AMERICAN SAMOA MCH PROGRAM
ASSETS AND NEEDS ASSESSMENT - 2010

Introduction

Title V of the Social Security Act of 1935 is a federal program that focuses on improving the health of all mothers, infants, and children. In 1981, Title V was amended to create the Maternal and Child Health (MCH) Services Block Grant that consolidated several categorical programs into a single program of formula grants to states. The MCH block grant serves three populations: pregnant women and infants, children and youth, and children with special health care needs. Each year, states apply for the block grant in an application that includes a plan for meeting needs identified through a statewide needs assessment, and a description of how the funds allotted to the state will be used. Every five years, state Title V MCH agencies are required to conduct comprehensive needs assessments to identify and prioritize MCH needs for strategic planning. The five-year needs assessment provides the opportunity to examine trends and issues, review progress, and set state MCH priorities for the next five years. The statewide needs assessment identifies the need for: (1) preventive and primary care services for pregnant women, mothers, and infants up to age one year; (2) preventive and primary care services for children; and (3) family-centered, community-based services for children with special health care needs and their families. With the identification, selection and prioritization of the MCH needs, plans are developed to implement programs and services to meet those needs over the next five years.

Description of the Territory of American Samoa

American Samoa is an unincorporated territory of the United States and consists of a group of seven islands in the southern Pacific Ocean located 2.600 miles southeast of Hawai`i and 1,800 miles northeast of New Zealand. The total land area of American Samoa is approximately 76 square miles (200 square km). The main island of Tutuila, the largest island of the group, covers an area of 55 square miles (143 square km) and is home to Pago Pago, the political, administrative, and commercial center of the Territory of American Samoa. Aunu`u Island is one mile off the southeast tip of Tutuila (a 15-minute ferry ride), with a land mass of 0.6 square miles and one village with a population of 476 residents (2000 Census). Sixty miles east of Tutuila is the Manu`a Island group (a 30-minute airplane ride) that includes the volcanic islands of Ofu and Olosega, connected by a bridge, and the Island of Ta`u. These islands are sparsely populated, with a total 2000 Census population of 1,378 residents, and each village having a few hundred residents. The Swains Island is a privately-owned coral atoll located 214 miles north of Tutuila with approximately 1.25 square miles of land mass and a population of 37 residents (2000 Census). Swains Islanders raise coconuts and grow bananas, taro, breadfruit and papaya, and supplement their diet with fish from outside of Swains' reef. Rose Island (coral atoll) lies 78 miles east of Ta`u with a land mass of 0.1 square miles, is uninhabited and is named a national monument.

Based on the 2000 Census, the Territory of American Samoa had a population of 57,291 residents and represents a 22% increase from the 1990 Census of 46,773 residents. Mid-census 2005 population was projected to increase to an estimated 65,500 residents and to 80,000 residents by 2010. American Samoa is divided into three geo-political districts: Western District, Eastern District, and Manu`a District. The population distribution for these districts show that there are 32,435 residents (56.6%) in the Western District, 23,441 residents (40.9%) in the Eastern District, and 1,378 (2.4%) in the Manu`a District. Of the total population based on the 2000 Census, there were 29,264 males (51.1%) and 28,027 females (48.9%). In assessing the population distribution by age, American Samoa has a relatively young population with over one-third (38.7%) of the population less than 15 years of age. For the total population, the median age stands at 21.3 years with 47.8% of the population less than 20 years of age, 44.1% between 20-59 years, and 8% who are 60 years and above. Of this total population, 88.2% are Samoan and the remainder includes Tongans, Whites, Filipinos, and other Asians. According to the census data, 58.3% of all families in American Samoa are below the poverty level. The median household income stands at $18,219 and a mean household income of $26,093 (Population and Housing Profile: 2000, American Samoa, Issued 2004). Since the mid-twentieth century, the birthrate in American Samoa has gradually declined while the death rate has remained stable.

Total Population by Age American Samoa, 2000 Census		
Age	Population	Percent
<5	7820	13.6
5-9	7788	13.6
10-14	6604	11.5
15-19	5223	9.1
20-24	4476	7.8
25-34	8707	15.2
35-44	7361	12.8
45-54	4733	8.3
55+	4579	8.0
Total	57291	100

Section 1: Process for Conducting Needs Assessment

1.1 Goals and Vision

The vision of the American Samoa Maternal and Child Health Program is framed in the belief that individuals, families, communities, non-governmental and government programs are committed to work together to assure "Healthy Families Living in Healthy Communities" in American Samoa. This vision can be achieved by promoting self-sufficiency among individuals, families and communities and provide them the opportunity to become partners in health and to assure that no mother, infant, child, or father be left behind.

The goals of the American Samoa MCH Program are to:

(1) Improve the pregnancy outcomes for mothers by assuring early and adequate prenatal care services are available and accessible, improve the nutritional status of pregnant women, and assure adequate inter-pregnancy spacing by providing access to family planning services.

(2) Assure a healthy start for infants by encouraging mothers to exclusively breastfeed for the infant's first six months, improve access to well baby clinics and provide nutrition education to families to prevent obesity and low hemoglobin.
(3) Assure that children and youths have the opportunity to grow and develop in a healthy family environment; develop healthy behaviors through health education; and improve access to well child care with proper nutrition and obesity prevention, preventive dental services, and immunizations
(4) Provide a system of services for children with special health care needs that will meet the needs of the child and the family. This system of services will allow early identification and referrals, comprehensive annual evaluations, family participation in health decisions, and transitions services for youths with special health care needs.
(5) Engage families and communities to participate in addressing the culturally appropriate social determinants of health to minimize the health disparities of vulnerable MCH populations in American Samoa.

1.2 Leadership

The MCH Needs Assessment Leadership Teams were coordinated under the guidance of the MCH Coordinator (Jacki Tulafono) who formed three MCH Teams: the Pregnant Women and Infant Team, the Children and Youth Team, and the Children with Special Health Needs Team. Each of the three teams was comprised of MCH staff, as the leads, and representatives from other American Samoa Government Programs, the LBJ Memorial Medical Center, the American Samoa Community College, and non-governmental agencies. As MCH Coordinator, Ms. Tulafono was able to utilize MCH Program resources to convene the members of the three MCH Teams and the MCH staff for training and education sessions, conduct team meetings, collect quantitative data, conduct and collect data from qualitative surveys, and analysis of the data. She was also able to use her position as the MCH Coordinator to obtain data from other MCH-related government and private sector programs and agencies.

1.2.1 Pregnant Women and Infant Team

The Pregnant Women and Infant Team was headed by Margaret Sesepasara and assisted by Luana Le`iato (MCH Program Staff). Other team members included:

- Dr. John AhChing, LBJ Tropical Medical Center, ObGyn
- Fale Uele, Department of Health, Health Information Services
- Mary Time, MCH Program;
- Utulei Vaofanua, Department of Health, Tafuna Family Health Center
- Vaasa Amoa, Department of Health, Breast/Cervical Cancer Early Detection Program
- Faafeta`i Meleisaea, MCH Program
- Gau Sipili, MCH Program

1.2.2 Children and Youth Team

The Children and Youth Team was headed by Dr. Olita Laititi and assisted by Conference Alailefaleula (MCH Program Staff). Other members of the team included:

- Denise Faamsino, Department of Human and Social Services
- Dr. Faiese Roby, Department of Health, NCD Coordinator
- Dr. Stanly Gurr, LBJ Tropical Medical Center, Dental
- Dr. James Marrone, LBJ Tropical Medical Center, Pediatrics;
- Eucharist Reupena, Department of Human and Social Services
- Fale Uele, Department of Health, Health Information Services
- Makeati, Department of Health, HIV Program
- Gaoa Mauga, LBJ Tropical Medical Center, Family Planning Program
- Jaqueline Tuiasosopo, Department of Human and Social Services
- Kathleen Siavii, Department of Health, Tafuna Family Health Center
- Lata Allen, Emergency Medical Services for Children
- Mabel Danielson, Department of Education, Early Childhood Education
- Magdalene Augafa-Leauanae, Department of Education, Office of Curriculum, Instruction, and Accountability
- Malu Pereira, Department of Human and Social Services, WIC Program;
- Marie Maiava, Vocational Rehabilitation
- Matamuli Punimata, Department of Health, Director of Nursing
- Milo Sili, Department of Health, Tafuna Family Health Center
- Ofeira Nuusolia, Department of Health, Tafuna Family Health Center
- Roy Ausage, Department of Youth and Women Affairs
- Tali Peau, ASMCA, Family Planning Program
- Terry Sooto-Palmer, Department of Human and Social Services
- Winnie Loa, Department of Health, Immunization Program
- Yolanda Masaunu, Department of Health, Immunization Program
- Lesieli Miscoi, Department of Education, Early Childhood Education
- Timo Tua, Department of Education, Early Childhood Education
- Doreen Leasuasu, Department of Health, Tafuna Family Health Center
- Sina Samuelu, Department of Health, Leone Health Center
- Dr. Anaise Uso, MCH Program
- Don Vargo, American Samoa Community College, Land Grant Program
- Va`a Tofaeono, Community Cancer Coalition

1.2.3 Children with Special Health Needs Team

The Children with Special Health Needs Team was headed by Tele Hill and assisted by Rosita Schuster Alailima-Utu (MCH Program Staff). Other members of the team included:

- Ernie Seiuli, University Center for Excellence on Developmental Disabilities
- Merina Tunupopu, Department of Health, Helping Hands (Part C) Program

- Paulia Pelenato, University Center for Excellence on Developmental Disabilities
- Pini Siaki, Center for Families of Individuals with Developmental Disabilities
- Sue Scanlon, Department of Health, Helping Hands (Part C) Program

1.3 Methodology

The American Samoa MCH Program identified potential partners in a variety of agencies, programs, and non-governmental organization and formed the three MCH Needs Assessment Teams in 2009. An external consultant was contracted to assist with training and technical assistance for the MCH Coordinator, MCH staff, and the MCH Need Assessment Teams. The training included the general concepts of the MCH Data Matrix and the MCH Pyramid, principles of needs assessment and planning, quantitative and qualitative data collection, analysis and interpretation of data, defining priorities, and formulating priority MCH issues and problems.

The conceptual framework for the needs assessment and plan was based on the MCH model built around the community of MCH population that includes families, pregnant women, infants, children, adolescents, children with special health needs, and fathers. The process is to strengthen partnerships by engaging other programs and agencies in American Samoa that interface with the MCH population and work together with communities to improve health outcomes for the MCH populations in their communities. The steps taken for the needs assessment and planning included: (1) Engage the stakeholders, (2) Collect data and analyze to assess needs, (3) Examine capacity, (4) Identify and select priority needs, (5) Set performance measures, (6) Develop action plans.

The stakeholders from government and non-governmental agencies and programs that interface with the MCH population were identified and invited to participate in the training, needs assessment and planning process. The stakeholders were assigned one of the three MCH Teams based on the type of services they provided. The stakeholders were involved in all of the team meetings and participated with the data collection, data analysis, priority setting, and formulating the targeted performance measures.

Quantitative data were collected for the MCH Data Matrix with additional data on the rates and causes of morbidity and mortality from the LBJ Tropical Medical Center's Health Information Center. These data were compared to data from past assessments and evaluations conducted in American Samoa by the MCH Program and other programs that provide services to the MCH population. Health care utilization data were collected for selected community-based MCH clinics. For example, data from the Leone and Amouli Health Centers were collected to provide geographic-specific data for assessing utilization of services and comparisons. Other data sources that were used as comparison include National MCH data and Healthy People 2010 Objectives. Qualitative survey and focus group data were collected to provide more in-depth information to complement some of the quantitative data.

Service capacity was examined based on the MCH Pyramid of Services and included Direct Health Care Services, Enabling Services, Population-based Services, and Infrastructure Services. The current American Samoa MCH Program descriptions and evaluations were reviewed the capacity and availability of services in each of the categories was identified and documented. MCH staff responsible for providing program services provided further detailed descriptions of services in each of the four service areas.

Priority needs were identified by examining and comparing the needs for services for each of the MCH populations based on the analysis of the data from the MCH Data Matrix and other reports of rates as well as causes of morbidity and mortality. Once the priority needs were identified, the entire MCH Needs Assessment Teams were convened and a listing of the top ten priorities was generated using a modified Hanlon Method of prioritization. With the top ten list of prioritized needs, the MCH Needs Assessment Teams were able to formulate the State Performance Measures and target indicators for measurement.

1.4 Methods for Assessing the Three MCH Populations

1.4.1 Pregnant women, mothers, infants

The Pregnant Women and Infant Team and the MCH Program staff used a variety of methods for collecting the quantitative data for the pregnant women, mothers, and infants. Data for this MCH population was manually collected from logbooks, prenatal clinic records, well baby clinic records, delivery and newborn logs, and hospital records. For example, data on live births were extracted from the LBJ Tropical Medical Center's Labor and Delivery logbook for 2009, data on utilization of prenatal care was obtained from data generated on the Postpartum data cards and Newborn data cards, clinic data from Leone, Amouli, and Tafuna Health Centers. Data were entered into the Excel program and the Filter, Sort, and Pivot Table functions were used to analyze the data.

Qualitative methods to assess utilization of prenatal care included conducting focus groups for women with no prenatal care. The Pregnant Women and Infant Team reviewed prenatal care utilization data from previous years and noted that approximately 7% of pregnant women do not receive any prenatal care and 15% have fewer than four prenatal care visits during their pregnancy. Geographically, on the islands of Tutuila and Aunu`a, prenatal care is available at a clinic within a one hour bus ride from any point on these islands. The team wanted to explore the reasons why women fail to receive prenatal care. There were a total of 64 pregnant women with no prenatal care during the period January to August 2009 identified in the LBJ Tropical Medical Center L&D logbook. This group of women were stratified into resident and non-resident status and village of residence was also identified for each woman. To assure a wide representation across Tutuila and Aunu`a islands, 10 women with resident status and 10 women with non-resident status were selected from a random selection of villages. Invitations were sent to each woman and nine women with resident status attended one focus group session and six women with non-resident

status attended a separate focus group session. The sessions were facilitated by a moderator, with assistance from a facilitator, and four recorders. Consent forms were developed and translated into Samoan for participant signatures. All responses were manually documented on hard copy. Transportation was provided for all participants and refreshments were served to the women. A bag, a pen, and a pre-paid phone card from the MCH Program were provided to each participant as an incentive. The Pregnant Women and Infant Team analyzed the participant responses and identified major patterns of issues elicited by the women. Specific detailed information was also categorized and documented.

