequate prenatal care, more likely to smoke or drink during pregnancy, more likely to deliver a low birth weight baby and less likely to initiate or maintain breastfeeding.

Having an unintended pregnancy can contribute to short interpregnancy spacing (span between the birth of one child and the conception of another), which increases the risk of infant morbidity and mortality.

Unintended pregnancy numbers are often an indication of access to family planning services. When family planning services are easily accessible, rates of unintended pregnancy and resulting abortions are generally lower.

How are we doing?

Three major factors have been identified as barriers to women accessing family planning services: 1) Financial. For low-income women, the cost of services and prescriptions can serve as a deterrent to accessing health care. 2) Cultural. Guam has a very diverse population and some women may receive conflicting messages regarding reproductive health issues. 3) Geographical. The distance or lack of transportation can restrict access to an affordable health care provider.

Domestic / Intimate Partner Violence

Healthy People 2010 Objective: By 2010, reduce the rate of physical assault by current or former intimate partners.

What is it?

Domestic/intimate partner violence is a pattern of behavior with the effect of establishing power and control over a “significant other” through fear and intimidation. It may include emotional or verbal abuse, denial of access to resources or money, restraint of normal activities or freedom, sexual coercion or assault, threats to kill or to harm, physical intimidation, or attacks. In extreme cases, domestic violence may result in the death of a partner.

The Centers for Disease Control defines domestic/intimate partner violence as including: current spouses (including common-law spouses), current non-marital partners, dating partners – including first date (heterosexual or same sex), former marital partners, former common-law spouses, separated spouses, former dates (heterosexual or same sex), former boyfriend/girlfriend (heterosexual or same sex). Intimate partners may be co-habiting, but need not be. The relationship need not involve sexual activities. The people involved may or may not be married, they may be adults or adolescents involved in dating, they may be gay or lesbian partners, or the

abuse may occur between parties whose co-habiting or intimate relationship has already begun.

Significance:

The consequences of domestic/intimate partner violence are far-reaching and costly. Victims experience both short-term and long-term lasting effects. Physical injuries can range from bruises, cuts and burns to choking, strangulation and stab wounds, broken bones, miscarriages and death. In additions, victims experience depression and other psychological distress, eating disorders and alcohol and substance abuse problems, and they are more likely than other people to contemplate or attempt suicide. Children who witness domestic/intimate partner violence experience depression and psychological distress and are more likely than other children to be physically violent.

How are we doing?

Year	Number of cases reported	Percent change
1999	378	
2000	316	-16.4
2001	259	-18.0
2002	169	-34.7
2003	596	252.7

Source: Uniform Crime Report, Guam Police Department

Although there have been considerable research efforts directed at identifying specific demographic factors that are associated with domestic/intimate partner violence, accurate data are difficult to obtain.

Cervical Cancer

Healthy People 2010 Objective: By 2010, reduce the death rate from cancer of the uterine cervix to no more than 2.0 deaths per 100,000 females.

What is it?

Cervical cancer begins in the lining of the cervix. The cervix is the lower part of the uterus.

There are 2 main types of cervical cancers: squamous cell carcinoma and adenocarcinoma. Cervical cancers and cervical precancers are classified by how they look under a microscope. About 80-90% of cervical cancers are squamous cell carcinoma, which are composed of cells that resemble the flat, thin cells called squamous cells that cover the surface of the endocervix (the lining of the cervical canal).

The remaining 10-20% of cervical cancers are adenocarcinoma. Adenocarcinomas are becoming more common in women born in the last 20 to 30 years. Cervical adenocarcinomas develop from the mucus – producing gland cells of the endocervix.

Significance:

Cervical cancer is the 10th most common cancer among females in the United States, with more than 12,000 new cases each year. Cervical cancer accounts for about 2% of all cancer deaths among females.

The principal risk factors for cervical cancer involve sexual behaviors. Early age at first intercourse and multiple sexual partners are associated with an increased risk.

How are we doing?

