COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI)

“That every individual who has made CNMI their home may be able to live and interact with each other in a community that is not only nurturing to its members’ spiritual growth, psychological balance, emotional stability and physical well-being, but at the same time fostering the development and maintenance of a cooperative and harmonious society.’

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This publication has been produced as part of the World Health Organization’s (WHO) profiles on mental health in development (WHO proMIND), and has been written and edited by:
Mrs Karen Buettner, Director of Hospital Services, Commonwealth Healthcare Corporation, Commonwealth of the Northern Mariana Islands
Ms Josephine Sablan, Director, Community Guidance Centre, Department of Public Health, Commonwealth of Northern Mariana Islands
Dr Michelle Funk, Coordinator, Mental Health Policy and Service Development, Department of Mental Health and Substance Abuse, WHO, Geneva
Mr James Arriola, Brabu, Evauluator for Project Brabu, Commonwealth Healthcare Corporation (CHCC) Substance Abuse Prevention, Commonwealth of the Northern Mariana Islands
Dr Sophie Price, Mental Health Policy and Service Development, Department of Mental Health and Substance Abuse, WHO, Geneva
Dr Kanna Sugiura, Technical Officer, Mental Health Policy and Service Development, Department of Mental Health and Substance Abuse, WHO, Geneva
Ms Sandra Diminic, Mental Health Policy and Service Development, Department of Mental Health and Substance Abuse, WHO, Geneva
Ms Natalie Drew, Technical Officer, Mental Health Policy and Service Development, Department of Mental Health and Substance Abuse, WHO, Geneva

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Dr Dong Il Ahn, The WHO Representative in the South Pacific, Suva, Fiji
Dr Temo K. Waqanivalu, Coordinator, Office of the WHO Representative in the South Pacific, Suva, Fiji

(WHO proMIND): Commonwealth of the Northern Mariana Islands
Potential partners interested in finding out more about mental health in CNMI should also contact project partners based in-country (contact details on page 10).

WHO proMIND
Potential partners and donors interested in supporting or funding WHO proMIND projects should contact Dr Michelle Funk (funkm@who.int), Coordinator, MHP, Department of Mental Health and Substance Abuse, WHO, Geneva, Switzerland.

More information about WHO MIND and WHO proMIND projects is available on the website: http://www.who.int/mental_health/policy/en/
The WHO Pacific Islands Mental Health Network (PIMHnet) came about at a meeting of Ministers of Health for the Pacific Island Countries (Samoa, 2005) during which the idea of a Pacific network as a means of overcoming geographical and resource constraints in the field of mental health was discussed.

There was unanimous support among countries of the Pacific Region to establish the network, and with the support of New Zealand’s Ministry of Health, the World Health Organization initiated the process to establish PIMHnet. The network was officially launched during the Pacific Island Meeting of Health Ministers in Vanuatu in 2007.

PIMHnet currently counts 19 member countries, each with an officially appointed focal point: American Samoa, Australia, Commonwealth of the Northern Mariana Islands, Cook Islands, Federated States of Micronesia, Fiji, Guam, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, and Vanuatu.

The key aim of the Pacific Islands Mental Health Network is to enable Island countries to work together and draw on their collective experience, knowledge and resources in order to establish mental health systems that can provide effective treatment and care.

In consultation with countries, PIMHnet has identified a number of priority areas of work, including advocacy; human resources and training; mental health policy, planning, legislation and service development; access to psychotropic drugs; and research and information. Network countries meet on an annual basis to develop workplans outlining major areas for action to address these priorities, to be officially endorsed by their Ministers of Health.

PIMHnet has also been successful in forging strategic partnerships with NGOs and other agencies working in the Pacific Region in order to; reduce the existing fragmentation of mental health activities and to build more coordinated and effective strategies to address the treatment gap, to improve mental health care and put an end to stigma, discrimination and human rights violations against people with mental disorders.

PIMHnet is funded by the New Zealand Ministry of Foreign Affairs and Trade through the New Zealand Aid Programme.
THE PROJECT

'That every individual who has made CNMI their home may be able to live and interact with each other in a community that is not only nurturing to its members' spiritual growth, psychological balance, emotional stability and physical well-being, but at the same time fostering the development and maintenance of a cooperative and harmonious society.'
KEY ACHIEVEMENTS for MENTAL HEALTH in CNMI

- Formulation of a mental health policy and plan soon after the establishment of the Commonwealth of the Northern Mariana Islands, in 1976
- Establishment of psychiatric inpatient care within the general hospital ‘The Commonwealth Health Center’ (CNMI)
- Outpatient care provided to the community through programs at the Community Guidance Center. This center also provides outreach services to the Tinian and Rota Islands, as well as to public and private schools and agencies
- A Human Resources and Training Plan has been formulated to address workforce issues in the mental health system, in 2010
- Establishment of CNMI behavior health survey summary to collect consistent behavior health adult data
- Annual publishing of the Epidemiological Profile of Mental Health and Substance Abuse

NEXT STEPS for CNMI

- To reduce re-hospitalisation rates of individuals with mental illness by strengthening community-based mental health programs and services
- To reduce stigma associated with mental health problems through education and community awareness activities
- To provide prevention and education services and community awareness to help reduce prevalence of mental health problems and substance abuse or use
- To help address and reduce the incidence and prevalence of community health problems such as depression and suicide, as well as the use of alcohol, drugs and inhalants
- To review the current mental health policy and draft a mental health plan
- To address the human resource needs of the mental health service, within the general health service, in the context of economic hardship
The Commonwealth of the Northern Mariana Islands (CNMI) is a 14 island archipelago in political union with the United States of America. It is a relatively new nation, since being ratified as a commonwealth country in 1975, but has a proud history of indigenous Chamorro and Carolinian culture. The population of CNMI inhabits the three southern islands of Saipan, Tinian and Rota.

The health system is comprised mostly of expatriate staff from the United States of America (USA), Canada and the Philippines, and there are associated difficulties in staff retention. Recruitment of expatriate staff to CNMI is expensive and time-consuming with vacancies remaining unfilled for long periods. There is no opportunity for training physicians in CNMI, although scholarships have been made available to assist residents to attend medical schools in the USA. There are training opportunities in nursing at the Northern Mariana College.

A mental health policy was formulated in 1976. Since 1996, mental health services have been coordinated by the Community Guidance Center (CGC), under the Department of Public Health, to focus on community mental health and substance abuse services. As well as behavioral, addiction and prevention programs, the CGC is also responsible for the inpatient psychiatric unit in the general medical hospital. All of these services are situated on the island of Saipan, the capital of CNMI. The CGC provides guidance and outreach services to primary health care facilities on the islands of Tinian and Rota.

The Pacific Island Health Officers Association declared a regional state of health emergency in May 2010 due to an epidemic of non-communicable diseases (NCDs) in the United States Affiliated Pacific Islands, including CNMI. High rates of suicide, substance abuse and interpersonal violence, especially in the youth population, are ongoing issues that require attention.

Acceptance and knowledge of mental illness in the CNMI community is encouraging. It is reported that generally the community is caring and sympathetic towards people with mental illness.
**HISTORY and MAJOR MILESTONES**

**1975**
Between December 1972 and February 1975, a covenant to establish the Commonwealth of Northern Mariana Islands, within the American political system is drafted. It is subsequently approved by the Mariana Islands District Legislature, and approved in a plebiscite by the Northern Mariana Island voters, in February and June 1975, respectively. The covenant is approved by joint resolution of the USA House of Representatives and the USA Senate, and signed by President Gerald Ford in March 1976. From 24 March 1976, the Commonwealth of the Northern Mariana Islands, in political union with the United States of America, is established.

**1976**
The Mental Health Policy, Substance Abuse Policy and National Mental Health Programme are formulated.

**1988**
The 24-hour Evaluation and Treatment Act is enacted by the Commonwealth Legislature, so that persons thought to be a danger to themselves or others due to mental illness may in an emergency situation be detained for a period of 24 hours to allow for assessment and treatment. Beyond this period, further involuntary treatment is to be decided only by court order.

**1991**
In October, the Department of Public Health, in collaboration with the Environmental Services Division, plans a comprehensive drug abuse rehabilitation and treatment program in line with the Anti-Drug Abuse Act of 1991.