1.4.2 Children and youth

The Children and Youth Team used a variety of methods to collect the quantitative data for children and youths. Data was primarily obtained through examining well baby and well child clinic records from Leone, Amouli, and Tafuna Health Centers, Immunization Program database, LBJ Tropical Medical Center L&D logbook, LBJ Tropical Medical Center hospital discharge and death records, WIC Program database, and the American Samoa DOE Youth Risk Behavior Surveillance System. Some of these data were analyzed and documented in published reports; however, the majority of the data required manual collection, cleaning, and analysis with the Excel software program using the Sort, Filter, and Pivot Table functions.

1.4.3 Children with special health care needs

The Children with Special Health Needs Team used the CSHN Program data and individual records of children for obtaining quantitative data.

The Children with Special Health Needs Team conducted a telephone survey of families of children with special health needs. The CSHN Team reviewed questions from the SLAITS questionnaire and selected and adapted those questions that were appropriate for CSHN Program in American Samoa. A total of 13 questions were included in the survey. A consent form was also developed. The survey and consent form were translated into Samoan and pre-tested with five families and translated copies were sent to the participating team members for their feedback. Based on this pre-testing and review of the questions, one question on "respite care" was eliminated because the concept of respite care was not culturally understood in the pre-testing. To assure consistency and uniformity among the interviewers, a script was developed and tested for those conducting the interviews. The CSHN Team identified 146 families registered in the CSHN Program. Of this total, 85 families had a current telephone number in the records and attempts were made to contact these families for a telephone interview. Of these families, 40 families agreed to participate in the telephone survey. Efforts to maintain confidentiality and privacy were conscientiously upheld throughout the interview process with families.

1.5 Methods for Assessing State Capacity

1.5.1. Direct health care services

Direct health care services are those services provided by MCH Program staff and partners to MCH populations and include preventive and primary care services and specialty care services when needed. The methods used to assess this component included examination and review of MCH Program annual reports and program descriptions and reports from partner agencies and programs. For in-depth information on the provision and availability of direct health care services, key informants were identified and interviewed. Key informants included MCH providers at Well Baby Clinics, Well Child Clinics, Prenatal Care Clinics, WIC services, Early Childhood Services, CSHN services, and medical care providers at the LBJ Tropical Medical Center.

1.5.2 Enabling services

Enabling services are those services that are provided to MCH populations to assure the access, availability, and acceptability to health care services. Enabling services include: outreach and awareness, health education, translation services, transportation, and coordination with other agencies such as WIC, Part C Program, and Early Childhood Education; and for CSHN respite care, family support services, and case management. The methods used to assess this component were similar to those methods used to assess the direct health care services and included MCH Program and partner agency annual reports and descriptions. The same key informants were interviewed to obtain information on the provision and availability of enabling services to the MCH populations.

1.5.3 Population-based services

Population-based services are services provided to all and include early newborn hearing screening, lead screening, immunization, nutrition, oral health, injury prevention, outreach education to the public. The methods used to assess this component included examination of program annual reports and program descriptions, interviewing key informants in the programs such as the Newborn Hearing Screening and WIC Program, and interviewing the staff that provide the services at the community-based health centers.

1.5.4 Infrastructure-building services

Infrastructure-building services are those essential administrative and leadership responsibilities to assure that MCH populations are provided with comprehensive, coordinated, and quality preventive and health care services. These services include: needs assessment, program planning, monitoring and evaluation, policy development, coordination and collaboration with programs that interface with the MCH population,

quality assurance through standards development, training, applied research, developing and maintaining systems of care, and management and health information systems. The methods used to assess this component included examination of MCH administration plans and activities, documentation of training sessions, review of MCH Program accomplishments.

1.6 Data Sources

Key quantitative data sources used for the needs assessment included the most recent years available and comparison years as appropriate and included the Year 2000 US Census data for socio-demographic and population data by age gender, residence, and poverty status; MCH Program and clinic data, past MCH assessments and data; partnering program data, and the LBJ Tropical Medical Center records for medical services and hospital discharge and mortality.

1.6.1 Pregnant Women and Infant Team

For the Pregnant Women and Infant Team, the data sources included:

- MCH Program data - Prenatal Clinic records from Leone, Amouli, and Tafuna Health Centers
- MCH Program data - Well Baby Clinic records from Leone, Amouli, and Tafuna Health Centers
- LBJ Tropical Medical Center delivery and newborn logs and hospital records
- Qualitative data was obtained from the focus groups conducted by the team

1.6.2 Children and Youth Team

For the Children and Youth Team, the data sources included:

- MCH Program data - Well Baby Clinic and Well Child Clinic records from Leone, Amouli, and Tafuna Health Centers
- Department of Health's Immunization Program database;
- LBJ Tropical Medical Center, Labor and Delivery logbook
- LBJ Tropical Medical Center hospital discharge and death records
- Department of Human and Social Services' WIC Program database
- American Samoa Department of Education's 2007 Youth Risk Behavior Surveillance System
- American Samoa Community College, Community and Natural Resources report on the *Prevalence of Obesity in American Samoan Schoolchildren, 2008-2009 School Year*

1.6.3 Children with Special Health Needs Team

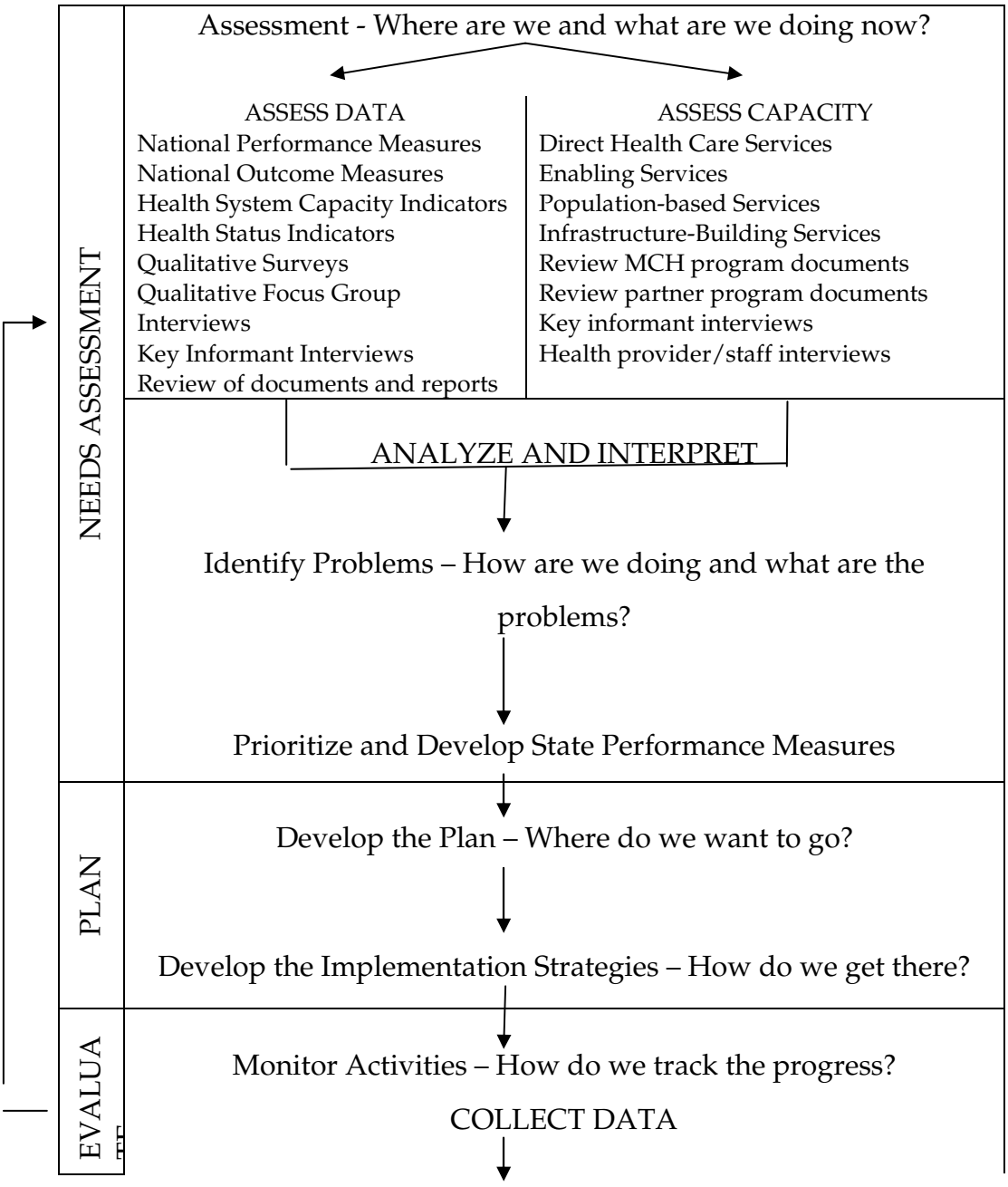
For the Children with Special Health Needs Team, the data sources included:

- MCH Program data - CSHN Program data and individual records of children

- Qualitative data was obtained from the telephone survey of families of children with special health needs

1.7 Linkages Between Assessment, Capacity, and Priorities

The five-year needs assessment is part of an ongoing planning cycle. The cycle begins with asking the question: "Where are we and what are we doing now?" that leads to the activities of collecting and assessing the data that provides the information on the health status of the three primary MCH populations. The second activity is to assess the service capacity of the systems.



	Evaluate Impact – How do we measure the successes?

Through the analysis and interpretation of the findings of health status and service capacity, the question: "How are we doing and what are the problems?" can lead to the identification of the problems and needs of the three MCH populations as well as the assets, strengths, and needs of the service capacity. The priorities for addressing the problems and issues formulated based on the fundamental philosophy and beliefs as well as the goals and objectives of the American Samoa MCH program. The priorities can then be translated into the State Performance Measures that will be the basis for developing the MCH plan for the next five years. The question: "Where do we want to go and how to we get there" provides the opportunity to develop the MCH plans and strategies, allocate resources and implement the plan. To answer the question: "How do we track the progress and how do we measure the successes" the indicators in the form of state performance measures are developed to monitor activities and evaluate performance each year within the five-year cycle and reported annually.

1.8 Dissemination

With the completion of the MCH Needs Assessment, the document will be widely distributed to all the members of the three MCH teams – the Pregnant Women, Mothers, and Infants Team, the Children and Youth Team, and the Children with Special Health Needs Team. Those team members who represent other programs and agencies will take the findings of the document back to their programs for further discussion. The participants from all three teams will all be brought together for a final meeting and training on developing a mechanism for prioritizing the findings. The participants will select the final top priority issues to be addressed by the MCH Program. The MCH Program administration and staff will develop the final State Performance Measures with input from the other participants.

1.9 Strengths and Weaknesses of the Process

The primary strength of the needs assessment process was the involvement and wide participation by all of the MCH staff and representatives from the other agencies and programs that provide services to the MCH population. This wide participation was important because of the contribution from the staff from other agencies and programs. Another strength in the process was the use of the concept of teams with MCH staff as leaders for the three MCH teams that helped to conduct the needs assessment and prioritize the findings of the assessment. All of the participants were engaged in the process and learned the principles of conducting a needs assessment, the importance of collecting data consistently, and how to analyze the data. The participants learned how to use the Pivot Table function in the Excel program and were able to produce results from the massive amounts of data.

There were many weaknesses that hindered the process of the needs assessment. The most significant weakness was the lack of an MCH Epidemiologist to act as the single source of data for the needs assessment and be the coordinator to obtain the data, compile and assess data, and write descriptive reports. We found that a major weakness was the lack of consistent data in a format that was usable. For example, some programs collected duplicated records of services rendered rather than unduplicated records of children. Because of this lack of consistency, MCH staff were manually collecting the data, cleaning the data and entering the data into an Excel program for analysis. Another major difficulty related to the lack of current population data. Intercensal data were not available at the detailed population level needed to calculate rates and proportions. Because these updated population data were not available, the U.S Census 2000 was used for denominator data. Therefore, we recognize that the results for the data indicators may differ from year to year and makes trend analysis difficult if not impossible. At times sample populations were used when data for the total population was not available. However, limited, the needs assessment presents the most recent and the best available data from these resources.

Section 2: Partnership Building and Collaboration Efforts

2.1 Methods Used to Build and Enhance Partnerships with:

2.1.1 State and local MCH programs

In American Samoa, the MCH Program is administratively centralized in the American Samoa Government's Department of Public Health and there are no local MCH programs. The State MCH Program is limited in one office with 13 staff and all activities for MCH services in the local communities and the community-based health centers are provided through the State MCH Program.

2.1.2 Other HRSA programs, State DOH programs, governmental agencies, local programs

In American Samoa, because of the geographic isolation of being on an island most programs are administratively centralized in the major American Samoa Government (ASG) departments and authorities: such as the Department of Public Health, the Department of Education, the Department of Human and Social Services, the Department of Youth and Women's Affairs, the American Samoa Community College, and the American Samoa Medical Center Authority (LBJ Tropical Medical Center). The MCH Program staff works closely with all the other Federal and ASG programs and private programs that provide services to the MCH populations. Some of the methods used are to collaborate to develop community-based programs by consolidating and sharing resources, sharing staff and clinic space to provide the services in the health centers, and conducting community awareness and education

services collaboratively. Other methods to build partnerships include inviting representatives from other programs and agencies to training and education sessions provided by the MCH Program, attending national conferences and meetings together, participating in local planning meetings with other programs and agencies, and representing MCH in advisory committees for other programs and agencies.

