Commonwealth of the Northern Mariana Islands
Department of Public Health
Maternal and Child Health 2010 Needs Assessment

Division of Public Health
Maternal and Child Health Program

CNMI Maternal and Child Health
Five Year Needs Assessment
Executive Summary

As a grantee of the federal Maternal and Child Health Services Title V Block Grant Program, CNMI is required to complete a statewide maternal and child health needs assessment every five years. The needs assessment process outcome is the identification of priority needs for the maternal and child population groups.

The Division of Public Health's Maternal and Child Health Program is responsible to facilitate the needs assessment process and administers MCH grant funds. The mission of the Division is "T*o promote the health and well-being of the residents of the Northern Mariana Island by: 1) Protection through sanitation, immunization, and other communicable and non-communicable disease programs; 2) Improving accessibility to care and health promotion and prevention programs; and 3) Empowerment of the community through health education to take responsibility of their health"*.

The MCH 2010 Needs Assessment includes:

Pregnant Women and Infants

- Case management of high-risk pregnancies
- Increase prenatal care among Medicaid participants
- Increase breastfeeding rates at hospital discharge
- Increase access to pap test service
- Increase access to mammogram service

Children and Adolescents

- Reduce proportion of children aged 12 months to 5 years who are at risk for overweight or obese
- Increase developmental screening
- Decrease birth rate among Chamorro teens aged 15-18 years
- Reduce adolescent risk factors relating to alcohol and other drug use

Children with Special Health Care Needs

- Input information on infants with a diagnosis at birth into the Birth Defects Registry within 6 months

The capacity to addressed each priority needs was also assessed. Short-term strategies were developed on each priority needs. Ongoing evaluation of the priority needs will be conducted so that long-term strategies will be developed. Therefore, we will continue to implement activities, monitor and evaluate results, and make necessary changes to continue to improve health outcomes for our MCH population groups.

The draft priority needs was posted on WIC Program's website, print media, and provided to partners.

Introduction

Each year, the CNMI Department of Public Health (DPH) receives approximately $500,000 from the Maternal and Child Health Bureau of the Health Resources and Services Administration for the Maternal and Child Health Services Title V Block Grant. As a grantee of Title V funds, CNMI is required to complete a statewide needs assessment every five years to identify the priority needs for the three MCH population groups:

- Pregnant women, mothers and infants
- Children and adolescents
- Children with special health care needs

To conduct the CNMI Maternal and Child Health (MCH) Program 2010 Five Year Needs Assessment, the Division of Public Health's MCH Program reviewed both quantitative and qualitative data to provide the necessary information to assess the needs of the MCH population groups. Throughout the process, the focus was on the Division of Public Health's Mission Statement: *To promote the health and well-being of the residents of the Northern Mariana Island by: 1) Protection through sanitation, immunization, and other communicable and non-communicable disease programs; 2) Improving accessibility to care and health promotion and prevention programs; and 3) Empowerment of the community through health education to take responsibility of their health.* The purpose of the needs assessment is to use the findings and recommendations to identify health priorities and improve and strengthen the Division of Public Health and its partners' ability to respond to public health issues.

The process involved internal partners with the Department and external partners including community members to identify health priority needs and at the same time assess the capacity within the state to address these needs. Although priority needs are identified it may change over time depending on any situation that may occur within the next five years that will necessitate the change.

Process for Conducting Needs Assessment

The goal and vision for the MCH Program is to "Develop a plan of interventions based on strengths and needs of CNMI's women, infants, children, adolescents, and children with special health care needs.

Methods for Assessing Three MCH Populations:

The CNMI Division of Public Health's Maternal and Child Health Program facilitated a process for ensuring stakeholder involvement in the development of the 2010 Title V Needs Assessment. The stakeholders included Head Start Program's staff, and families; Early Childhood Comprehensive System Partners and target population they serve; Women of childbearing age; Parents; Adolescents; Parents of CSHCN; CNMI Interagency Coordinating Council (ICC) members; Early Intervention Services (EI) providers, and Daycare Centers Providers and families. We also worked with clinical

providers for the ranking of health priorities. More effort was made to involve stakeholders than in previous assessment.

The needs assessment process included a review of data both primary i.e., low birth weight, infant mortality rate, prenatal care rate, morbidity and mortality rate etc., and secondary, i.e. EIS Program's Family Survey, YRBS, etc.; 'talk story' sessions with clinical nursing staff, parents, women of childbearing age, etc.; ranking of health priorities from each target population and from health care providers, PH Program Managers, agencies providing services to MCH target groups, etc. We met with target population at hotel conference room setting, community events, and clinic setting.

The development of the 2010 community input sessions, involved the following:

May 2009: team met with partners including DPH programs to inform about Title V Needs Assessment

June - October 2009: team met with partners to identify list of potential priority needs, data sources and review data indicators

September to December 2009: conducted interviews at Immunization Clinic, Women's Clinic, Children's Clinic, Chest Clinic, Southern Community Wellness Clinic, and Dental Clinic

November 10 2009, January 13 and March 17: conducted interviews at Walk on Wednesday included ranking of potential priority needs

January 2010: partnered with Breast and Cervical Screening Program and others to conduct interviews during Breast Cancer Screening Campaign event at various government and private agencies.

January 2010: conducted focus group with parents of CSHCN

February 1-5, 2010: conducted interviews at Wise Women Dance class site including ranking of potential priorities with partners

February 6, 2010: conducted presentation to childcare providers and received input on list of potential priority needs for infants and children.

February 20, 2010: "talk story" session with clinical nursing staff on children with special health care needs and also solicited ranking on list of potential priorities.

February 22-23, 2010: Ranking of potential priorities at Wise Women Dance Class site

February-March 2010: solicit ranking of potential priority needs from partners and their target group

March 2-3, 2010: conducted interviews at Wise Women Village Project site including ranking of potential priorities

March-April 2010: met with programs and schools about adolescent health determinant work group

March-May 2010: solicit ranking of list of potential priorities from students at public high schools

March-April 2010: partner meetings to discuss identified priority needs and look at capacity, challenges, and opportunities

May 2010: solicit ranking of list of potential priorities at arianas March Against Cancer event

May 30, 2010: conducted Adolescent Health Determinant work group with partners

May 2010: The CNMI Title V Maternal and Child Health Needs Assessment brief went online on the WIC Program's website for public awareness and comments.

May – July 2010: provided stakeholders the CNMI Title V Maternal and Child Health Needs Assessment brief for comments.

The MCH 2010 Needs Assessment process was conducted from lessons learned in the previous needs assessments. The training provided to the Pacific Jurisdictions also enhanced the capacity of MCH staff to conduct the needs assessment especially with community's involvement. One of the comments from the primary reviewer on the 2005 needs assessment was "Who decided what the priority needs are?" The process this year included many interactions with the community through focused groups, key informant interviews; talk story sessions, ranking of priorities, etc. Quantitative and qualitative data and list of potential priorities were provided to participants.

Thus the process for the MCH needs assessment involved:

- Input from MCH Advisory committee
- Input from partners such as Interagency Coordinating Council, Head Start Health Services Advisory Committee and Community Partners, Child Care Program Providers/Participants, etc.
- Agency Reports – Head Start Program's Community Assessment, YRBSS, Tobacco Youth Survey (TYS)
- Partner agencies survey – Public School System Early Intervention Services Program Family Survey, Newborn Hearing Screening Program Family Survey, WIC Program's survey, Community Guidance Center (CGC) Mental Health Report, Annual Performance Reports, etc.
- Information on services needed by the target population they serve was gathered from discussions with key informants, i.e., Head Start's Center Parent Involvement Committee, program managers and other key staff;

- Surveys – Patient Satisfaction Survey, Children with Special Health Care Needs Survey, Kagman Community Health Survey
- Focus groups/key informants – presented participants with list of health issues for discussion and ranking
- Review of capacity of maternal and child health services;
- Review data on health status indicators and outcome measures;
- Community input during community events

Pregnant Women, Mothers and Infants -

The maternal child population groups almost doubled from 1990 to 2000 census (Table 1). The increase in the number of infants, children and women of childbearing age has increased mainly because of recruitment of contract workers. Large portions of the overall population are in the age range of 20 to 34 years are alien women contract workers.) Most of the new immigrants are contract workers from the Philippines and China. The number for the indigenous population, Chamorro and Carolinian, has not changed much (Table 2).