***Pap Smears by Age, Women 18+ years
Percent Ever Having a Pap Smear***

Year	18+	18-24	25-29	30-44	45-54	55-64	65+
2001	87.9	71.9	90.5	91.0	86.2	92.3	91.7
2002	89.8	74.2	88.9	94.8	93.9	85.7	89.6
2003	90.6	74.1	94.4	93.2	93.4	95.3	93.3

Source: Behavioral Risk Factor Surveillance System, DPHSS

***Pap Smears by Age, Women 18+ years
Percent With Pap Smear in the Last 3 Years***

Year	18+	18-24	25-29	30-44	45-54	55-64	65+
2001	90.2	91.3	92.5	92.5	94.2	86.1	72.7
2002	81.5	79.2	76.6	84.7	88.3	76.7	60.0
2003	88.9	100.0	91.2	87.9	88.2	82.9	82.8

Source: Behavioral Risk Factor Surveillance System, DPHSS

The rate of deaths has declined due to the usage of the Pap test. The decrease is also because more women are having regular gynecological examinations. The implementation of the Breast and Cervical Cancer Early Detection Program in late 2001 has impacted the proportion of women over 30 who have had a Pap smear within the past three years, and thus the lifetime Pap smear rates, by providing these services free of charge to women with income limitations and no health insurance. Over 300 women per year are now served by this program.

Breast Cancer

Healthy People 2010 Objective: By 2010, reduce the breast cancer death rate to no more than 22.2 deaths per 100,000 population.

What is it?

Breast cancer is a disease caused by an uncontrolled growth of abnormal cells in the breast tissue. In the early stages, breast cancer may reside in the breast as a tiny nodule or lump. In the later stages, some cells from the lump spread or metastasize to other parts of the body such as the lung, brain, liver or bones and cause tumors to grow in these other tissues and organs.

Significance:

Breast cancer is the most frequently diagnosed cancer among women and is the second leading cause of death among women. The American Cancer Society estimates more than 200,000 women are diagnosed with breast cancer each year. Although there have been debates in the scientific community over the benefits of mammography, the National Cancer Institute and the American Cancer Society continue their recommendation of regular mammograms to screen for early breast cancer. Screening and early detection can save lives, particularly among women over the age of 40.

How are we doing?

Mammograms by Age for women 40+ Percent Ever having a Mammogram

Year	40+	40-44	45-49	50-54	55-59	60-64	65+
2001	76.8	57.4	76.5	82.8	87.5	86.7	94.4
2002	76.7	62.7	82.9	90.2	80.0	64.9	74.8
2003	77.4	54.7	79.6	76.2	92.0	100.00	90.0

Source: Behavioral Risk Factor Surveillance System, DPHSS

Percent of Women who had a Mammogram in the Last 2 Years

Year	40+	40-44	45-49	50-54	55-59	60-64	65+
2001	86.7	80.0	82.0	100.00	95.2	76.9	73.5
2002	83.9	54.9	78.0	65.8	70.0	86.1	77.3
2003	85.7	92.6	84.6	87.5	78.3	89.3	92.6

Source: Behavioral Risk Factor Surveillance System, DPHSS

The risks of breast cancer increase with age, and the rise is particularly notable after age 40. It is found more often among women with a personal or family history of breast cancer, women who have never had children and those whose first birth was after age

30. The Guam Breast and Cervical Cancer Early Detection Program has also assisted in improving the rates of women over the age of 40 who have regular mammograms by providing this service to over 200 un- or under-insured women over per year.

Sexually Transmitted Diseases

Healthy People 2010 Objective: By 2010, reduce the proportion of females aged 15 to 24 attending family planning clinics with Chlamydia Trachomatis infections to no more than 3%.

By 2010, reduce the proportion of females aged 15 to 24 attending STD clinics with Chlamydia Trachomatis infections to no more than 3%.

By 2010, reduce the proportion of males aged 15 to 24 attending STD clinics with Chlamydia Trachomatis infections to no more than 3%.

By 2010, reduce gonorrhea to no more than 19.0 new cases per 100,000.

By 2010, eliminate sustained domestic transmission of primary and secondary syphilis to no more than 0.2 cases per 100,000.

What are they?

Sexually transmitted diseases (STDs) include more than 25 infectious organisms that are primarily transmitted from person to person during sexual contact. Some of the infections can occur without obvious symptoms.