**1993**
The rights of persons undergoing psychiatric assessment, evaluation, care or treatment are stipulated in the Patient's Rights Act of 1993. These rights are afforded during voluntary or involuntary inpatient or outpatient treatment at an assessment or treatment facility.

The Involuntary Criminal Commitments Act of 1993 takes effect. This Act protects persons suffering from mental illness who, because of their illness, are incapable of committing criminal conduct. The Act establishes procedures for involuntary commitment of persons not capable to stand trial or be sentenced. It also outlines procedures concerning the defence of not guilty by reason of insanity.

Enactment of the mental health legislation, known as The Involuntary Civil Commitment Act of 1993 occurs. This piece of legislature establishes the procedures for 72-hour emergency detention of persons suffering from mental illness at significant risk to themselves or others, and for emergency and non-emergency involuntary civil commitment after a court hearing, for specified periods of time.

**1995**
The death of a 15 year old male, in August 1995, from the inhalation of butane gas, and the treatment of a further eight young men aged between 10 and 16 for inhalant abuse within a six month period highlights the increasing prevalence of inhalant abuse in the youth community. As
such, the Inhalant Abuse Prevention Act of 1995 is enacted to prohibit sales of volatile solvents, nitrites and anaesthetics to persons under the age of 18. This Act is amended in January 2005 so that the court can require a person convicted to receive treatment and counselling. The amendment also request that the Secretary of Public Health initiate an education campaign among parents, and states that merchants may be required to keep records of sales of these items.

1996

The Community Guidance Center is established to deliver mental health and substance abuse services to individuals and families with mental health, alcohol and substance abuse problems. This center replaces the Division of Mental Health and Social Services in the Department of Health.

2000

In January, the Department of Health appropriates funds for the completion of the Transitional Living Center. This facility is to provide accommodation for mental health patients who do not require acute mental health inpatient care, but require additional support prior to transitioning to independent living.

2005

A situational analysis on Mental Health Needs and Resources in Pacific Island Countries (1) is conducted as part of a Pacific-wide review of mental health care and services by the World Health Organization and Auckland University, New Zealand.

2007

In March, the Commonwealth of Northern Mariana Islands joins the WHO Pacific Islands Mental Health Network following the official launch of PIMHnet in Port Vila, Vanuatu.

In June, representatives from CNMI attend the inaugural WHO PIMHnet meeting and policy and planning workshop in Apia, Samoa.

In November, the Medical School Professorial Scholarship is established to support local students to complete studies in medicine in US accredited medical schools. This scholarship aims to increase the number of local resident doctors in the CNMI, and in so doing, minimise the costs of recruitment, housing and repatriation of foreign doctors.

2008

The CNMI is represented at the second PIMHnet Annual General Meeting, including the workshop on human resources and training plans in Nadi, Fiji.

The Commonwealth Health Care Corporation Act is established to allow for healthcare and related public health services in CNMI to become a public corporation, in an attempt to improve the economic status of the healthcare system.

2010

The Community Guidance Center conducts Applied Suicide Intervention Skills Training (ASSIST) workshops in an effort to build capacity for suicide prevention. The workshops form part of an initiative to collaborate with the community to create more successful suicide prevention activities and support early intervention efforts.

CNMI prioritization project to identify substance abuse prevention priorities in Northern Mariana is developed
Annual Epidemiological Profile on Mental Health and Substance Abuse is published

Hosting of the Pacific Behavioral Health Collaborating Council Meeting in Northern Mariana for regional networking

Inter-island jurisdiction-wide training is held, topics included; epidemiology, evaluation, and cultural competency

**2011**

CNMI Evidence-Based Intervention Workgroup is established to develop and implement evidence–based interventions in the Pacific

Annual Epidemiological Profile Mental Health and Substance Abuse is published

**2012**

The first CNMI Behavioral Health Survey (CBHS) to provide baseline data for adult’s on substance use, abuse and mental health is completed

Three staff receive professional certification from the America IC&RC accreditation body; 1 Certified Alcohol and Drug Counselor and 2 Certified Prevention Specialists

Annual Epidemiological Profile Mental Health and Substance Abuse is published
Figure 1. Timeline

- **1975**: Establishment of the Commonwealth of Northern Mariana Islands, in political union with USA.
- **1976**: Formulation of the National Mental Health Programme.
- **1978**: Department of Public Health plans a comprehensive drug abuse treatment and rehabilitation.
- **1988**: Enactment of the 24-hour Evaluation and Treatment Act.
- **1996**: The Community Guidance Center is established.
- **1999**: Development of Mental Health Policy and Substance Abuse Policy.
- **2000**: WHO and Auckland University conduct a situational analysis on Mental Health Needs and Resources in Pacific Island Countries.
- **2008**: Planning and appropriation of funds for the Transitional Living Center, for sub-acute treatment of mental health patients.
- **2009**: Evidence-Based Intervention Workgroup established.
- **2010**: First CNMI Behavioral Health Survey (CBHS) to provide baseline data was completed.
- **2011**: Three staff received professional certification (1 Alcohol and Drug Counselor and 2 Prevention Specialists).
- **2012**: First CNMI Behavioral Health Survey (CBHS) to provide baseline data was completed.
DEVELOPMENT AND POVERTY REDUCTION POLICIES, STRATEGIES AND PROGRAMMES

- Public Law 4-49 'The Commonwealth Development Authority Act of 1984' to establish the Commonwealth Development Authority with the aim of stimulating the economic development of the CNMI. The authority is to achieve this aim through the functions of the Development Banking Division and Development Corporation Division

HEALTH AND MENTAL HEALTH POLICIES, PLANS AND PROGRAMMES

- National Mental Health Policy, 1976
- National Substance Abuse Policy, 1976
- National Mental Health Program, 1976
- Youth Suicide Prevention Plan, 2003
- Pacific Islands Health Officers Association - World Health Organization Human Resources for Health Planning Project, June 2008
- Project Brabu - a comprehensive, community-based substance abuse prevention project, through the Strategic Prevention Framework State Incentive Grant Advisory Council of CNMI, and funded by the US center for Substance Abuse Prevention, 2010

LEGISLATION

SITUATIONAL ANALYSES


- Hughes, F. et al., Situational Analysis of Mental Health Needs and Resources in Pacific Island Countries, WHO & University of Auckland, Faculty of Medical and Health Sciences, 2005, http://www.who.int/mental_health/policy/pimhnet/Pacific_islands_needs_assessments.pdf

- Youth Risk Behavior Surveillance- Pacific Island Unites States Territories, 2007

- Commonwealth Behavioral Health Survey, 2011
MAIN PARTNERS

NATIONAL LEADING PARTNERS
Ms Karen Buettner, Director of Hospital Services, Commonwealth Healthcare Corporation, Saipan, Commonwealth of the Northern Mariana Islands
Email: karen.buettner@dph.gov.mp

Mr James Arriola, Evaluator for Project Brabu, Commonwealth Healthcare Corporation (CHCC) Substance Abuse Prevention, Saipan, Commonwealth of the Northern Mariana Islands
Email: jamesharriola@gmail.com

WHO COUNTRY OFFICES
Dr Dong Il Ahn, WHO Representative in the South Pacific, Suva, Fiji
Email: ahnd@wpro.who.int

Dr Temo K. Waqanivalu, Coordinator, Office of the WHO Representative in the South Pacific, Suva, Fiji
Email: waqanivalut@wpro.who.int

WHO REGIONAL OFFICE FOR THE WESTERN PACIFIC (WPRO)
Dr Xiangdong Wang, Regional Adviser in Mental Health and Control of Substance Abuse, WHO Regional Office for the Western Pacific, Manila, Philippines
Email: wangx@wpro.who.int

WHO HEADQUARTERS
Dr Shekhar Saxena, Director, Department of Mental Health and Substance Abuse (MSD)
Email: saxenas@who.int

Dr Michelle Funk, Coordinator, Mental Health Policy and Service Development, MSD
Email: funkm@who.int

Ms Natalie Drew, Technical Officer, Mental Health Policy and Service Development, MSD
Email: drewn@who.int

Dr Kanna Sugiura, Technical Officer, Mental Health Policy and Service Development, MSD
Email: sugiuraka@who.int

OTHER
Dr Frances Hughes, (former) WHO PIMHnet Facilitator
Email: frances@wellpro.co: frances@wellpro.co
THE CONTEXT
1. COUNTRY DEMOGRAPHIC and SOCIOECONOMIC PROFILE

Figure 2
Location of the Commonwealth of the Northern Mariana Islands

This map is an approximation of actual country borders.
Source: reference (2)

GEOGRAPHY AND CLIMATE

The Commonwealth of the Northern Mariana Islands is located in the Pacific Ocean. It is comprised of fourteen individual volcanic islands, with a total land area of 457 square kilometres. This landmass is spread over 683,760 square kilometres of the Pacific Ocean. The population is situated predominately on the three southern islands of Saipan, Tinian and Rota. The largest and most populated island is Saipan, which is also the capital. Saipan is 20.1 kilometres long and 8.8 kilometres wide (3).