Table 1: Maternal and Child Health Population

Population	1990	2000	Change
Infants (less than 1)	824	1,297	473
Children (1-12 yrs)	8,372	12,701	4,329
Adolescents (13-17)	2,709	3,735	1,026
Women (15-44 yrs)	13,669	25,836	12,167

Source: U.S. Census Bureau

Table 2: CNMI Population by Ethnicity

Ethnicity	1990	2000	Change
Chamorro	12,555	14,749	117.5
Filipino	14,160	18,141	128.1
Carolinian	2,348	2,652	112.9
Chinese	2,881	15,311	531.4
Caucasian	875	1,240	141.7
Other Pacific Islands	3,663	4,600	125.6
Other Asians	4,291	5,158	120.2
Others	2,572	7,370	286.5

Source: U.S., Census Bureau

However due to the closing of the garment industry and the federalization of immigration, we have been seeing a decrease in the population estimates for the MCH population groups. In 2009, there are an estimated 1,024 infants < than 1 year in the CNMI -273 less than the 2000 census data (Table 3). The estimated population for women of childbearing age (15-44 years) is 16,738 in 2009 -9,000 less than 2000 census data (Table 4). Over half of these infants and women of childbearing age live on the island of Saipan.

Table 3. Population of Infants < 1 year (mid-year estimates)

Age	2009	2008	2007
< 1 yr	1,024	1,088	1,178

Source: Central Statistics Division, Dept. of Com.

Table 4. Population of females aged 15-44 years in the CNMI (mid-year estimates) -2009-2007

Age	2009	2008	2007
15-19	2,582	2,544	2,517
20-24	2,730	3,129	3,675
25-29	3,569	3,608	3,840
30-34	2,574	2,668	3,003
35-39	2,561	2,785	3,056
40-44	2,722	2,698	2,746

Source: Central Statistics Division, Dept. of Commerce

Our decrease in live births can be also attributed to the closing of the garment industry and the federalization of immigration Table 5. This is true also for the population of the CNMI since the large influx of temporary adult migrant workers accounts for most of the population growth over the past 15 years.

Table 5. Live Births (2005-2009)

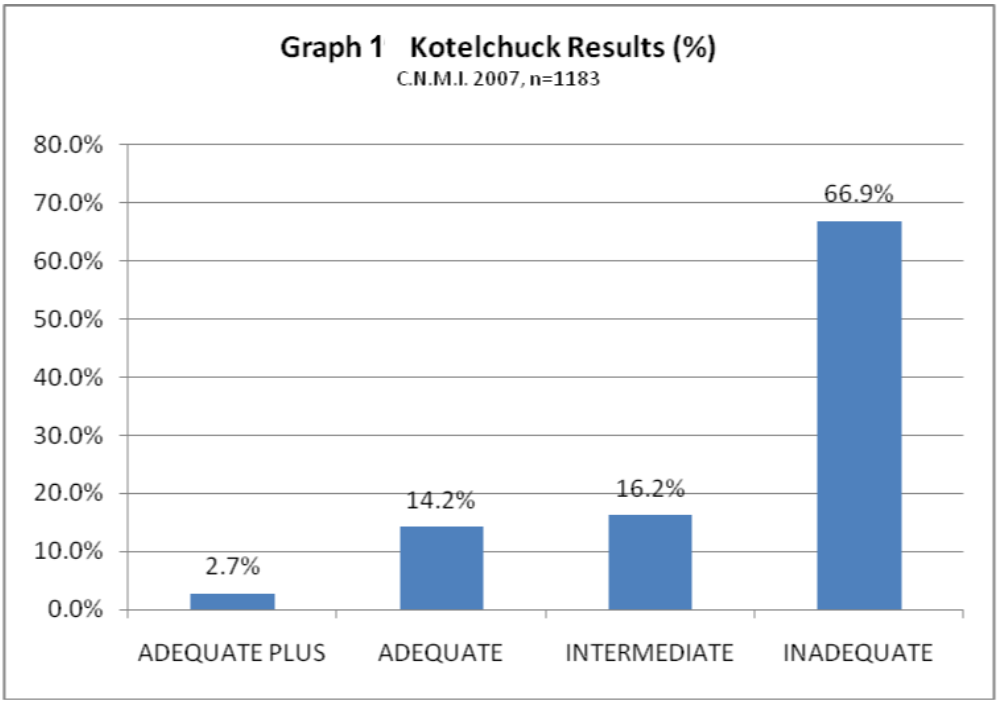
2005	2006	2007	2008	2009
1332	1422	1385	1266	1110

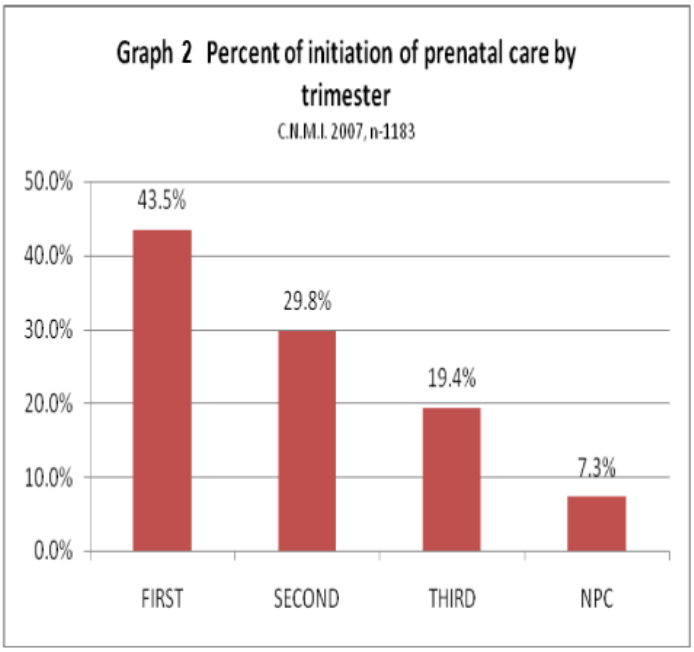
Source: DPH, Office of Health and Vital Statistics

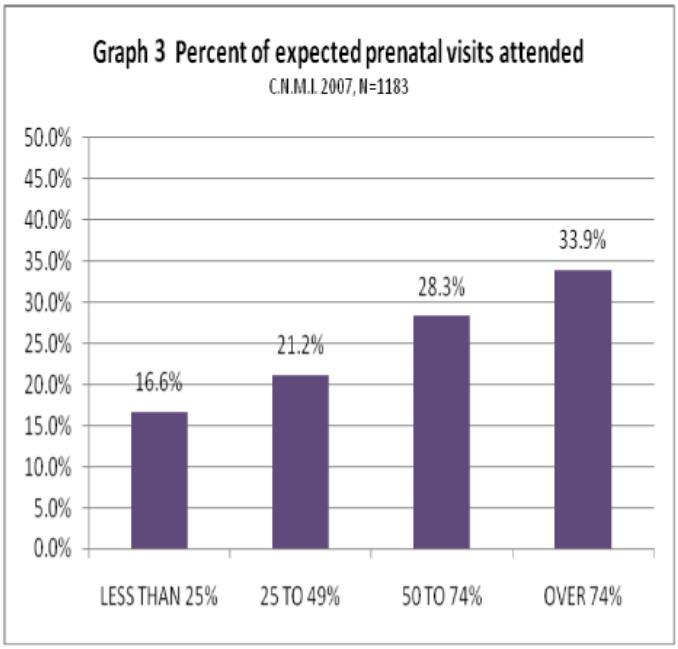
Prenatal Care

Prenatal care and postpartum care services are provided at the Southern Community Wellness Clinic, Adolescent Health Clinic, and Women's Clinic. Health care providers include Obstetrics/Gynecologists, women's health nurse practitioners, midwife, and family practitioner. High-risk pregnancies are being cared for at the Women's Clinic. Medicaid enrollees can also access prenatal care services at 4 private health clinics.

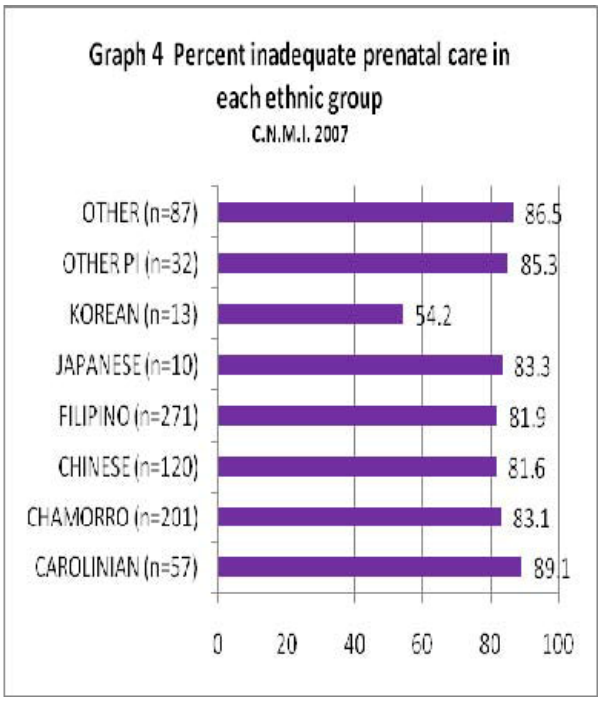
The latest Kotelchuck data results show a large percentage of prenatal care being labeled inadequate, solely because it starts after the fourth month (Graph 1). Analysis of 2007 data using trimester prenatal care began or using percentage of expected visits attended, confirms the Kotelchuck findings. Only 43.5% of women began prenatal care in the first trimester, and almost 40% attend less than half of the prenatal visits expected, regardless of when prenatal care was instituted **(**Graphs 2 and 3). However, when compared to last year when initiation of prenatal care was highest in the second trimester, initiation of prenatal care during 2007 was highest in the first trimester.