Significance:

Even though young women and men can suffer serious health problems from a sexually transmitted disease, STDs have a disproportionate impact on women. They are more easily transmitted to women and more difficult to detect. As a result, complications of undiagnosed infections are far more common and severe.

How are we doing?

Unfortunately, the rates of Chlamydia and Gonorrhea in youths aged 10-19 have been steadily increasing in the five years between 2000 and 2004, despite increasing access to STD clinics.

In focus group discussions, some of the points that were brought forth included:

- Adolescents rate sexually transmitted diseases as a priority concern. Teen-friendly, community-based clinics are needed so that teens have a safe place to go to seek testing and treatment.

- To identify barriers to STD testing for women and young adults. To collaborate with prevention educators and testing/treatment providers to address issues specific to youth and those at risk.

Adolescent Pregnancy

Healthy People 2010 Objective: By 2010, reduce pregnancies among adolescent females to no more than 46 pregnancies per 1,000.

What is it?

Teens or teenagers include pre-adolescents (10-14 years old) and adolescents (15-19 years old). The teen pregnancy rate is calculated as the number of pregnancies (births, abortions and fetal losses) per 1,000 teens.

Significance:

Adolescent pregnancy is one of the most pressing and persistent problems facing society. Pregnancy in adolescence may be associated with inadequate prenatal care, higher rates of low birth weight and infant mortality and repeat pregnancies during the teen years. Children born to an adolescent mother are more likely to encounter additional health risks compared with children born to non-teenage mothers. In addition, teen parenthood is associated with poverty, high costs of health care and public assistance and low educational attainment.

Sexual activity places teens at risk for pregnancy. Teens who earn lower grades, use substances (tobacco, alcohol, drugs) and date steadily are more likely to be sexually active. Teens who have experienced sexual abuse are at greater risk for becoming sexually active, thus have a higher risk of becoming pregnant. Teens who are of low socioeconomic status and members of ethnic and racial minority groups may be at greater risk for teen pregnancy.

How are we doing?

The rate of live births to teens dropped from 64.72 per 1,000 teen females in 2000 to 51.11 in 2004, a 21% decrease, but still higher than the Year 2010 objective of 46 per 1,000. Progress toward this objective is only slowly being made.

Percentage of students in high school reported engaging in sexual behaviors

	Ever had sexual intercourse			First sexual intercourse before age 13			Had two or more partners during lifetime		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
High School 1997	44.7	54.7	49.4	8.4	13.2	10.6	10.1	15.8	12.8
High School 1999	44.8	47.2	46.0	13.8	16.1	14.9	27.5	27.4	27.6
High School 2001	44.2	51.5	47.7	11.0	19.6	15.2	34.2	46.8	47.9
High School 2003	49.0	42.0	45.6	6.2	10.2	8.2	9.1	14.0	11.5

Source: Youth Risk Behavior Survey, Guam

In focus group discussion, some of the points that were brought forward include:

1. Adolescents rate teen pregnancy as a priority concern. Teen-friendly, community-based clinics are needed so that teens have a safe place to go to seek care and birth control. Participants also indicated that teen clinics must accommodate teens that work, thus the hours of operation must meet the needs of the population they serve.
2. There is a great concern that pregnant teens do not have access to, or at least know the importance of accessing, prenatal care. There is a belief that more effort needs to go into reaching out to pregnant teens to ensure that they are getting appropriate prenatal care.

Child Abuse and Neglect

Healthy People 2010 Objective: By 2010, reduce the incidence of maltreatment of children to no more than 10.3 per 1,000 children.

What is it?

Child abuse is a general term encompassing any of the following:

- Physical injury constitutes any physical abuse of a child by non-accidental means, and is often at variance with the explanation given for the injury.

- Sexual abuse is any sexual act, such as indecent exposure, improper touching, to penetration that is carried out with a child.
- Emotional abuse is a consistent, chronic behavior by a parent or a caretaker and is detrimental to the child's development.
- Physical neglect of a child means the failure or inattention on the part of the caregiver or parent to provide the child's basic needs, such as food, clothing, shelter, medical care and supervision.

