ANNUAL REPORT
FY 2012
Republic of the Marshall Islands
We are pleased to present to you the MOH Annual Report FY12. The services provide through the Ministry of Health have grown from rudimentary level to cover areas which require more skills and modern equipment. This means the services provided shall require additional financial resources to meet the new demands of the health services today.

In furtherance, there are also sections which present the current health status of Leprosy and Tuberculosis which the Ministry of Health continues to manage attempting to reduce the prevalence rates to reach the threshold set by the WHO on both medical conditions. At any rate, the report also presents activities performed by the Bureau of Primary Health Care in its initiatives to reduce and possibly eliminate both Tuberculosis and Leprosy.

The Fiscal Year 2012 began with the outbreak of dengue fever in Majuro, where as many as 800 plus laboratory confirmed cases were seen and treated at the hospital. In response to the outbreak, MOH requested assistance from WHO, SPC, CDC and the US Military under the humanitarian program. Financial resources from the Ministry of Health were expended to defray the costs incurred along with monetary assistance from the health organizations aforementioned.

Bulk of the diseases, medical conditions and complications reported are preventable and can be reduced and/or eliminated with simple personal hygiene, understanding how to create a healthy life and simply changes in lifestyles to take charge of one’s own health and healthy choice. This MOH Annual Report provided data and information on NCD including diabetes mellitus, cancer and caption on tobacco and its effects on human life.
There are still many challenges in which the Marshall Islands as a country must dedicate its attention to. The Ministry of Health alone cannot shoulder the whole lot. It is a shared responsibility. We are in the period where regulations can play a vital role in setting up benchmarks and levels of involvement in importing certain commodities like foodstuffs and substances prone to be abused. The regulations can set the stage to control the importations of these commodities or how much micro-nutrients and other vital vitamins should be added.

We extend our sincere gratitude and thanks to our traditional leaders, local partners, and stakeholders in the RMI for your continued support. We also extend our appreciation and acknowledgement of our regional and international partners. We also wish to acknowledge President Christopher J. Loeak and the Government of the Republic of the Marshall Islands for its continues support to the Ministry of Health.

Komool Tata.
ACKNOWLEDGEMENT

The Ministry of Health acknowledges and recognizes numerous contributions and support offered to upgrade the level of care by relevant government sectors, private sectors, civil societies, individuals and the church-based organizations, many of which are not mentioned in this report. Without these worthy contributions the Ministry of Health could not have system. We are so grateful.

The high light of the fiscal year started with the Dengue Fever Outbreak. MOH the immeasurable support and technical assistance rendered by the Center for Disease Control and Prevention (CDC). In particular, MOH recognizes Dr. Tai-Ho Chen, Quarantine Medical Officer based in Honolulu, Hawaii for coordinating conference calls, surveillance and assistance to RMI throughout the outbreak. MOH acknowledges and kommool tata to the following health agencies for allowing their medical staff to assist our local medical staff: Kaiser Permanente, Honolulu for Dr. Wilfred Alik; Ministry of Health, Republic of Palau for Dr. Robert Maddison and the John A. Burns School of Medicine, University of Hawaii for Dr. Sheldon Riklon. Kommool tata also to Dr. Tyler Sharp of CDC and Dr. Eric Nilles of WHO.

The Ministry of Health acknowledges the continued support from the Office of the President and the Government of the Marshall Islands. Kommool tata to Mr. Casten Nemra, Chief Secretary, for the able leadership in coordinating the clean-up efforts with all government entities, NGOs and international partners as one of the major preventive efforts during the dengue outbreak to further confirm the theme “health is a shared responsibility”.

Last but not least, we wish to recognize the tireless and professional efforts of our own Ministry staff, who have come together as one team to actively carry out their respective roles in responsibilities at all level of care and support services. The hard work, ideas shared, countless hours spent whether in the dengue ward, laboratory or meetings were all worth the determinations.

To our local, regional and international partners listed and those who have contributed support one way or another during the Fiscal Year 2012, kommool tata and God bless you.
The Ministry of Health acknowledges the continued support from our colleagues and partners:

Air Marshall Islands
Assembly of God RMI & Honolulu
Asian Development Bank (ADB)
Bank of Guam (BOG)
Bank of the Marshall Islands (BOMI)
Business Sector
Center for Disease Control and Prevention (CDC)
College of the Marshall Islands (CMI)
Council of Iroij
Economic Policy, Planning, and Statistics Office (EPPSO)
Genesis Hospital, Pohnpei FSM
Government of Australia
Government of Israel
Government of Japan
Government of Federated States of Micronesia
Health and Human Services (HHS), USA
Health Resources and Services Administration (HRSA)
Honolulu Jepta
Iroij and Leroij Ro (Traditional Leaders)
Iroij Anjua Loeak Jepta
Jarin Rarik Dron (JRD)
Johndell M Ilao (JMI)
John A. Burns, School of Medicine
Kaiser Permanente, Honolulu
Kora in Jiban Lolorjake Ejmour (KIJLE)
Kora In Okrane (KIO)
Kramer Family
Kumiti Cancer Coalition
Kumiti Coalition
Kumiti NCD Coalition
Kwajalein Atoll local Government
Majuro Atoll Local Government
Majuro English Assembly
Majuro United Church of Christ (JRD) RMI and Honolulu Journal
Marshall Islands Medical Society (MIMS)
Marshall Islands Nursing Association (MINA)
Marshallese Lejmanjuri Organization (MaLO)
MediSource Pacific
MedPharm
Ministry of Health, Palau
National Hansen Disease Center, USA
Office of Environmental Planning Policy Coordinator
Pacific Islands Health Officers Association (PIHOA)
Pacific Leprosy Foundation, New Zealand
Pacific Chronic Disease Coalition (PCDC)
Public Service Commission
Republic of China, Taiwan
Rita Elementary School
RMI Cancer Survivors
RMI Environmental Protection Authority (RMI EPA)
Secretariat of the Pacific Community (SPC)
Shriners' Hospital for Children
The Church of Jesus Christ of Latter-Day Saints
The Salvation Army Church RMI and Honolulu
Trinity Health International (THI)
Tripler Army Medical Center
The United Nations Children's Fund (UNICEF)
United Airlines
United Nations Development Programs
United Nations Fund for Program Activities (UNFPA)
United States of America Government
University of Hawaii (UH)
University of South Pacific (USP)
USDA Rural Development
Women’s Athletic Club (WAC)
World Health Organization (WHO)
Women United Together in the Marshall Islands (WUTMI)
Youth to Youth in Health (YTYIH)
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GEOGRAPHY AND DEMOGRAPHICS

The Marshall Islands consists of 29 atolls and five major islands, which form two parallel groups—the “Ratak (sunrise) chain and the “Ralik” (sunset) chain. The Marshallese is of Micronesian origin. The matrilineal Marshallese culture revolves around a complex system of clans and lineages tied to land ownership.

The Marshall Islands has an area of 1,826 square kilometers and is composed of two coral atoll chains in the Central Pacific. The Marshall Islands is a parliamentary democracy, constitutionally in free association with the United States of America. It has a developing agrarian and service-oriented economy.

Table 1: RMI Population by Gender

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>53,158</td>
<td>27,243</td>
<td>25,915</td>
</tr>
<tr>
<td>2010</td>
<td>54,439</td>
<td>27,938</td>
<td>26,501</td>
</tr>
<tr>
<td>2009</td>
<td>54,065</td>
<td>27,741</td>
<td>26,324</td>
</tr>
<tr>
<td>2008</td>
<td>53,889</td>
<td>27,643</td>
<td>26,246</td>
</tr>
<tr>
<td>2007</td>
<td>52,701</td>
<td>27,022</td>
<td>25,679</td>
</tr>
<tr>
<td>2006</td>
<td>52,163</td>
<td>26,746</td>
<td>25,417</td>
</tr>
</tbody>
</table>