Graph 1 Kotelchuck Results (%)
C.N.M.I. 2007, n=1183
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
2.7%
14.2%
16.2%
66.9%
ADEQUATE PLUS
ADEQUATE
INTERMEDIATE
INADEQUATE

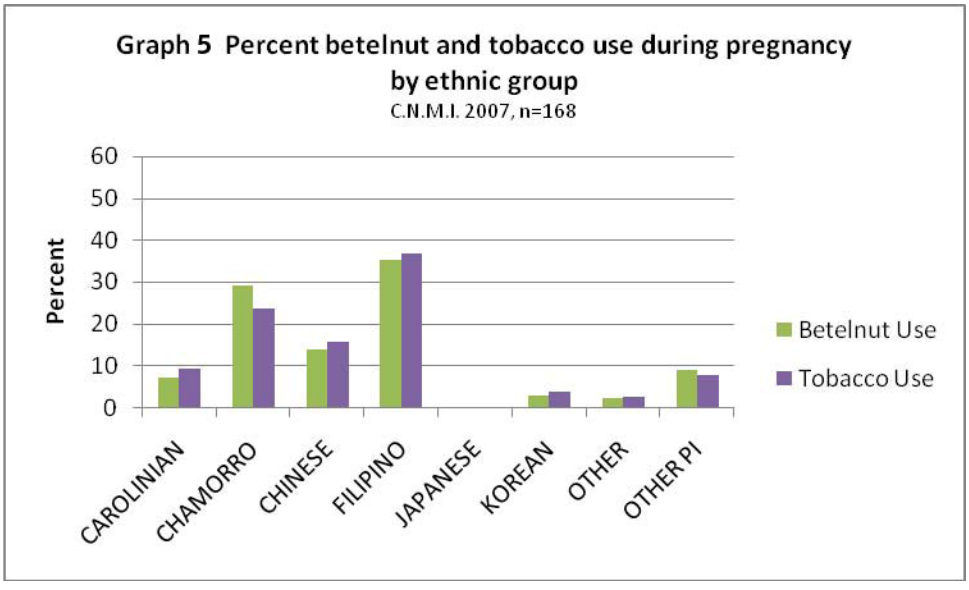

Graph 2 Percent of initiation of prenatal care by trimester
C.N.M.I. 2007, n-1183
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
43.5%
29.8%
19.4%
7.3%
FIRST
SECOND
THIRD
NPC


Graph 3 Percent of expected prenatal visits attended
C.N.M.I. 2007, N=1183
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
16.6%
21.2%
28.3%
33.9%
LESS THAN 25%
25 TO 49%
50 TO 74%
OVER 74%

In looking at our 2007 Kotelchuck data by ethnicity, Carolinians and the Other category had the highest percentage of inadequate care (Graph 4**).** (Please note that Chamorro and Carolinian are the two indigenous groups in the CNMI).



Information regarding use of various substances during pregnancy remains sketchy due to incomplete reporting of information on birth certificates. In particular, evaluation of tobacco use may be unreliable as it is often closely tied to betel nut use. Data regarding the effects of betel nut use is not prolific but since the number of users may be as high as or higher than those using tobacco (Graph 5), a closer look at those babies born to mothers using betel nut may be warranted. It is possible that as the price of tobacco continues to climb, betel nut use may increase simply because it is a more economical alternative.



In order to gather data regarding access to care, demographic information, and infant outcomes, a survey instrument was developed and administered to women admitted to the postpartum floor after giving birth at the Commonwealth Health Center (CHC) (the only birthing hospital in the CNMI). 131 women participated in the survey. Results of the survey revealed that:

- Although only 87 percent indicated that they were aware of the need for prenatal care, approximately 92 percent of all postpartum women had received at least one prenatal visit.
- In addition, 98 percent indicated that they would receive care with the next pregnancy if they were able.
- The majority of women were Filipina (37.7%) followed by Chamorro ethnicity (25.4%) and almost half were residents of the CNMI.
- Almost half graduated high school and were married while slightly more than 50% had an income below $10,000 per year.
- Most patients (47.6%) were self-pay followed by coverage with Medicaid (29.4%).
- The mean gestational age for starting prenatal care was 3.5 months with an average of 7.9 visits prior to delivery.
- Most infants were term with good apgars and an average weight of 7.1 pounds although eight infants (6.7%) were admitted to the Neonatal Intensive Care Unit after delivery.
- Calculation of APNCU data reveals only 35.9% of patients had adequate or better prenatal visits (Table 3).
- One hundred percent of patients who did not receive prenatal care indicated they had an income below $10,000 per year.
- Most (55.6%) did not receive prenatal care despite having Medicaid coverage.
- Reasons given for not obtaining prenatal care were related to lack of funds/lack of insurance; transportation; and they were unaware they were pregnant.

Teen Pregnancy

Since 2005-2009, the teen birth rate (ages 15-17 years) for the CNMI has been decreasing. (Table 6) However there was an increase in 2009. This is lower than the U.S. Birth rate of 41.9 in 2006 (ages 15-19). In the CNMI. ___ of the teen births are to Chamorro girls.

Table 6. Teen Birth Rates, CNMI [Rate per 1,000] – 2005-2009

Age	2005	2006	2007	2008	2009
Age 15-17	25.1	22.2	22.2	20.3	22.2
Age 15-19	34.4	39.7	45.3	37.3	38.7
Age 18-19	45.2	63.8	81.3	64.9	64.7

Source: DPH, Office of Health and Vital Statistics

Table 7. Teen Births by Ethnicity for 15-19 years old 2005-2009

	2005	2006	2007	2008	2009
Total	91	100	115	96	100
Chamorro	63	59	83	63	58
Carolinian	7	12	9	9	18
Filipino	9	12	13	16	15
Chuukese	3	4	2	2	3
Palauan	3	4	3	3	3
Pohnepeian	2	3	2	0	1
Other	4	6	4	3	2

Source: DPH, Office of Health and Vital Statistics

Unintended Pregnancies

One of the state performance measures from the 2005 needs assessment was to decrease the number of unplanned pregnancies. We have collaborated with the Family Planning Program to increase access to family planning services to women of childbearing age. Although we have made strides in breaking down barriers in the community, 66.7 percent of live births were unplanned in 2008. Although it was not stated, unplanned pregnancy can be attributed to women not knowing that they were pregnant; thus no prenatal care.

Breast and Cervical Cancer

A total of 550 cases of cancer were observed for the eleven-year period 1991 to 2001. For cancer cases, the most common cancers seen were similar to the leading causes of cancer death, including breast cancer (accounting for 16% of all cases), lung cancer (12%), cervical cancer (11%), cancers of unknown origin (10%), and head and neck cancers (7%). Of the 304 cases of cancer in females, 29% were breast cancer, 20% were cervical cancer, 8% were of unknown origin, 7% were uterine cancer, and 5% lung cancer. There were 15,543 women aged 25-60 years that were identified as not having had a pap smear for the past 4 years. There are 4 private clinics that accept Medicaid. Our partnership with Wise Women Village Project (WWVP) and Breast and Cervical Screening Program has enhanced and expanded access to these services to our women. However, the funding for WWVP ends in August.

Birth Rate

Table 8 Live Births and Preterm – 2005-2009

Births	2005	2006	2007	2008	2009
Live birth	1388	1422	1388	1266	1109
Preterm	72	66	53	30	56
Not stated	12	18	25	14	7

Preterm by Ethnicity	2005	2006	2007	2008	2009
Total	72	66	53	30	56
Carolinian	7	9	3	5	6
Chamorro	16	18	14	12	16
Filipino	25	18	18	5	22
Chuukese	9	4	3	1	1
Chinese	7	5	6	5	5
Korean	1	2	2	1	0
Palauan	2	2	1	0	3
Pohnpeian	1	2	1	0	1
Others	4	6	5	1	2

Source: DPH, Office of Health and Vital Statistics

Low Birth Weight

The low birth weight rate for the U.S. for 2005 is 8.2. This is higher than our rates for the past 5 years. It has been documented that low birth weight infants are born to mothers who did not receive adequate prenatal care, born to teen mothers or mothers older than 35 years of age. Our state priority needs addresses these issues to improve outcomes for our babies and mothers. Babies born to Filipino mothers have the highest numbers for the past 5 years followed by Chamorros. There were four sets of twins born last year weighing < 2,500 grams. However, 1 twin was above 2500 grams.