The islands have a tropical climate, with the dry season between December and June, and the rainy season between July and November. Due to their position in the Pacific Ocean, the islands are vulnerable to typhoons. There are also active volcanoes on the islands of Pagan and Agrihan.

Saipan, Rota and Tinian are the only islands with paved roads, and inter-island transport occurs by plane or boat (4).

DEMOGRAPHICS

In 2010 the population of CNMI was around 61000 (5) and 91% of the people lived in urban areas (6). The local residents are primarily from one of the two indigenous ethnic groups - Chamorros and Carolinians. There is also free movement of people to the islands according to the ‘Compact of Free Association, which includes the USA, Hawaii, the Republic of Palau, the Republic of the Marshall Islands, and the Federated States of Micronesia. Approximately half of the population is made up of foreign workers from Asia, in particular from China and the Philippines (3). 74.0% of the population is 15 years and older, and 3.31% of the population 65 years and older. The average life expectancy is 76.9 years (4).
EMPLOYMENT

The majority of the workforce consists of overseas workers located in the tourism, construction and business sectors. The government employs most of the indigenous population. In the health sector, the majority of medical and health professionals are overseas workers from the Philippines, Canada and the United States of America.

CULTURE

The official languages of the Commonwealth of Northern Mariana Islands are English, Chamorro and Carolinian.

The main religion is Roman Catholic, however, there are also a wide variety of other religions practiced in the Northern Marianas, including; various protestant denominations, Jehovah's Witness, Seventh Day Adventist, Baptist, Buddhist and Muslim. Religion and the church play a vital role in the lives of residents.

GOVERNMENT AND MEDIA

The Commonwealth of Northern Mariana Islands is in political union with the United States of America. Residents are citizens of the USA but do not pay taxes to the USA or vote in United States federal elections. The Chief of State is the President of the USA. The Head of the Government is the Governor, supported by the Lieutenant Governor, who is democratically elected.
for a four year term, with the possibility of a second term. The three major parties are the Covenant Party, the Democratic Party and the Republican Party. There are three branches of government; the executive, legislative and judicial.

The Secretary of Public Health is appointed by the Governor and serves as an Executive Cabinet member and head of the Department of Public Health.

There are two main newspapers in the CNMI- the Daily Marianas Variety and the Saipan Tribune. There is one TV broadcast station on Saipan.

**Development indicators**

CNMI is classified as a high income group country (8) Substantial financial assistance is received from the USA, with other income sources mainly from tourism. Garment manufacturing has been an important industry in the past, but has virtually ceased after changes to wage and import regulations(3). There has also been a decrease in tourism mainly from Japan and USA, in the context of global economic issues.

The economic potential of CNMI is constrained due to a lack of diversification. There has been a reliance on the two major industries of tourism and garment manufacturing, and these industries have undergone changes that have caused major challenges for the state of the economy (4).

Schooling is compulsory between the ages of 6 and 16, and there is a literacy rate of 97% among adult males and 96% in adult females(9).

In the CNMI there is an unemployment rate of 8.3% and 94% of the population have access to improved sanitation facilities (8).

Table 1. **Individual indicators of human development for Commonwealth of Northern Mariana Islands**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Commonwealth of Northern Mariana Islands</th>
<th>Source: reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>76.9</td>
<td>(4)</td>
</tr>
<tr>
<td>Infant mortality rate per 1,000 live births</td>
<td>1.8</td>
<td>(4)</td>
</tr>
<tr>
<td>Under five mortality rate per 1,000 live births</td>
<td>data not available</td>
<td>(4)</td>
</tr>
<tr>
<td>Maternal mortality ratio per 100,000 live births</td>
<td>data not available</td>
<td>(4)</td>
</tr>
<tr>
<td>GDP per capita in USD</td>
<td>12,638</td>
<td>(8)</td>
</tr>
</tbody>
</table>
2. CONTEXTUAL FACTORS INFLUENCING MENTAL HEALTH NEEDS AND SERVICES

INTERPERSONAL VIOLENCE

There is a high rate of interpersonal violence in CNMI, particularly in the youth population. In a survey of high school students (10) 19.6% reported carrying a weapon, with 7.4% of students reporting carrying a gun. Over 31.0% of respondents reported having been in a physical fight in the preceding 12 months; with 4.5% of these having been injured in a physical fight. During the previous 12 months 14.1% reported having been hit, slapped or physically hurt by their boyfriend or girlfriend. The survey indicated that 18.1% of female respondents reported having been physically forced to have sexual intercourse when they did not want to, and 11.9% of males reported this experience.

SUBSTANCE ABUSE

There is a substance abuse policy that was formulated in 1976.

In the high school population, 31.1% of students reported current cigarette use (use within the preceding 30 days) and 5.9% reported daily cigarette use of more than 10 cigarettes.

Overall 69.8% of high school students reported using alcohol during their lifetime, with more than one third of students (41.1%) reporting current use. Of concern, 25.5% reported having an episode of heavy drinking (had five or more alcoholic drinks within a couple of hours) in the 30 days preceding the survey. This corresponds with the response that 28.4% of sexually active students had consumed alcohol or other drugs prior to their last sexual intercourse. In CNMI it is illegal to drink or purchase alcohol under the age of 21.

Drug use by high school students was found to be prevalent, especially marijuana use, where 54.9% of students reported use during their lifetime, and 31.9% reported current use. Lifetime use of other drugs was less prevalent. Also of concern was lifetime use of methamphetamine reported to be 4.9%, lifetime use of ecstasy reported to be 4.7%, lifetime use of cocaine reported as 4.7%, and lifetime heroin use 3.5%. Of the surveyed students, 4.1% reported having used a needle to inject an illegal drug into their body (10).

Rates of substance abuse in adults were also prevalent, although not quite as high as in the youth population. In a 2011 study (11), 28.3% of adults reported current use of cigarettes (use in the last 30 days), and 4.4% reported using other forms of tobacco, with 21.1% of respondents reporting using Betel nut with tobacco. Approximately 41% of respondents reported current use of alcohol, 3.8% reported using marijuana, and 0.1% reported using heroin, crack or cocaine, or methamphetamines in the previous 30 days. Of the group, 0.5% reported misusing prescription drugs. Lifetime use of marijuana was reported in 15.5% of respondents, and lifetime use of heroin, crack or cocaine or methamphetamines was 1.1%. No respondents reported using hallucinogens currently, but the lifetime prevalence was 0.3%. No respondents reported using inhalants currently, or at any time in the past.

SUICIDE

Rates of suicide in Pacific Island youth are among the highest in the world (12). Overall, 24.7% of high school students in CNMI had attempted suicide one or more times during the 12 months preceding the 2003 Youth Risk Behavior Survey (13). The prevalence of attempted suicide was higher among female (33.9%) than male (15.7%) students. This figure had decreased in the 2007 survey, with 17.3% of students reporting attempted suicide (22.6% of females and 11.8% of males), with 4.4% of students having made an attempt that required treatment by a doctor or nurse (10).
In the years 1990-1992 there were 22 completed suicides of males and 3 of females in CNMI (12). In the year 2000, nine people committed suicide, twelve in 2001, four in 2004, and three in 2005 (14). A Suicide Awareness and Prevention Taskforce has been formed by the Community Guidance Center.