Table 2: RMI Population by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
<td>7,949</td>
<td>8,011</td>
<td>8,031</td>
<td>7,717</td>
</tr>
<tr>
<td>5 - 9</td>
<td>7,471</td>
<td>7,371</td>
<td>7,390</td>
<td>7,022</td>
</tr>
<tr>
<td>10 - 14</td>
<td>6,949</td>
<td>7,200</td>
<td>7,331</td>
<td>6,496</td>
</tr>
<tr>
<td>15 - 19</td>
<td>6,351</td>
<td>6,152</td>
<td>6,107</td>
<td>4,735</td>
</tr>
<tr>
<td>20 - 24</td>
<td>6,384</td>
<td>6,370</td>
<td>6,278</td>
<td>5,095</td>
</tr>
<tr>
<td>25 - 29</td>
<td>4,275</td>
<td>4,491</td>
<td>4,743</td>
<td>4,403</td>
</tr>
<tr>
<td>30 - 34</td>
<td>2,626</td>
<td>2,639</td>
<td>2,740</td>
<td>3,791</td>
</tr>
<tr>
<td>35 - 39</td>
<td>2,304</td>
<td>2,212</td>
<td>2,132</td>
<td>3,141</td>
</tr>
<tr>
<td>40 - 44</td>
<td>2,180</td>
<td>2,103</td>
<td>2,041</td>
<td>2,783</td>
</tr>
<tr>
<td>45 - 46</td>
<td>2,068</td>
<td>2,043</td>
<td>2,013</td>
<td>2,348</td>
</tr>
<tr>
<td>50 - 54</td>
<td>1,790</td>
<td>1,784</td>
<td>1,791</td>
<td>1,929</td>
</tr>
<tr>
<td>55 - 59</td>
<td>1,479</td>
<td>1,525</td>
<td>1,555</td>
<td>1,583</td>
</tr>
<tr>
<td>60 - 64</td>
<td>897</td>
<td>971</td>
<td>1,049</td>
<td>1,047</td>
</tr>
<tr>
<td>65 - 69</td>
<td>473</td>
<td>498</td>
<td>540</td>
<td>526</td>
</tr>
<tr>
<td>70 - 74</td>
<td>331</td>
<td>333</td>
<td>332</td>
<td>249</td>
</tr>
<tr>
<td>75+</td>
<td>361</td>
<td>363</td>
<td>367</td>
<td>293</td>
</tr>
<tr>
<td>Total</td>
<td>53,889</td>
<td>54,065</td>
<td>54,439</td>
<td>53,158</td>
</tr>
</tbody>
</table>
In 2011, RMI through Economic Planning, Policy and Statistics Office (EPPSO) conducted a National Census. The 2011 data reflected the recent census. The population for 2006 to 2010 was from the RMI Population Estimate of April 2009 released by EPPSO. EPPSO advised us to use 2011 population data for calculation of 2012 data.

The population pyramid of RMI in 2011 indicates that it is an expansive population. This is supported by the high crude birth rate and high crude death rate of RMI. For FY 2012, RMI has a Crude Birth Rate is 25 per 1,000 live births and Crude Death Rate is 6 per 1,000 population. Based on FY2011 Total Fertility Rate, Marshallese woman will have 3 children in her lifetime. The rate of natural increase of population is 1.85%.
### Table 3: Health Care System

<table>
<thead>
<tr>
<th>Majuro</th>
<th>Leroij Atama Zedkeia Medical Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laura Health Center</td>
<td>Leroij Kitlang Kabua Memorial Hospital</td>
</tr>
<tr>
<td>Rongrong Health Center</td>
<td>Santo Health Center</td>
</tr>
<tr>
<td>Ebeye, Kwajalein</td>
<td>Ebadon Health Center</td>
</tr>
<tr>
<td>Leroij Kitlang Kabua Memorial Hospital</td>
<td>Gugeegue Health Center</td>
</tr>
</tbody>
</table>

**Outer Islands**

<table>
<thead>
<tr>
<th>Ratak Chain</th>
<th>Ralik Chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milli</td>
<td>Ebon</td>
</tr>
<tr>
<td>Nallu</td>
<td>Toka</td>
</tr>
<tr>
<td>Enejit</td>
<td>Namdrik</td>
</tr>
<tr>
<td>Lukonwor</td>
<td>Jabwor</td>
</tr>
<tr>
<td>Tokewa</td>
<td>Jaluit</td>
</tr>
<tr>
<td>Tinak</td>
<td>Jabnoden</td>
</tr>
<tr>
<td>Kilange</td>
<td>Mejrirok</td>
</tr>
<tr>
<td>Ine</td>
<td>Narmij</td>
</tr>
<tr>
<td>Arno</td>
<td>Imiroj</td>
</tr>
<tr>
<td>Ulien</td>
<td>Imiej</td>
</tr>
<tr>
<td>Bikarej</td>
<td>Aerok Ailinglaplap</td>
</tr>
<tr>
<td>Tutu</td>
<td>Bwoj</td>
</tr>
<tr>
<td>Aur</td>
<td>Woja</td>
</tr>
<tr>
<td>Tobal</td>
<td>Jabo</td>
</tr>
<tr>
<td>Aerok Maleolap</td>
<td>Loen</td>
</tr>
<tr>
<td>Tarawa</td>
<td>Mae</td>
</tr>
<tr>
<td>Jang</td>
<td>Majkin</td>
</tr>
<tr>
<td>Ollet</td>
<td>namu</td>
</tr>
<tr>
<td>Kaven</td>
<td>Lib</td>
</tr>
<tr>
<td>Wotje</td>
<td>Lae</td>
</tr>
<tr>
<td>Wodmez</td>
<td>Ujae</td>
</tr>
<tr>
<td>Likiep</td>
<td>Wotho</td>
</tr>
<tr>
<td>Jebal</td>
<td></td>
</tr>
<tr>
<td>Mejit</td>
<td></td>
</tr>
<tr>
<td>Enejelar</td>
<td></td>
</tr>
<tr>
<td>Ailuk</td>
<td></td>
</tr>
</tbody>
</table>

### Table 4: Number of Beds in Two Major Hospitals

<table>
<thead>
<tr>
<th>Hospital</th>
<th>No. of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leroij Atama Zedkeia Medical Center</td>
<td>101</td>
</tr>
<tr>
<td>Leroij Kitlang Kabua Memorial Hospital</td>
<td>45</td>
</tr>
</tbody>
</table>
Table 5: Specialized Program

<table>
<thead>
<tr>
<th>Clinics</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro 177 Clinic</td>
<td>Majuro</td>
</tr>
<tr>
<td>Ejit Clinic</td>
<td>Ejit, Majuro</td>
</tr>
<tr>
<td>Kili Health Center</td>
<td>Kili</td>
</tr>
<tr>
<td>Enewetak Health Center</td>
<td>Enewetak</td>
</tr>
<tr>
<td>Utrik Health Center</td>
<td>Utrik</td>
</tr>
<tr>
<td>Mejatto Health Center</td>
<td>Kwajalein</td>
</tr>
<tr>
<td>DOE Clinic</td>
<td>Majuro</td>
</tr>
<tr>
<td>Kumiti Wellness Center</td>
<td>Majuro</td>
</tr>
<tr>
<td>Taiwan Health Center</td>
<td>Majuro</td>
</tr>
</tbody>
</table>

Table 3 indicates the hospital and health centers under the Ministry of Health. Leroij Atama Zedkeia Medical Center commonly known as Majuro Hospital and Leroij Kitlang Kabua Memorial Hospital commonly known as Ebeye Hospital are serving inpatient, outpatient, public health clinics and ancillary services. There are 56 Health Centers in RMI. Aside from the 177 Health Centers, Health Assistants are the health care provider in the health centers. Medical and public health staff conduct outreach to the health centers in the outer islands and within the community as well.

The 177 Health Care Program Clinics are providing primary health care services to the four atolls affected by the nuclear testing. A primary health care Physician with the Health Assistant manages the 177 Clinics. DOE Clinic is providing medical services to the nuclear patients under the Department of Energy. Kumiti Wellness Center which is managed by Canasback Mission, in collaboration with MOH, shows right diet and exercise could reduce or replace the need for diabetic medications and provide a higher quality of life for the participants. Taiwan Health Center concentrates on developing health education materials and training programs mostly in Non-Communicable Diseases (NCDs) like diabetes and also helps our outreach activities.

Table 6: Private Clinics

<table>
<thead>
<tr>
<th>Clinic Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro Clinic</td>
<td>Delap, Majuro</td>
</tr>
<tr>
<td>Capital Dentistry</td>
<td>Uliga, Majuro</td>
</tr>
<tr>
<td>Eyesight, Professional Opticare</td>
<td>Delap, Majuro</td>
</tr>
</tbody>
</table>

Table 6 indicates there are three licensed private clinics providing limited clinical services for the residents in Majuro. Such clinics are licensed under the MOH’s Medical Examining and Licensing Board to practice in the RMI.
### FINANCIAL RESOURCES AND EXPENDITURES

#### Table 7: MOH Budget Allocation from All Sources, FY 2010-2012

<table>
<thead>
<tr>
<th>Funds</th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact Fund</td>
<td>$6,959,858</td>
<td>$6,834,858</td>
<td>$6,834,858</td>
</tr>
<tr>
<td>General Fund</td>
<td>$3,059,851</td>
<td>$2,980,025</td>
<td>$2,980,025</td>
</tr>
<tr>
<td>Health Fund</td>
<td>$6,477,000</td>
<td>$6,785,000</td>
<td>$6,785,000</td>
</tr>
<tr>
<td>Ebeye Special Needs</td>
<td>$1,690,353</td>
<td>$1,708,523</td>
<td>$1,722,546</td>
</tr>
<tr>
<td>US Federal &amp; Other Grants</td>
<td>$5,963,038</td>
<td>$4,072,159</td>
<td>$3,941,911</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>$628,156</td>
<td>$175,186</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$24,778,256</strong></td>
<td><strong>$22,861,654</strong></td>
<td><strong>$22,264,340</strong></td>
</tr>
</tbody>
</table>

Table 7 indicates the allocated budget of the Ministry of Health for all its services. Health Fund includes Health Care Revenue Funds. The US Federal and other grants were based on the 240P report of Ministry of Finance. This table indicates a decrease in funding allocation for.