2.1 Stakeholder Involvement

2.2.1 Public and family involvement in needs assessment

The public and families were involved in the needs assessment through their participation in the qualitative surveys conducted by the Pregnant Women and Infant Team and the Children with Special Health Needs Team. The Pregnant Women and Infant Team conducted two focus groups with women who received no prenatal care. One group included 10 women who were residents and the other group included non-resident women. The purpose of the focus groups was to identify the barriers that prevented the pregnant women from receiving prenatal care.

Families were also involved with the telephone survey conducted by the Children with Special Health Needs Team. A total of 40 families agreed to participate in the CSHN telephone survey to determine whether parents and caregivers of Children with Special Needs are satisfied with the services they are currently receiving and what additional services do families need for their children.

2.2.2 Collaborative efforts in completing the needs assessment

The collaborative efforts to complete the needs assessment were extensive as evidenced by the number of representatives who were invited to participate in the needs assessment. There were a total of 41 representatives from both ASG programs and non-governmental programs that provide services to the MCH population and were included in one of the three MCH teams that conducted the assessment. These representatives were invited to participate in three training programs that included sessions on the basic public health principles of maternal and child health including the MCH Data Matrix, the MCH Pyramid, and MCH measures and indicators for the needs assessment. Other training included the steps in conducting a needs assessment, methods for conducting qualitative surveys, data sources for quantitative data, and data analysis and interpretation. During each of the training sessions plans for collecting the data were developed and the participants in the three teams worked together, with MCH staff as lead, to complete the data collection and analysis.

Section 3: Health Status, Needs, and Outcomes of the MCH Population Groups

3.1 Description of the MCH Population

The population of American Samoa has been steadily increasing when in 1970 the population stood at 27,159 and steadily increased by 110% when the population measured 57,291 in 2000. In examining the total population by gender, there are slightly more males (51.1%) than females (48.9%) (Census: Population and Housing Profile, 2000). When the data for population is stratified by gender and age to determine the proportion of women who are in the child-bearing age groups, we find that there are 12,673 (45%) women between the ages of 15-44 years. In assessing the fertility of women by age groups, there are 4,624 women ages 15-24 years with 1,538 children ever born for a rate of 333/1,000 women; in the age group 265-34 years, there are 4,322 women with 9,049 children ever born for a rate of 2,094/1,000 women; and for the 3,727 women between 35-44 who had 13,363 children ever born for a rate of 3,585/1,000 women.

Population by Age and Gender
American Samoa, 2000

Age	Male	Female	Total
Total	29,264	28,027	57,291
0-4	4,008	3,812	7,820
5-9	4,058	3,730	7,788
10-14	3,389	3,215	6,604
15-19	2,747	2,476	5,223
20-24	2,328	2,148	4,476
25-29	2,218	2,138	4,356
30-34	2,167	2,184	4,351
35-39	1,980	2,079	4,059
40-44	1,654	1,648	3,302
45-49	1,331	1,329	2,660
50-54	1,071	1,002	2,073
55-59	817	657	1,474
60-64	636	568	1,204
65-69	407	383	790
70-74	231	324	555
75+	222	334	556

ASG Department of Commerce

American Samoa has a relatively young population with over one-third (38.7%) of the population less than 15 years of age. For the total population, the median age stands at 21.3 years with 47.8% of the population less than 20 years of age, 44.1% between 20-59 years, and 8% who are 60 years and above.

3.2 Description of the Health Status of the MCH Population Groups

3.2.1 Pregnant women, mothers, and infants

MCH Data Matrix - Pregnant Women and Infants Indicators.

MCH Data Matrix – Prenatal and Infant Indicators, 2005-2009

Measures and Indicators		2005	2006	2007	2008	2009
National Performance Measures						
11	Percent of mothers who breastfeed their infants at 6 months of age	35.4	34.2	ND	45.0	19.4
12	Percent of newborns who have been screened for hearing before hospital discharge	0	0	0	0	91.1
15	Percent women who smoke in the last three months of pregnancy	ND	ND	2.1	3.3	3.8
18	Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester	14.7	15.0	22.1	19.5	23.1
National Outcome Measures						
1	Infant mortality rate	11.3	11.1	8.5	ND	8.0
3	Neonatal mortality rate	7.1	6.2	5.4	ND	4.4
4	Postneonatal mortality rate	4.2	4.9	3.1	ND	4.4
5	Perinatal mortality	14.2	12.8	11.6	ND	6.6
Health Systems Capacity Indicators						
4	Percent of women with a live birth whose observed to expected prenatal visits are ≥80% on the Kotelchuck Index	14.7	18.8	22.1	19.5	70.0
Health Status Indicators						
1A	Percent live births weighing <2500 grams	3.8	2.8	3.3	1.6	0.7
1B	Percent of singleton live births weighing <2500 grams	3.0	2.6	3.0	1.5	0.1
2A	Percent live births weighing <1500 grams	0.3	0.6	0.5	0.4	0.07
2B	Percent of singleton live births weighing <1500 grams	0.3	0.6	0.6	0.5	0.07
State Performance Measures						
1	Percent infants born to women receiving adequate prenatal care according to the Kotelchuck Index	14.7	15.0	22.1	18.2	40.7
4	Percent 4 month old infants in WBCs who are exclusively breastfed	31.2	27.1	31.2	54.6	17.0
6	Percent 1 year old infants who low hemoglobin (<11Gms)	30.0	31.0	10.9	27.2	44

ND - No data available

Birth rate trends 2000–2009. Assessing the overall trends of births and infant deaths over time shows that since 2000, the birth rate has been fluctuating, but slowly declining. In 2000, there were 1,730 births with a birth rate of 30.0/1000 persons based on an estimated population of 57,700 residents. The number of births and the birth rates steadily decreased until 2003 when there were 1608 births and a birth rate of 25.7/1000 persons. In 2004 and 2005, there were increases in the birth rate of 26.7/1000 persons and 26.3/1000 persons, respectively. Since 2006, there has been a steady decline in both the number of births and the birth rate and by 2009 there were 1361 births with a birth rate of 17.0/1000

Birth Trends, 2000-2009

Year	Est Pop	Births	Rate/1000
2000	57700	1730	30.0
2001	59400	1655	27.9
2002	60800	1629	26.8
2003	62600	1608	25.7
2004	64100	1713	26.7
2005	65500	1720	26.3
2006	66900	1442	21.6
2009	80000	1361	17.0

ASG Statistical Yearbook, 2006

persons based on an estimated 2010 population of 80,000 residents. There are no data available for the years 2007 and 2008.

Adequacy of Prenatal Care Utilization (Kotelchuk Index). The indicator measuring the adequacy of prenatal care utilization was determined from data collected manually on the Postpartum Card and the Newborn Card that are completed by the nursing staff at the LBJ Tropical Medical Center and sent to the MCH Program so that both the mother and the infant can be followed in postpartum clinic and well baby clinics in the health centers. These cards contain all of the necessary data for calculating the Kotelchuck Index. A total of 1384 Postpartum Cards and Infant Cards were collected between October 2008 and September 2009. Of this total, 670 (48.4%) cards had completed data and were used for calculating the Kotelchuck Index. Data were entered into the Excel program spreadsheet and the Pivot Table function was used to calculate the results. The results show that of the 670 women that were included in the sample, 145 (21.6%) were determined to have a Kotelchuck Index of Adequate Plus; 128 (19.1%) were Adequate; 59 (8.8%) were Intermediate; and 338 (50.4%) were Inadequate.

Adequacy of PNC Utilization
October 2008 – September 2009

Kotelchuck Index	n	%
Adequate Plus	145	21.6
Adequate	128	19.1
Intermediate	59	8.8
Inadequate	338	50.4
Total	670	100

Analysis of data to determine the proportion of women who initiated prenatal care by trimester show that of the 670 total births, 147 (21.9%) women initiated prenatal care in the first trimester defined as care in the first twelve weeks of the pregnancy; 345 (51.5%) women initiated prenatal care in the second trimester defined as care between the 13th week through the 27th week of gestation; and 155 (23.1%) women initiated care in the third trimester defined as 28th week of gestation to birth.

In comparing the proportion of women who received adequate prenatal care in the past five years, the data show that in 2005 14.7% of the women received adequate prenatal care and that proportion increased to 22.1% in 2007, decreased to 18.2% in 2008 and then dramatically increased to 40.7% in 2009. The dramatic increase in the percentage of women receiving adequate prenatal care in 2009 may be a reflection of the variations in the data collecting methods used during these time periods. The data for 2009 was collected from 1384 postpartum and infant data cards of a nine-month period and which only 48% of the cards had the completed data necessary to complete the calculations for the Kotelchuck Index. Therefore, this variation in the percentage for 2009 may be an artifact of the data collection.

Qualitative Focus Groups of Women with No Prenatal Care.

The Pregnant Women and Infant Team examined preliminary data of women receiving prenatal care during the first eight months of 2009 and noted that 64 (7%) of the pregnant women did not receive prenatal care and 15% of the pregnant women

received less than 4 prenatal care visits during their pregnancy. It was noted that these women with no or few prenatal care visits are at high risk for poor pregnancy outcomes. The team conducted two focus groups in an attempt to determine the barriers that prevented these women from initiating and receiving prenatal care services. Two groups of 10 women (one group of residents and one group of non-residents) from a wide geographic distribution of villages on the islands of Tutuila and Aunu`u were invited to participate in two separate focus groups. There were nine participants in the group of resident women and six participants in the group of non-resident women. Of the 15 women, 14 women were Samoan and one woman was Tongan; ten women were between the ages of 15-29 and five were between 30-40 years of age; 13 were currently married and two were single; two had less than high school education, 10 were high school graduates, and three had education beyond high school; 13 of the women were housewives and two are employed by the American Samoa government.

Some of the questions included: *Do you think prenatal care is important? What are some of the things that kept you from getting prenatal care? How can we make it better for you?* The majority of the women thought that prenatal care was important. Some responses included: important to be informed about the baby's health, prevent anything happening to the baby, prevent high blood sugar and high blood pressure, important for mother's and baby's health. According the responses, the most common barriers mentioned included: the costs of laboratory tests, cost of transportation to attend prenatal clinic, no baby sitter to watch other children, morning sickness, did not finish paying previous hospital bill, tired of negative attitudes of the staff providing prenatal services.

Some of the recommendations that were provided by the participants included: lower the cost of registration and first prenatal visit and follow-up prenatal clinic visits and laboratory tests, provide transportation to prenatal clinic visits, improve customer service and staff attitudes, and provide all of the necessary services at the prenatal clinic (Hepatitis B vaccination, blood drawing for laboratory tests, prenatal vitamins and iron).

3.2.2 Children and youth

MCH Data Matrix – Children and Youth Indicators.

MCH Data Matrix – Children and Youth Indicators, 2005-2009

Measures and Indicators		2005	2006	2007	2008	2009
National Performance Measures						
7	Percent 19-35 month old children who received full schedule of age appropriate immunizations	75.1	70.3	69.7	68.9	56.0
8	Rate (1000) of births for teenagers aged 15 through 17	11.7	11.0	14.8	15.6	18.9
9	Percent third grade children who received protective sealant on at least one permanent molar tooth	4.2	41.9	44.1	60.7	43.0
10	Rate (100,000) of deaths to children 14 years and younger caused by MV crashes	0	4.4	3.8	0	4.5
14	Percent children 2-5 years receiving WIC with a BMI >85th percentile	ND	ND	14.0	14.3	36.8
16	Rate (100,000) of suicide deaths among youths aged 15 – 19 years	0	0	0	0	0
National Outcome Measures						
6	Rate (100,000) of death to children 1 thorough 14 years	48.8	55.7	15.9	ND	58.1
Health Systems Capacity Indicators						
1	Rate (10,000) children <5 years hospitalized for asthma	ND	ND	143	152	25.6
Health Status Indicators						
3A	Rate (100,000) of death to children ≤14 years due to unintentional injuries	4.0	4.4	3.8	3.9	4.5
3B	Rate (100,000) of death to children ≤14 years due to MV crashes	0	4.4	3.8	0	4.5
3C	Rate (100,000) of death to youth 15 through 24 years due to MV crashes	28.4	27.5	0	8.5	20
4A	Rate (100,000) of all non-fatal injuries among children ≤14 years	0	58.4	94.5	77.6	319.6
4B	Rate (100,000) of non-fatal injuries due to MV crashes among children ≤ 14 years	53.7	39.6	41.6	38.8	45.0
4C	Rate (100,000) of non-fatal injuries due to MV crashes among youth 15 through 24 years	51.6	36.8	129.9	101.9	10.0
5A	Rate (1000) of women 15 through 19 years with reported case of Chlamydia	0.2	11.7	10.2	10.7	6.0
5B	Rate (1000) of women 20 through 44 years with reported case of Chlamydia	0.1	4.1	4.4	7.0	6.9
State Performance Measures						
3	Percent 2-4 year old in MCH well child clinics who access dental health services	35.3	10.8	14.9	31.4	64.4
5	Percent 14-17 year olds attending school who admitted to smoking in the last 30 days	ND	40.0	24.2	24.2	24.2

ND – No data available

MCH Program Well Child Clinic – Obesity and Anemia.

The staff of the MCH Program collected data on a sample of 2-4 year old children attending the well child clinics at the Tafuna Health Center and the Leone Health Center. Data on weight, height, age, and gender was collected to calculate the BMI and BMI percentage. Other data included type of feeding and hemoglobin measures at 6 months of age and 1 year of age. Data on a total of 576 children were collected and entered into an Excel spreadsheet and the Sort, Filter, and Pivot Table functions were used to determine counts and percentages. Of the sample of 576 children, 236 (41%) were female and 340 (59%) were male.