Significance:

Recognition of abuse and neglect is important because they can lead to many other problems. Children who are abused may be more likely to abuse others over the course of their lives. Violence becomes perceived as a normal and acceptable response for many children who lived with abuse for long periods producing an intergenerational cycle of violence.

Children referred for possible child abuse and neglect are at risk for poor health due to higher rates of poverty, inattention to medical needs, previously unreported and/or untreated injuries and inappropriate or unsanitary living conditions in the home.

How are we doing?

Physical abuse accounted for the greatest proportion (24.64%) of reported incidents followed by physical neglect (14.06%), sexual abuse (10.81%) and emotional abuse (6.6%).

The support and commitment of the public is crucial to sustaining an effective response to child abuse and neglect. In earlier periods of history of child protection, concerned individuals and organizations stood behind an organized community response to protect children. Now public support is needed to build the consensus necessary to intervene in family life, and to generate community support that strengthens parenting and the protection of children.

Adolescent Substance Use

Healthy People 2010 Objectives: By 2010, reduce past month use of illicit substance to 0.7%.

By 2010, reduce tobacco use by adolescents to 21%.

By 2010, reduce the proportion of persons engaging in binge drinking of alcoholic beverage to 2.0%.

By 2010, reduce deaths and injuries caused by alcohol and drug related motor vehicle crashes to 13.5 per 100,000.

What is it?

An important goal of U.S. policy for the prevention of substance abuse among youth is to increase the percentage of young persons who reach adulthood without using tobacco, alcohol or other drugs. Strengthening the ability of children and teenagers to reject all such substance is an important element in prevention activities because the required skills and attitudes can carry over into adulthood.

Alcohol use is defined as the current use (use in the past 30 days) and lifetime use (ever having used alcohol). Heavy episodic use is defined as having five or more drinks within a couple hours, on one or more of the previous days.

Cigarette smoking is defined as the percentage of students in grades 9-12 who smoked cigarettes on one or more of the past 30 days.

The common measures of marijuana use are defined by current and lifetime use. The current use of marijuana is defined as having used marijuana in the past 30 days. Lifetime use is defined as ever using marijuana during a lifetime.

Significance:

Adolescence is a critical time to establish health behaviors that persist into adulthood. The use of alcohol has a sizable impact on the health of teens. Alcohol abuse can result in a series of educational and social problems that lead to adverse outcomes as an adult, including failure to complete high school, unemployment, and criminal activity. Alcohol use has been linked to physical fights, academic and occupational problems, and illegal behavior. Dependence on alcohol and other drugs is also associated with psychiatric problems such as depression, anxiety and antisocial personality disorders.

Tobacco use is the leading cause of preventable disease and death in the United States. Smoking increases the risk of chronic disease, coronary heart disease and stroke, as well as cancers of the lungs, larynx, mouth and bladder. The use of chewing tobacco has been linked to lung, larynx, esophageal and oral cancers.

Among adolescents, the short-term health effects of smoking include respiratory system damage, addiction to nicotine, and the associated risk of other drug use. Long-term health consequences of adolescent smoking are reinforced by the fact that most young people who smoke regularly continue to smoke throughout adulthood.

Marijuana use has short term and potentially long term health effects. Short-term effects of marijuana include problems with memory, learning, thinking and problem solving, distorted perception, loss of coordination and anxiety. These effects can be magnified when other drugs are mixed with marijuana. People who smoke marijuana often develop the same kinds of breathing problems that cigarette smokers have including coughing and wheezing.

Drug use can result in short term and long-term health problems, as well as increasing the risk of pregnancy and sexually transmitted infections. On a social level, it may result

in poor performance in school, inability to maintain employment, criminal activity, etc. Illicit drug use is one of the largest factors in rising jail and prison populations.

How are we doing?

Age is a risk factor for most adolescents using drugs, alcohol and tobacco. Risk factors for multiple adverse behaviors, such as tobacco use, and alcohol use and illicit drug use are similar and often interrelated. These risk factors include school difficulties or failure, low self-esteem, associating with peers who engage in risky behaviors, family members who engage in risk behaviors or have addictions to substance, etc.