Table 10. Percent of live births < 2,500 grams in the CNMI, 2005-2009

2005	2006	2007	2008	2009
7.4	8.0	5.8	6.1	8.9

Source: DPH, Health and Vital Statistics Office

Very Low Birth Weight

In reviewing records, these infants were born at less than 37 weeks gestation; there were no twins born <1500 grams last year.

Table 11. Percent of live births weighing < 1,500 grams in the CNMI, 2005-2009

2005	2006	2007	2008	2009
1.0	1.1	0.5	0.2	0.4

Source: DPH, Health and Vital Statistics Office

Fetal Death

Fetal death is defined as those deaths at 20 or more weeks of gestation. The CNMI's fetal death rate of 8.9 in 2009 is higher than the U.S. for 2006 at 6. In reviewing some maternal characteristics for fetal death, more efforts needs to be focused to increase early and continuous prenatal care for our pregnant women. The postpartum survey found that cost and transportation are two barriers for women in seeking prenatal care. Our focused

on Medicaid enrollees will also open the opportunity for uninsured pregnant women coming to public health clinics to be provided eligibility assistance to the program. The CNMI will continue with fetal death as the state's negotiated outcome measure.

Table 12 Fetal Death in the CNMI: 2005-2009

2005	2006	2007	2008	2009
9.8	10.5	13.7	4.7	8.9

Source: DPH, Office of Health and Vital Statistics

Infant Mortality

As can be seen in Table 13 there is a significant decrease in our infant mortality rate. The infant mortality rate in the CNMI was at its highest in 2006. This is lower than the U.S. infant mortality rate of 6.9 per 1,000 live births in 2005 and Guam at 12.3 in 2004.

Table 13. CNMI Infant Mortality Rate: 2005-2009

2005	2006	2007	2008	2009
3.8	6.3	3.6	4.7	1.8

Source: DPH, Health and Vital Statistics Office (Births & Deaths/1000 population; Infant Deaths/1000 live births)

Breastfeeding

Although, the Commonwealth Health Center is designated a baby friendly hospital in which all newborns are breastfed at hospital discharge unless formula is prescribed due to mother or baby being ill, it has not been enforced with changes in management and shortage in nursing staff. We have trained staff that can provide counseling and education to mothers. Last year, MCH and WIC Program collaborated to bring the Certified Lactation Counseling training to Saipan. The MCH Program also recruited a consultant to provide additional breastfeeding training and most importantly mentoring to all nursing staff, including private clinics.

The opening of the WIC Clinic has increased our capability to collect data on breastfeeding at 6 months. However, few babies are being exclusively breastfed at 6 months The Division's capacity to collect accurate breastfeeding data is not there. We currently have no data for hospital discharge and strategies to provide this capacity will be included in the work plan for the priority need of initiation of breastfeeding at hospital discharge.

Children and Adolescent Population -

The estimated population for children ages 1-17 years in the CNMI is 18,634.

Immunization

Strategies to increase our immunization numbers include: 1) Mass media campaigns on the importance of age appropriate immunization; 2) conducting presentations at parent teacher association meetings and working with schools for complete immunization of each student; 3) reinstating walk-in Immunization Clinic; 4) providing immunization on-site during community events; and 5) tracking and follow-up. The biggest challenge for The Immunization Program continues to be challenged in their tracking of children who have exited the island and the constant moving of residence of children who are Micronesians or have contract workers as parents. Although we continue to struggle with shortages of nurses, we work hard to ensure accessibility of service by collaborating with the four private health clinics on the island of Saipan. Supplemental immunization activities during immunization awareness week include going to a site (i.e., school) at the villages to give shots at the same time providing transportation to the site and opening of the clinics after hours 5 days a week, including Saturdays. The program does have the list of names of those children who are behind in their immunization. The program staff continues to work closely with the schools to ensure that all children who are enrolled are immunized. Transportation barrier continue to be a challenge for families.

MCH Program, ECCS Project, Newborn Hearing Screening have formed a partnership for referral with Immunization Program. We have successfully collaborated to include information on newborn hearing screening, developmental screening, and oral health on the baby's immunization card.

Table 14. 19-35mos Vaccine Coverage Rate, Vaccine Category: CY2008-2009

Age Group	Total Administered	HBV Stats		IPV Stats		DTaP Stats
		UTD	Rate	UTD	Rate	UTD
Total	1,596	1,480	93%	1,441	90%	1,410
19mos	105	95	90%	92	88%	87
20mos	106	84	79%	81	76%	81
21mos	114	89	78%	86	75%	88
22mos	84	73	87%	66	79%	71
23mos	86	75	87%	73	85%	71
24mos	112	108	96%	101	90%	98
25mos	99	98	99%	94	95%	87
26mos	95	83	87%	80	84%	87
27mos	105	100	95%	98	93%	96
28mos	105	103	98%	101	96%	93
29mos	93	90	97%	91	98%	86
30mos	97	95	98%	93	96%	89
31mos	86	85	99%	82	95%	81
32mos	53	51	96%	52	98%	51
33mos	83	81	98%	82	99%	80
34mos	88	85	97%	85	97%	83
35mos	85	85	100%	84	99%	81

Source: Resource Patient Management System (RPMS), Data cut off, as of 12-31-09

Childhood Obesity

The CNMI ranked third in the world for prevalence of Type II diabetes. Obesity has been growing at a fast pace in the CNMI. In 2005, the University of Hawaii conducted the Healthy Living in the Pacific Islands Project survey. The survey purpose is to identify rates of overweight & obesity among children in CNMI and related risk factors for chronic disease and to identify dietary, physical activity, and socio-economic factors influencing nutrition. The executive summary states that: Four hundred twenty children, ages six months-10 years old were studied for indicators of nutrition and health in the Commonwealth of the Northern Mariana Islands in June and July of 2005 using a two-stage cluster survey. Seventy-three percent were breast fed. 25% were still breastfeeding at six months and 22% were still breastfeeding at 12 months. Nine percent breastfed exclusively until six months. 47% introduced complementary food before six months. In preliminary analysis of the diets of 60 children, high energy intakes were found, especially from protein and fat sources. Sodium (salt) intake was high and calcium intake was low. Only one quarter of the children met Healthy People 2010 objectives of <10% of calories from saturated fat and =30% of calories from total fat. One third of children had no physical activity in school. Most children had three days of physical activity per week (both in school and outside of school) and watched television an average of four hours per day. Thirty-four percent of children over two years were overweight or at risk for overweight. Overweight prevalence was similar across ethnic groups. One fifth of the children had high blood pressure. Nine cases of Acanthosis nigricans were identified, all among overweight children. These children were significantly more likely to have high blood pressure and early pubertal maturation. Between 2-5% of children were identified as underweight (using different indicators) and, 26% of children under five years had anemia, as did 17% of 5-10 year old children. Alternative activities to television and video games and alternative foods to high fat meats are recommended to improve nutritional status, weight status and health among children in the CNMI

The 2007 YRBS results for Middle School show that the percentage of students who described themselves as slightly or very overweight went from 18.7 in 2005 to 21. 4 in 2007. The percentage of student who were trying to lose weight decreased from 52.2 in 2005 to 50.0 in 2007.

Unintentional Injuries

The top 3 causes of death from unintentional injuries among children aged 14 years and younger in the CNMI are allergic reaction, gunshot, and respiratory failure. Last year a man went on a shooting spree and killed 4 people in which two are children. Please note that the CNMI do have child safety seat law and seat belt law. We have to commend the Department of Public Safety for their aggressive campaign on seat belt use, prevention of drunk driving, and participation in community events. We must continue with our public awareness especially to our children.

The 2007 YRBS results for middle school show that:

- The percentage of students who never or rarely wore a seat belt when riding in a care increased from 10.2 in 2005 to 15.7 in 2007.
- The percentage of students who ever rode in a car driven by someone who had been drinking alcohol increased from 51.2 in 2005 to 58.2 in 2007.

Table 15**.** Rate of Death of children 14 yrs and younger due to motor vehicle crashes, 2005-2009

2005	2006	2007	2008	2009
12.5	12.5	0.0	6.1	6.2

Source: DPH, Health and Vital Statistics Office

Table 16. CNMI Child Death Rate (1-14 years), 2005-2009

2005	2006	2007	2008	2009
41.9	6.6	6.6	13.1	

Source: DPH, Health and Vital Statistics Office

Oral Health

We continue to work with the public and private schools grades 1st, 5th, and 6th to bring students to the clinic to receive sealant and fluoride varnish application. During school year 2009-2010, 2,613 students participated in the School Dental Program. 68% of these students that were assessed had caries. For the Head Start children a team from the dental clinic provides services at each of the Head Start centers. An assessment is conducted on each child's teeth and a report card showing the necessary treatment plan is provided to parents. We have been providing restorative treatment to Head Start children in partnership with 4 private dental clinics that accept Medicaid. For the Head Start children we also conduct oral health education and information to parents and home visits.