The data for assessing the BMI percentile categories for these children showed that 25 children (4.3%) were underweight (<5%ile) and 58.2% were in the healthy weight category (5% ile- 85ile%). A total of 202 (35.1%) of the children seen in the clinics were in the overweight and obese categories and of the children in this group, 19.1% were overweight and 16.0% were in the obese category. In assessing the data for low hemoglobin (defined as <11 Gm) among the children, the data show that at 6 months of age, 72.7% of the children did not have a hemoglobin documented in the record and of the 157 children who did get tested, 50.3% had hemoglobin below 11 Gms and 49.7% had hemoglobin 11 Gms and above. At one year of age, 346 (60.1%) children did not have a hemoglobin result in the records, of the remaining 230 children who were tested, 144 (62.6%) children had hemoglobin under 11 Gms and 86 (37.4%) children had hemoglobin 11 Gms and above. In assessing the feeding history of the children, the data show that 19.6% of the children were exclusively breastfed, 47.6% had a combination of breastmilk and formula, and 32.8% were fed formula.

In summary, the BMI categories, feeding history, and hemoglobin levels were determined for this limited sample of 576 children between 2-4 years of age who received well child care services in the Tafuna and Leone Health Centers during a six months of 2009. The BMI categories show that overall 35.1% of the children were in the overweight and obese categories. In assessing the children for anemia (Hgb <11 Gms), the data showed that at 6 months of age only 27.3% of the children had documented hemoglobin values and of these children 50.3% were anemic; at one year of age 39.9% of the children had documented hemoglobin values and of these children 62.6% were anemic. Feeding history revealed that only 19.6% of the children were exclusively breastfed.

Immunization. Immunization services are provided by the MCH Program in partnership with the community health centers and the pediatric department of the LBJ Tropical Medical Center. The data for immunization were collected from the Amouli Health Center, Tafuna Family Health Center, and Leone Health Center. A total of 965 records of 2-year old children from the well baby clinics were reviewed and data for completed series of immunizations were collected. The data show that there are wide variations among the three clinics. The records of 98 2-year old children were reviewed for Amouli Health Center and 81% of the children had completed immunizations. For

Leone Health Center, 186 records were reviewed and 72% of the children had completed immunizations. For Tafuna Family Health Center, 681 2-year old children's records were examined and 48% had completed immunizations. The overall data for the three clinics reveal that of the 965 total records reviewed, 540 records showed completed immunizations for a overall 56% of the 2-year old children with fully completed immunizations. Of major concern is the fact that since 2005, the proportion of 2-year old children with completed immunization has been declining. In 2005 75.1% of the 2-year old children were fully immunized and that percentage has been slowly declining until it reached 56.0% in 2009.

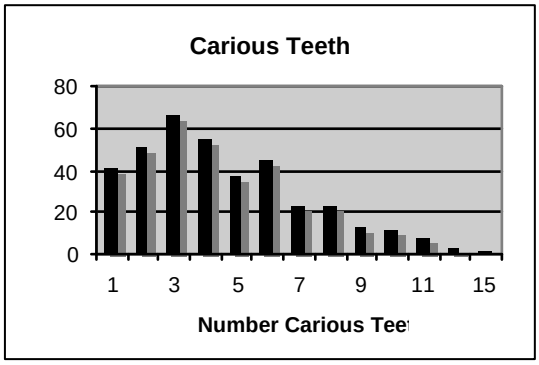
Dental Services for Children. The MCH Dental Program focuses its services on 3rd grade children in American Samoa. There are 23 elementary public schools in American Samoa and during the 2008-2009 school year, the MCH Dental Team was able to provide services in 13 public school that has a 3rd grade enrollment of 1,067 students. During the 2008-2009 school year, 540 3rd grade children were screened by the MCH Dental Team and of these children, 459 (43%) received a dental sealant on one permanent tooth. Since 2006, when 41.9% of the 3rd grade children received a sealant on at least one molar, the trend was increasing in that in 2007 the proportion increased slightly to 44.1% and further increased to 60.6% in 2008; however, in 2009, that proportion decreased to 43%.

In addition to providing dental sealants, the MCH Dental Team also assessed the children for dental caries. The children in the 3rd grade are between 7 -9 years of age and have both deciduous and permanent teeth. Data on the caries rates among the 540 children screened during this time period shows that overall, 69.4% of the children had dental caries in at least one tooth. In examining the data for caries rates for deciduous and permanent teeth, 64.1% of the children had caries in at least one deciduous tooth and 25.4% had caries in at least one permanent tooth.

Dental Caries Among Third Grade Children, 2009

Caries	Deciduous		Permanent		Total Caries	
	N	%	N	%	N	%
Yes	346	64.1	137	25.4	375	69.4
No	194	35.9	403	74.6	165	30.6
TOTAL	540	100	540	100	540	100

In attempting to assess the extent of the problems with dental caries, the data show that 41 children had one carious deciduous or permanent tooth and the number of children increases as the number of caries increases until 66 children had three carious teeth. Then the number of children decreases as the number of carious teeth decreases until one child was assessed who had 15 carious teeth. When the number of carious teeth are aggregated into 1-3, 4-6, 7-9, and 10+ carious teeth, of the 375 children who were found to have at least one deciduous or permanent



carious tooth, 158 (42%) children had caries in 1-3 of their deciduous and permanent teeth, 135 (36%) children had 4-6 carious teeth, 59 (16%) children had 7-9 teeth involved and 23 (6%) children had 10 or more teeth involved with caries.

Obesity in American Samoan Schoolchildren.

In May 2009, the American Samoa Obesity Study Committee, under the direction of staff from the American Samoa Community College, Community and Natural Resources completed a report to the Directors of the Department of Health and the Department of Education, *Prevalence of Obesity in American Samoan School children, 2008/2009 School Year*. This report revealed that the overall prevalence of obesity among children and adolescents in American Samoa is much higher than in the United States. Overall, 55.6% of the students were either overweight or obese; although the prevalence was lower for young students, it increased considerably with age.

In assessing the percentage of overweight and obese students by gender and grade levels, the data show that 43.5% and 41.3% of the combined boys and girls in Kindergarten and 2nd grade, respectively were overweight and obese. The data also reveals that the proportion of overweight and obese children increased as the grade increased so that by the 11th grade, 71.3% of the children were in the overweight and obese category. In assessing the data stratified by gender, the data show that the proportion of boys in the overweight and obese category is slightly higher as compared to the girls from Kindergarten through the 3rd grade; however, in the 5th grade, the proportion of girls in the overweight and obese categories becomes higher as compared to the boys in the same grade.

Percentage Overweight and Obese Students by Grade and Gender

Grade	K	2	3	5	6	8	9	11
Boys	43.8	43.5	44.2	49.7	54.4	56.3	59.6	68.1
Girls	43.1	39.1	43.5	51.2	56.8	65.5	69.6	74.5
Total	43.5	41.3	43.9	50.0	55.6	60.9	64.6	71.3

Vargo, D. Prevalence of Obesity in American Samoan Schoolchildren, 2008/2009, May 2009

Children 2-5 Years Receiving WIC Services, 2009.

The American Samoa Department of Human and Social Services administers The Special Supplemental Nutrition Program for Women, Infants and Children (WIC). WIC provides nutritious foods, nutrition education, and referrals to health and other social services to participants at no charge. WIC serves low-income pregnant, postpartum and breastfeeding women, and infants and children up to age 5 who are at nutrition risk.

Weight Categories Based on BMI Percentage, WIC Participants, 2-5 Years, 2009

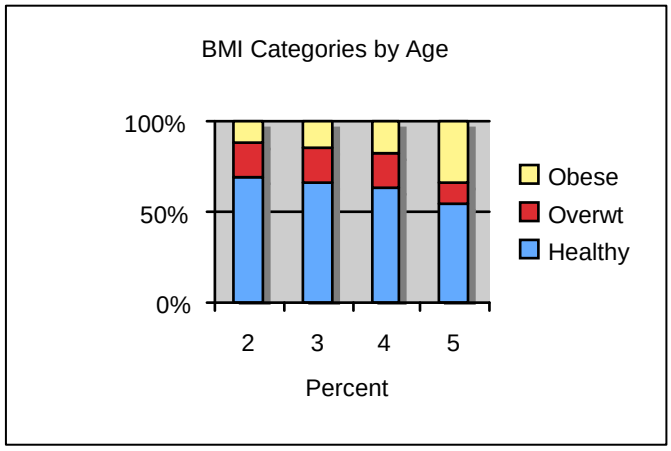
Gender	Age	Underweight	Healthy Weight	Overweight	Obese	Total
Female	2	13 (2.2%)	390 (66.1%)	123 (20.8%)	64 (10.8%)	590
	3	9 (1.4%)	391 (62.8%)	140 (22.5%)	83 (13.3%)	623
	4	14 (1.6%)	569 (63.8%)	172 (19.3%)	137 (15.4%)	892
	5	1 (2.7%)	23 (62.2%)	3 (8.1%)	10 (27.0%)	37
	Total	**37 (1.7%)**	**1,373 (64.1%)**	**438 (20.4%)**	**294 (13.7%)**	**2,142**
Male	2	14 (2.4%)	411 (70.1%)	97 (16.6%)	64 (10.9%)	586
	3	9 (1.5%)	404 (66.3%)	109 (17.9%)	87 (14.3%)	609
	4	16 (1.9%)	523 (61.5%)	157 (18.4%)	155 (18.2%)	851
	5	0 (0.0%)	17 (45.9%)	5 (13.5%)	15 (40.5%)	37
	Total	**39 (1.9%)**	**1,355 (65.1%)**	**368 (17.7%)**	**321 (15.4%)**	**2,083**
Both	2	27 (2.3%)	801 (68.1%)	220 (18.7%)	128 (10.9%)	1,176
	3	18 (1.5%)	795 (64.5%)	249 (20.2%)	170 (13.8%)	1,232
	4	30 (1.7%)	1,092 (62.7%)	329 (18.9%)	292 (16.8%)	1,743
	5	1 (1.4%)	40 (54.1%)	8 (10.8%)	25 (33.8%)	74
	Total	**76 (1.8%)**	**2,728 (64.6%)**	**806 (19.1%)**	**615 (14.6%)**	**4,225**

Vargo, D., American Samoa Community College, Personal Communication, 2009

The 2009 data for WIC services shows that there were a total of 4,864 children between the ages of 0-5 years who received WIC services. Of these children, there were 4,225 (86.8%) children between the ages 2-5 years. When the data are stratified by gender, there were 2,142 (50.7%) females and 2,083 (49.3%) males. In assessing the data by age groups, there were 1,176 (27.8%) 2-year old children, 1,232 (29.1%) 3-year old children, 1,743 (41.2%) 4-year old children, and 74 (1.8%) 5-year old children.

For the 4,225 children between 2-5 years of age, the BMI percentages were calculated and categorized into underweight (<5th percentile), normal BMI (5th - 85th percentile), overweight (86-95 percentile) and obese (>95th percentile) categories. In examining the data for overweight and obese females, 732 (34.1%) of the females are in the combined overweight and obese category. The data for males show that 689 (33.1%) of the males are in the combined overweight and obese category. When combining both females and males into the overweight and obese categories there were a total of 1,421 (33.7%) children in the combined category. So, there are slightly more females in the combined overweight and obese category when compared to the males.

In assessing the data for healthy, overweight, and obese BMI percentile categories by age groups, the data show that at 2 years of age, 68.1% of the children were in the healthy BMI category and the proportion of healthy weight children slowly decreased as the children's age increased so that by 5 years of age, the proportion of children in the healthy category decreased to 54.1%. At the same time the proportion of children in the combined overweight and obese categories (O/O) increases as the age increases. At 2 years of age, 29.6% of the children were in the combined O/O category and by the time the children reached 5 years of age, 43.6% of the children were in the combined O/O category. In further assessing the data for the combined categories and stratifying the data to compare the overweight category with the obese category, the data show that the proportion of overweight children decreases from 18.7% of the 2 year old children to 10.8% of the 5 year old children. At the same time, the proportion of obese children increases for the same age groups so that 10.9% of the children are obese at 2 years of age and 33.8% of the children are obese at 5 years of age. In summary, for the 2-5 year old children receiving WIC services, there is an inverse relationship between healthy BMI category and the combined overweight and obese BMI category in that as the child's age increases the proportion of children in the healthy BMI category decreases as the proportion of children in the combined overweight and obese category increases. In summary, it appears that as the children's age increases, the proportion of children in the obese category increases while at the same time the proportion of children in both the healthy and the overweight categories decrease. It also appears that the increase in the combined overweight and obese category is due largely to increases in the obese category.



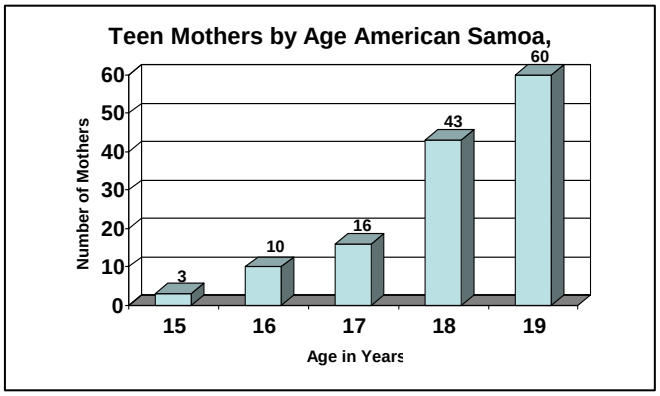
Child Morbidity Data. Data on diagnosis for hospital admissions to the LBJ Tropical Medical Center for 2009 was examined for children between the ages of birth to 5 years of age. The individual diagnoses were categorized into major that reflected major conditions such as respiratory diseases (pneumonia or bronchiolitis), infections (abcess, cellulitis, lymphadenitis), gastrointestinal diseases (gastroenteritis, vomiting, diarrhea), and fever (fever of unknown origin, febrile convulsions). Overall, there were 560 admissions of children 5 years and under and of these children, 50.2% were admitted for respiratory tract diseases, 11.6% for infections,

Percent Admissions to LBJ Medical Center, 2009

	Age of Child in Years				
Diagnostic Category	0	1	2	3	4
Respiratory	55.7	56.4	51.0	39.7	24.5
Gastrointestinal	7.2	12.8	9.8	11.5	8.2
Infection	4.1	8.1	14.7	17.9	26.5
Injury	1.0	2.1	3.9	5.1	10.2
Asthma	0	1.3	2.0	1.3	4.1

and 10.7% for gastrointestinal diseases. When the diagnostic conditions were examined for each age group from 0 to 4 years, the data showed that diseases of the respiratory tract accounted for the largest percentage of admissions in all ages except for the 4-year old children. It should be noted that over half of the admissions in the early ages 0-2 were due to pneumonia and bronchiolitis and that percentage decreased at 3 and 4 years of age. The percentage of admissions for infections, that included abscesses, cellulitis, and lymphadenitis were at 4.1% for infants and that percentage increased as the age increased so that at 4 years of age, the percentage of admissions for infections was the highest when compared to the other diagnostic categories. The same pattern is seen for injuries in that during infancy only 1.0% of the admissions were for injuries and the proportion slowly increases with age and at 4 years of age 10.2% of the admissions to the LBJ Tropical Medical Center were for injuries.