#### Table 8: Basic Health Plan Financial Report - Revenues and Expenditures

<table>
<thead>
<tr>
<th></th>
<th>FY2011 - AUDITED</th>
<th>FY2012 - UNAUDITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Fund Tax</td>
<td>2,954,616.00</td>
<td>2,933,422.00</td>
</tr>
<tr>
<td>RepMar Subsidy</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Others</td>
<td>$25,256.00</td>
<td>$449.00</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td><strong>$2,979,872.00</strong></td>
<td><strong>$2,933,871.00</strong></td>
</tr>
<tr>
<td>Expenses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off-Island Care</td>
<td>$1,519,040.00</td>
<td>$1,541,708.00</td>
</tr>
<tr>
<td>Off-island Travel</td>
<td>$609,598.00</td>
<td>$500,396.00</td>
</tr>
<tr>
<td>Other Medical Charges</td>
<td>$3,499.44</td>
<td>$3,430.00</td>
</tr>
<tr>
<td>Third Party Agreement Fee</td>
<td>$179,000.00</td>
<td>$183,500.00</td>
</tr>
<tr>
<td><strong>Administrative Expenses:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries &amp; Wages</td>
<td>$302,933.00</td>
<td>$293,696.00</td>
</tr>
<tr>
<td>Collection Fees</td>
<td>$200,000.00</td>
<td>$200,000.00</td>
</tr>
<tr>
<td>Travel</td>
<td>$73,211.00</td>
<td>$78,733.00</td>
</tr>
<tr>
<td>Utilities</td>
<td>$20,864.00</td>
<td>$8,945.00</td>
</tr>
<tr>
<td>Professional Fees (Audit Expenses)</td>
<td>$20,000.00</td>
<td>$44,426.00</td>
</tr>
<tr>
<td>Communication</td>
<td>$6,854.00</td>
<td>$7,596.00</td>
</tr>
<tr>
<td>Insurance</td>
<td>$0</td>
<td>$102.00</td>
</tr>
<tr>
<td>Repairs and Maintenance</td>
<td>$2,384.00</td>
<td>$70.00</td>
</tr>
<tr>
<td><strong>Total Administrative Charges</strong></td>
<td>$33,421.00</td>
<td>$87,093.00</td>
</tr>
<tr>
<td><strong>Total Administrative Expenses</strong></td>
<td>$659,667.00</td>
<td>$720,661.00</td>
</tr>
<tr>
<td><strong>Inter-Island Referral</strong></td>
<td>$198,181.56</td>
<td>$144,296.00</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td><strong>$3,168,986.00</strong></td>
<td><strong>$3,093,991.00</strong></td>
</tr>
<tr>
<td><strong>Net Revenue (Loss)</strong></td>
<td><strong>($189,114.00)</strong></td>
<td><strong>($160,120.00)</strong></td>
</tr>
</tbody>
</table>
Table 9: Health Fund Expenditure by Location

<table>
<thead>
<tr>
<th>Location</th>
<th>FY2011 - AUDITED</th>
<th>FY2012 - UNAUDITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippine Referrals</td>
<td>$2,079,685.13</td>
<td>$1,996,421.26</td>
</tr>
<tr>
<td>HNL Referrals</td>
<td>$40,402.26</td>
<td>$168,312.72</td>
</tr>
<tr>
<td>Inter Island Referrals and PHC</td>
<td>$198,181.56</td>
<td>$182,111.26</td>
</tr>
<tr>
<td>Administration - Majuro, Ebeye, Honolulu and Philippines</td>
<td>$633,784.13</td>
<td>$720,661.00</td>
</tr>
<tr>
<td>SHF - Majuro Admin</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>SHF - HNL Admin</td>
<td>$53,830.86</td>
<td>$65,295.45</td>
</tr>
<tr>
<td>SHF - HNL Referral</td>
<td>$326,299.45</td>
<td>$200,626.22</td>
</tr>
<tr>
<td>SHF - PI Referral</td>
<td>$194,859.54</td>
<td>$235,363.02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$3,527,042.93</strong></td>
<td><strong>$3,568,790.93</strong></td>
</tr>
</tbody>
</table>

Table 9 indicates that in FY2012, the expenditure has increased by 1.2% from the previous year.

Table 10: Supplemental Health Plan Financial report - Revenues and Expenditures

<table>
<thead>
<tr>
<th>FY2011 - Audited</th>
<th>FY2012 - Unaudited</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supplemental Health Fund Collection</strong></td>
<td>$610,488.05</td>
</tr>
<tr>
<td><strong>Other Income</strong></td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td><strong>$610,488.05</strong></td>
</tr>
<tr>
<td><strong>Expenditure:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Off-Island care</strong></td>
<td>$527,116.98</td>
</tr>
<tr>
<td><strong>Administrative Expenses:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Utilities</strong></td>
<td>$19,182.43</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>$5,992.60</td>
</tr>
<tr>
<td><strong>Repair &amp; Maintenance</strong></td>
<td>$6,166.00</td>
</tr>
<tr>
<td><strong>Insurance</strong></td>
<td>$12,060.50</td>
</tr>
<tr>
<td><strong>Other Administrative Expenses</strong></td>
<td>$10,429.33</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td><strong>$580,947.84</strong></td>
</tr>
<tr>
<td><strong>Net Revenue (Loss)</strong></td>
<td>$29,540.21</td>
</tr>
</tbody>
</table>
The Basic Health Fund Revenue comes from the RMI taxes collected as stipulated under the Health Fund Act. Health Care Revenue Fund is used to purchase pharmaceuticals and medical supplies on island care.

Table 11: Health Care Revenue Fund Expenditures by Location

<table>
<thead>
<tr>
<th>Location</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>$2,451,475</td>
<td>$3,122,092.90</td>
</tr>
<tr>
<td>Ebeye</td>
<td>$643,701</td>
<td>$592,019.06</td>
</tr>
<tr>
<td>Outer Islands</td>
<td>$173,694</td>
<td>$172,301.36</td>
</tr>
<tr>
<td>Total</td>
<td>$3,268,870.24</td>
<td>$3,886,413.32</td>
</tr>
</tbody>
</table>