	Current alcohol use			Lifetime alcohol use			Binge drinking behavior		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
High school 1997	37.9	46.9	42.0	72.3	76.3	74.1	17.7	29.2	22.9
High school 1999	40.3	48.5	44.0	75.7	78.5	76.9	18.5	22.7	22.8
High school 2001	40.4	51.6	45.9	58.0	50.2	54.2	19.1	33.8	26.5
High school 2003	36.6	39.2	37.9	71.6	71.1	71.3	13.8	20.7	17.3

Source: Youth Risk Behavior Survey, Guam

	Current marijuana use			Lifetime marijuana use			Used marijuana on school property		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
High school 1997	18.0	38.6	27.8	43.0	54.3	48.3	8.2	15.8	11.8
High school 1999	20.4	36.5	27.9	45.0	58.8	51.4	8.0	13.1	10.4
High school 2001	20.9	35.1	27.8	30.3	28.8	29.6	6.4	16.1	11.1
High school 2003	22.8	31.4	27.1	41.8	52.0	46.9	11.7	17.4	14.6

Source: Youth Risk Behavior Survey, Guam

Adolescent Suicide

Healthy People 2010 Objective: By 2010, reduce suicides and the incidence of injurious suicide attempts among youth aged 15 through 19 to no more than 8.2 per 100,000 youth.

What is it?

Suicide is the 11th leading cause of death in the United States. When someone commits suicide, many are left to wonder why. Research indicates a number of factors can contribute to suicide: alcohol and drug use, availability of firearms in the home, lack of access to mental health services, social isolation, homophobia, depression, lack of coping skills, family violence, and/or a family history of suicide.

Although depression is often closely associated with suicidal feelings, not all people who kill themselves are visibly depressed. In fact, some suicidal people appear to be happier than they have been in recent times because they have decided to “resolve” their problems by killing themselves.

Significance:

Suicide exacts an enormous toll on its victims and the family and friends left behind. Suicide takes the lives of more than 30,000 people every year. Every 18 minutes another life is lost to suicide. Every day 80 Americans take their own lives and over 1,900 Americans visit the Emergency Departments for a self-inflicted Injury (National Hospital Ambulatory Medical Care Survey, 2002).

How are we doing?

Suicide Deaths by Age 2000 - 2004

	2004	2003	2002	2001	2000
10-19 yrs	3	4	6	7	7
20-29 yrs	7	6	6	4	14
30-39 yrs	1	7	3	6	4
40-49 yrs	3	1	4	3	3
50-59 yrs	0	2	1	1	1
60-69 yrs	2	0	2	1	0
70+ yrs	0	0	0	0	0
Total	16	20	22	22	29

Source: Guam Office of Planning and Evaluation, DPHSS

Suicide is the second leading cause of death to youth on Guam between the ages of 15 through 19 years.

The rate of suicide deaths for teens 10 -19 has steadily decreased from 26 per 100,000 in 2000 to 10 per 100,000 in 2004. The year 2010 objective has not been met, but progress has been made.

	Seriously considered attempting suicide			Made a suicide plan			Attempted suicide		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
High school 1997	35.7	23.1	29.7	29.6	20.2	25.2	20.9	17.9	19.5
High school 1999	34.6	20.9	28.2	33.8	22.5	28.5	24.9	12.4	19.0
High school 2001	42.0	25.6	34.0	36.9	22.5	29.8	28.2	14.5	21.5
High school 2003	36.4	18.8	27.2	32.4	21.7	26.9	26.7	16.4	21.5

Source: Youth Risk Behavior Survey, Guam

On Guam, most suicide attempters are female. The trend shows that attempts are increasing in the age group 14-18 years old. The prevailing pattern is either 2 to 3 attempts then the attempt is complete or the individual receives intervention. Most completed suicides are by males. The pattern is completion with the first attempt. The common methodology is hanging and then firearms.

Child Obesity

Healthy People 2010 Objective: By 2010, reduce the proportion of children aged 6 to 11 and youth aged 12 to 19 who are overweight or obese to 5%.

What is it?