Teen Births. Data for births occurring to teen-age mothers 15 through 19 years of age were collected from the LBJ Tropical Medical Center's Labor and Delivery logbook for the calendar year 2009. The following data elements were collected: Hospital number, age of mother, number of prenatal care visits, and birthweight. During 2009, there were a total of 1361 live births to mothers of all ages of which 134 (9.8%) infants were born to 132 teen-age mothers between the ages of 15 through 19 years of age. There were two sets of twins that account for the difference between the number of live births and the number of mothers delivering. In assessing the data for the 132 teen mothers by age, there is a direct positive correlation between teen mother ages and number of births in that there were three births to teen mothers 15 years of age and the number of births increased as the age of the teen mother increased so that there were a total of 60 births among mothers 19 years of age. The data for live births by birthweights show that of the 134 births to teen mothers, three infants (2.2%) were born low birth weight (less than 5.5 pounds) and the majority (76%) were born between six and seven pounds. The data on the number of prenatal care visits to teen mothers show that highest number of teen mothers received six to 10 prenatal care visits. The data also shows that 40 (29.8%) of the teen mothers received 11 to 16 prenatal care visits.



Youth Risk Behavior Surveillance Survey. The American Samoa Department of Education conducted the YRBS with 3,625 students in six public high schools in grades 9 – 12 during 2007. The YRBS measures risk behaviors in six categories – tobacco use, dietary behaviors, physical activity, alcohol and other drug use, sexual behavior, and violence/injury.

Injury and Violence. Student's significant risk behaviors related to unintended injuries and violence included: (1) Never or rarely wore seatbelt (30.9%), (2) Rode in car by someone who had been drinking alcohol (37.6%), (3) Carried a weapon (22.2%), (4)

YRBS - Violence and Injury, American Samoa and National, 2007

Risk Behavior	Am Samoa	National
Never or rarely wore seatbelt	30.9%	11.1%
Rode in car by someone who had been drinking alcohol	37.6%	29.1%
Carried a weapon	22.2%	18%
Involved in a physical fight	54.4%	35.5%
Physically forced to have sexual intercourse	22.8%	7.8%
Feeling sad or hopeless almost every day for two weeks or more	41.9%	28.5%
Seriously considered attempting suicide	25.7%	14.5%
Made a plan on how they would attempt suicide	26.8%	11.3%
Attempted suicide one or more times	19.6%	6.9%
Had to be treated by a doctor or a nurse	6.1%	2.0%

Involved in a physical fight (54.4%), and (5) Physically forced to have sexual intercourse (22.8%). Questions related to suicide ideation were significant in that 41.9% of the students report feeling sad or hopeless almost every day for two weeks or more, and in the past 12 months 25.7% seriously considered attempting suicide, 26.8% made a plan on how they would attempt suicide, and 19.6% attempted suicide one or more times with 6.1% reported having had to be treated by a doctor or a nurse.

Tobacco Use. Responses on risk behaviors related to tobacco use show that the lifetime prevalence of cigarette smoking is 56.8% and that 16.8% smoked their first cigarette before 13 years of age. There are 9.1% who report being regular smokers (smoked on 20+ days in the last 30 days) and 11.8% are current smokers (10 cigarettes per day). Most important are that 84.5% of the students reported having tired to quit

YRBS – Tobacco, Alcohol and Other Drug, American Samoa and National, 2007

Risk Behavior	Am Samoa	National
Lifetime prevalence of cigarette smoking	56.8%	50.3%
Regular smokers (smoked on 20+ days in the last 30 days)	9.1%	8.1%
Current smokers (10 cigarettes per day)	11.8%	10.7%
Tried to quit smoking cigarettes during the past 12 months	84.5%	49.7%
Lifetime prevalence of alcohol use	46.6%	75%
Had at least one drink of alcohol in the past 30 days	29.8%	44.7%
Binge drinking (five or more drinks of alcohol with a couple of hours on one or more of the past 30 days	18.3%	26%
Lifetime prevalence of marijuana use	17.6%	38.1%
Current marijuana use (one or more times in past 30 days)	10.2%	19.7%
Lifetime prevalence of sniffing glue, aerosol, paints, or sprays to get high one or more times	11.6%	13.3%
Lifetime prevalence (use one or more times during their lifetime) of heroin, methamphetamines, ecstasy, or steroids use	5.3% to 6.5%	2.3% to 4.4%

smoking cigarettes during the past 12 months. ***Alcohol and Other Drugs Use.*** Risk behaviors involving alcohol and marijuana use appear to be more significant than risk behaviors involving "huffing inhalants" and other illicit and prescription drugs. The lifetime prevalence of alcohol use among students is 46.6% with 13.9% having had

alcohol before age 13 years, and 29.8% had at least one drink of alcohol in the past 30 days. Binge drinking (five or more drinks of alcohol with a couple of hours on one or more of the past 30 days) was reported by 18.3% of the students. Marijuana use is slightly lower than alcohol in that the lifetime prevalence of marijuana use is 17.6% with 7% having tried marijuana before 13 years of age. Occasional use (one or more times in past 30 days) was reported by 10.2% of the students. The lifetime prevalence of sniffing glue, aerosol, paints, or sprays to get high one or more times was reported by 11.6% of the students. Lifetime prevalence (use one or more times during their lifetime) of heroin, methamphetamines, ecstasy, or steroids use reported by the students ranged from 5.3% to 6.5%.

Sexual Behaviors. Among students, 32.0% report ever having had sexual intercourse and 20% report having had sexual intercourse with one or more people during the past three months. Of those who had sexual intercourse during the past three months, 33.9% reported drinking alcohol or using drugs. Condom use during the last sexual intercourse was reported by 41.2% of the students. Over half (54.6%) of the students reported being taught about AIDS or HIV infection in school.

Dietary Behaviors. Being overweight and obese are significant problems that are even affecting students in American Samoa. The *Prevalence of Obesity in American Samoan Schoolchildren* reports that 66%-70% of students in grades 9 and 11 are overweight or obese. When compared to the students self-reporting on this YRBS, only 19.9% report being at risk for becoming overweight, 38.6% report being overweight, and 22.6% report themselves as slightly or very overweight. More significant is the fact that 54.4% of the students reported trying to lose weight with 68.4% reporting exercise to lose or keep from gaining weight, 48.2% eating fewer calories, 28.6% stopped eating for 24 hours, 13.5% took diet pills, and 14.2% vomited or took laxatives. In examining the dietary behaviors during the past seven days, 78% ate fruit one or more times, 48.1% ate green salad, 64.8% ate potatoes, 54.3% ate carrots, and 76% ate other vegetables at least one or more times. However, only 27.2% ate fruits and vegetables five or more times a day during the past seven days.

YRBS – Diet and Physical Activity, American Samoa and National, 2007

Risk Behavior	Am Samoa	National
Overweight	38.6%	15.8
Slightly or very overweight	22.6%	29.3
Trying to lose weight	54.4%	45.2
Exercise to lose or keep from gaining weight	68.4%	60.9
Eating fewer calories	48.2%	40.6
Stopped eating for 24 hours	28.6%	11.8
Took diet pills, powders, liquid	13.5%	5.9
Vomited or took laxatives	14.2%	4.3
Ate fruits and vegetables five or more times a day during the past seven days.	27.2%	21.4
Watched three or more hours of TV on an average school day	34.9%	35.4
Played video or computer games three or more hours per day	25.4%	24.9
Played on one or more sports teams during the past 12 months	64.3%	56.3
Physically active for a total of at least 60 minutes per day on five or more of the past seven days.	22.8%	34.7

Physical Activity. Behaviors of inactivity were reported by 34.9% of the students who watched three or more hours of TV on an average school day and 25.4% reported playing video or computer games three or more hours per day. Although 64.3% of the students reported playing on one or more sports teams during the past 12 months, only 22.8% report being physically active for a total of at least 60 minutes per day on five or more of the past seven days.

3.2.3 Children with special health care needs

MCH Data Matrix – Children with Special Health Needs Indicators.

MCH Data Matrix – Children with Special Health Needs, 2005-2009

Measures and Indicators		2005	2006	2007	2008	2009
National Performance Measures						
2	Percent CSHN 0-18 years whose family partner in decision making and are satisfied with the services they receive	35.0	35.0	89.3	89.3	75.0
3	Percent CSHN 0-18 years who receive coordinated, ongoing, comprehensive care within a medical home	54.8	85.7	89.3	89.3	100
4	Percent CSHN 0-18 whose family have adequate private/public insurance to pay for the services they need	100	100	100	100	100
5	Percent CSHN 0-18 whose family report that community-based service systems are organized so they can use them easily	51.7	50.0	42.9	42.9	42.5
6	Percent YouthSHN who received the services necessary to make transitions to all aspects of adult life	0	0	21.4	21.4	61.5
State Performance Measures						
2	Percent annual re-evaluation of CSHN by the interdisciplinary team	97.6	76.4	87.9	91.9	100
7	Percent CSHN who receive an annual dental assessment	20.5	57.9	87.9	93.4	64.4

The Children with Special Health Needs Program in American Samoa serves a total of 146 children in the program during 2009. Examining the population of CSHN by age and gender, the data show that there are 44 (30.1%) children 0-5 years of age, 88 (60.3%) children between the ages 6-15 years, and 14 youths (9.6%). However, care must be taken in the interpretation of these proportions because in examining the age data by one-year intervals, the data show that there are 8.8 children per year in the 0-5 age category and 9.7 children per year in the 6-15 age category. When assessing the data based on gender, the data show that there are twice as many males as females with the majority of the CSHN population represented by males in the 6-15 year age category. Based on their assessments, the diagnostic classification of these children shows that 63 (43%) children are diagnosed with cerebral palsy and of these

CSHN by Age and Gender, 2009

Age	Male	Female	Total
0 -5	27	17	44
6-15	64	24	88
16-18	7	7	14
Total	98	48	146

Diagnostic Classification	Male	Female	Total
Autism	6	5	11
Cleft face	--	1	1
Cleft palate	4	5	9
Cerebral palsy	13	11	24
Cerebral palsy with neurological problems	20	19	39
Down syndrome	7	5	12
Down syndrome with cardiac problems	8	6	14
Developmental delay and speech defect	6	8	14
Cardiac	7	6	13
Seizure disorder	6	7	13
Speech disorder	9	7	16
Turner Syndrome	1	1	2
Visual impairment	9	6	15

children over half (39 children) were also diagnosed with neurological problems. The next largest category of children are 26 (17.8%) children diagnosed with Down syndrome with over half of the children diagnosed with Down syndrome also diagnosed with cardiac defects. Other major diagnostic categories reveal that 13 children each are diagnosed with cardiac defects or seizure disorders, and 11 children are diagnosed with autism. It must be noted that the total number of children based on these diagnostic categories exceed the 146 children because several of these children may be represented in more than one diagnostic category.

Qualitative Telephone Survey of Families. A telephone survey of the parents of children with special health needs was conducted by the Children with Special Health Needs Team that included representatives from the MCH CSHN program, the University Center for Excellence on Developmental Disabilities, Department of Health, Helping Hands (Part C) Program, and the Center for Families of Individuals with

Developmental Disabilities (CFIDD), and the American Samoa Community College, Land Grant.

The purpose of the telephone survey was to determine whether parents and caregivers of children with special health needs are satisfied with the services they are receiving and what other services do the families need for their children. Of the 146 families in the CSHN program, 85 families had telephone numbers documented in the records that were called and 40 families agreed to participate in the survey. A series of 12 closed-ended questions and one open-ended question were asked.

Questions that related to the provision of services included: (1) Satisfaction of services - 57.5% were very satisfied and 17.5% were somewhat satisfied and only 10% were not satisfied. (2) Services close to home – 20% were able to obtain services close to their home and 80% were not able to obtain services close to their home. (3) Services easy to use – 42.5% responded that services were set up so that it is easy to use and 17.5% said that services were not set up for ease of use. (4) When asked if there are other services you would like, 42.5% wanted additional services that included physical therapy (30%), occupational therapy (17.5%), nutrition services (10%), and medical services (15%).

Questions that related to training sessions and support included: (1) Would like training to help take care of their child – 40% would like training services that included feeding (37.5%), lifting and positioning (10%), and oral hygiene (10%). (2) Would like to meet with other families – 57.5% would like to meet with other families and staff.

There were 13 families with youths between 16-18 years of age that responded to the questions related to transition services. Of these 13 youths, 2 (15.4%) received sex education services, 2 (15.4%) received independent living skills training, 3 (23%) received employment preparation, and 5 (38.5%) did not receive any of these services.

3.3 Needs of the MCH Population Groups

3.3.1 Pregnant women, mothers, and infants. The MCH program provides prenatal clinic services and well baby care in partnership with the community health centers and the outpatient department of the American Samoa Medical Center Authority.