Suicide

In the 2007 Youth Risk Behavior Survey (YRBS) trend analysis report, the percentage of high school students who have actually attempted suicide one or more times during the past 12 month also decreased from 19.9 in 2005 to 17.3 in 2007. The percentage of high school students who seriously considered attempting suicide during the past 12 months decreased from 28.3 in 2005 to 26.8 in 2007. Suicide was mentioned as the important/most common and/or most concerning adolescent issue related to behaviors that contribute to unintentional and intentional injuries and mental health. The Division of Public Health staff conducts presentations during symposiums, forums, meetings, etc. with other agencies to address this issue. Some prevention strategies outlined in the Youth Suicide Prevention Plan for the CNMI include school-based suicide awareness/prevention programs, skills training, screening, peer helpers, etc. The Adolescent Health Clinic located at one of the public high schools provides public health intervention services to our students in the school setting.

Table 17. Rate of suicide deaths among youths aged 15-19 in the CNMI, 2005-2009

2005	2006	2007	2008	2009
0.0	0.0	0.0	18.9	0

Source: DPH, Health and Vital Statistics Office

Teen Pregnancies

After declining steadily from 2005-2008, birth rates for 15 to 17 year-olds increased in 2009 (Table 18). In 2009, majority of the babies were born to indigenous Chamorro teens and thus are likely to stay on island. This has implication not just for public health but for other social service providers. In 2007 the U.S. birth rate for 15-19 year olds is 42.5.

Overall, the Division of Public Health continues to make the prevention of teen pregnancy and decreasing the number of teen births a priority. This is evident with the opening of the school-based clinic at one of the public high school on the island of Saipan. Together with the Family Planning Program and HIV/STD Prevention Office, and Community Guidance Center, we are working with the schools, teens, and parents on activities to reduce risk-taking behaviors (violence, suicide, unintentional injury, substance abuse). Although the birth rate for older Chamorro women continues to decline it continues to increase for Chamorro teens. As was stated, the MCH population is greatly affected by the labor situation in the CNMI.

Table 18. Teen Birth Rates, CNMI [Rate per 1,000] 2005-2009

Age	2005	2006	2007	2008	2009
Age 15-17	31.3	22.2	21.5	20.3	22.2
Age 15-19	34.4	39.7	45.3	37.3	38.7
Age 18-19	45.2	63.8	81.3	64.9	64.7

The 2007 YRBS reports the following sexual activity for high school students:

Sexual Behavior	2005	2007
Ever had sexual intercourse	48.4	49.7
Had first sexual intercourse before age 13	8.6	9.8
Had four or more sexual partners in lifetime	13.9	14.7
Had sexual intercourse with one or more people during the past 3 months	33.6	34.1
Used condom before last sexual intercourse	43.1	40.1
Drank alcohol or used drugs before last sexual intercourse	26.3	28.4

Source: 2007 US and CNMI YRBS

The 2007 YRBS reports the following sexual activity for middle school students:

Sexual Behavior	2005	2007
Ever had sexual intercourse	15.0	18.4
Used condom during last sexual intercourse	50.6	53.7

Source: 2007 US and CNMI YRBS

Sexually Transmitted Illnesses

Chlamydia ranks as the highest STI amongst adolescents in the CNMI. We again will continue to expand our work with the schools and families since students are still practicing risky behaviors.

Table 19. Chlamydia rate aged 15-19 years, 2005-2009

2005	2006	2007	2008	2009
22.9	20.3	11.9	8.6	15.1

Source: DPH, Health and Vital Statistics Office

Children with Special Health Care Needs -

The CNMI provides early intervention services to infants and toddlers, birth through age three, and their families in collaboration with the Public School System (lead agency) since 1986. This is the entry point for children identified with special health care needs. Services are provided to infants and toddlers that meet the following criteria:

1. Developmental Delay in the area of cognitive development; physical development, including health vision, and hearing; communication development; social or emotional development; or adaptive development (self-help or daily living skills).
2. Established Condition– a diagnosed physical or mental condition such as chromosomal anomalies/genetic disorders and neurological disorders.
3. Informed Clinical Opinion – defined as procedures including clinical assessment and observation used by qualified professionals, i.e., physician, audiologist, speech pathologist.
4. Infants and toddlers at risk for developmental delay because of biological or environmental factors. These are the low or very low birth weight and premature infants or infants born to teen mothers.

Out of 1,109 live births in 2009, there were 4 children served under the age of 1. The ethnicity of our children are Chamorros and Filipinos. Data shows that in 2009 most referrals are received from the NICU/Nursery (68%) and parents/families (11%). The three most referral diagnosis in 2009 were prematurity, no prenatal care and respiratory concerns.

The CNMI currently is providing early intervention services to about 1.2% of the total population of birth to 3 years old. The percentage of children served is below the national average by 1%. The number of children served in 2004 is 47. The numbers of referrals for 2004 is 116. 41% of our referral source is from the Neonatal Intensive Care Unit at the Commonwealth Health Center, 29% from the public health facilities, and 10% from parent/family. We are currently providing services to 77 families.

In the Memorandum of Understanding (MOU) that has been updated and signed in March of 2005, the Division of Public Health through the Maternal and Child Health Program is responsible for Comprehensive Public Awareness and Child Find System. The public awareness activities include training for staff and/or families, parent night, parent forum, printed materials, i.e., brochures, and flyers, media announcements, and participating in community events or symposiums/meetings. One new activity is conducting developmental screenings one Saturday a month and at Immunization and WIC Clinics to children 0-3 years old.

We partner and collaborate with different agencies to ensure that these children receive the services they need. Specialist ranging from cardiology to orthopedic comes to Saipan twice a year. In addition to service coordination on island we also assist families with off-island medical referral process. The CSHCN staff does conduct home visits.

Preliminary findings from the Children with Special Health Care Needs survey are: (Please note that we are still conducting the survey)

- 59% reported that they do partner in decision-making at all levels and are satisfied with the services they receive.

- 67.9% of CYSHCN received coordinated, ongoing, comprehensive care within a medical home. Please note that Medicaid enrollees are accessing health care more at the private clinics for their children. In conducting our focus group with CSHCN parents, one major occurring statement is “how much they are grateful that they can go to the private clinics now”. This provides their children with a primary care provider.

- When asked if families have adequate private/public insurance to pay for services needed for their children/youth, 70.5% said yes. Please note that majority of the costs for off-island care is covered by the Department’s Medical Referral Program. Eligibility assistance is provided to families at the center, home, and at the Medicaid Office. Transportation and translation is also provided.

- 52.2% of families with CYSHCN report that community-based service systems are organized thus they can use them easily. For the children enrolled in the early intervention services program 96.3%
  There are no private organizations providing community-based services for CSHCN in the CNMI. Thus, these services are provided by CNMI government such as early intervention services, Head Start Program, MCH Program, Food

Stamp Program, Family Hope Center, etc. MCH Program works with family support groups to assist the program in disseminating resource information to families. Transportation and translation is provided as requested.

- 6.9% of CYSHCN received the services necessary to make transitions to all aspect of adult life, including health care, work, and independence. Please note that pediatricians have made improvements in working with families in the transition of their children to adult providers.

The CNMI Early Intervention Services Program (Part C) submitted their Annual Performance Report for 2008-2009 earlier this year. The following is information on the 54 CSHCN that were enrolled in the program for that reporting year.

- 98% of infants and toddlers with Individualized Family Service Plans (IFSP) receive early intervention services on their IFSPs in a timely manner
- 96.3% of infants and toddlers with IFSPs primarily receive early intervention services in the home or community-based settings
- Percent of families participating in Part C who report that early intervention services have helped the family

A. Know their rights – 77%
B. Effectively communicate their needs – 80%
C. Help their children to develop and learn – 77%

Partnership Building and Collaboration Efforts

As has been stated, the MCH Program has been instrumental in forging strong partnerships to enhance disease prevention and public awareness activities. Other strategies to strengthen MCH Program's capacity to promote and protect the health of our target population are: 1) work with schools to ensure children enrolled are up to date with their immunization and on nutrition and physical fitness activities; 2) work with our partners during island-wide community events which will strongly emphasize lifestyle behavioral changes especially with health care practices, diet, and physical fitness; 3) establish a network linkage with other providers to inform them of health news, health alerts, awareness events, training, etc.; and 4) develop partnership with other agencies to ensure continuity of care. Therefore, the strength of our work is in our collaboration with our partners.