Overweight among children and youth is diagnosed according to gender and age specific Body Mass Index (BMI) growth curves with overweight being defined as at or above the 95th percentile.

Significance:

Dramatic increases in childhood overweight have occurred in the recent decades. Pediatric overweight has a profound effect on physical, mental, emotional and social development of children. Furthermore, childhood overweight is associated with developing into adult overweight. Overweight youth have an estimated 70-80% chance of becoming obese adults.

Multiple factors contribute to the rising obesity rates in what has been termed a “toxic environment”: exposure of children to fast food restaurants and media promoting high calorie foods, increased availability of high portion sizes, over-consumption of whole milk and sodas, decreasing opportunities in school, community and home environments for physical activity, increased sedentary activity, particularly television viewing. Genetic and metabolic factors as well as behaviors affecting dietary intake and physical activity, environmental, cultural and socioeconomic components also play a role.

How are we doing?

According to the 2003 YRBS data, almost 16% of Guam high school students perceived that they were overweight. In fact, about 18% of Guam adolescents were at risk for becoming overweight or were overweight in 2003. A higher percentage of female students thought that they were overweight; however, more male students were actually overweight or at risk of becoming overweight. Female students were more likely to engage in exercising, dieting or both to lose weight compared to male peers.

No quantitative studies of child obesity have been done on Guam for the general population.

Children and Adolescent with Special Health Care Needs

Healthy people 2010 Objective: By 2010, increase the proportion of states and territories that have service systems for children with special health care needs.

What is it?

Children and adolescents with special health care needs are defined as “those who have or are at risk for chronic physical, developmental, behavioral or emotional conditions and who also require health and related services of a type or amount beyond that required by children generally.”

This definition goes beyond identifying children based on their diagnosis, by emphasizing the impact of their special health needs and their need for health services. Various conditions and chronic illnesses may be included in this definition, such as cerebral palsy, developmental delay, attention deficit hyperactivity disorder, depression, asthma or cystic fibrosis.

Significance:

Approximately 13% of children and adolescents in the United States have a chronic condition or disability. A higher prevalence of children with special health care needs was found among boys, who were 50% more likely than girls to have special health care needs, and among older children, who were about twice as likely to have a special health care need.

How are we doing?

In December 2001, the Medical Director of DPHSS conducted a survey of family practitioners and pediatricians in the public and private sectors. The purpose of this survey, entitled “Survey of Guam Child Health Providers Regarding Children With Special Health Care Needs,” was to gather information about current practices related to caring for children with special health care needs, perceived barriers to care and recommendations for further training. The report indicated that children with special

health care needs on Guam do not receive continuous, comprehensive, coordinated and family centered medical care, as promoted by the American Academy of Pediatrics. As noted in the report, most of the physicians surveyed see several children with special health care needs in their practice. Fifteen percent (15.8%) reported seeing “none”, sixty percent (60%) of the physician reported seen 5 to 15 children monthly.

Health Care Delivery System

The turn of the century offers an opportune time to take stock of the current state of health care on Guam. Guam’s health care delivery system is pluralistic, distinguished by a public and private sector for the local civilian population, and a military system for the delivery of medical services to the active military members and their dependents, as well as the military retirees and veterans on Guam.

All the health services customarily found in a community of similar size in the U.S. mainland are available to the island population. One unique problem setting Guam apart from the mainland communities is that specialized and tertiary medical services are thousands of miles away, necessitating medical referrals to Japan, the Philippines, Hawaii, or the United States mainland. Guam is situated in the Western Pacific. The United States’ western-most territory lies about 5,800 miles (12 hours flight time) from the U.S. mainland, and 3,800 miles (7 hours flight time) southwest of its closest U.S. neighbor, Hawaii. Guam, while being remote from the United States, is closer to the Asian rim. Tokyo, Taipei, Manila, and Hong Kong are all within three hours flight time. Such referrals are cumbersome, time-consuming and usually impact considerably on individual and government financial resources.