Table 12: Grants and Financial Resources

<table>
<thead>
<tr>
<th>Granting Agency/Grant Name</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMI National Comprehensive Cancer Control Program</td>
<td>$273,712</td>
<td>$209,451</td>
<td>$220,277</td>
</tr>
<tr>
<td>Comprehensive STD Prevention System</td>
<td>$137,434</td>
<td>$136,600</td>
<td>$96,662</td>
</tr>
<tr>
<td>Tuberculosis Elimination &amp; Laboratory</td>
<td>$153,243</td>
<td>$135,735</td>
<td>$101,801</td>
</tr>
<tr>
<td>Preventive Health Services</td>
<td>$25,477*1</td>
<td>0</td>
<td>$20,299</td>
</tr>
<tr>
<td>HIV/AIDS Surveillance Program</td>
<td>$13,532</td>
<td>$18,042</td>
<td>0</td>
</tr>
<tr>
<td>Immunization &amp; Vaccines for Children Grants</td>
<td>$1,009,281</td>
<td>$1,086,766</td>
<td>$1,089,599</td>
</tr>
<tr>
<td>Sexual Violence Prevention &amp; Education</td>
<td>$8,549</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>HIV Prevention Project for the Pacific Islands</td>
<td>$122,518</td>
<td>$122,518</td>
<td>$158,999</td>
</tr>
<tr>
<td>Systems/base Diabetes Prevention Control Program (DPCPS)</td>
<td>$86,301</td>
<td>$86,301</td>
<td>$86,301</td>
</tr>
<tr>
<td>Tobacco</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>National Public Health Improvement Initiative</td>
<td>0</td>
<td>$250,000</td>
<td>$314,521</td>
</tr>
<tr>
<td>Epidemiology and Laboratory Capacity Grant</td>
<td>Started in 2012</td>
<td>Started in 2012</td>
<td>$119,772</td>
</tr>
<tr>
<td>Public Health Preparedness &amp; Response for Bioterrorism</td>
<td>$1,115,400</td>
<td>$388,143</td>
<td>$372,756</td>
</tr>
<tr>
<td>PPHF Chronic Disease and Health Promotion</td>
<td>Started in 2012</td>
<td>Started in 2012</td>
<td>$204,836</td>
</tr>
<tr>
<td>Total CDC</td>
<td>$3,019,970</td>
<td>$2,533,556</td>
<td>$1,796,224</td>
</tr>
<tr>
<td>Pacific Basin Initiative</td>
<td>$549,299</td>
<td>$676,190</td>
<td>$756,499</td>
</tr>
<tr>
<td>ARRA - Ebeye CIP FY10</td>
<td>$546,485</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Children's Oral Healthcare Access Program</td>
<td>$173,827</td>
<td>$160,000</td>
<td>0</td>
</tr>
<tr>
<td>Maternal &amp; Child Health Services (MCH)</td>
<td>$232,647</td>
<td>$232,609</td>
<td>$178,246</td>
</tr>
<tr>
<td>HIV Care Grants (Ryan White Grant)</td>
<td>$52,820</td>
<td>$25,479</td>
<td>$17,006</td>
</tr>
<tr>
<td>Bioterrorism - Hospital Preparedness Programs</td>
<td>$946,039</td>
<td>$316,983</td>
<td>$309,956</td>
</tr>
</tbody>
</table>
State SSDI  -  -  -  $65,357
APPCHO – Diabetes  -  -  -  $66,000
New Born Hearing & Screening  $150,000  $150,000  $79,000
Total HRSA  $2,651,117  $1,561,261  $1,472,064
Continue delivery of Family Planning Services to the People of Marshall Islands  $159,092  $162,721  $134,000
New Freedom State Coalitions to Promote Community Base Care  $20,000  $0  $28,000
State Mental Health Data Infrastructure for Quality Improvement Grants/DIG  $50,000  $0  $0
Block Grants for Community Mental Health Services  $76,391  $82,265  $92,000
Total  $146,391  $82,265.00  $254,000
TOTAL US FEDERAL GRANTS  $5,976,570  $4,339,803  $3,522,288
USAPIN - Pacific Regional Central Cancer registry  $58,302  $27,240  $27,240
CEED Program  $20,000  $0  $0
ROC Grants  $0  $0  $0
Japan Government's Grants  $83,950  $0  $0
WHO Biennium^{2}  $155,000  $155,000  $146,500
Global Fund  $333,000  $283,265  $245,883
Australian Grants (Disaster Fund Hospital)  $484,620  $0  0
Total  $1,134,872  $465,505  $419,623
Grand Total  $7,136,919  $4,805,308  $3,941,911

NB: 1. The Notice of Grant Award for the Preventive Health and Health Services Block Grant was not received properly because it was mistakenly addressed to Secretary of Health in CNMI by the grant agency.
2. WHO Funds is for 2 years. The total amount given by WHO was divided into 2 years for the purpose of reporting.

Table 13: Capital Health Budget Allocation and Expenditure FY2012

<table>
<thead>
<tr>
<th>Atoll</th>
<th>Health Budget Allocation</th>
<th>Expenditure</th>
<th>% of Expenditure</th>
<th>Population</th>
<th>Per Capita Health Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>15,179,935</td>
<td>15,179,935</td>
<td>100%</td>
<td>27,797</td>
<td>$546</td>
</tr>
<tr>
<td>Ebeye</td>
<td>5,362,700</td>
<td>4,832,700</td>
<td>90.12%</td>
<td>11,408</td>
<td>$423.62</td>
</tr>
<tr>
<td>Outer Island</td>
<td>842,685</td>
<td>842,685</td>
<td>100%</td>
<td>13,953</td>
<td>$60.39</td>
</tr>
<tr>
<td>Total</td>
<td>21,385,320</td>
<td>20,855,320</td>
<td>97.52%</td>
<td>53,158</td>
<td>$392.34</td>
</tr>
</tbody>
</table>
Effective and Efficient Financial Management

- Utilization of regional and international assistance to improve performance
- Development of a database to assist with planning effectively for the future
- Strengthening of internal control by increasing the number of staff who are most qualified.
- By providing more relevant financial training and in money management.

- Continue identify cost trends and cost savings opportunities
- Strengthen communication with the rest of the Bureaus and units on all cross cutting issues including budget balances, new polices and etc.
- Continue to have regular monthly meetings of the staff to better identify imminent predicaments in the movement of money.
- Timely reconciliation of funds to better identify approaching flaws.
**Human Resources for Health**

During the past two years, the Ministry of Health has created another greater responsibility of the Office of Administration, Personnel and Finance (OAPF). Human Resources for Health have become significant entity being charged to enhance capacity building for a strong and qualified staff of the Ministry of Health and to ensure pertinent salaries are awarded accordingly.

Generally, the OAPF is responsible for the daily management of all MOH funding, centralized point of procurement and supply, and overseeing the administrative, personnel, and financial functions of the Ministry. OHPPS is responsible for collecting, analysis, and monitoring of health indicators, processing of birth and death certificates, preparations of MOH’s Annual Report and other reports, and responsible for the MOH’s network and Ministry of Health Integrated Information System which includes Hospital Information System, Public Health Information System, and Management Information System.

<table>
<thead>
<tr>
<th>Position</th>
<th>Majuro Hospital</th>
<th>Ebeye Hospital</th>
<th>Public Health/Outer Islands</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Practitioner</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>General Practitioner</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pediatric</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>OB-Gynecologist</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Ophthalmologist</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pathologist</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Orthopedic Surgeon</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Internist</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>General Surgeon</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Anesthesiologist</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Medical Assistant</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Health Assistant</td>
<td>7</td>
<td>2</td>
<td>56</td>
<td>65</td>
</tr>
<tr>
<td>Nurse Anesthetist</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Dentists</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>15</strong></td>
<td><strong>66</strong></td>
<td><strong>108</strong></td>
</tr>
</tbody>
</table>

Table 14 shows the total number of medical providers currently delivering medical services in Majuro, Ebeye, and the Outer islands for FY2012.
**Human Resources for Health**

**Table 15: Nurses by Position FY2012**

<table>
<thead>
<tr>
<th>Position</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Nurses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Health</td>
<td>30</td>
<td>7</td>
<td>37</td>
</tr>
<tr>
<td>Clinical</td>
<td>78</td>
<td>28</td>
<td>106</td>
</tr>
<tr>
<td>Practical Nurses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Health</td>
<td>7</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Clinical</td>
<td>13</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Nurse Aides</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Health</td>
<td>3</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Clinical</td>
<td>22</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>156</td>
<td>59</td>
<td>211</td>
</tr>
</tbody>
</table>

**Table 15** indicates the total of 211 nurses who are currently working both in Majuro and Ebeye.

**Table 16** discloses a total of 71 ancillary personnel currently at both Majuro and Ebeye.

**Table 16: Professional Services, FY2012**

<table>
<thead>
<tr>
<th>Services</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy Services</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Laboratory Services</td>
<td>14</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Radiology Services</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Biomedical Services</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Rehabilitation Services</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Dental Services</td>
<td>19</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>Sterilization/Central supply</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>17</td>
<td>71</td>
</tr>
</tbody>
</table>
**Table 17: Support Services, FY2012**

<table>
<thead>
<tr>
<th>Services</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterilization/Central supply</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Security</td>
<td>12</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>12</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Dietary Services</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Maintenance</td>
<td>6</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Morgue</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>42</td>
<td>31</td>
<td>73</td>
</tr>
</tbody>
</table>

**Table 18: Total Human Resource for Health, FY2012**

<table>
<thead>
<tr>
<th>Bureaus/Offices</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretary's Office</td>
<td>2</td>
</tr>
<tr>
<td>Bureau of Majuro Hospital Services</td>
<td>221</td>
</tr>
<tr>
<td>Bureau of Kwajalein Atoll Health Care Services</td>
<td>142</td>
</tr>
<tr>
<td>Bureau of Primary Health Care Services</td>
<td>136</td>
</tr>
<tr>
<td>Office of Health Policy, Planning and Statistics</td>
<td>7</td>
</tr>
<tr>
<td>Office of Administration, Personnel, &amp; Finance</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>527</td>
</tr>
</tbody>
</table>

The direct health care services are provided by the three (3) Bureaus namely,
- Bureau of Majuro Atoll Health Care Services,
- Bureau of Kwajalein Atoll Health Care Services, and
- Bureau of Primary Health Care Services.