The data for utilization of prenatal care and the determination of the Kotelchuck Index was used to examine the timing of initiation of prenatal care. The analysis showed that of the total 670 live births that were included in the sample, on 21.9% of the mothers initiated care in the first trimester (≤12 weeks of gestation), 51.5% of the women initiated care in the second trimester (13-27 weeks of gestation), and 23.1% initiated care in the third trimester (28+ weeks of gestation). In determining the Kotelchuck Index to measure the adequacy of utilization of prenatal care services, the data showed that 21.6% of the women were determined to be Adequate Plus, 19.1%

were Adequate for a combined percentage of 40.7% who were Adequate and above, 8.8% were Intermediate, and 50.4% were inadequate.

Focus groups were conducted with women who received no prenatal care during 2009 to determine the barriers that prevented women from obtaining prenatal care. Based on the focus group responses, the major barriers included: cost of laboratory tests, cost of transportation, no baby sitter, did not finish paying previous bill, and tired of negative attitude of providers and staff. The recommendations included: lower to cost of registration, visits, and laboratory tests, improve customer service, and provide all the services at the prenatal clinic including Hep B vaccination, blood drawing, prenatal vitamins and iron.

Therefore, with half of the pregnant women with inadequate utilization of prenatal care services and over half initiating care after the first trimester, there is a need to pursue changes in the policies on how prenatal care clinics operate and charge for services. Some of the recommendations are to include more of the services as a "package" at the prenatal clinics and to charge less for visits and laboratory tests. There have been attempts to provide a "package of prenatal care services" at reduced costs and this option should be further pursued.

3.3.2 Children and youth.

The MCH program staff provides well baby clinic and well child clinic services for all children in American Samoa. These services are provided in partnership with the community health centers (Tafuna Family Health Center, Amouli Health Center, Leone Health Center) and the LBJ Tropical Medical Center outpatient services.

The data from MCH Needs Assessment show that the major MCH problems include the declining percentage of 2-year old children fully immunized, overweight and obesity among children and youths of all ages, high rates of dental caries among children in the 3rd grade, low rates of dental referrals, and anemia among young children. Among the youths, there are high rates of risk behaviors for injury and violence, high rates of signs of depression and planning and attempting suicide, and higher rates of behaviors that may lead to smoking.

The major MCH issue is the overweight and obese problem affecting all children, youths and adults. Several of the data sets analyzed for this assessment shows that the problem starts early and escalates as the child ages. The staff of the MCH program collected data from the Tafuna and Leone Health Centers' well child clinics. Data on 576 children between the ages of 2-4 years were collected and BMI and BMI percentages were calculated. Of these children 35.1% were in the overweight or obese percentiles (19.1% overweight and 16.0% obese). The second data set analyzed was the data of 2-5 year old children from the WIC program. The BMI and BMI percentiles on 4,225 children were calculated and the results show that 33.7% of the children were in the overweight or obese categories (19.1% overweight and 14.6% obese). These data also

show that a higher proportion of girls are overweight (20.4%) when compared to boys (17.7%); however, there are more boys who are obese (15.4%) when compared to girls (13.7%). The third major study of American Samoan children in public schools during the 2008/2009 school year. The results show that overall 55.6% of the students were overweight or obese. However, when stratifying the data based on grade level, the data show that over 40% of the children in kindergarten and grade 2 were in the overweight or obese category and that proportion steadily increased so that by the time children were in the sixth grade 55.6% were overweight or obese and by the time the child reached the eleventh grade 71.3% were overweight or obese. The final survey, the WHO's NCD STEPS Report of 2009 was a study of American Samoan adults 25-64 years of age. The survey asked questions related to risk behaviors that could potentially lead to non-communicable chronic diseases. The result of this survey showed that 93.5% of the adults were overweight or obese; had a mean waist circumferences for males (41 and 3/16th inches) and females (41 and 1/4 inches) that exceeded the values of 37 inches for males and 31.5 inches for females that are considered to infer increased risk of cardiovascular disease; and the one of the highest prevalence for diabetes in the world (random blood sugar ≥ 110mg%) at 47.3% for the entire adult population.

Therefore, there is a need to address the issue of obesity among young children and youth with a comprehensive and Territory-wide prevention and intervention program in order to prevent the secondary complications of chronic diseases that so often are associated with being overweight or obese.

The data for 2-year old children immunization shows that of 965 well baby records reviewed, 540 children were fully immunized. Of major concern is the fact that in 2005, there were 75.1% of the children showed full immunization status, that percentage has been slowly declining so that in 2006, 70.3% of the children were fully immunized and in subsequent years there continued to be a decline until the proportion of 2-year old children who are fully immunized stood at 56.0% in 2009.

Therefore, there is a need to expand the immunization program in the well baby clinics through awareness and education of the parents on the importance of immunizations. The MCH program should also consider adding more resources to the immunization effort.

The data on dental caries among 7-9 year old children in the 3rd grade who received a dental sealant was significant in that it showed a high proportion of these children with significant dental caries. During the 2008/2009 school years, 540 children were screened by the MCH Dental Team and of these 375 (69.4%) children had at least one dental cavity in a deciduous or permanent tooth. The data revealed that 64.1% of the children had a cavity in a deciduous tooth and 25.4% of the children had a cavity in a permanent tooth. To assess the extent of the dental caries problem, the data on the number of carious teeth per child was examined. When the number of caries was aggregated into categories, the data show that 158 (42%) children had 1-3 caries, 135

(36%) children had 4-6 caries, 59 (16%) children had 7-9 caries, and 23 (6%) children had 10+ caries.

Therefore, there is a need for a comprehensive oral health program that should include an educational program for the prevention of dental caries, consideration of fluoride supplements supplied through the well baby clinics and well child clinics, and improving the rates of dental screening and dental referrals for treatment.

There are data from a sample of 576 children from two community health centers' well baby clinics that show a high prevalence of anemia among the 1-year old children. However, hemoglobin levels were document in only 27% of the six-month old children and 39% of the children at 1 year of age. Of those children who were measured for hemoglobin levels, 50% were anemic at 6 months and 62% were anemic at one year. In addition, the feeding history of these children showed that only 19% were exclusively breastfed at 6 months of age.

Therefore, the findings from this limited data set show that 35% of these children are overweight or obese, 19% were exclusively breastfed, and 60% are anemic at 1 year of age. There is a need to develop and implement a comprehensive nutrition education program in the well baby clinics that reinforce breastfeeding, proper nutrition with feeding of iron-rich foods, and preventing obesity.

The data for behavioral risk factors for youths comes from the YRBS survey of 2007 conducted by the American Samoa Department of Education. The results from the survey show that a higher proportion of youths have significant risk behaviors related to injury and violence when compared to the National YRBS results to 2007. The data on tobacco use show that a slightly higher percentage of American Samoan youths smoke and that a significantly higher proportion of youths tried to quit smoking; and alcohol and marijuana use are lower than National trends. The data for dietary and physical activity data show that the youths in American Samoa report higher perceptions of being overweight and are also trying to lose weight; and a lower percentage of youths are physically active.

Therefore, there is a need to develop awareness and education programs for reducing behaviors that lead to injury and violence, a need to develop a tobacco cessation service targeted for young people, and develop a comprehensive Territory-wide policy and program to begin to address the problem of overweight and obese children and youths as an effort to prevent obesity as this population become adults.

3.3.3 Children with special health care needs. The MCH CSHN program staff provides services to 146 children with special needs and their families. The CSHN staff works collaboratively with other American Samoa Government programs such as the Department of Education's Special Education Program, and the Early Childhood

Education Program; the LBJ Tropical Medical Center Pediatric Department and other specialty clinics.

The results of the MCH Needs Assessment for CSHN show that because of the unique situation in American Samoa where health and medical care services are provided to anyone in need, families and children with special needs have access to care and receive that care in a coordinated medical home. Three-fourths of the families are satisfied with the care they receive and almost half report that community services are organized and easy to use.

A telephone survey conducted with 40 families show that the majority are satisfied with the services and are easy to use. However, only 20% report that services are available close to home. Families reported that they would like more physical therapy, occupational therapy, nutrition, and medical services. Families would also like to have training in feeding, lifting and positioning, and oral hygiene; over half of the families would like to have support groups where they are able to meet with other families and with staff.

Of the 40 families that participated in the telephone survey, 13 had youths with special needs between the ages of 16 – 18 years. Of these youths, five did not receive any transition services and three youths received employment preparation, two youths each received sex education, and independent living skills.

Therefore, there is a need to expand services to include more physical therapy, occupational therapy, nutrition, and medical services; develop a series of training sessions for caregivers on feeding, proper lifting and positioning, and oral hygiene; develop support groups for parents and caregivers to be able to meet; and assure that all youths with special needs are proved with appropriate transition services to meet their needs.

Section 4: MCH Capacity by Pyramid Levels

4.1 Direct Health Care Services

4.1.1 Pregnant women, mothers, and infants

Direct Health services for women, mothers, and infants include free prenatal services in two of the four community health centers and Well Baby/Child services at all four health centers. The health centers have health districts or catchment areas, and prenatal services are also delivered by geographic location. Two of the prenatal clinics in the community health centers are administered by the Department of Health, and one is administered by the hospital. Prenatal clinic is also provided at the hospital (ASMCA), which covers the central and second largest part of the island. All high risk mothers and those who have reached 36 weeks of gestation are referred to the OBGYN

clinic at the hospital (American Samoa Medical Center Authority) for closer supervision.

Direct health services are provided by only a handful of practitioners. The hospital has four to five doctors on staff to see patients both in-patient setting (labor and delivery, surgery, maternity ward) and the out-patient clinics. There are three nurse practitioners who also provide prenatal, family planning, post partum and women's health services at the health centers. There is a disparity between the number of clinical providers for women's health and prenatal care when compared to the number of patients who require these services and the number of out-patient visits and number of in-patient days required by each woman.

There are approximately 1300 births annually. With seven to eight providers serving prenatal patients alone, each provider would have to serve 163 women each. Although prenatal care participation is comparatively low in American Samoa, if each of these women gets a minimum of 5 visits during her pregnancy, each provider would have to have more than 800 clinic visits in a year. This number does not include other women's health services that are also offered at these clinics such as family planning, annual check-ups, ultra sounds, gynecology visits, and in-patient care.

While the MCH staff and hospital staff share a collaborative working relationship, the clinics are still very crowded and the providers are overwhelmed. This becomes a challenge in delivering quality services as well as a barrier of access for women receiving the services. The wait in the clinic is often longer than ideal as a single or small group of clinicians are working to ensure that all clients are served in a timely manner.

The facilities in which the services are provided are also not conducive to patient centered care. The hospital has renovations for the OBGYN clinic and the maternity ward already planned and these facilities will be upgraded soon. The space in the health centers are often crowded, as wait areas and common areas are shared by prenatal and well baby clients as clinics run concurrently.

There are lab tests and other scheduled tests that are required by the prenatal protocol for standardized care. The laboratory charges a service fee per lab test ordered. This has been a reported barrier by women accessing the service. Often clients will postpone their labs or not get them at all due to cost. There is only one laboratory that is located at the hospital. Transportation is a problem for some women as well. These are two related issues that prenatal clients have identified as barriers to accessing prenatal care: cost of lab services and transportation to and from the lab. Finding solutions to address these issues would minimize challenges women face when accessing prenatal care.

4.1.2 Children and youth

Well Baby/Child clinics are held at four community based health centers. The Well Child Clinic schedules vary by clinic, based on the case load of each district. All Well Child Services are provided at no cost to clients, and are operated on a normal schedule of 8:00 a.m. to 4:00 p.m. In addition to infants, children are also seen at the Well Child Clinics. Screening, and health maintenance visits begin in infancy and continue through the teen years. Children are seen on a schedule based on the recommended immunization schedule for children 0-14. Age appropriate immunizations are given, and clinicians provide physical exams on an annual basis.

Currently Well Baby/Child visits are only done at the Public Health clinics. There are three physicians and one nurse practitioner providing these services at each of the health centers. The Well Baby/Child population is the largest population served by MCH.

With the expansions that took place during the last fiscal year the Department of Health was funded to expand services at each of the clinics. Although this added staff to two of the health centers, there remains a shortage of nursing staff on island. This shortage is most notable in the Well Baby/Child clinics. There are only two nurses at the busiest clinic to provide all of the screening and immunizations done during these visits. This may be sufficient for the smaller outer clinics, however it is insufficient for the heavily populated areas such as the Tualauta county. Although there are sufficient doctors, infants and children see the physicians only on specified visits, while they are recipients of nursing care at every visit. This shortage, along with a decrease in the number of days Well Baby clinics are opened at some of the clinics is attributed in the decrease in immunization coverage over the last several years.

Adolescent services are also provided through the Well Child services with some of the reproductive health services provided at the prenatal clinics. There are immunization boosters at 11 and 15 years that required for school entry, this is bringing in this population. Although more of this age group is being seen, adolescent health services should be expanded to accommodate an annual visit for each teen. With the level of staffing and the number of clients to serve, this is not currently possible to an optimum level.

The MCH Program also provides services to school children in the third grade. The MCH School Outreach Team provides preventive dental services to children in the school setting. This is a collaborative effort with a dental team based in the American Samoa Medical Center Authority (ASMCA). In addition, dental treatments are provided at the community health centers and the ASMCA.

Although these services available, there are only 13 dentists to serve the entire population. The patient to dentist ratio is greater than 4,000:1. The ideal ratio is

generally 1,500:1. The local ratio is more than double the ideal, demonstrating a need for expansion in dental services. This is also reflected in the data collected during this Needs Assessment.

The Department of Health is currently recruiting a dentist or dental therapist to replace the dentist formerly working on the MCH dental school team. Recruitment for this position has been challenging, as there are few dental professionals in the Territory.

The ASMCA Dental Service and the community health center dentists are partners of MCH and are cognizant of this situation. MCH will continue to work closely with them to devise strategies on addressing this service issue.

4.1.3 Children with special health care needs

The initial screening for Children with Special Health Care Needs (CSHCN) begins at birth, with the initial assessment at the nursery. While some conditions are identified immediately or are anticipated, developmental screening and physical assessments continue through infancy at the Well Baby/Child clinics to rule out any chronic or developmental issues. The assessments and developmental screening done at the Well Baby/Child clinics are done by both MCH clinicians and Public Health Nurses. There is a referral system in place where any child can be referred to the CSHCN program for a more detailed assessment and/or follow-up.