COMMUNICABLE DISEASES
Infectious diseases have been reemerging as a public health concern in CNMI. This is especially true of tuberculosis, enteric foodborne illnesses, vaccine-preventable diseases, HIV and other sexually transmitted infections (3). There were no reports of notifiable diseases in 2010, including botulism, chlamydia trachomatis infection, cholera, Dengue Virus, giardiasis, gonorrhoea and haemophilus influenza (3). In 2009, the rate of tuberculosis diagnosis in CNMI was 32/100000 population (15). There have been outbreaks of salmonella and Shigella from food items that were addressed by the Department of Public Health (3).

In terms of HIV/AIDS, among the High School population, 34.1% of students reported being currently sexually active, with 9.8% of students reporting having had sexual intercourse for the first time before the age of 13. Only 40.1% of students reported using a condom during their last sexual intercourse. Of the respondents, 82.3% reported having been taught about AIDS or HIV infection in school (10). In 2009, there were no new cases of HIV infection and no new cases of AIDS diagnosis reported to the Center for Disease Control. There are 13 adolescents/adults living with an HIV infection diagnosis in CNMI; 12 of these are of Asian ethnicity and one of Pacific Islander background. An estimated five adolescents/adults are living with an AIDS diagnosis in CNMI (16).

NONCOMMUNICABLE DISEASES
The Pacific Island Health Officers Association declared a regional state of health emergency in May 2010 due to an epidemic of non-communicable diseases (NCDs) in the United States Affiliated Pacific Islands (17). These affiliated islands include American Samoa, Guam, the Republic of the Marshall Islands, the Federated States of Micronesia, the Republic of Palau, and the Commonwealth of the Northern Mariana Islands. Obesity, diabetes, hypertension and atherosclerotic vascular disease are increasing concerns for the ageing population of CNMI (3).

The leading cause of death in CNMI is heart disease, followed by cancers including lung, liver and cervical. Cerebrovascular disease is the third most common cause of death, followed by renal disease (3).

Of indigenous adults aged 25 and older in CNMI, 11% have a diagnosis of diabetes mellitus (18). Approximately 16.9% of high school students are overweight (16.3% of males and 17.5% of females), and 14.5% considered obese (16.0% of males and 12.9% of females) (10).

To begin to address these issues, the CNMI Diabetes Prevention and Control Program was established. This program has worked together with the Roman Catholic Church to adopt a policy so that instead of families providing 18 days of feasting as part of the Lasayon Matait rosary prayer for the dead, the deceased's family offers a buffet feast only on the day of the funeral. The aim was to create a healthy, supportive environment for people living with or at risk of diabetes. Weekly beach walks to promote physical activity and health awareness have also been supported by the CNMI Diabetes Prevention and Control Program together with the local CNMI healthcare system (19).

MIGRATION
The Compact of Free Association with the United States of America permits the free movement of people between the freely associated states of the Republic of Palau, the Republic of the Marshall Islands, the Federated States of Micronesia, mainland USA, Hawaii, and the flag territories of Guam, CNMI and American Samoa. In 1996, the CNMI Department of Public Health estimated that it provided healthcare costing US$ 1,480,000 to residents of the compact freely associated states. This additional health care burden plays an important role in overwhelming the capacity of the local health system of CNMI (9).
MENTAL HEALTH PROBLEMS AND TREATMENT IN THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS
3. BURDEN OF DISEASE and TREATMENT GAP

PREVALENCE AND BURDEN OF DISEASE IN COUNTRY

There is no epidemiological data about the prevalence and incidence of mental illness in CNMI, however, other data relating to mental health exists. In the 2007 Youth Risk Behavior Survey (10), 42.0% of high school students reported feeling sad or hopeless every day for two weeks in a row, to an extent that this had an effect on their usual activities. This rate was higher among females (49.9%) than in males (34.4%) (10).

In the Commonwealth Behavioral Health Survey (11), 5.7% of respondents reported that a mental health condition or emotional problem had kept them from doing their usual work or activities during the past month.

According to the World Mental Health Survey (20), it is estimated that 13% of a country's population will experience a mental disorder in any 12 month period. For the CNMI's adult population of approximately 35,000 people, this would represent approximately 4,550 people suffering from a mental illness each year. According to The WHO World Mental Health Survey estimate, 10% would experience a mild to moderate form of disorder, and 3% would experience a severe disorder. In the CNMI population, this equates to approximately 3,500 people experiencing mild or moderate mental illness each year, and 1,050 people experiencing a form of severe mental illness.

TREATMENT AND SERVICE UTILIZATION DATA

In the Commonwealth Behavior Survey (11), 0.6% of respondents indicated that they were taking medicine or receiving treatment from a doctor or health professional for a mental health condition or emotional problem, and 0.3% responded that they were receiving treatment from a local traditional healer for this type of condition. The target population of this survey included the entire adult population of CNMI aged 18 and older. In a population of approximately 46,672 adults in CNMI, this equates to 210 people receiving treatment from health professionals for mental health or emotional problems.

The above mentioned survey statistic is consistent with the data collected from the community guidance center and the community health center. It shows that treatment was provided to 268 adults aged 18 and older in the community guidance center during the year 2010 (21). The number receiving treatment increased to 353 in 2012. There were a further 75 persons utilizing the inpatient service of the community health center. Assuming that treatment was not provided through the health centers, approximately 428 people received treatment for mental health-related needs in 2012.
**TREATMENT GAP**

With the absence of epidemiological data on mental disorders in the population of CNMI, the prevalence of mental health problems can be calculated using the World Mental Health Survey estimates. These estimates indicate that approximately 5,868 adults in CNMI will experience a mental disorder each year; with 4,514 of this group suffering from a mild or moderate form of illness and 1,354 from a severe form of illness. Although the data are extremely unreliable and incomplete, of these 5,868 people suffering from illness, 428 people received treatment from a health practitioner in the community guidance center and the inpatient service of the community health centre.

The treatment gap is the difference between the prevalence of mental illness in a population, and the number of individuals receiving treatment. If it is assumed that people with a more severe form of mental disorder receive treatment, this would equate to a treatment gap of 68%. This means that 68% of people suffering from a severe form of mental illness in CNMI do not currently access mental health services. If it is assumed that people with all severities of illness are receiving treatment, then it is estimated that the treatment gap is approximately 90%. Figure 5 shows the Treatment Gap for people suffering from mental health problems in CNMI.

![Figure 5: Treatment gap for severe mental disorders in the CNMI](image-url)
MENTAL HEALTH WITHIN THE GENERAL HEALTH SYSTEM
4. MENTAL HEALTH WITHIN THE GENERAL HEALTH SYSTEM

Medical treatment in the Commonwealth of Northern Mariana Islands is provided through one general hospital, located on the island of Saipan. The general hospital is named the Commonwealth Health Center Saipan (CHC), and has 86 acute beds for medical, surgical, obstetric and paediatric patients. There is also an intensive care unit and haemodialysis unit, as well as 24-hour emergency department. The mental health inpatient unit is integrated into the general hospital and is a 9-bed locked unit. The inpatient unit provides care for adults over the age of 18. Limited mental health care for children and adolescents under the age of 18 is available in the paediatric medical department. Outpatient public health clinics are provided at the general hospital for communicable and chronic diseases, dental care, maternal and child health, immunizations, nutrition and environmental health. The general hospital employs 22 medical doctors, 117 nurses and 20 allied health personnel.

There are community primary health care clinics on the islands of Saipan, Tinian and Rota. On Saipan the other available clinics include the Women and Children's Clinic and the Children's Development Assistance Center. On Tinian there is the Tinian Health Center, and on Rota, the Rota Health Center. The clinics on Tinian and Rota Islands are visited by a mental health counselor biweekly for mental health and substance abuse services, and a psychiatrist visits monthly. Staff from the mental health inpatient unit at the general hospital are available 24-hours per day, to provide consultations by telephone to community primary health care clinic staff.