All state and local preventive health programs are administered under the Division of Public Health, Department of Public Health. These include children with special health care needs, family planning, HIV/STD prevention, immunization, etc. We collaborate in provision of services such as teen pregnancy and std prevention and in awareness and outreach activities such as importance of prenatal care, women's health screenings, autism, and oral health. The newborn screening (metabolic) database and the early hearing detection and intervention surveillance system are linked to the birth certificate database. The data needs for the MCH Program is provided by the Health and Vital Statistics Office. Therefore, MCH Program and other Division programs support the training and equipment needs of the Office. MCH Program Coordinator was a committee

member that worked on the revision of the birth certificate to the 2003 standard form. We have just completed our second phase of our work to increase prenatal care in the CNMI with the Hospital Division's OB/GYN unit, Breast and Cervical Cancer Screening Program, Wise Women Village Project, and Family Planning Program, and Nutritionist. In 2008, we developed a prenatal care book working with 4 groups of women in developing it. Last year we completed our prenatal care ad campaign in print media and radio spots. One of the outcomes of our working group is to include Medicaid information in the ads. We are now working on the last part which is to implement a Prenatal Care Village Project. We formed a partnership with the CHC Volunteers Association in this project.

Being under the umbrella of the CNMI government makes it easier to collaborate with external agencies. Most of social services programs are provided by the State. Therefore, we have established working partnership with Northern Marianas College (NMC) for training needs of both clinical and programmatic staff, conducting awareness activities in nutrition and physical activity, and in our work to prevent and control non-communicable disease. The NMC School of Nursing and Emmanuel Nursing College provide volunteers during events such as HPV School Campaign and H1N1 and health fairs. We have increased our referrals to the private health and dental clinics for Medicaid enrollees. The Immunization Program has a Memorandum of Agreement with 4 private health clinics thus increasing accessibility. All Division programs conduct outreach activities at schools during their health fairs, science fairs, nutrition awareness event, etc. We also assist with private organization wellness program. During our health fairs our external partners also come to set up exhibits and information sharing.

We have an Information Sharing Agreement (ISA) with WIC Program for exchange of information for MCH data reporting and collaborate in our work to increase breastfeeding. We have a Memorandum of Understanding (MOU) with the following:

- Medicaid Program
- Public School System Early Intervention Services Program
- Head Start Program

Our strategy in getting community involvement:

- Seek the assistance of our partners since MCH is a member of majority of the committees that addresses the MCH population groups.
- Coordinate/facilitate focus groups, interviews, etc
- Public Service Announcements
- Meetings with community leaders
- We are fortunate in that our community is responsive and willing to work with Department of Public Health

We continue to provide feedback to community through public service announcements or at smaller targeted gathering. We learned that organizing a general public forum does not work for our community. What works is when we go to leaders of different ethnic group, parishes, or villages and inform them of our activity to solicit participation. During village projects we contact village leaders to assist with recruitment. We also work with

our partners to recruit depending on target groups we are working with. In addition, we work with external and internal partners to provide incentives.

MCH Program Capacity by Pyramid Levels

a. Direct Health Care Services

The Department of Public Health provides primary and preventive health care services through the Commonwealth Health Center, Southern Community Wellness Clinic (SCWC), Women and Children's Clinic, Adolescent Health Clinic, and Tinian and Rota Health Centers **(**Table 20). The infrastructure of the Commonwealth Health Center was built to accommodate a population of 15,000 and currently the 2009 estimated population is at 62,819. Rota Health Center and Tinian Health Center provides health care services in each perspective island. Dental services are provided at the Dental Unit. Please note that there are 6 private clinics on the island of Saipan in which 4 participate in the Medicaid Program. We have Memorandum of Understanding (MOU) for the provision of immunization to children at four of these clinics.

Table 20. Division of Public Health Facilities Profile

Delegate Agency	Village	Service Area	Office Hours	Clinic Hours
Southern Community Wellness Clinic (SCWC)	San Antonio Village, Saipan	Island-wide (located in southern area)	0730 – 1630 Monday – Friday	Same
Adolescent Health Clinic @ Marianas High School	Marianas High School	Marianas High School	0830-1500 Monday – Friday	0830 – 1230 Wednesday & Friday
Women's Clinic @ CHC (referral site)	Garapan Village, Saipan	All of CNMI	0730 – 1630 Monday – Friday	Same
Tinian Health Center	Tinian	Tinian	0730 – 1630 Monday - Friday	Same
Rota Health Center	Rota	Rota	0730 – 1630 Monday – Friday	Same

There are 3 OB/GYNs, 2 pediatricians, 3 Women's Health Nurse Practitioners, and 3 midwives providing services for MCH population group at the Department of Public Health. For the private clinics there are 4 Family Practitioners, 1 Internist, 1 Internist/Pediatrician, 1 pediatrician, and 3 Physician Assistants, 1 Women's Health Nurse Practitioner. Please note that we have increased our referrals to the private clinics.

Currently, the greatest challenge to the health care system is to meet the increasing demand of human and financial resources for prevention, medical management, and

off-island referral. Although the capacity and resource capability of the Division of Public Health is limited, we continue to seek other ways to assure the availability and accessibility of direct health care services for the MCH population groups. One major factor is in our work to open Medicaid to the private clinics. Medicaid enrollees can access services at four private and dental clinics. In evaluating our services such as Wise Women Village Project, Southern Community Wellness Clinic, and provision of immunization at private clinics, one of our lessons learned is that if we bring services to them, they will come.

The CNMI is designated a health manpower shortage area with the National Health Service Corps. This include not only providers such as pediatrician but also dentists (especially with a focused on CSHNN), occupational therapist, physical therapist, home visiting nurses, sub-specialty physicians who serve CSHNC, audiologist, registered dietician, etc.

The development of homestead lots in the CNMI is growing rapidly and is a geographic challenge in reducing health disparities. These homestead lots are both residential and farming community. Majority of the larger homestead lots are located miles away from the nearest health facility - private or governmental. There is no public transportation on the island. This has pose as a challenge for the Division in ensuring the availability and accessibility of services. For example, the Kagman Homestead area is located in the northeast side on the island of Saipan with a population of about 8,000. These are young families living in the area. There are two Head Start Schools, one elementary, middle, and high schools in the village. The nearest health facility is located on the west side of the island which is about 7 miles away. Results from the postpartum survey shows that over 50% of women that lives in either Kagman or Koblerville either had inadequate or no prenatal care. These are two of the villages that WWVP services and Head Start Dental Program are provided. We coordinate activities with all the schools for health activities. We will again submit the Section 330 grant application to open a community health center in Kagman.

State's Capacity/Strengths to provide Direct Health Care Services

- Expand health and dental care for Medicaid participants, including CSHCN, to 4 private clinics
- Within Division of Public Health, a walk-in immunization clinic is open free of charge; 4 private health clinics also provide immunization through an MOU
- Developmental screenings is provided free of charge at the Children's Developmental Assistance Center (C*DAC), Immunization Clinic; C*DAC is open one Saturday a month for developmental screening service
- Referrals are done at all programs in the Division
- Medicaid Program information is included in all awareness campaigns such as prenatal and oral health
- Care coordination is provided to children with special health care needs
- Women's health screenings provided at SCWC and Women's Clinic including the private clinics; DPH programs provides assistance to low-income women

- Prenatal care provided at all public and private clinics which are open during the evenings and Saturdays
- School-based clinic
- Assistance for off-island care is provided to CSHCN through the Medical Referral Program
- In the area of nutrition we establish a referral process for children aged 0-5 to WIC Program and school-aged children to Public School System Nutritionist

Weaknesses and Challenges

- Recruitment of health care providers and specialty areas such as Nutritionist
- Access to oral health is limited for the uninsured
- Access to oral health is limited for CSHCN
- Lack of public transportation
- Geographic and financial disparities
- Unable to share data across agencies
- Depressed economic situation in the CNMI
- Lab and pharmaceutical cost for uninsured

Opportunities

- Collaborate with another high school that opened a school-based clinic last school year
- Put on line vacancy announcements for key positions (provide it to partners both on and off island)
- Work with partners to bring out services at the community level
- Department of Public Health will be submitting an application for community health center.
- Programs such as Glucometer loaners program
- MCH population groups included in partners strategic work plan
- Plans to submit the Community Health Center grant when funding opportunity is available

b. Enabling Services

The Division in its commitment to ensure accessibility to health care services for our MCH population groups does provide:

- Transportation assistance to the community. The SCWC brochure states "Please call us if you cannot get to the clinic because you do not have a ride and we will do our best to help you". We collaborate with other programs such as Breast and Cervical Screening Program that provide transportation, including airfare. For our CSHNC we allow for Social Worker to follow them during their appointments whether it is to the doctor, WIC, Nutrition Assistance Program, Medicaid, etc. when requested. Social Worker and Clinical Attendants can assist with application process for parents of children with special health care needs.
- Translation - we have been improving our work in translation of materials. We have materials that are translated in Chinese, Tagalog, and Korean. We did this

by working with our ethnic groups and providing incentives such as gas voucher or providing staffing for blood pressure and glucose screenings during one of their events. Please note that all educational materials are provided to Rota and Tinian Health Centers.