The CSHCN program collects referrals from the hospital, Special Education, Early Intervention and other service providers in the community. The referral is followed by a visit by the CSHCN team to assess the child's condition and service needs of the child and family. Direct services are coordinated between the CSHCN team, the pediatrics department at the ASMCA, Helping Hands (early intervention) and the health care centers. A service plan is developed and the CSHCN team will provide follow up visits to ensure that services recommended and/or planned for the child and the family are met. Referrals to other service agencies are made as necessary, in addition to a referral back to the hospital as is needed.

Subspecialty care for this population is very lacking. Occupational therapy services are not available, and physical therapy services are very limited at best. Audiology and speech pathology are also not consistently available, although some services were available to toddlers who are in the Helping Hands early intervention program. The MCH program has supported continuing education for an Occupational Therapist who will be return from school in 2011 to offer these services to the CSHCN population. Other specialty services need to be developed in a similar fashion serve this population.

4.2 Enabling Services

4.2.1 Pregnant women, mothers, and infants

The MCH staff provides health education and translation services in all of the prenatal and Well Baby clinics for all clients accessing services. Home visiting services, case management and tracking services are also provided for mothers who need follow up for Hepatitis B by the Immunization program. Oral health education is provided for school children and their mothers in the school setting. Outreach activities are also implemented for church groups, and other community groups. This year there was a push for H1N1 vaccinations and teams conducted outreach and education for villages, schools and other community organizations. These services were also translated in Samoan for all groups.

The MCH program has a senior health educator and two nutritionists on staff that provides the majority of health education for all topical areas. The Public Health nurses and clinicians who work in the health centers also provide one on one education as they serve their clients.

There is however a greater need for community wide health education and awareness that is coordinated, consistent and culturally appropriate. There is no concerted health education division within the Department of Health. Each program or service area provides education and/or outreach specific to their area of specialty. This creates gaps in services and fragmented services.

Prenatal clinic experiences low participation levels, and case management and reminder calls for pending and missed appointments may be a method of increasing participation. In the last fiscal year a practical nurse was added to the prenatal team to assist the nurse practitioner. She is now providing this service to the prenatal clients, placing reminder calls for appointments and tracking the patients as they come in.

WIC has now moved into Leone and Amouli Health centers, collocating services with the prenatal and Well Baby Clinics. This enables clients to access these services in one central location and reduces the barrier of transportation from travelling to one place instead of two. This is especially true of these two centers, which are on very ends of the island and the farthest from the WIC main office where services were once centrally located.

4.2.2 Children and youth

Many of the services available to pregnant women and infants are also available to children and youth. Health education and translation services are available to Well Baby Clients. In addition, the Dental staff provides health education on oral health and nutrition in the school setting to elementary aged children as well as Gear Up students

and parents. Dental services are also coordinated between the hospital dental school team and the MCH dental staff, as well as the community health center dental clinics.

The Immunization Program also shares these activities. One of these efforts is the Media Push planned for 2011. The Immunization Program has partner with local media firms to sponsor multimedia messages on child health topics such as immunization coverage, and breastfeeding.

The MCH Program also partners with the Teen Pregnancy Prevention Coalition and Gear Up to promote adolescent health and education on reproductive health for young people. These efforts are coordinated through Gear Up Wrap around services as well as outreach events in the community.

There are strengths exhibited in this service level however, the need is always greater than the current capacity. There is however a greater need for community wide health education and awareness that is coordinated, consistent and culturally appropriate.

4.2.3 Children with special health care needs

Enabling services for this population include transportation, service coordination, and family support services. The CSHCN staff conduct home visiting and follow up services in the homes. In addition the team provides transportation to and from medical appointments. The CSHCN staff also follow up on referrals to subspecialty services such Shriner's Hospital medical visits to American Samoa, to ensure that all children who require consultation get on the appointment roster when the team is in town, the children are brought to the clinic for their appointments, and if necessary are transported back home.

The CSHCN clinician also works with WIC, Food Stamp and the utility companies to refer children who are eligible for services, and ensures that the or medical referral is completed allowing them to enroll for services. These services are also coordinated with other partner agencies to ensure that these services are available to all children who are eligible.

4.3 Population-based Services

4.3.1 Pregnant women, mothers, and infants

Prenatal services include hepatitis screening for all women and vaccinations for women who are susceptible. Vaccinations are also done for all infants beginning with the first Hepatitis B and Hepatitis Immunoglobulin B (for babies born to carrier mothers) vaccinations given in the Nursery. The immunization schedule starts at birth and

continues through adolescence. The capacity to provide immunization services on a population wide basis is a challenge.

The health centers have been experiencing a nursing shortage for some time now. Using the patient to nurse ratio, the current ratio of population per community nurse is 1555:1. There are only 11 nurses currently working in all of the Well Baby Clinics, to serve the entire population. This staffing shortage has resulted in an overall decrease in the coverage levels for immunization over the last five years.

Newborn hearing screening has been implemented in January 2009 for the first time. The Early Hearing Detection and Intervention Program awarded the Department of Health with support to implement the newborn hearing screening program in American Samoa. There are currently only one screener, while another position for screener in the process of being filled. Audiology assessments are scheduled on a quarterly basis. There have been some contracting issues with the EHDI program, resulting in an interruption of audiology consults. More screeners are also needed for the program, and are in the process of being recruited.

4.3.2 Children and youth

Immunization services are the main Population based service for children and youth. The overall coverage has been impacted by the low number of nurses to give vaccinations in the health centers. The MCH and the Immunization Programs are currently working on strategies to address this issue. Some of these strategies include hiring of core staff to conduct outreach activities, nursing staff and a school health initiative. With support from the American Recovery and Reinvestment Act, the Immunization Program will launch a mobile health unit (van) specifically for outreach activities targeting immunization in the community and in schools.

4.3.3 Children with special health care needs

The Immunization services for children are client based. All immunizations are normally done at the health centers however for the CSHCN clients the program clinician will make arrangements that work best for the family. Upon visiting the family at home the CSHCN staff checks the immunization status of the child to assess for completeness of the record. If the child is delinquent with their immunizations, they will either be taken to the health center at their convenience to receive the needed shots, or the clinician will make a follow up visit to administer the vaccinations there base on the individual needs of the family.

4.4 Infrastructure-Building Services

The MCH Program has partnered with a majority of the service agencies and other key stakeholders in the community. During the needs assessment these partnerships were strengthened by engaging all partners in the process. This group of partners will continue to be engaged for program planning, service coordination and policy development relative to the MCH population.

The MCH Coordinator and other staff are also members of other coordinating bodies such as the Interagency Leadership Council for developmental disabilities and the Developmental Disabilities Planning Council, the Early Childhood Education (Head Start) Advisory Council, Traffic Records Coordinating Committee for Highway Safety, the Gear Up Program Partners, Teen Pregnancy Prevention Coalition, the First Lady's Taitaitama Initiative (youth substance abuse prevention) executive committee, and the Health Planning Committee for Department of Education. Coordination activities are accomplished through these various organizations, in addition to the direct efforts made by the MCH Program.

Currently the MCH program has enlisted the assistance of the medical staff for the entire Department of Health in revision of clinical guidelines for Well Baby and Prenatal clinics, development of data tools and electronic templates, and educational modules. MCH staff provide, coordinate, as well as participate in continuing education efforts each month at the Tafuna Family Health Center. Standards for clinical practice and management, program monitoring, and quality improvement are accomplished through these efforts.

Section 5: Selection of State Priority Needs

5.1 List of Potential Priorities

5.1.1 Pregnant women and infants

Service (What needs to be done)	Outcome (Why it needs to be done)
Increase the number of women with adequate prenatal care utilization	Improve pregnancy outcomes, decrease IMR and FMR
Increase the number of women who receive early prenatal care in the first trimester	Improve pregnancy outcomes, decrease IMR and FMR
Increase the number of infants exclusively breastfed for the first six months of life	Improve nutrition, prevent obesity
Increase and improve nutrition education	Increase percent with normal

at well baby clinic	hemoglobin, prevent obesity

5.1.2 Children and youth

Service (What needs to be done)	Outcome (Why it needs to be done)
Plan and implement a comprehensive multi-media education approach to oral health and caries prevention	Improve oral health
Improve dental referrals	Prevent dental caries
Pursue policies related to use of early fluoride supplements or fluoridation of water supply	Population-based approach to prevent dental caries
Improve rates of protective sealants among 3rd grade children in school	Prevent dental caries
Improve immunization rates of all children	Decrease prevalence of vaccine preventable disease
Improve and increase nutrition education among children and youth	Prevent obesity and related chronic diseases
Improve and increase opportunities for physical activities among children and youth	Prevent obesity and related chronic diseases
Increase pregnancy prevention education and family planning services among youth	Decrease teen births
Offer tobacco cessation services to youth	Decrease tobacco use

5.1.3 Children with Special Health Needs

Service (What needs to be done)	Outcome (Why it needs to be done)
Develop services to assure that youths with special needs received transition education	Increase the number of youths who are prepared for adulthood
Improve community-based service delivery system for easy access to services	Increase family satisfaction, improve service delivery
Develop education and training sessions for parents to support their ability to provide care for their children in the home – feeding, lifting, positioning, oral hygiene	Increase family satisfaction
Develop support groups to give parents, caregivers, and program staff the opportunity to meet and support each other	Family support

Increase services such as physical therapy, occupational therapy, additional medical services, nutrition services	Improve service delivery

5.2 Methodologies of Ranking and Selecting Priorities

The J.J. Hanlon method of basic priority ranking and the use of structured decision tables were used to determine the rankings and selecting the priorities for the major MCH issues and problems. (Pickett, G. and Hanlon, J., *Public Health Administration and Practice*, 9th Ed., 1990 and Vilnius, D. and Dandoy, S., A priority rating system for public health programs, *Public Health Reports*, Sept-Oct, 1990). The model ranks the MCH health problems according to the size of the problem, the urgency and severity of the problem, the impact of the problem on others, the propriety, economics, acceptability, legality of the solutions, and the availability of resources.

Prioritization Methodology and Developing State Performance Measures

	INPUT	PROCESS	OUTCOME
Step 1	MCH Need Assessment Summary reports Data	Brainstorm	List of MCH health problems, MCH service needs and MCH outcomes
Step 2	From Step 1 - List of MCH health problems, MCH service needs and MCH outcomes	Refine and organize by linking health problem to service needs and outcomes	List of linked MCH problems to MCH service needs and MCH outcomes
Step 3	From Step 2 - List of linked MCH problems to MCH service needs and MCH outcomes	Weighted Voting or "Place the Dots"	List of 15-20 selected MCH health problems
Step 4	From Step 3 - List of selected MCH health problems	Hanlon Method	Priority 7-10 MCH health problems
	From Step 4 - Priority MCH health problems	Discussion and decision	State Performance Measures

The participants in the process of identifying and selecting the priority issues will include all of the representatives from each of the three MCH teams – the Prenatal and Infant Team, the Child and Youth Team, and the Children with Special Health Needs Team. This array of participants includes representatives from providers of medical care, public health providers, educators, researchers, and the public.

Step 1: To identify and list the major MCH health problems, service needs, outcomes, and issues in each of the three MCH populations – pregnant women and infants, children and youth, and children with special health needs. By using the data and information presented in the MCH Needs Assessment and other data and summary reports, the group will "brainstorm" to identify and list all of the major MCH

health problems, service needs and outcomes categorized into one of the three MCH populations.

Step 2: Using the list of health problems, service needs and outcomes developed by the brainstorming process, the group will discuss, refine and organize the list by matching the health problem with a corresponding service need component or outcome. The outcome of this process will be a list of health problem and its corresponding service need components or outcome. The purpose of this step is to assure that the final list is comprised of health problems that can be addressed with action. It is important to have this list of health problems so that comparisons of these problems can be assessed and evaluated against each other for the prioritization process.

Step 3: With the list of health problems and its corresponding service need or outcome, the group will use the Weighted Voting method to further narrow the list by identifying those health problems that are the most important to the group. The list of health problems are written on poster sheets and placed on the wall. Each participant will be provided with ten colored "sticky" dots and will place a colored dot next to their choices of the health problems that they think are the most important. Each participant will select at least one health problem in each of the MCH populations – the remaining choices may be anywhere in the list of health problems. The health problems with the highest number of "colored dots" will be the selected health problems that will be used for prioritization.

Step 4: With the list of selected health problems, prioritize the list of health problems using the adapted Hanlon method that applies a set of criteria that rates the size of the health problem, the seriousness of the problem that necessitates the service need, and the effectiveness of the potential solution to the problem and a "reality" test of feasibility of the solution. The resulting process produces a quantifiable value for each health problem need being analyzed and provides the basis for priority setting.

Develop State Performance Measures: With the prioritized list of health problems, the group will further discuss and develop the State Performance Measures that will be included in the MCH Data Matrix and the MCH Application of 2010.

5.3 Priorities Compared with Prior Needs Assessment

Program priorities that were identified in the prior needs assessment were maintained during the last 5 year period. Many of these issues have been converted into new priorities and state performance measures as they remain to be of concern and warrant effort.

5.4 Priority Needs and Capacity of the MCH Pyramid

The program priorities as identified and ranked during this needs assessment were:

PRIORITY NEEDS	SERVICE LEVEL
Increasing immunization coverage for young children.	Population-based
Increasing adequacy of prenatal care for pregnant women.	Direct Services
Improving BMI of children 2-5 years old.	Enabling Services
Improving nutritional status of 1 year olds.	Direct/Enabling Services
Increase the number of infants who are breastfed.	Direct/Enabling Services
Improve oral health of children 0-5 years.	Population-based
Improve services for Children with Special Health Care Needs.	Direct Services

Following the prioritization process of all areas of need identified there was careful examination of each need, the service capacities to address the need, including current efforts as well as gaps, and the effectiveness and/or impact of services. The list above is a result of a lengthy discussion of all partners assembled at the final needs assessment planning session. Some priorities weighed more heavily in the discussion than others. For example, immunization was selected after a discussion on the effectiveness of the interventions and the resources allocated for the intervention. Others, such as teen pregnancy, were not chosen because the group decided that it would continue to be addressed as a national performance measure and did not warrant additional importance. The MCH Program recognizes that adolescent health issues were not highlighted in the plan for the coming year. It is also acknowledged that the capacity to address adolescent health issues is not adequate to meet the needs of this population. These issues will continue to be addressed through infrastructure building efforts while such capacity is developed.