Mental health services are primarily provided by the Community Guidance Center (CGC) and the Commonwealth Health Center (CHC). Although these have separate locations, the CGC is administered by the CHC. Staff of the CGC and CHC work together to determine the treatment plan for each individual discharged from CHC. With regards to the outpatient clinic services that are needed, these are determined by the psychiatrist who would then refer people to CGC as needed. CHC inpatient psychiatric services are provided at the psychiatric ward located at the CHC, which is a division under the Department of Public Health. It is a 9-bed, locked unit for individuals 18 years and older which provides inpatient services for adults with SMI. Care is centered on diagnosis, stabilization, respite care, as well as educational services on mental health for consumers and their families during inpatient stays. Through the use of the available staff and an on-call physician, the emergency departments at the respective health centers on Saipan, Tinian, and Rota provide 24-hour crisis service to persons with SMI or other acute mental health needs. The nursing staff of the psychiatric unit in the CHC are available for additional consultation at all times. In addition, a psychiatrist is on call 24-hours for related emergencies, as well as for psychiatric consultation to the Saipan, Tinian and Rota health centers. Currently, psychiatric inpatient care for children/adolescents is provided on a very limited basis at the medical hospital; separated from the adult inpatient unit.

The Community Guidance Center, provides individual group counseling for substance abuse and gambling addiction. It also provides family education and counseling regarding substance abuse, behavioral health services to address co-occurring disorders, Drug-Free Workplace Program Supervisory Training, Drug-Free Workplace Program Employee Education, marriage counseling, and counseling for the Victims of Crime Advocacy (VOCA) clients. The service is staffed by; one psychiatrist, two psychologists, four mental health counselors, three substance abuse counselors, five social workers, two social welfare assistants and three substance abuse prevention personnel. These services are administered by the Community Mental Health Services Team (CMHST). In addition, the CMHST provides linkages between and referrals for primary health services, mental health counseling and substance abuse treatment, educational services, job training, vocational rehabilitation support, housing assistance, nutrition assistance program, and entitlements such as Medicaid and social security disability. Moreover, the CMHST provides monthly outreach services to the consumers on the neighboring islands of Tinian and Rota.
There are private medical facilities operating in CNMI including the Island Medical Center, the PacifiCare Medical Center, Marianas Medical Center, Pacific Medical Center and the Saipan Health Clinic. Medical facilities in the CNMI must meet U.S. standards. The cost of medical insurance and care in CNMI, however, is generally lower than in the U.S. mainland (22). Medical Associates of the Pacific, TR Professional Counseling Services, Pacific Clinical and Consulting provide mental health services.

Treatment that cannot be provided within CNMI is accessed through a medical referral program. Patients will be transported to Guam, Hawaii, Japan or the Philippines to access services not available in CNMI.

The psychiatrist and psychiatric nurse are not employed under CGC. The psychiatrist is employed by the Department of Corrections and has training in forensic mental health.
Figure 6. The Health System in the CNMI
Source: references (4)
### Non-Governmental Organizations

- Northern Mariana's Housing Corporation (Saipan) - housing and homelessness
- Ayuda Network Inc. (Saipan) - youth support organization
- Pomade Ministry Foundation (Tinian) - provide mental health treatment and crisis care
- Northern Marianas Protection and Advocacy Systems Inc. (Saipan) - support the rights of people with disabilities, provide advocacy
- American Red Cross (Northern Mariana Islands Chapter) - provide emergency relief in disasters

### Private Medical Centers

**SAIPAN ONLY**

- Island Medical Center
- Mariscana Medical Center
- Pacific Medical Center
- San Simeon Medical Center
- Saipan Health Clinic
- Medical Associates of the Pacific

### Public Health System

**Services and facilities fully financed and supervised by the Ministry of Health**

**General Hospital known as the 'Commonwealth Health Center Saipan'**

- **Mental Health Inpatient Unit**
  - 9 psychiatric beds in total
  - including 6 long-stay beds

- **Community Guidance Center (CGC)**
  - CGC is part of the Commonwealth Health Center Saipan

**Community Primary Health Care Centers**

- Tinian Health Center
- Rota Health Center
- Women and Children's Clinic
- Family Care Clinic
- Children's Development Assistance Center

**Mental Health Treatment**

- A mental health counselor from the Community Guidance Center visits Rota and Tinian on a bi-weekly basis for substance abuse and mental health services. A psychiatrist makes monthly visits

**Substance Abuse Treatment**

**Rehabilitation and Recovery**

**Nurses on inpatient unit and psychiatrist on-call provide 24-hour emergency consultations to others services in the general hospital**

**24-hour crisis services are available at the community primary health care centers, with support from the mental health services at the general hospital (The Community Health Center) by telephone**
COORDINATION

The Community Guidance Center is a division under the Department of Public Health and is the main provider of mental health and substance abuse treatment in CNMI. The center administers all publicly funded mental health programs that are related to mental health or substance abuse. The programs at the Community Guidance Center each have a responsible manager, who reports to the Director of the Community Guidance Center. The Director facilitates the integration of services and steers policy direction. The Director is overseen by the Secretary of Health, who in turn reports to the Governor. The Secretary of Public Health serves as an Executive Cabinet member in the government and the head of the Department of Public Health (3).

LEGAL FRAMEWORK, POLICIES

The major mental health legislation is the 'Involuntary Civil Commitment Act of 1993'. The Act provides for a 72-hour period of emergency detention and evaluation for persons allegedly suffering from a mental illness, consistent with the least restrictive means possible. This is possible only if the person presents a danger to themselves or others, through acts committed in the previous 24-hour period. After an evaluation has occurred, the person may be released, or undergo treatment as a voluntary patient. Further involuntary treatment can only occur at the order of the court. The 'Assisted Outpatient Treatment Act of 2006' establishes the procedures necessary for involuntary treatment in the community, of persons with mental illness.

Other legislation concerning persons with mental health problems is the 'Involuntary Criminal Commitment Act of 1993' that provides for the involuntary commitment of persons not capable to stand trial or be sentenced for criminal acts committed due to mental illness. It also outlines procedures concerning the defense of not guilty by reason of insanity.

The general health legislation in CNMI includes the 'Medical Practice Act of 1982' that provides for medical treatment standards, and for a medical profession licensing board to oversee the implementation of these standards. The 'Patient's Rights Act,' established in 1994 describes the rights that should be afforded to all patients. The Act determines that these rights should be afforded if the person is receiving assessment, evaluation, care or treatment, at an evaluation or treatment facility, as an inpatient or outpatient, and be they voluntary or involuntary patients.

Legislation regarding substance abuse in the Commonwealth of Northern Mariana Islands includes the 'Anti-Drug Abuse Act' which states that the Department of Public Health and Environmental Services is responsible for planning a comprehensive drug abuse rehabilitation and treatment program. Also, the 'Inhalant Abuse Prevention Act' enacted in 1995, and amended in 2005 was developed to prohibit the sale of volatile solvents, nitrites and anaesthetics to persons under the age of 18, and requires that a person convicted under this act receive treatment and counseling.

MENTAL HEALTH POLICY AND PLAN

A mental health policy and national mental health program exist and were initially formulated in 1976. The mental health policy components are advocacy, promotion, prevention, treatment and rehabilitation(9). Currently, the Department of Public Health is updating the policy under the CGC director.

HUMAN RIGHTS AND EQUITY

There are disability benefits available for persons with mental disorders. To receive disability benefits, an individual must be certified by a licensed psychiatrist (9). Persons recognized as suffering from a disability are eligible for healthcare through the Medicaid system and are provided with health insurance that allows access to health and dental services (23). In addition, CNMI U.S citizens and CNMI Permanent residents with green cards over 5 years can receive a standard supplementary allowance of US $698 a month. This depends on age, marital status, employment status, medical condition(s), etc. Other sources of supplemental funding through CNMI federal sources are food stamp benefits which are limited due to restrictions and are decided on a case by case basis.
In a survey conducted in 2011, 86.8% of residents of CNMI indicated the belief that people with mental illness can lead normal lives with treatment, and 86.5% believed that people are generally caring and sympathetic to people with mental illness (11).
FINANCING

Of the government’s total expenditure (see Figure 8), US$ 43.32 million was spent on health, which was 25.4% of total government expenditure in 2007 (3).

The mental health system in CNMI receives state funding, with 1% of the total health budget allocated to mental health (see Figure 9), through the Community Guidance Center. Between 2003 and 2007 funding in the state budget decreased by 47% as a result of the state of the CNMI and global economy.