These direct health care services include, but not limited to:
- clinical services in the hospitals and health center facilities and outreach activities;
- primary health care or preventive services in the hospital and health center settings, school and community compounds, house-to-house outreach;
- health promotions and educational activities, special projects with community groups;
- Collection of data for the Health Information System to monitor health indicators, how the health services are provided and assessment of health care system in the RMI.

**Achievements:**
- The HRH Report 2012-2023 was approved by Cabinet in January. The HRH report is a result of collaborative efforts and works of various stakeholders including USP, CMI, Ministry of Finance, Ministry of Education, Ministry of Health, and some NGOs.
- Two other administrative posts were filled: Chief Accountant post and Performance Based Budgeting post.
Challenges
- Personnel Office has been short on staff
- Securing additional funding to fully implement the HRH initiative

Capacity Building:
- Trainings and workshops were held in relations to Human Resources for Health Management sponsored by PIHOA. It was attended by Assistant Secretary for AP&F. HRH coordinator attended a HRH workshop. As a result of the coordinator’s attendance, an annual work plan was drafted and has been incorporated into the MOH FY2013 annual work plan.
- Training was done locally to our Material Management Director and Chief Procurement on procurement processes in regards to medical supplies and pharmaceuticals.
Data and Vital Statistics

There were 1,316 births from October 2011 to September 2012. There was a 10.7% decrease in increase in crude birth rate for this fiscal year. Crude Birth Rate is calculated as the Number of live births divided by Number of total population) x 1,000. Very Low Birth Weight (VLBW) is calculated as liveborn infants that weigh less than 1,500 grams or less than 3 lbs and 4 ozs. Low Birth Weight (LBW) is calculated as liveborn infants that weigh less than 2,500 grams or less than 5 lbs and 8 ozs. Premature Birth is commonly used as a synonym for preterm birth, refers to the birth of a baby before its organs mature enough to allow normal postnatal survival, and growth and development as a child. Preterm birth refers to the birth of a baby of less than 37 weeks gestational age.

The Total Fertility Rate in FY2012 is 3.05. This means that a Marshallese woman will have 3 children in her lifetime.

Table 19: Summary of Birth Information

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY 2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Birth</td>
<td>1,526</td>
<td>1,603</td>
<td>1,396</td>
<td>1,487</td>
<td>1,316</td>
</tr>
<tr>
<td>Crude Birth Rate Per 1,000 Live births</td>
<td>29</td>
<td>30</td>
<td>26</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Total Fertility Rate</td>
<td>3.58</td>
<td>3.58</td>
<td>3.18</td>
<td>3.38</td>
<td>3.05</td>
</tr>
<tr>
<td>Rate of Natural Increase</td>
<td>2.28%</td>
<td>2.23%</td>
<td>2.04%</td>
<td>2.12%</td>
<td>2.12%</td>
</tr>
<tr>
<td>LBW</td>
<td>210</td>
<td>202</td>
<td>186</td>
<td>181</td>
<td>167</td>
</tr>
<tr>
<td>VLBW</td>
<td>18</td>
<td>20</td>
<td>26</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Premature</td>
<td>106</td>
<td>121</td>
<td>74</td>
<td>90</td>
<td>50</td>
</tr>
<tr>
<td>Teen Pregnancy</td>
<td>253</td>
<td>232</td>
<td>198</td>
<td>222</td>
<td>182</td>
</tr>
<tr>
<td>% of Teen Pregnancy from All Birth</td>
<td>17%</td>
<td>14%</td>
<td>14%</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Teen Pregnancy Rate Per 1,000 Population</td>
<td>39</td>
<td>36</td>
<td>31</td>
<td>41</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Vital Statistics, MOH

Table 20: Teen Pregnancy (Mother’s Age is less than 20 years old)

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teen Pregnancy</td>
<td>253</td>
<td>232</td>
<td>198</td>
<td>222</td>
<td>182</td>
</tr>
<tr>
<td>VLBW for Teen Pregnancy</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>LBW for Teen Pregnancy</td>
<td>53</td>
<td>43</td>
<td>37</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>Premature Teen Pregnancy</td>
<td>31</td>
<td>18</td>
<td>10</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>% of Teen Pregnancy from All Birth</td>
<td>17%</td>
<td>14%</td>
<td>14%</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>Teen Pregnancy Rate Per 1,000 population</td>
<td>39</td>
<td>36</td>
<td>31</td>
<td>41</td>
<td>34</td>
</tr>
</tbody>
</table>

Teen pregnancy is the pregnancy occurring in young women under 20 years old. In FY 2012, rate is 34 per 1,000 population less than 20 years old. Teen Pregnancy remains a grave concern for the Ministry because of the complications that may incur during birth and challenges to the
family, government, and the teenage mothers. Family Planning Clinics under the Maternal and Child Health Program and Youth to Youth in Health Clinic continue to offer contraceptives and counseling to teenagers.

**Table 21: Births by Locations**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Outer Islands</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,015</td>
<td>345</td>
<td>166</td>
<td>1,526</td>
</tr>
<tr>
<td>2009</td>
<td>1,030</td>
<td>383</td>
<td>190</td>
<td>1,603</td>
</tr>
<tr>
<td>2010</td>
<td>944</td>
<td>311</td>
<td>141</td>
<td>1,396</td>
</tr>
<tr>
<td>2011</td>
<td>1,017</td>
<td>344</td>
<td>126</td>
<td>1,487</td>
</tr>
<tr>
<td>2012</td>
<td>906</td>
<td>305</td>
<td>105</td>
<td>1,316</td>
</tr>
</tbody>
</table>

*Source: Vital Statistics, MOH*

Table 21 indicates a decrease in the total birth in the Marshall Islands from FY2008 to FY2012.

**Graph 1: Birth Trend from FY2008 to FY2012**

Data and Vital Statistics
Table 22: Births by Gender and Locations FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>Majuro</th>
<th>Kwajalein</th>
<th>Outer Islands</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>470</td>
<td>158</td>
<td>66</td>
<td>694</td>
</tr>
<tr>
<td>Female</td>
<td>436</td>
<td>147</td>
<td>39</td>
<td>622</td>
</tr>
<tr>
<td>Total</td>
<td>906</td>
<td>305</td>
<td>105</td>
<td>1,316</td>
</tr>
</tbody>
</table>

Source: Vital Statistics, MOH

Table 22 shows the gender distribution of FY2012 births on the 3 main islands.

Table 23: Births by Gender by Fiscal Year

<table>
<thead>
<tr>
<th>Age</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>798</td>
<td>787</td>
<td>761</td>
<td>798</td>
<td>694</td>
</tr>
<tr>
<td>Female</td>
<td>728</td>
<td>816</td>
<td>635</td>
<td>689</td>
<td>622</td>
</tr>
<tr>
<td>Total</td>
<td>1,526</td>
<td>1,603</td>
<td>1,396</td>
<td>1,487</td>
<td>1,316</td>
</tr>
</tbody>
</table>

Source: Vital Statistics, MOH

Table 24: Birth by Attendant per Year

<table>
<thead>
<tr>
<th>Attendant</th>
<th>FY2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Midwife</td>
<td>1076</td>
<td>1003</td>
<td>1063</td>
<td>985</td>
</tr>
<tr>
<td>Health Assistant</td>
<td>186</td>
<td>122</td>
<td>110</td>
<td>81</td>
</tr>
<tr>
<td>Medical Assistant</td>
<td>10</td>
<td>6</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Doctor</td>
<td>310</td>
<td>254</td>
<td>277</td>
<td>236</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>4</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Traditional Birth Attendant (TBA)</td>
<td>11</td>
<td>7</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>1,603</td>
<td>1,396</td>
<td>1,487</td>
<td>1,316</td>
</tr>
</tbody>
</table>

Table 25: Birth by Attendant FY2012

<table>
<thead>
<tr>
<th>Attendant</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Majuro</td>
</tr>
<tr>
<td>Nurse Midwife</td>
<td>789</td>
</tr>
<tr>
<td>Health Assistant</td>
<td>1</td>
</tr>
<tr>
<td>Medical Assistant/MEDEX</td>
<td>0</td>
</tr>
<tr>
<td>Doctor</td>
<td>106</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
</tr>
<tr>
<td>Traditional Birth Attendant (TBA)</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>906</td>
</tr>
</tbody>
</table>

Source: Vital Statistics, MOH
**Challenge/Barrier:** This number referenced to the number of incomplete birth registration forms that were submitted to the Statistics Office without the age of the mothers, which continues to be a barrier for vital statistics.