- Outreach – again outreach activities are provided with internal and external partners
- Service coordination - provided to CSHCN
- Referrals – we have been diligent in our referrals to Medicaid, C*DAC for developmental screenings, private health and dental clinics, WIC, Immunization, and our early childhood comprehensive system agencies with support from ECCS Big Steps for Little Feet Project

Capacity/Strengths

- Mass media campaigns on early childhood topics
- Successful collaborations with partners
- CSHCN survey currently being conducted
- Direct lines available to MCH program and other Division preventive programs
- Partner program share resources (manpower and financial) for outreach activities

Weaknesses/Challenges

- High cost for translation of materials (also translators)
- No public transportation available
- Shortage of vehicles at the Division of Public Health
- Lack of respite care in the CNMI
- Limited staff are pulled to all Division efforts

Opportunities

- Work with partners to provide incentives
- Collaborate with private agencies providing home visit
- Submitted Affordable Care Act Maternal, Infant, and Early Childhood Home Visiting Program
- Department of Public Health will be submitting an application for community health center.
- Retired nurses to assist with health activities at the village level
- MCH population groups included in partners strategic work plan

c. Population-Based Services

We continue to expand our capacity to provide population-based services for our MCH population groups.

Mothers and infants

- Newborn Screening
- Universal Newborn Hearing Screening
- Immunization
- Early Intervention Services Program
- Prenatal Care

- Specialty Clinics
- Referrals for preventive health services
- Tracking
- Case Management for high-risk pregnant women
- Programs for low-income women
- Outreach/Public Education

Children and Adolescents

- Immunization
- Early Intervention Services/CSHCN
- School-based Clinic
- Teen Pregnancy Prevention
- Outreach Public Education
- HPV School Campaign

CSHCN

- Early Intervention Services/CSHCN
- Specialty Clinics
- Referrals
- Outreach/public education

Through our work with implementing the newborn screening database we established a partnership with Oregon State Public Health Laboratory. We assisted Head Start Program with their lead screening project. One of our success has been our Dental School Program which with Head Start and the public and private elementary schools. MCH participated in the HPV School Campaign and H1N1 mass immunization campaign. Universal Newborn Hearing Screening is provided at the nursery before hospital discharge. In collaboration with Public School System, early intervention services are provided to our families out in the community - Children's Developmental Assistance Center. We have increased our translation of materials to Chinese and Korean in some of our Division Programs. We conduct home visits to children with special health care needs. We developed a resource directory of services for families with children 0-8 years of age, including CSHCN.

Capacity/Strengths

- Expand health and dental care for Medicaid participants, including CSHCN, to 4 private clinics
- Public Awareness Campaigns
- Referral process in place for early childhood
- Educational materials provided to Medicaid participating health and dental clinics
- High participation of partners during community events

Weaknesses/Challenges

- Limited staffing
- Programs providing services for low-income families exceed funding level before fiscal year is over
- Inability to access data at the private clinics– i.e. oral health
- Lab and pharmaceutical cost for uninsured

Opportunities

- Submitted Affordable Care Act Maternal, Infant, and Early Childhood Home Visiting Program
- Department of Public Health will be submitting an application for community health center.
- Village leaders in support of public health activities for their village
- MCH population groups included in partners strategic work plan
- Include MCH population groups in SPC's NCD plan

d. Infrastructure-Building Services

The Division of Public Health has made great strides in strengthening the current workforce capabilities to ensure sustainability of staff in providing services to the community. The most significant achievement is that the Area Health Education Center (AHEC) grant from the John A. Burns School of Medicine. Funds from the AHEC grant supports the NCLEX review class for local nurses. The CNMI Department of Public Health currently relies on recruiting nurses and other health professionals from the Republic of the Philippines. One recommendation from the prenatal focus group is to recruit nurses from other places. This will be one way to reduce recruitment costs and not to mention remove the burden of the lengthy process involved in the recruitment process.

The recruitment of the State System Development Initiative Project Coordinator has improved MCH Program's capacity to collect data. Other accomplishments include linkage of Early Hearing Detection and Intervention Surveillance system and newborn screening database to birth certificate database. The Department was granted the Promoting Integration of State Health Information Systems and Newborn Screening Service Systems grant. This will assist the Department in the implementation of an electronic medical record and data linkage to other units within the hospital.

Capacity/Strengths:

- Recruitment of SSDI Project Director
- Shared costs for training opportunities
- Partners support for needs assessment, surveys, etc.
- Policies/procedures for other programs include MCH population groups
- Implementation of birth certificate to 2003 standard form

Weaknesses and Challenges:

- Health information system – hospital focused

- Access to timely program and population data
- Limited expertise for data linkage, etc.

Opportunities:

- Submitted Affordable Care Act Maternal, Infant, and Early Childhood Home Visiting Program
- MCH Program Coordinator part of management team working on developing plan for strengthening the quality assurance/ quality improvement system (QA/QI) in the Department of Public Health

List of Potential Priorities

The list of potential priorities is a result of recommendations from our work with our partners and community members from each MCH population group. We also worked with our partners to review data and our capacity as systems to address the priority.

Pregnant Women and Infants

- Access to care (prenatal, pap test, mammogram, etc)
- Case Management (high risk pregnancy)
- Dental health
- Domestic and sexual violence
- Early and adequate prenatal care
- Educational awareness (prenatal care, newborn screening, growth and development, etc)
- Developmental Disabilities
- Health/dental insurance
- Nutritional status, including physical fitness
- Mental health screening
- Planned pregnancies/child spacing
- STI/HIV (screening, counseling, follow-up)
- Substance abuse
- Teenage Pregnancy
- Tobacco use
- Infant mortality
- Fetal death
- Breastfeeding
- Premature Birth

Children and Adolescents

- Alcohol and other drug use
- Child abuse and neglect
- Chronic disease/conditions
- Dental health
- Health insurance/access to care
- Healthy youth development

- Mental health screening
- Motor vehicle injuries
- Nutrition and physical activity
- Obesity
- School readiness
- STI/HIV
- Suicide
- Tobacco use
- Tobacco use with betel nut
- Unintentional injuries
- Violence

Children and Youth with Special Health Care Needs

- Access to specialty care and services
- Autism Spectrum Disorder screening
- Community-based support for children with behavioral issues
- Condition specific health information
- Coordination of services
- Dental health for CYSHCN
- Developmental, social, emotional screening
- Early identification
- Early intervention
- Families receive needed services
- Health care/Medical Home
- Health Insurance
- Home care/visit services
- Knowledge of child development
- Mental health screening
- Parents as decision making partners
- Provider capacity
- Training and family support
- Transition

Methodologies for Ranking/Selecting Priorities

We began the process by reviewing our progress with the priority needs from the 2005 needs assessment. This allowed us to see if our community or target group still has the need for any of the previous priorities. The partner agencies also provided their information or data on their target group. We listed a comprehensive set of priorities for each MCH group and looked at the State's capacity and strengths, weakness/challenges, and opportunities to direct effort to the priority needs. We then met with groups such as women, parents, adolescents, and parents of children with special health care needs. Please note that for parents we worked with both fathers and mothers. We got the support of our partners to solicit input from their target group such as Child Care Program and Head Start Program.

From the list of potential priorities, we approached the community-at- large to select the top five priorities for each MCH population group. Then we had a discussion with partners to identify capacity and strengths, weaknesses and challenges, and opportunities for the top 5 selected priorities for each MCH population group.

The final set of priorities was distributed to partners and posted online on the WIC Program website (please note that DPH website is still being developed) for feedback.

Comparison of Priorities

Women of Childbearing Age and Infants

2005	2010
• To increase the percent of pregnant women who are screened for Chlamydia	• To increase the percent of mothers who breastfeed their infants at hospital discharge.
• To decrease the number of unplanned pregnancies.	• To ensure early entrance into prenatal care to enhance pregnancy outcomes for pregnant women enrolled in Medicaid.
• To increase the proportion of women aged 18 years and older who have ever received a pap smear.	• Improved case management of pregnant women identified as 'high-risk'
• To increase the proportion of women aged 40 years and older who have ever received a mammogram.	• To increase the proportion of women aged 18 years and older who have ever received a pap smear. • To increase the proportion of women aged 40 years and older who have ever received a mammogram.

To increase the percent of pregnant women who are screened for Chlamydia (replaced)

- In discussions to identify a priority need for pregnant women and in reviewing the data the need is to focus on getting pregnant women to come in to prenatal care (if they don't come how are they going to be tested)

To decrease the number of unplanned pregnancies (replaced)

- The Family Planning Program has the capacity to address this area. MCH will continue to support for pregnancy test kits, outreach activities.