The mental health system also accesses other funds through grants including the Community Mental Health Service Block Grant, Project for Assistance in Transition from Homelessness Block Grant and Substance Abuse Prevention and Treatment Block Grant. The majority of grants are targeted at substance abuse prevention and education programs. Grants increased by 28% between 2003 and 2007.

The primary sources of financing of the mental health system, in descending order are; tax, social insurance, grants, private insurances and out of pocket expenditure by the individual patient or their family (9).

Figure 8
Total government expenditure on health (% of total government expenditure)
Figure 9
Total government expenditure on mental health (% of government total health expenditure).
HUMAN RESOURCES

One of the major challenges for the health system in CNMI is recruitment and retention of staff. There is a limited amount of training in health locally, with the exception of two nursing courses. As a result, the majority of healthcare staff are recruited from other countries. There is a high turnover rate of staff and there is limited scope for professional development through education courses and career progression.

In the general public health system, there are 30 physicians; three of which specialize in obstetrics and gynecology and two in paediatrics. There are also 123 registered nurses as of 2012.

For mental health services there is one psychiatrist, two clinical psychologists with PhD level qualifications, four mental health counselors, five social workers and three substance abuse counselors.

Table 2

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<th>Non-government organizations</th>
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### Table 3. Human Resources by Facility in the government health sector in CNMI (2012)

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**GENERAL HOSPITAL**

Commonwealth Health Center Saipan (CHC)

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<th>LPN</th>
<th>Nurse Assistants</th>
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<th>Clinical Psychologist</th>
<th>Mental Health Counselor</th>
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**MENTAL HEALTH CENTER**

Community Guidance Center (CGC)

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<th>LPN</th>
<th>Nurse Assistants</th>
<th>Medical Doctor</th>
<th>Nurse</th>
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**PRIMARY HEALTH CARE**

Tinian Health Center

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Rota Health Center

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Women and Children’s Clinic (part of CHC)

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Family Care Clinic (part of CHC)

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Children’s Development Assistance Center (part of CHC)

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**TOTAL CNMI**

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NA: Data not available

CGC is part the Commonwealth Health Center Saipan. Therefore in some areas the same staff are working in multiple centers (indicated with *)
**TRAINING**

There are no courses specifically related to mental health provided on CNMI. Further, there are no postgraduate qualifications offered for nurses who would like to complete further study in mental health at the Northern Mariana College. The college offers courses for residents of CNMI and the Pacific Basin, including study to become a nurse's assistant, through the Certificate of Completion for Nursing Assistants (NA). The college also offers the Associate in Science degree in Nursing (ADN). At the completion of the two year ADN program, the graduate is eligible for the National Computerized Licensure Examination for Registered Nurses (NCLEX-RN), which leads to a Registered Nurse license in CNMI and makes the student eligible for licensure in any state or territory of the USA. Without acquiring this qualification, the student cannot work as a registered nurse in CNMI. The Northern Marianas College is associated with Pacific Resources for Education and Learning (PREL). This is a not-for-profit corporation serving the education needs of US affiliated Pacific Islands (24).

There is also a Bachelor of Science Nursing program offered at the University of Guam College of Nursing and Health Sciences since 1993. This is offered as a distance education course and as continuing education, and is provided to US affiliated countries including CNMI. The course is funded under a US federal grant combined with a grant from the Sasakawa Foundation (1).

The majority of the nursing workforce in CNMI is not trained locally. There are significant numbers of nurses from the Philippines, as well as from Canada, Australia and New Zealand. Expatriate nurses must have at least two years of work experience to work at the Community Health Center. There has been a recent initiative in CNMI to encourage students to pursue careers in health. The Area Health Education Center in CNMI aims to promote recruitment, training and retention of healthcare professionals committed to underserved populations. The program attempts to bring the resources of academic medicine to the local community level, and to adapt national initiatives to address local healthcare issues (25). In CNMI, an initiative has commenced for healthcare staff to provide instruction at Northern Marianas College. Staff are able to log their hours and these hours can be used as credit for undertaking further NMC courses without charge.

There is no training available for physicians in CNMI. The majority of physicians are expatriates who have been trained in either the USA or Canada. In November 2007, the Medical School Professorial Scholarship was established to support local students to complete studies in medicine in medical schools accredited by the United States. This scholarship aims to increase the number of local resident doctors in CNMI, and in so doing, minimise the costs of recruitment, housing and repatriation of foreign doctors.

In mental health, as well as the one expatriate psychiatrist, there are two clinical psychologists with PhD and PsyD qualifications, and four mental health counselors with master’s degree-level qualifications. The substance abuse counselors have either master degree or bachelor degree qualifications credentialed in alcohol and other drug abuse. Of the five social workers, two have bachelor degrees with post bachelor credits, and the other three have associate degrees plus case management training. Of the substance abuse prevention personnel, one has a bachelor degree and three have associate degrees, with one having a high school certificate as the highest level of training. The three social work assistants have completed a high school certificate.

**CONTINUING PROFESSIONAL DEVELOPMENT**

There is a continuing professional development requirement for nurses in CNMI that is monitored by the CNMI Board of Nursing. Nurses are required to maintain 30 credit hours of continuing education every two years in order to maintain their licenses. They can complete this requirement through a weekly program taught by supervisors.

Physicians have continuing medical education through a weekly program taught by local medical staff, or by specialists visiting the island. This program is not currently accredited through the Accreditation Council for Continuing Medical Education (ACCME). There are currently limited opportunities to participate in educational activities occurring off-island through teleconferencing. There is a collection of selected journals available to staff.
Regular training of primary care professionals is not conducted in the area of mental health (9). However, there are in-service training opportunities each month for two hours, where clinicians from the Community Guidance Center, Tinian Health Center, and those in private practice are invited to attend (26). Mental health staff are required to attend multidisciplinary team meetings twice per week that consist of case presentations and analysis, and discussion of new treatment modalities.

Table 4.

<table>
<thead>
<tr>
<th>Human Resources</th>
<th>Training available in CNMI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Degree courses</td>
</tr>
<tr>
<td><strong>Mental Health workers</strong></td>
<td></td>
</tr>
<tr>
<td>Psychiatrists</td>
<td>No</td>
</tr>
<tr>
<td>Neurosurgeons</td>
<td>No</td>
</tr>
<tr>
<td>Neurologists</td>
<td>No</td>
</tr>
<tr>
<td>Psychologists</td>
<td>No</td>
</tr>
<tr>
<td>Mental Health Counselor</td>
<td>No</td>
</tr>
<tr>
<td>Social workers</td>
<td>No</td>
</tr>
<tr>
<td>Social Welfare Assistants</td>
<td>No</td>
</tr>
<tr>
<td>Substance Abuse Counselor</td>
<td>No</td>
</tr>
<tr>
<td>Substance Abuse Prevention Personnel</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>General Health Workers</strong></td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>No</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>Yes</td>
</tr>
<tr>
<td>Licensed Practice Nurses</td>
<td>Yes</td>
</tr>
<tr>
<td>Nursing Assistants</td>
<td>Yes</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>No</td>
</tr>
<tr>
<td>Traditional healers</td>
<td>No</td>
</tr>
</tbody>
</table>
**MEDICATIONS**

The World Health Organization has published a list of Essential Psychotherapeutic Medicines, which is a list of medications that are necessary to meet priority mental health care needs within countries. It has been compiled based on the public health relevance of a medication, and evidence of the efficacy, safety and comparative cost-effectiveness. By treating persons with mental disorders with these medications, the aim is to address the symptoms of mental disorders, shorten the course of many disorders, reduce disability and prevent relapse.

In the CNMI, the majority of WHO Essential Psychotherapeutic Medicines are available. All clients must see a US credentialed or government pre-approved credentialed equivalent psychiatrist in order to receive initial and continued psychiatric medication. All medicines, with the exception of Nicotine Replacement Therapy (NRT) which is issued at the Tobacco Prevention Control Program (TPCP) must be prescribed by a doctor through referral or onsite. Only trained TPCP Staff are allowed to dispense NRT. Medications for mental health needs are available at both primary and specialist settings. As well as these, medicines including; ethosuximide, phenobarbital, phenytoin sodium, carbidopa, levedopa, risperidone, olanzapine, clozapine, cilatropin, paroxetine, bupropion, sertraline hydrochloride, tranylcypromine and venlafaxine are also available through privately owned and operated pharmacies (9).