The Vital Statistics under the Office of Health Planning, Policy, and Statistics is responsible to register birth and death occurring in the hospitals, health centers, and at home. Teen pregnancy is still high. 18.68% of the teen births have low birth weight. Some of the reasons that may contribute to the LBW in teenage pregnancies are immaturity, lack of knowledge, and high risk of premature labor, anemia, and high blood pressure. At any rate this year, the teenage pregnancy rate is at 14%.

**Plans to address high teenage pregnancy rates and recording:**
- Aggressive health promotion and community awareness targeting women, youths, students and school drop-outs. Community participation in health promotion and education is very essential to reduce teen pregnancy rates.
- More outreach clinics to increase accessibility to reproductive and family planning services
- Discussions on vital statistics recording/reporting for health assistants

### Table 26: Birth by Mother’s Age

<table>
<thead>
<tr>
<th>Age</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Stated</td>
<td>7</td>
<td>106**</td>
<td>52</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>10 – 14</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>15 – 17</td>
<td>79</td>
<td>54</td>
<td>60</td>
<td>85</td>
<td>66</td>
</tr>
<tr>
<td>18 – 19</td>
<td>170</td>
<td>173</td>
<td>141</td>
<td>137</td>
<td>110</td>
</tr>
<tr>
<td>20 – 24</td>
<td>523</td>
<td>504</td>
<td>452</td>
<td>496</td>
<td>426</td>
</tr>
<tr>
<td>25 – 29</td>
<td>409</td>
<td>411</td>
<td>375</td>
<td>400</td>
<td>354</td>
</tr>
<tr>
<td>30 – 34</td>
<td>217</td>
<td>223</td>
<td>215</td>
<td>219</td>
<td>221</td>
</tr>
<tr>
<td>35 – 39</td>
<td>94</td>
<td>97</td>
<td>63</td>
<td>108</td>
<td>105</td>
</tr>
<tr>
<td>40 – 44</td>
<td>20</td>
<td>24</td>
<td>33</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>45 – 49</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,526</td>
<td>1,603</td>
<td>1,396</td>
<td>1,487</td>
<td>1,316</td>
</tr>
</tbody>
</table>

*Source: Registered Births Vital Statistics, MOH*
Table 27: Summary of Death Data

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Death</td>
<td>299</td>
<td>339</td>
<td>286</td>
<td>361</td>
<td>332</td>
</tr>
<tr>
<td>Infant Death</td>
<td>47</td>
<td>42</td>
<td>31</td>
<td>41</td>
<td>26</td>
</tr>
<tr>
<td>Fetal Death (Still Birth)</td>
<td>13</td>
<td>19</td>
<td>15</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>Early Neonatal Death</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Neonatal Death</td>
<td>20</td>
<td>19</td>
<td>22</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Post Neonatal Death</td>
<td>27</td>
<td>23</td>
<td>9</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Perinatal Death</td>
<td>28</td>
<td>34</td>
<td>31</td>
<td>37</td>
<td>19</td>
</tr>
<tr>
<td>Child Death (Under 5 years old)</td>
<td>56</td>
<td>52</td>
<td>39</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Child Death (1-4 years old)</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Maternal Death</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rate/Ratio</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Death</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Infant Mortality Rate</td>
<td>31</td>
<td>26</td>
<td>22</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td>Fetal Mortality Rate</td>
<td>8</td>
<td>12</td>
<td>11</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Neonatal Mortality Rate</td>
<td>13</td>
<td>12</td>
<td>16</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>Perinatal Mortality Rate</td>
<td>18</td>
<td>21</td>
<td>22</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Child Mortality Rate (under 5 years old)</td>
<td>37</td>
<td>32</td>
<td>28</td>
<td>34</td>
<td>25</td>
</tr>
<tr>
<td>Child Mortality Rate (1-4 years old)</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Maternal Mortality Ratio</td>
<td>0</td>
<td>25</td>
<td>14</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Vital Statistics, MOH;

Formula in calculating the Death Indicators:

Infant mortality rate is the number of registered deaths among infants (below one year of age) per 1000 live births in a given year or period of time.

Fetal Mortality Rate is the number of fetal deaths divided by the number of live births plus fetal deaths (for a specified time period, usually a calendar year) and multiplied by 1,000.

Maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Maternal Mortality Ratio is calculated by the number of maternal deaths to the number of live births per 10,000.

Neonatal deaths: Deaths among live births during the first 28 completed days of life. It may be subdivided into early neonatal deaths, occurring during the first 7 days of life, and late neonatal deaths, occurring after the 7th day but before the 28th completed day of life.

*1 Per 1,000 live births
*2 Per 100,000 live births
*3 Per 1,000 Population
**DATA AND VITAL STATISTICS**

Post-neonatal Mortality Rate is the number of deaths of infants between 28 days and <1 year divided by the number of live births

Perinatal Mortality Rate is number of stillbirths or fetal death and deaths in the first week of life per 1,000 live births

Table 28: Number of Registered Deaths by Locations

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Outer Islands</th>
<th>Ship/Ocean</th>
<th>Registered Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>204</td>
<td>46</td>
<td>49</td>
<td>0</td>
<td>299</td>
</tr>
<tr>
<td>2009</td>
<td>223</td>
<td>48</td>
<td>62</td>
<td>6</td>
<td>339</td>
</tr>
<tr>
<td>2010</td>
<td>188</td>
<td>47</td>
<td>47</td>
<td>4</td>
<td>286</td>
</tr>
<tr>
<td>2011</td>
<td>258</td>
<td>61</td>
<td>37</td>
<td>5</td>
<td>361</td>
</tr>
<tr>
<td>2012</td>
<td>243</td>
<td>40</td>
<td>46</td>
<td>3</td>
<td>332</td>
</tr>
</tbody>
</table>

*Source: Vital Statistics, MOH*

Table 28 shows the number of death according the five years interval. The total number of death remains almost the same.

**Graph 2: Maternal Mortality Trend**

Graph 2 indicates that the maternal death had a higher rate in FY2009 of 25 per 10,000. There were 4 maternal deaths in FY2009. In FY2012, there were 0 maternal death.

In the last five years, the RMI has had maternal deaths which were preventable. Priority will be placed on improving the health care of pregnant women to avoid maternal death. Detection of high risk pregnancy will be increased.
MOH Objective: Improve Reproductive Health Services

Objective 1: All Maternal and Child Health clinical staff will have been trained on high risk pregnancy management.

Objective 2: All high risk pregnant women will have been enrolled in the High Risk clinic and managed appropriately

Table 29: Infant Deaths by Locations

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Outer Islands</th>
<th>Total</th>
<th>IMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>27</td>
<td>3</td>
<td>17</td>
<td>47</td>
<td>31</td>
</tr>
<tr>
<td>2009</td>
<td>25</td>
<td>5</td>
<td>12</td>
<td>42</td>
<td>26</td>
</tr>
<tr>
<td>2010</td>
<td>24</td>
<td>2</td>
<td>5</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>2011</td>
<td>24</td>
<td>10</td>
<td>7</td>
<td>41</td>
<td>28</td>
</tr>
<tr>
<td>2012</td>
<td>17</td>
<td>4</td>
<td>5</td>
<td>26</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Vital Statistics, MOH

Graph 3: RMI Infant Mortality Rate Trend
The Infant Mortality Rate (IMR) remains high for all years. The IMR decreased by 29% in FY 2012. Mothers not attending prenatal care or seek prenatal care very late are contributing factors. Prematurity is one of the causes of infant mortality which is linked to the health of the mother.

Table 30 indicates that prematurity is attributable to the main cause of death for the infants during the FY2008-2012. One of the major objectives to be mindful of is reducing the Infant Mortality Rate by 10% each year. In FY2011, the Ministry has started the presumptive Chlamydia treatment for pregnant mothers attending prenatal care and continued in FY2012.

**MOH Objective: To reduce the Infant Mortality Rate by 10% in FY2012**

**Priority Activities for FY2011-FY2012 is to reduce the Infant Mortality Rate by:**

1. Continue to improve the immunization for children two years and under;
2. Continue to encourage breast feeding practices as the best infant food;
3. Continue to educate to improve nutrition practices and family hygiene; and
Millennium Development Goal (MDG) 4: Reduce Child Mortality Rate

WHO Target: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.

WHO promotes four main strategies which MOH adapted:
- appropriate home care and timely treatment of complications for newborns;
- integrated management of childhood illness for all children under five years old;
- expanded program on immunization;
- infant and young child feeding.

Graph 4 demonstrates reduction in child mortality rate. The trend over the years shows a downward mobility. Child Mortality Rate or Under-5 mortality rate is the number of children who died before the age of five, per thousand live births. This is also one of the Millennium Development Goals.