Despite a relatively high number of licensed physicians on the island, Guam is considered a Health Professional Shortage Area and Medically Underserved Area by HRSA. This is especially true in the areas of obstetrics and pediatrics; there are only 10-15 of each practicing on Guam, which is far from enough given the very high birth rate on the island. In addition, the lack of specialists and the remoteness of the island means that the primary care physicians must take over those functions too, thus exacerbating the lack of accessible primary care (e.g., the community pediatricians serve as neonatologists for GMHA’s neonatal intensive care unit, sending premature newborns 7 to 8 hours by commercial jetliners to Hawaii if needed). This shortage of specialty care extends to most fields, including orthopedics, dermatology, neurology, critical care and cardiology. In other areas, such as neurosurgery, allergy/immunology, gastroenterology and all pediatric subspecialties, there is no on-island care available. Thus, all physicians must maintain high skill levels.

Private Sector:

The private sector caters more to the individual needs in the community, providing, on a one-to-one basis, outpatient medical and dental care, laboratory, radiological and optometrical services, as well as pharmaceuticals. There are several multi-specialty medical/dental groups. In addition, there are specialty medical group practices and individual physicians and dentists. Independent laboratories, pharmacies, and optical retailers within the community provide auxiliary services.

Military Sector:

The military system consists of the U.S. Naval Hospital and smaller outpatient dispensaries at various military locations throughout the island. The U.S. Naval Hospital is the military's central facility for general acute care. The hospital also provides outpatient services in the various medical disciplines and maintains a dental clinic. The medical center is self-contained and provides auxiliary services needed in conjunction with the provision of medical care. It is staffed and equipped to deal primarily with the medical needs of active military personnel on Guam and their dependents; however, health care needs of military retirees, veterans and their eligible dependents are addressed as well.

The U.S. Naval Hospital is not considered a functional component of Guam's health care delivery system. However, there is some interaction between the public and military systems. Specialized medical officers provide a limited amount of consultation, diagnosis, and treatment services. During supply and pharmaceutical shortages at the Guam Memorial Hospital Authority or the Department of Public Health and Social Services, the U.S. Naval Hospital can be depended on for furnishing the needed items. Naval and Air/Sea Rescue Units on Guam serve the community as well as the neighboring islands. Furthermore, the military serves as a back up which could be immediately mobilized during man-made or natural disasters.

In addition, Guam's military personnel use the private medical service providers whenever a medical specialty is not provided through the military system through the CHAMPUS (Civilian Health and Medical Program of Uniformed Services) program.

Public Sector:

The Department of Mental Health and Substance Abuse is the sole public agency available and authorized to provide in and out patient mental health services. The central mission of the department is to provide comprehensive inpatient and community based outpatient mental health care, as well as drug and alcohol programs and services for the people of Guam. In addition, the department is mandated to strive towards the improvement, enhancement and the promotion of the physical and mental well-being of the residents of Guam who experience the life-disturbing effects of mental illness, alcoholism and drug abuse as well as those who are at risk of suffering those effects and who need such assistance.

Guam Memorial Hospital Authority (GMHA) serves as the sole civilian hospital. The hospital is a non-accredited Level II Trauma Center. The hospital is a 221-bed facility, which provides acute and long-term care, including skilled and intermediate nursing care. The hospital offers all customary care and certain specialty services. The hospital maintains approximately 77 to 80 beds in its medical, surgical and special care units which comprise a little over half of the total of acute care beds. In addition to the procedures that require inpatient stays, there have been a growing proportion of procedures performed on an outpatient basis. These procedures are performed either in

the hospital or in one of the surgi-centers. Approximately 30% of the surgeries done at GMHA are “come-and-go surgery”. Two ambulatory surgical centers provide services as well.

The Department of Public Health and Social Services mission is to achieve and maintain the highest level of independence and self-sufficiency in the health and social welfare of the island of Guam residents. The functions, responsibilities and authority of the department are defined by local and federal laws and regulations. Both local and federal monies fund the various programs and services. Except for categorical programs governed by specific eligibility guidelines, social and health care services are generally provided to low-income families and individuals free of charge.

Through the department, services that are provided include preventive medical and dental services, health education, and diagnosis and treatment for communicable diseases, maternal and child health, family planning, services for children with special health care needs, immunizations, special supplemental foods and food stamps, welfare services, child and adult protective services, chronic disease and dental services for children.