Table 5
**Comparison of the WHO List of recommended psychotropic medications and the National Essential Medicines List in CNMI**

<table>
<thead>
<tr>
<th>Drugs included in WHO Essential Psychotherapeutic Medicines 2009</th>
<th>Drugs included in CNMI National Essential Medicines List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpromazine</td>
<td>✔</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>✔</td>
</tr>
<tr>
<td>Fluphenazine</td>
<td>✔</td>
</tr>
<tr>
<td>Amitriptyline</td>
<td>✔</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>✔</td>
</tr>
<tr>
<td>Diazepam</td>
<td>✔</td>
</tr>
<tr>
<td>Clomipramine</td>
<td>✔</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>✔</td>
</tr>
<tr>
<td>Valproic acid</td>
<td>✔</td>
</tr>
<tr>
<td>Lithium Carbonate</td>
<td>✔</td>
</tr>
<tr>
<td>Methadone</td>
<td>✔</td>
</tr>
<tr>
<td>Nicotine replacement therapy</td>
<td>✔</td>
</tr>
</tbody>
</table>

Source: reference (9)

(See Appendix for the WHO List of Essential Medicines recommended dosages)
INFORMATION SYSTEMS

The Department of Public Health Vital Statistics Office in the CNMI collects information on the number and causes of death. There is also a mental health reporting system. Data is collected on inpatients and outpatients, as well as epidemiological data (9). The information collected includes registered consumers and admission as well as readmissions, source of referral, and encounters by program. Demographic data including age and ethnicity is recorded. Also, the nature of the problem, diagnosis, treatment modality and reason for discharge are monitored. Consumer encounters with prevention services are collected. An annual consumer survey is conducted to assess consumer reports on access to services, quality of services, participation in treatment planning, connectedness and functioning. The results of the consumer survey are presented in the Community Guidance Center annual report.

PUBLIC EDUCATION AND LINKS TO OTHER SECTORS

The Community Guidance Center works in partnership with other government agencies including; the Office of Vocational Rehabilitation, the Workforce Investment Agency, The Department of Labor, Northern Marianas Housing Corporation, Independent Living Center, Criminal Justice Planning Agency, Judicial Branch - Court System, Department of Public Safety, Division of Corrections, Public School System, Northern Marianas College, Division of Youth Services and Medicaid Office.
Figure 10. **Mapping Health Care Services in CNMI**

![Map of CNMI showing health care services](image)

- The Community Health Center
- Community Guidance Center
- Saipan Health Center
- Tinian Health Center
- Rota Health Center
- Women and Children's Health Center
- Family Care Center
- Children's Development Assistance Center
FACILITIES AND SERVICES

This section details the range of health services on CNMI. The mapping of services is illustrated in Figure 10 and the distribution of services across CNMI can be seen in Table 6.

1. Specialist facilities and hospitals

CNMI does not have any separate inpatient facilities or hospitals for treatment of acute mental health conditions. There are limited forensic mental health services. There is currently no Department of Corrections facility suitable to evaluate, house or treat people with mental illness, and there are no current plans to build a forensic unit. There is a room for people with mental disorders in the detention facility and the jail. A nurse and staff psychiatrist are available at the Department of Correction for eight hours each day. No other officers are trained to handle inmates or detainees who suffer from mental illness.

2. General hospitals

The main provider of acute health services in the Commonwealth of the Northern Mariana Islands is the Commonwealth Health Center Saipan, located on the island of Saipan. This is a unified medical hospital comprised of both inpatient and outpatient services. The 24-hour emergency service is staffed by emergency physicians, nurses, and family physicians. Also available at the center is; a clinical laboratory, electrocardiography, ultrasonography and radiology services, respiratory service, physical therapy department, and inpatient pharmacy. The inpatient service provides 74 acute care beds for the treatment of patients with medical, surgical and obstetric conditions, as well as paediatric patients. There is an intensive care unit and a haemodialysis unit. There are also dental services and public health services available at the center, including maternal and child health, immunization, chronic disease, communicable diseases, nutrition, environmental health and satellite clinics.

General hospital inpatient mental health services

There is an inpatient mental health service located in the general hospital, known as the Commonwealth Health Center Saipan, that provides care for persons requiring acute or respite inpatient treatment of serious mental illness. It is a locked unit for adults over the age of 18. The unit has one isolation room. The unit aims to provide diagnosis, stabilization and education services to persons with mental illness and their families. This unit has 9 beds, which equates to 1.4 psychiatric beds per 10,000 population in CNMI (9). The Community Health Center cannot accommodate aggressive patients who have been accused of committing a crime. If such person is requiring more than a brief stay in hospital, they are referred off-island for treatment.

3. Formal community mental health services

Mental health services are provided through the Community Guidance Center (CGC), also known as Guam Ina’Ayuda in Chamorro and Imwall Alilis in Carolinian. It was formerly known as the Division of Mental Health and Social Services. The Community Guidance Center provides addiction services, behavioral services and prevention services, and is also responsible for the inpatient services at the Community Health Center (CHC). CGC is separated as a division in management but staff work collaboratively with the CHC with clients who are discharged in regards to outpatient services. The psychiatrist is also shared between the two units along with substance abuse clinicians. The Community Guidance Center is staffed by a psychiatrist, psychologists, counselors, psychiatric social workers, social welfare assistants, and substance abuse prevention personnel. (21).

Until 2011, a Transitional Living Center provided support to people with mental health problems, prior to their moving into independent accommodation. The center also used to provide community outreach, medication clinics, transitional living programs, respite programs and a day program for both inpatients and outpatients. The center however, has since been closed.
4. Mental health services through primary health care
The Department of Public Health in CNMI also provides mental health services through primary healthcare clinics, these include the Rota Health Center, the Tinian Health Center, the Saipan Health Center, the Family Care Clinic, the Children's Development Assistance Center and the Women and Children's Clinic. Mental health care is available within the primary health care system at the Saipan, Rota and the Tinian Health Centers. Treatment of severe mental disorders is available at the primary level and for stabilized patients after hospital treatment is over.

5. Informal community care

Traditional healers
There are traditional healers of Carolinian and Chamorro background in the CNMI, known in Chamorro culture as suruhano (m)/suruhana (f), who provide healing practices based on indigenous knowledge systems. The traditional healers use medicinal plants and other practices to treat individuals. There have been recent efforts to revive and sustain the traditions, knowledge and practice of traditional healers in the CNMI and there is a trilingual directory of 112 practitioners available. Inclusion in this directory is voluntary (27).

There is a non-profit corporation The Inetnon Âmot yan Kutturan Natibu (Chamorro)/Mwiischil Saley me Kkoor Aramasal Falüw (Carolinian), translating to Association of Native Medicine and Culture, which began in 2007 to advocate for, and protect the traditional practices. Residents may seek out traditional healers for treatment of mental health disorders in order to avoid stigma in this small community, where western medicine is not trusted (28). There are Chamorro descriptors for people with mental illness including \textit{kaduku}, \textit{fafta}, \textit{baba l ilu-na}, or \textit{atmario}, all of which are associated with behavioral illness types by manner of contraction which include but are not limited to genetic disposition, possession, environmental factors, short/long term maturation, etc. Some may believe that people with mental illness are 'possessed' by the \textit{taotaomo'na}, (Translated: people of the before time) or ancient ancestors who can be good or evil and take over a person's mind, controls judgment and actions and does things that the individual is not responsible for. There is the belief that this can cause disorientation, offset the natural spiritual/physical equilibrium of an individual or family, change personalities and cause one to 'see things.' (29) The traditional healers can tell if a sickness is from the \textit{taotaomo'na} or not and can adjust remedies, both herbal and customary, to heal such illnesses.

Non-government organizations (NGOs)
There are non-government organizations (NGOs) working in mental health in CNMI.