Graph 4: Child Mortality Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Child Mortality Rate Per 1,000 Live birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2007</td>
<td>8</td>
</tr>
<tr>
<td>FY2008</td>
<td>6</td>
</tr>
<tr>
<td>FY2009</td>
<td>6</td>
</tr>
<tr>
<td>FY2010</td>
<td>6</td>
</tr>
<tr>
<td>FY2011</td>
<td>6</td>
</tr>
<tr>
<td>FY2012</td>
<td>5</td>
</tr>
</tbody>
</table>

It is worth noting that Diabetes Mellitus related diseases remain over the three years interval as the leading cause of death. DM Related: 15 – End Stage Renal Disease, Septicemia -25, Myocardial Infarction – 3, Gangrene – 36, CVA – 7

Table 31: 5 Leading Cause of Mortality

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumonia- 24</td>
<td>Cancer (All Types) - 36</td>
<td>Pneumonia - 29</td>
<td>Pneumonia - 36</td>
<td>Cancer (All Types) - 33</td>
</tr>
<tr>
<td>Myocardial Infarction - 23</td>
<td>Septicemia - 31</td>
<td>Cancer (All Types) - 26</td>
<td>Cancer (All Types) - 27</td>
<td>Pneumonia - 20</td>
</tr>
<tr>
<td>Cancer (All Types) - 22</td>
<td>Hypertension - 28</td>
<td>Malnutrition - 16</td>
<td>Myocardial Infarction - 17</td>
<td>Myocardial Infarction - 11</td>
</tr>
<tr>
<td>CVA- 21</td>
<td>Suicide - 14</td>
<td>CVA - 14</td>
<td>Suicide - 10</td>
<td>Septicemia - 9</td>
</tr>
</tbody>
</table>
Dengue Fever Outbreak in the Marshall Islands

Dengue is the world's most common mosquito-borne viral infection and a leading cause of morbidity throughout the tropics and subtropics. Illness caused by one of the four dengue virus (DENV) serotypes most frequently result in classic dengue fever (DF), characterized by fever, headache, body pain, eye pain, nausea and rash.

With the quick response by MOH to seek assistance from CDC, WHO, SPC and US Military, the outbreak of dengue fever was contained only in a short while. The suspected cases were found in Majuro, Ine, Arno, and Ebeye. The most suspected were detected in Ajeltake, Long Islands, Utidrikan, Jenrok, Uliga and Small Islands in Majuro Atoll. The dengue fever was more severe amongst the children from ages 4 up to adults ages 39. There were no deaths during the outbreak.

As such, the total number of suspected and of course positive cases were totaled up to 748 cases. That was no dead reported as a result of the dengue fever. Also, in November 14, there were five pregnant females who were tested positive with the RDT, all of whom were recovered and were discharged without any complications to the babies. Attempting to remedy and reduce the further spread of the dengue fever, the Ministry of Health, with assistance from the WHO, was issuing mosquito repellents and nets to the staff who were heavily involved in the treatment of the patients as well as the patients who were admitted to the dengue ward. Representatives from the US military and CDC teamed up with representatives from MOH and RMI EPA in spraying the whole Majuro Atoll to eliminate the known breeding grounds.

Further training and management of dengue fever was highlighted and instructions were given to the staff should there be another outbreak of dengue of fever. The dengue fever was contained in a short duration through the effective management of the MOH team in corporation with RMI EPA and assistance from CDC, WHO and US Military.

The Ministry confirmed the first dengue fever case in October. Within one week, the number doubled. The Ministry worked tirelessly to produce a life educational video on dengue fever with assistance from NTA. The video was aired within one day of production, Additionally, the MOH mobilized health teams to visit all the schools in Majuro to do presentations that was reviewed and endorsed.

The Ministry received additional medical supplies and materials from: Republic of China, Taiwan; Government of Japan; Centers for Disease Control and Prevention (CDC), World Health Organization (WHO); U.S.A. Military Services; Department of Energy (DOE)
## Table 32: Number of Dengue Cases in RMI, FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Tested</th>
<th>Number of Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>0-4</td>
<td>58</td>
<td>54</td>
</tr>
<tr>
<td>5-9</td>
<td>65</td>
<td>56</td>
</tr>
<tr>
<td>10-14</td>
<td>127</td>
<td>119</td>
</tr>
<tr>
<td>15-19</td>
<td>128</td>
<td>140</td>
</tr>
<tr>
<td>20-24</td>
<td>119</td>
<td>126</td>
</tr>
<tr>
<td>25-29</td>
<td>86</td>
<td>112</td>
</tr>
<tr>
<td>30-34</td>
<td>43</td>
<td>67</td>
</tr>
<tr>
<td>35-39</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>40-44</td>
<td>31</td>
<td>28</td>
</tr>
<tr>
<td>45-49</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>50-54</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>55-59</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>60-64</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>65-69</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>70+</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Not Stated</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>780</td>
<td>818</td>
</tr>
</tbody>
</table>

## Table 33: Number of Dengue Cases in Majuro, FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Tested</th>
<th>Number of Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>0-4</td>
<td>53</td>
<td>54</td>
</tr>
<tr>
<td>5-9</td>
<td>49</td>
<td>47</td>
</tr>
<tr>
<td>10-14</td>
<td>86</td>
<td>88</td>
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<tr>
<td>15-19</td>
<td>79</td>
<td>103</td>
</tr>
<tr>
<td>20-24</td>
<td>96</td>
<td>107</td>
</tr>
<tr>
<td>25-29</td>
<td>69</td>
<td>80</td>
</tr>
<tr>
<td>30-34</td>
<td>33</td>
<td>52</td>
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<tr>
<td>35-39</td>
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<td>19</td>
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<td>40-44</td>
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<td>18</td>
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<tr>
<td>50-54</td>
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<td>8</td>
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<tr>
<td>55-59</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>60-64</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>65-69</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>70+</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Not Stated</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>580</td>
<td>617</td>
</tr>
</tbody>
</table>
### Table 34: Number of Dengue Cases in Ebeye, FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Tested</th>
<th>Number of Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>0-4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>5-9</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>10-14</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>15-19</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>20-24</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>25-29</td>
<td>8</td>
<td>29</td>
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<tr>
<td>30-34</td>
<td>5</td>
<td>13</td>
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<td>35-39</td>
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<td>10</td>
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<td>40-44</td>
<td>6</td>
<td>11</td>
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<tr>
<td>45-49</td>
<td>3</td>
<td>5</td>
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<td>50-54</td>
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<td>1</td>
<td>5</td>
</tr>
<tr>
<td>60-64</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>65-69</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>70+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not Stated</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>137</td>
</tr>
</tbody>
</table>

### Table 35: Number of Dengue Cases in Outer Islands, FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Tested</th>
<th>Number of Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>0-4</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>5-9</td>
<td>6</td>
<td>4</td>
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<tr>
<td>10-14</td>
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<td>12</td>
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<td>15-19</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>20-24</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>25-29</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>30-34</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>35-39</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>40-44</td>
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<td>45-49</td>
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<td>55-59</td>
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<td>0</td>
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<tr>
<td>60-64</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>65-69</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>70+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not Stated</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>64</td>
</tr>
</tbody>
</table>
Graph 5: Dengue Cases Per Location, FY2012

Distribution by Positive and Negative Cases Per Location
(As of June 21, 2012)
Graph 6: Dengue Cases by Date of Onset, FY2012

Distribution of Dengue Suspected Cases by Date of Onset

Number of Suspected Cases
Graph 7: Dengue Cases by Positive and Negative Cases, FY2012
Graph 8: Dengue Cases Per Age Distribution, FY2012
Dengue Fever Ward
CDC and WHO Consultants
Donations to Meetings on from Taiwan Health Center
Dengue Fever Video Announcement
Reproductive Health Services

Screening for Children with Special Health Care Needs (CSHCN) continues in collaboration with Ministry of Education (MOE), Special Education Programs/sharing information and providing services for both clients and families. In 2008, RH Clinic expanded its clinic twice a week after normal working hours to Youth to Youth in Health (YYTIH) and Laura Clinic every Saturday. The YYTIH clinics provide STI screening, family planning, contraceptive distribution based on choice, and physical exam for all gender. The RH services are funded by Title X/Family Planning, Title V/Maternal and Child Health Block Grants, and UNFPA.