To increase the proportion of women aged 18 years and older who have ever received a pap smear (continued).

- The working group decided to continue to keep this priority need but may discontinue it for next year. The reason is that the ASSIST 2010 Wise Women Village Project expires at the end of August and as of now DPH programs have to regroup to come up with a plan to provide this service to the uninsured. In our work with women through the village project we have noticed that there is a large number of women that are a little bit above the low income level and thus do not qualify for Medicaid or programs such as Breast and Cervical Screening Program.

To increase the proportion of women aged 40 years and older who have ever received a mammogram (continued).

- This would be the same as above but we do face the challenge of no radiologists or film.

To increase the percent of mothers who breastfeed their infants at hospital discharge (added).

- Obesity, diabetes, hypertension, and atherosclerotic vascular disease are among the major health concerns facing the CNMI population. Research has shown benefits of breastfeeding for babies such as it may protect them from obesity later on in life; may protect them from developing type 1 diabetes; and protection against heart diseases. Moreover the benefits to the mothers include decreased risks of osteoporosis, breast and ovarian cancers, and type-2 diabetes. The working group has only WIC Program's data but with information from women, morbidity and mortality data, and high rank high it was selected. Furthermore, there is added support from partners in this area to put more efforts into this intervention which is of no cost to families.

To ensure early entrance into prenatal care to enhance pregnancy outcomes for pregnant women enrolled in Medicaid (added).

- Overall prenatal care rate is low in the CNMI. Moreover, survey results show that women enrolled in the Medicaid Program also do not access early and continuous prenatal care. The system is in place to provide prenatal care services to Medicaid enrollees however it is not utilized. MCH program can provide eligibility assistance and thus this will provide the uninsured the opportunity to apply for Medicaid. Partners such as Head Start and Early Intervention Services want to improve health outcomes for their target population. MCH needs to provide information on services covered by Medicaid Program because as one mother said – "I thought it only covers for my baby's cost".

Improved case management of pregnant women identified as 'high-risk' (added)

- In our discussions with women prevention of diabetes was a priority. The working group looked at existing program both at the Department of Public and other agencies and their capacity to address this issue. In November last year MCH worked with a consultant to assist the program look at the problem of gestational diabetes. Her scope of work was to identify GDMs and pregnant

women with pre-existing diabetes and to design and implement case management services for these women. From December 2009 to May 2010 there were 39 women identified. We are working to improve case management by revising policies, reinstating glucometer loaner program, training to providers and nurses for counseling and education, referral to WIC Program, etc.

Children and Adolescents

2005	2010
• To decrease obesity among school-aged children • To decrease the rate of Chlamydia for teenagers aged 13-19 years.	• To reduce the proportion of children ages 12 months to 5 years who are at risk of overweight or obese • Increase developmental screening for children 0-5 years old • To lower the birth rate among Chamorro teenagers aged 15-18 • Reduce adolescent risk behaviors relating to alcohol and other drug use

To decrease obesity among school-aged children (replaced)

- This correlates over to the new state performance measure which focuses our efforts to decreasing obesity by working with families to increase fruits and vegetables consumption for children 12 months – 5 years of age.

To reduce the proportion of children ages 12 months to 5 years who are at risk of overweight or obese (added)

- The World Health Organization (WHO) lists "Inadequate Fruit and Vegetable consumption" as one of the top ten risk factors for Non-Communicable disease. Preliminary results from the NATFAN: Children State Agency Report Pre-Food Package Rollout Questionnaire conducted at the WIC Clinic in the Fall 2009 shows that for our WIC children age 12 months to 5 yrs 65.1% eat fruits one time or less per day and 69.1% eat vegetables one time or less per day. This is one of the reactions from our partners: "This data explains a lot. CNMI has a big fruit and veggie consumption problem. We have amazing potential here... we can do something about this!!"

To decrease the rate of Chlamydia for teenagers aged 13-19 years (replaced)

- The HIV/STD Prevention Program and the Family Planning Program have the capacity to address this issue. The opening of one more school-based clinic provides 2 access sites for the students

To lower the birth rate among Chamorro teenagers aged 15-18 (added)

- The results from the Adolescent Health Determinant work group identified teen pregnancy as a priority need. They ranked it second amongst the list. In reviewing the data, the working group focused it to reducing the birth rate among

Chamorro teenagers since they have the highest rate. They chose ages 15-18 because majority of 18 year olds are still in their last year of high school.

Reduce adolescent risk behaviors relating to alcohol and other drug use (added)

- The results from the Adolescent Health Determinant work group identified alcohol and other drug use as the important/most common and/or most concerning adolescent issues related to 1) Behaviors that contribute to unintentional and intentional injuries; 2) Sexual activity that leads to unintended pregnancy and sexually transmitted diseases 3) Mental Health and 4) Alcohol, Tobacco, and other drug use. Furthermore, students ranked alcohol and other drug use the highest amongst the list of priority needs.

Children with Special Health Care Needs

2005	2010
• To increase the percentage of eligible infants with disabilities under the age of 1 receiving early intervention services.	• Input information on infants with a diagnosis at birth into the Birth Defects Registry within 6 months

To increase the percentage of eligible infants with disabilities under the age of 1 receiving early intervention services (replaced)

- The new priority need will cross over to address this issue. The identification of babies will result in an increase of babies receiving early intervention services

Input information on infants with a diagnosis at birth into the Birth Defects Registry within 6 months (added)

- The priority need that was identified by parents, partners, and rank is early identification and intervention of infants with special health care needs. MCH Program does not have the system in place to identify these babies but has an ongoing contract with a consultant to develop and implement the birth defects registry. This will definitely improve our referral for early intervention and case management of our special population. The biggest challenge in conducting any survey for CSHCN is that we are not able to know all of them. This will also improve our collaboration with private clinics in that we will be able to note if they are receiving services from them.

As can be seen, the final priority needs for the CNMI's MCH population groups are similar to the previous assessment. However the new priority needs are more focused and will also cross over to address previous priority needs. For example, the previous priority need for adolescents is to decrease chlamydia for teenagers and the new one is to lower the birth rate for Chamorro teenagers. Our work in this priority need will also focus on prevention of STDs. In addition counseling and education will also cross over to other priority needs such as prenatal care and breastfeeding.

Priority Needs and State Performance Measures

The following performance measures will assist us to measure success and monitor progress on priority needs from 2011 through 2015.

Priority Pregnant Women and Infants	National/ State Performance Measure
Initiation of prenatal care visits during first trimester for pregnant women enrolled in the Medicaid Program	NPM #18 – Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester SPM #1 Percent of infants born to Medicaid enrolled pregnant women receiving care in the first trimester
Improved case management of pregnant women identified a "high risks"	NPM # 15 – Percentage of women who smoke in the last three months of pregnancy SPM - #2
Initiation of breastfeeding at hospital discharge	NPM #11 – The percent of mothers who breastfeed their infants at 6 months of age SPM #3- Percent of mothers who breastfeed their infants before hospital discharge

Priority Children and Adolescents	National/ State Performance Measure
Developmental screening for children 0-5 years	SPM #4
Improve nutritional status and physical activity in children	NPM #14 - Percentage of children aged 2 to 5 years, receiving WIC services with a BMI at or above the 85th percentile SPM #5 – Increase fruits and vegetables intake up to one
Decrease teen birth of Chamorro teenagers aged 15 through 18 years Reduce adolescent risk behaviors relating to alcohol and other drug use	NPM #8 The rate of birth (per 1,000) for teenagers aged 15 through 17 years. SPM #6 – The rate of birth (per 1,000) for Chamorro teenagers aged 15-18 years

Priority	National/State Performance Measure
Children with Special Health Care Needs	
Early identification and intervention of children with special health care needs	SPM #7 – Percent of children less than 1 year receiving early intervention services
Input infants with a "diagnosis" into the birth defects database with 6 months	SPM #8 - Increase

6. Outcome Measures – Federal and State

The MCH Program planned activities or initiatives correlates with national and state performance measures to assure progress to healthier outcomes for the MCH population groups. The program's efforts to improve the health status of pregnant women, infants, children, children with special health care needs, and adolescents have been successful over time as evidenced by expansion of Medicaid to private health and dental clinics, eligibility assistance, targeted outreach, risk reduction education, and development of comprehensive activities. Furthermore in our efforts to maximize resources, the program has established partnerships with internal and external agencies to expand on activities that will have a positive impact on the clients we serve and achieve goals for our programs. At the recommendation of our partners the MCH Program will continue to track fetal death outcomes. We still face the challenge of collecting quality data to track our progress in our performance. We will continue with fetal death as the state negotiated outcome measure.