The Northern Marianas Protection and Advocacy Systems Inc. (NMPASI) is a non-profit organization set up in 1993 for advocacy of people with disabilities. It includes a program called Protection and Advocacy for Individuals with Mental Illness Program (PAIMI) with the aim of ensuring that individuals with disabilities are free from abuse, neglect, discrimination, and are provided with education, health care, and are given opportunities to make informed decisions and contribute to society.

The CNMI American Red Cross offers counseling to disaster affected populations after critical incidents.

The Ayuda Network is a non-profit youth support organisation with the aim of meeting the development needs of all people, and to address social problems.

The Coalition on the Anti-Stigmas of Mental Illness in the CNMI (CAMI-CNMI) is a mental health awareness group for the CNMI. Functions of the group include fundraising for projects such as an emergency monetary fund for persons without income and the erection of a pergola at the inpatient psychiatric unit at the Community Health Center.

The Pomade Ministry Foundation is situated on Tinian Island, and provides mental health treatment and crisis care.
Substance Abuse Prevention and Recovery Coalition (SAPARC) was established to create unified community collaboration with health institutions for strengthened behavioral health systems and development.

**Faith-based organizations**
Mental Health services in CNMI are also provided by faith-based services. Religion is an important part of the community in CNMI and churches offer theological and supportive counselling. More formal services are offered by Karidat, formerly known as CNMI Catholic Social Services. These services include youth programs, a 24-hour crisis hotline, and social services to victims of crime and the indigent (28).

**Mental health services users or family associations**
There is no special mental health service user or family association.

**Self-care and family-care**
Since there are no long stay institutions currently available for individuals experiencing mental illness, long term care is almost always provided within families. This avoids institutionalisation and is an effective practice where individuals benefit from strong cultural and familial foundations.

**Awareness raising activities**
The Treatment and Recovery and Prevention Unit all collaborate in the designated National Awareness Months’ activities such as; National Mental Health Awareness Month, Prevention Week, Recovery Month. Collaborative efforts often begin with public proclamation signings and scheduled events which include but are not limited to fairs, awareness walks, media campaigns, outreach presentations and technical assistance to community and inter-agency partners.
Table 6. Service Utilization in the Commonwealth of the Northern Mariana Islands

<table>
<thead>
<tr>
<th>Facility/Level</th>
<th>GENERAL HEALTH</th>
<th>MENTAL HEALTH INPATIENT</th>
<th>MENTAL HEALTH OUTPATIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Number of Beds</td>
<td>Total Number Beds</td>
<td>Average Length of Stay</td>
</tr>
<tr>
<td>Commonwealth Health Center-Saipan (CHC)</td>
<td>86</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Community Guidance Center (CGC)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rota Health Center</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Tinian Health Center</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Women and Children’s Clinic Included with CHC Saipan Total</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Family Care Clinic Included with CHC Saipan Total</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Children’s Development Assistance Center Included with CHC Saipan Total</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>TOTAL</td>
<td>86</td>
<td>9</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA: Data Not Available
CGC is part of the Commonwealth Health Center, Saipan
Table 7. Distribution of health facilities across the Commonwealth of the Northern Mariana Islands

<table>
<thead>
<tr>
<th>Facility/Level</th>
<th>Saipan</th>
<th>Tinian</th>
<th>Rota</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TERTIARY LEVEL CARE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Health Center</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRIMARY LEVEL CARE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saipan Health Center</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tinian Health Center</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Rota Health Center</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Women and Children’s Clinic</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Care Clinic</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children’s Development Assistance Center</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 11(a) and (b). The WHO Pyramid of Care and the reality in the Commonwealth of the Northern Mariana Islands

Figure 11(a)
**Ideal structure for mental health care in any given country**

Figure 11(b)
**The reality of mental health care in CNMI**
The levels of care that are non-existent, poorly developed or inappropriate have been removed from the pyramid of care. Long-term psychiatric facilities do not exist in CNMI; this is a positive step towards the ideal structure for mental health care.
INTERNET RESOURCES

Mental health and development: Targeting people with mental health conditions as a vulnerable group

Improving health systems and services for mental health

WHO/Wonca joint report: Integrating mental health into primary care - a global perspective


The WHO Mental Health Policy and Service Guidance Package

- The mental health context
- Mental health policy, plans and programmes - update
- Organization of services
- Planning and budgeting to deliver services for mental health
- Mental health financing
- Mental health legislation & human rights
- Advocacy for mental health
- Quality improvement for mental health
- Human resources and training in mental health
- Improving access and use of psychotropic medicines
- Child and adolescent mental health policies and plans
- Mental Health Information Systems
- Mental health policies and programmes in the workplace
- Monitoring and evaluation of mental health policies and plans

Essential psychotherapeutic medicines
(©WHO Model List of Essential Medicines, 16th list, March 2009)
Where the [c] symbol is placed next to the complementary list it signifies that the medicine(s) require(s) specialist diagnostic or monitoring facilities, and/or specialist medical care, and/or specialist training for their use in children.

<table>
<thead>
<tr>
<th>Psychotic disorders</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chlorpromazine</strong></td>
<td>Injection 25 mg/ml in 2ml ampoule</td>
<td>Oral liquid 25 mg/5 ml</td>
</tr>
<tr>
<td></td>
<td>Tablet 100 mg/ml</td>
<td></td>
</tr>
<tr>
<td><strong>Fluphenazine</strong></td>
<td>Injection 25 mg (decanoate or enantate) in 1ml ampoule</td>
<td></td>
</tr>
<tr>
<td><strong>Haloperidol</strong></td>
<td>Injection 5 mg in 1ml ampoule</td>
<td>Tablet 2 mg; 5 mg</td>
</tr>
</tbody>
</table>

**Complementary list [c]**

<table>
<thead>
<tr>
<th><strong>Chlorpromazine</strong></th>
<th>Injection: 25 mg/ml in 2ml ampoule</th>
<th>Oral liquid: 25 mg/5 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tablet: 10 mg; 25 mg; 50 mg; 100 mg/ml (hydrochloride)</td>
<td></td>
</tr>
<tr>
<td><strong>Haloperidol</strong></td>
<td>Injection: 5 mg in 1ml ampoule</td>
<td>Oral liquid: 2 mg/ml</td>
</tr>
<tr>
<td></td>
<td>Solid oral dosage form: 0.5 mg; 2 mg; 5 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depressive disorders</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amitriptyline</strong></td>
<td>Tablet 25 mg (hydrochloride)</td>
<td></td>
</tr>
<tr>
<td><strong>Fluoxetine</strong></td>
<td>Capsule or tablet 20 mg (present as hydrochloride)</td>
<td></td>
</tr>
</tbody>
</table>

**Complementary list [c]**

<table>
<thead>
<tr>
<th><strong>Fluoxetine</strong></th>
<th>Solid oral dosage form: 20 mg (present as hydrochloride)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a &gt;8 years</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bipolar disorders</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carbamazepine</strong></td>
<td>Tablet (scored) 100 mg; 200 mg</td>
<td></td>
</tr>
<tr>
<td><strong>Lithium carbonate</strong></td>
<td>Solid oral dosage form: 300 mg</td>
<td></td>
</tr>
<tr>
<td><strong>Valproic acid</strong></td>
<td>Tablet (enteric coated): 200 mg; 500 mg (sodium valproate)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Generalized anxiety and sleep disorders</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diazepam</strong></td>
<td>Tablet (scored): 2 mg; 5 mg</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Obsessive-compulsive disorders and panic attacks</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clomipramine</strong></td>
<td>Capsule 10 mg; 25 mg (hydrochloride)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medicines used in substance dependence programmes</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nicotine replacement therapy</strong></td>
<td>Chewing gum: 2mg, 4mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transdermal patch: 5mg to 30mg/16 hrs; 7mg to 21mg/24 hrs</td>
<td></td>
</tr>
</tbody>
</table>

**Complementary list [c]**

| **Methadone**                                   | Concentrate for oral liquid 5 mg/ml; 10 mg/ml |                               |
|                                                   | Oral liquid 5 mg/5 ml, 10 mg/5 ml |                               |

*The square box is added to include buprenorphine. The medicines should only be used within an established support programme.

Source: reference (30)
REFERENCES

1. World Health Organization, Policy and Service Development Centre for Mental Health Research, University of Auckland. Situational analysis of mental health needs and resources in Pacific Island countries. 2005.