The capacities to address these priority needs are enumerated in Section 4 (page 33).

5.5 MCH Population Groups

All of the three population groups have been addressed in the listed priority needs. The MCH program will continue to work with its partners to coordinate and deliver services to each group through planning, policy development, and collaborative projects such as the Gear Up program and the new home visiting initiative.

5.6 Priority Needs and State Performance Measures

Defining the mechanisms to measure impact in each priority area was a challenge. Some areas of need such as childhood obesity and physical activity did not have evidence based interventions and were found too difficult to measure. The State Performance Measures were intended to reflect each priority need, and there the same number of each. The State Performance Measures include the data definitions, and data sources that will be used for each measure. Further development of these measures will include timelines, policies and procedures for the activities as well as data collection mechanisms.

As the entire group of partners and needs assessment participants were also involved in the development of these plans, transparency and accountability to our stakeholders play a key role in the implementation of these plans.

Section 6: Outcome Measures

While the National Performance Measures are selected based on the significance and data from across the country, American Samoa and its counter parts in the Pacific also have measures that are of local significance. Some of the State Performance Measures seem redundant when compared with the National State Performance Measures however; American Samoa still has a very long way to go in order to meet these objectives.

The health service infrastructure and capacity are limited to resources currently available. These resources are human, physical (facilities and equipment), and financial. Social, political, cultural and environmental factors are also very different in the Pacific. As an example, American Samoa does not have a water fluoridation program. Until the political, economic and technical aspects of this issue are addressed, oral health will continue to be a health need. American Samoa relies on imported food sources, making healthy foods more expensive. It is anticipated that nutritional issues and obesity will continue to be health concerns. In all of these indicators, the Pacific islands are farther from the health objectives and require additional efforts to affect change.

For these reasons, the State Priorities and State Performance Measures have been determined as the necessary response to address health outcomes in this population. Improving adequacy of prenatal care for pregnant women, addressing the nutritional needs of infants and improving the immunization coverage for children will improve the health status of the MCH population.

American Samoa MCH Program
Summary of the MCH Needs Assessment

Introduction: The Title V Maternal and Child Health Program requires a comprehensive needs assessment every five years to assess the capacity of the state MCH program services and to conduct a needs assessment to determine the needs for preventive and primary care services for pregnant women, mothers, infants, children, youths and family-centered, community-based services for children with special health care needs and their families.

The Territory of American Samoa consists of a group of seven islands with a combined land-mass of 76 square miles in the southern Pacific Ocean. Based on the 2000 census, the population stood at 57,291 residents with projections to 65,500 residents in 2005 and 80,000 residents in 2010. American Samoa has a relatively young population with 38.7% less than 15 years of age and 47.8% less than 20 years of age. According to the census data, 58.3% of families are below the poverty level with a median household income of $18,219.

Methodology, process, collaborations, strengths and challenges: Under the leadership of the MCH Coordinator, the three MCH Needs Assessment Leadership Teams were formed - the Pregnant Women and Infant Team, the Children and Youth Team, and the Children with Special Health Needs Team. Each of the three teams was comprised of MCH staff, as the leads, and representatives from other American Samoa Government Programs, the LBJ Memorial Medical Center, the American Samoa Community College, and non-governmental agencies. An external consultant was contracted to assist with training and technical assistance for the MCH Coordinator, MCH staff, and the three MCH Need Assessment Teams. The training included the general concepts of the MCH Data Matrix and the MCH Pyramid, principles of needs assessment and planning, quantitative and qualitative data collection, analysis and interpretation of data, defining priorities, and formulating priority MCH issues and problems.

The conceptual framework for the needs assessment and plan was based on the MCH model built around the community of MCH population that includes families, pregnant women, infants, children, adolescents, children with special health needs, and fathers. The process was to strengthen partnerships by engaging other programs and agencies in American Samoa that interface with the MCH population and work together with communities to improve health outcomes for the MCH populations in their communities.

Quantitative data were collected for the MCH Data Matrix with additional data on the rates and causes of morbidity and mortality from the LBJ Tropical Medical Center's Health Information Center. Health care utilization data were collected for selected community-based MCH clinics. Qualitative telephone survey and focus group data were collected to provide more in-depth information to complement some of the quantitative data. Service capacity was examined based on the MCH Pyramid of Services and included Direct Health Care Services, Enabling Services, Population-based Services, and Infrastructure Services. Priority needs were identified by examining and comparing the needs for services for each of the MCH populations based on the analysis of the data from the MCH Data Matrix and other reports of rates and causes of morbidity and mortality. A listing of the top ten priority needs were identified based on the analysis of the data and using a modified Hanlon Method and the Weighted Criteria Method of prioritization. With the top ten list of prioritized needs, the MCH Needs Assessment Teams were able to formulate the State Performance Measures and target indicators for measurement.

A strength of the needs assessment process was the involvement and wide participation

by all of the MCH staff and representatives from the other agencies and programs that provide services to the MCH population. However, there were also many challenges. The most significant weaknesses were the lack of an MCH Epidemiologist to coordinate the tasks and the lack of consistent data in a format that was usable and the lack of current population data. Therefore, we recognize that the results for the data indicators may differ from year to year and makes trend analysis difficult if not impossible. However, limited, the needs assessment presents the most recent and the best available data from these resources.

Health Status and Needs – Pregnant women, mothers, infants: The quantitative data for this MCH population included analysis of the birth trends, Kotelchuck Index that measures the adequacy of prenatal care utilization, initiation of prenatal care, teen births, and the infant mortality rate. Qualitative assessment included data from focus groups of women who delivered a liveborn and did not receive prenatal care during the pregnancy.

Birth trends have been declining since the year 2000 when there were 30.0 births/1000 population with a gradual and steady decline until 2006 when the birth rate measured 21.6/1000 population. Initiation and utilization of prenatal care continues to be a problem. Data for a sample of 670 women who delivered a live birth, 21.9% initiated care in the first trimester, 51.5% in the second trimester, and 23.1% in the third trimester. In assessing adequacy of utilization of prenatal care, the data showed that 21.6% had an “adequate plus” Kotelchuk Index, 19.1% were “adequate”, 8.8% were “intermediate” and 50.4% were “inadequate”. The data for teen births for 2009 showed that 9.8% of all births were to mothers ages 15 through 19 years. During 2005 to 2009, the infant mortality rate fluctuated from the lowest of 8.5/1000 live births in 2007 to the highest of 11.6/1000 live births in 2009. Between 2005 and 2009, the infant mortality rate fluctuated between a low of 8.7/1000 livebirths in 2007 to a high of 11.6/1000 livebirths in 2009.

The qualitative information was gathered through two focus groups of ten women per group who had delivered and infant and who received no prenatal care. Responses showed that the majority of the women thought that prenatal care was important; and the common barriers to receiving prenatal care included: the costs of laboratory tests, cost of transportation to attend prenatal clinic, no baby sitter to watch other children, morning sickness, did not finish paying previous hospital bill, tired of negative attitudes of the staff providing prenatal services. Recommendations included: lower the cost of registration and first prenatal visit and follow-up prenatal clinic visits and laboratory tests, provide transportation to prenatal clinic visits, improve customer service and staff attitudes, and provide all of the necessary services at the prenatal clinic (Hepatitis B vaccination, blood drawing for laboratory tests, prenatal vitamins and iron).

With half of the pregnant women with inadequate utilization of prenatal care services and over half initiating care after the first trimester, there is a need to pursue changes in the policies on how prenatal care clinics operate and charge for services. Some of the recommendations are to include more of the services as a “package” at the prenatal clinics and to charge less for visits and laboratory tests. There have been attempts to provide a “package of prenatal care services” at reduced costs and this option should be further pursued.

Health status and needs – Children and youth: The quantitative data for this MCH population included an analysis of the data for immunization, child obesity, dental cavities, morbidity, and youth risk behaviors.

Immunization services are provided by the MCH Program in partnership with the community health centers and the outpatient department of the LBJ Tropical Medical Center. A total of 965 records of 2-year old children from three well baby clinics were reviewed and data showed a range of 48% to 81% immunization completion rates. Of major concern is the fact that in 2005, 75.1% of the children were fully immunized and the rate has declined to 56.0% in 2009. Childhood obesity is becoming a major problem as evidenced by data from the well baby clinics and the public schools. In 2009, a sample of 576 well baby records from 2-4 year old children were reviewed and showed that 35.1% were overweight or obese. A study conducted in the public schools grade 2 to 11 showed that 43.5% of the kindergarten students were overweight or obese and that rate gradually increased until 71.3% of the 11th grade students were overweight or obese. The MCH Dental Program provides dental sealants and evaluation for 3rd grade children (7-9 years) in American Samoa. Data on the caries rates among the 540 children evaluated showed that 69.4% of the children had dental caries in at least one tooth and the data for caries rates for deciduous and permanent teeth showed that 64.1% of the children had caries in at least one deciduous tooth and 25.4% had caries in at least one permanent tooth. Child morbidity was assessed as admissions to the LBJ Medical Center during 2009. There were 560 admissions of children 5 years and under and of these children, 50.2% were admitted for respiratory tract diseases, 11.6% for infections, and 10.7% for gastrointestinal diseases. When the diagnostic conditions were examined for each age group from 0 to 4 years, admissions for respiratory diagnoses decreased with age and for infections and injury, admissions increased with age.

The Department of Education conducted the YRBS with 3,625 students in six public high schools during 2007. Survey results for violence and injury showed that students reported risky behaviors such as not wearing seatbelt, physical fighting, forced to have sexual intercourse, feeling sad or hopeless, and considering, planning, or attempting suicide. Tobacco use data showed that 9.1% are regular smokers and 11.8% are current smokers – higher than national averages. Alcohol and marijuana use are lower, while use of illicit drugs is slightly higher than national averages.

There are needs to: (1) Address obesity among children and youth with a comprehensive Territory-wide prevention and intervention program to prevent the secondary complications of chronic diseases associated obesity. (2) Expand the immunization program in the well baby clinics through awareness and education on the importance of immunizations. (3) Develop a comprehensive oral health program to include an educational program for the prevention of dental caries, fluoride supplements supplied through the well baby clinics and well child clinics, and improvement in the rates of dental screening and dental referrals for treatment. (4) Develop and implement a comprehensive nutrition education program in the well baby clinics that reinforce breastfeeding, proper nutrition with feeding of iron-rich foods, and preventing obesity. (5) Develop awareness and education programs for reducing behaviors among youth that lead to injury and violence, a tobacco cessation service targeted for young people, and a comprehensive Territory-wide policy and program to begin to address the problem of overweight and obese children and youths to prevent obesity as this population become adults.

Health status and needs – Children with special health needs: The MCH-CSHN Program served 146 children in 2009 of which 43% were diagnosed with cerebral palsy and neurological problems, 17.8% were diagnosed with Down Syndrome, 9.0% with cardiac problems and 7.5% with autism. Other diagnostic categories included cleft palate, developmental delay, seizure disorder, and visual impairments.

A telephone survey was conducted among 40 families of children with special needs who agreed to participate in the interview. The results of the survey showed that the majority of families are satisfied with the services and are easy to use. However, only 20% report that services are available close to home. Families reported that they would like more physical therapy, occupational therapy, nutrition, and medical services. Families would also like to have training in feeding, lifting and positioning, and oral hygiene; over half of the families would like to have support groups where they are able to meet with other families and with staff.

There is a need to expand services for children with special needs to include more physical therapy, occupational therapy, nutrition, and medical services; develop a series of training sessions for caregivers on feeding, proper lifting and positioning, and oral hygiene; develop support groups for parents and caregivers to be able to meet; and assure that all youths with special needs are proved with appropriate transition services to meet their needs.

2010-2015 MCH Health Priorities:

- Increase immunization rate among 2-year old children
- Increase rate of adequate prenatal care utilization among pregnant women
- Decrease rate of dental caries among children
- Improve rate of breastfeeding among infants
- Decrease rate of anemia among 1-year old infants
- Decrease rate of overweight and obesity among children
- Decrease rate of teen pregnancy
- Decrease risk behaviors among youths that lead to injury and violence
- Decrease dental caries among children with special needs

2010-2015 MCH Service Priorities:

- Awareness education of consequences of obesity and Type 2 diabetes
- Prenatal care - one-stop shopping (lab tests, iron, prenatal vitamins)
- Comprehensive campaign to promote physical activity for children and youth
- Outreach for prenatal care to improve rate of initiating early prenatal care
- Education for CSHN caregivers on feeding, lifting, positioning, nutrition, oral health
- Mental health services for youth with symptoms of depression and suicide ideation
- Outreach CSHN families for case-finding and referrals to the CSHN Program
- Improve awareness of consequences of no prenatal care

2010-2015 MCH State Performance Measures:

- Percent of l9-35 month old children with completed immunizations.
- Percent of pregnant women who receive adequate plus or adequate prenatal care based on the Kotelchuck Index.
- Percent of 1 year old children attending well baby clinics who receive a package of oral hygiene services (caregiver education, 3 varnishes, 1 toothbrush with toothpaste, sticker).
- Percent of 2-5 year old children in well baby clinics who are not receiving WIC services who have a BMI ≥85%.
- Percent of 1 year old children attending well baby clinic who receive a Hgb test at 9-12 months of age.

- Percent of 1 year old children attending well baby clinic who received a Hgb test at 9-12 months of age and had a Hgb ≥11gm/dl.