Southern and Northern Region Community Health Centers (SRCHC) (NRCHC) are fixed facilities that provide comprehensive, culturally sensitive, coordinated and continuous care to improve the health status of the medically uninsured, and underinsured population. Both SRCHC and NRCHC are under the Bureau of Primary Care Services (BPCS). These Centers operate on a sliding scale fee for service plan. Guam is unique compared to other States in that the indemnity insurance companies contract the same pool of physicians. Therefore, it is difficult for Guam to adopt managed care due to the limited number of physicians. Public and private organizations, health agencies and community-based organizations refer patients to SRCHC and NRCHC. Physicians assigned into these centers have expertise in family practice, internal medicine and pediatrics.

Emergency Medical Services System

In 1977, Guam passed legislation establishing the Emergency Medical Service System for the island. The law designates the Department of Public Health and Social Services as the lead agency and established the Emergency Medical Service (EMS) Administration Office within the department.

Guam has one civilian ambulance service provider, the Guam Fire Department (GFD). The military (Air Force and Navy) each have ambulance units, which serve their jurisdictions, and there is a Mutual Aid Agreement in place with each military unit for mutual aid assistance to the local ambulance service. The Guam Fire Department operates ten (10) ambulances throughout the island; the Navy and Air Force have seven (7) to cover their jurisdictions. GFD operates their ambulances at the BLS-Level with two units providing ALS Service (EMT-Intermediate with I.V., Intubations and EKG and medication skills) plus one ALS Intercept (non-transport) unit.

The Emergency Departments of both hospitals are capable of addressing pediatric emergencies. Neither hospital is formally or informally identified as more capable in providing emergency care for ill or injured children. In-hospital care for ill or injured children is the same at these two facilities. Both hospitals have a Pediatric and Neonatal Intensive Care Unit. Furthermore, both have pediatric inpatient units. All of the outpatient clinics see pediatric patients. Some pediatricians have private clinics specializing in seeing pediatric patients only.

“Native” or Traditional Health Care Providers

Suruhanas or Suruhanos are native Chamorro healers who use natural herbs in combination with massage to cure a variety of complaints. The name is believed to come from the Spanish word “cirujano” for ship doctors who came to Guam with the Spanish galleons.

Suruhanas or Suruhanos are considered to be “good” people who have received their powers from God. In addition, it is believed that the powers are inherited and that they usually stay within a family. However, if there are no family members to continue with the healing, a suitable apprentice is trained. A working knowledge of curative herbs, where and when they grow, how they are transformed into medicine, as well as anatomy of the human body is taught over several years. Practicing Suruhanas or Suruhanos rely heavily on experience and success with a particular treatment. Some Suruhanas or Suruhanos specialize in particular fields such as pregnancy and childbearing while others treat matters related to skeletal or muscular systems.

Hilots are traditional Filipino healers, who function much the same as Suruhanas or Suruhanos. As expected, the Hilots services are used more frequently by those of Filipino descent than any other ethnic group.

Kakahnas are a particular group of healers that is no longer as prevalent now as it was in the years before World War II. Kakahnas healed primarily through supernatural powers and were considered by many to be sorcerers. Folklore holds that the Kakahnas could invoke the souls of the dead and could communicate with the Taotaomonas or “Old People” who are believed to be the spirits of ancient Chamorros.

Financial Access to Care

Guam Public Law 18-31 established the Medically Indigent Program (MIP). MIP is 100% locally funded. The program provides medical assistance to low-income families who are residents of Guam.

Unlike state programs, Guam’s Medicaid federal reimbursement is capped at \$6.69 million, with a federal matching rate of 50%. Because of the difficulties of covering the costs of a basic mandatory set of services, many services and supports that may be needed by children and their families are not covered. In addition, residents of Guam are not eligible to receive Supplemental Security Income (SSI), a potential resource for purchasing needed services available to eligible individuals in the states. Another

potential source of financing is Guam's locally funded Medically Indigent Program (MIP), which provides medical assistance to low-income families who do not qualify for Medicaid. Considered a payor of last resort, MIP currently provides a severely limited health care benefit package that does not include mental health services.