Table 36: RMI MCH Health Indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Pregnancies</td>
<td>1,591</td>
<td>1,526</td>
<td>1,603</td>
<td>1,396</td>
<td>1,487</td>
<td>1,316</td>
</tr>
<tr>
<td>Antenatal Care Achieved</td>
<td>1,152</td>
<td>1,215</td>
<td>1,537</td>
<td>1,373</td>
<td>1,374</td>
<td>1,263</td>
</tr>
<tr>
<td>Antenatal Coverage (%)</td>
<td>72</td>
<td>80</td>
<td>96</td>
<td>98</td>
<td>92</td>
<td>96</td>
</tr>
<tr>
<td>Number of First Trimester Booking</td>
<td>539</td>
<td>543</td>
<td>607</td>
<td>556</td>
<td>510</td>
<td>401</td>
</tr>
<tr>
<td>Rate of First Trimester Booking</td>
<td>34</td>
<td>36</td>
<td>38</td>
<td>40</td>
<td>34</td>
<td>32</td>
</tr>
<tr>
<td>Number of deliveries Attended by trained health personnel</td>
<td>1,575</td>
<td>1,510</td>
<td>1,582</td>
<td>1,385</td>
<td>1,462</td>
<td>1,302</td>
</tr>
<tr>
<td>Number of Non pregnant women of reproductive age (15-49)</td>
<td>12,688</td>
<td>12,792</td>
<td>12,685</td>
<td>12,690</td>
<td>11,537</td>
<td>11,708</td>
</tr>
<tr>
<td>Number of unduplicated acceptors of family planning</td>
<td>1,499</td>
<td>2,236</td>
<td>2,504</td>
<td>2,565</td>
<td>1,679</td>
<td>2,016</td>
</tr>
</tbody>
</table>

Prenatal Care

The two main hospitals provide the following prenatal care services for pregnancy management, STI/HIV screening, Pap smear screening, oral health, and immunization. Health centers in Outer Islands provide pregnancy management.. Outreach Mobile Team that visited the Outer Islands includes MCH services including prenatal care. MCH Staff coordinates with the Health Assistants for pregnancy management and update training with the Health Assistant.
In FY2012, only 32% of the pregnant women that attended Prenatal Clinic come to the clinic in their 1st Trimester. It is important to note that the total encounters/visits for all trimesters have increased slightly.
Table 38: Summary of Prenatal Visits

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Visits All Trimesters</td>
<td>3,383</td>
<td>3,100</td>
<td>4,895</td>
<td>5,066</td>
<td>5,994</td>
<td>6,760</td>
</tr>
<tr>
<td>Number of Pregnant Women</td>
<td>1,152</td>
<td>1,215</td>
<td>1,537</td>
<td>1,373</td>
<td>1,374</td>
<td>1,263</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Trimester Encounters</td>
<td>1,248</td>
<td>961</td>
<td>879</td>
<td>822</td>
<td>721</td>
<td>569</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Trimester Encounters</td>
<td>1,102</td>
<td>1,081</td>
<td>1,615</td>
<td>1,681</td>
<td>1,937</td>
<td>2,082</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Trimester Encounters</td>
<td>1,033</td>
<td>1,058</td>
<td>2,401</td>
<td>2,563</td>
<td>3,336</td>
<td>4,109</td>
</tr>
</tbody>
</table>

Source: RH program, Majuro, Ebeye, & Outer Islands

Table 39: Prenatal Visit by Main Islands

<table>
<thead>
<tr>
<th>Total</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Visits All Trimesters</td>
<td>4,247</td>
<td>5,066</td>
<td>5,994</td>
</tr>
<tr>
<td>Number of Pregnant Women</td>
<td>949</td>
<td>1,373</td>
<td>1,374</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Trimester</td>
<td>500</td>
<td>822</td>
<td>721</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Trimester</td>
<td>1,431</td>
<td>1,681</td>
<td>1,937</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; Trimester</td>
<td>2,316</td>
<td>2,563</td>
<td>3,336</td>
</tr>
</tbody>
</table>
Cervical Cancer is one of the leading types of cancer among women in the RMI. Early detection of abnormalities in the cervix through Pap smear is the first stage in handling cervical cancer. Pap smear tests are available in the MCH Clinics in Majuro, and Kwajalein. For Outer Islands, the Mobile Team from Majuro and 177 Women's Mission conducts the Pap smear testing. All pregnant mothers that visit the hospitals for their prenatal care undergo Pap smear test.

<table>
<thead>
<tr>
<th>Pap Smear Test</th>
<th>FY2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro Laboratory</td>
<td>1,948</td>
<td>1,983</td>
<td>1,453</td>
<td>1,520</td>
</tr>
<tr>
<td>Kwajalein Laboratory</td>
<td>78</td>
<td>408</td>
<td>354</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>2,026</td>
<td>2,391</td>
<td>1,807</td>
<td>1,720</td>
</tr>
</tbody>
</table>

MCH Program continues to encourage pregnant women to be screened on schedule in order to detect abnormalities as early as possible and to promote cervical cancer prevention and awareness. High risk family planning users will be screened for cervical cancer during each clinic visit. However, the figures show that not all women want to have pap smear.

In FY2012, there are 1,720 pap smear test done where in 530 from Majuro and 14 in Ebeye have abnormal findings. All abnormal findings were monitored and treated.

**Family Planning**

There are several methods available for family planning services. The two most popular and used method are the 3 months hormonal injection and oral contraceptive. Family Planning Services also helps on parents planning for a pregnancy.

Male and female condoms are available in the Family Planning Clinics, STD/HIV Clinics, Health Centers, Youth to Youth in Health, hotels and the bars for free.

One of the major attempts of the MCH program has to do with educating all expected mothers to visit the Family Planning Clinic further information and to receive family planning available services.
### Table 41: RMI Unduplicated Number of Female Family Planning Users

<table>
<thead>
<tr>
<th>Method</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Sterilization</td>
<td>147</td>
<td>57</td>
<td>70</td>
<td>40</td>
<td>27</td>
</tr>
<tr>
<td>Intrauterine device (IUD)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Hormonal Implant</td>
<td>159</td>
<td>308</td>
<td>286</td>
<td>261</td>
<td>292</td>
</tr>
<tr>
<td>3 Month Hormonal Injection</td>
<td>907</td>
<td>933</td>
<td>1,013</td>
<td>611</td>
<td>443</td>
</tr>
<tr>
<td>Oral Contraceptive</td>
<td>438</td>
<td>395</td>
<td>612</td>
<td>280</td>
<td>247</td>
</tr>
<tr>
<td>Female Condom</td>
<td>22</td>
<td>13</td>
<td>41</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Fertility Awareness Method(FAM)</td>
<td>0</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Abstinence</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Withdrawal or Other Method</td>
<td>10</td>
<td>31</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Method Unknown</td>
<td>27</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No Method</td>
<td>143</td>
<td>204</td>
<td>158</td>
<td>19</td>
<td>402</td>
</tr>
<tr>
<td>Pregnant/Seeking Pregnancy</td>
<td>257</td>
<td>300</td>
<td>333</td>
<td>366</td>
<td>542</td>
</tr>
</tbody>
</table>

**Relay on male method**

<table>
<thead>
<tr>
<th>Method</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vasectomy</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Male Condom</td>
<td>39</td>
<td>57</td>
<td>37</td>
</tr>
<tr>
<td>Total Female Users</td>
<td>2,149</td>
<td>2,305</td>
<td>2,565</td>
</tr>
</tbody>
</table>

Source: RH program, Majuro, Ebeye, & Outer Islands

### Table 42: RMI Unduplicated Number of Family Planning by Age and Gender

<table>
<thead>
<tr>
<th>Age Group</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Total</td>
</tr>
<tr>
<td>Under 15</td>
<td>14</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>15-17</td>
<td>67</td>
<td>19</td>
<td>86</td>
</tr>
<tr>
<td>18-19</td>
<td>181</td>
<td>52</td>
<td>233</td>
</tr>
<tr>
<td>20-24</td>
<td>700</td>
<td>67</td>
<td>767</td>
</tr>
<tr>
<td>25-29</td>
<td>712</td>
<td>34</td>
<td>746</td>
</tr>
<tr>
<td>30-34</td>
<td>493</td>
<td>15</td>
<td>508</td>
</tr>
<tr>
<td>35-39</td>
<td>238</td>
<td>8</td>
<td>246</td>
</tr>
<tr>
<td>40-44</td>
<td>104</td>
<td>0</td>
<td>104</td>
</tr>
<tr>
<td>Over 44</td>
<td>56</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>Total Users</td>
<td>2,565</td>
<td>202</td>
<td>2,767</td>
</tr>
</tbody>
</table>

Source: RH program, Majuro, Ebeye, & Outer Islands
Table 43: RMI FP Methods for Unduplicated Male Users

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Condom</td>
<td>112</td>
<td>54</td>
<td>124</td>
<td>188</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>Vasectomy</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fertility Awareness Method (FAM)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Method</td>
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</tr>
<tr>
<td>Method Unknown</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Partner pregnant or seeking pregnancy</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Reason</td>
<td>0</td>
<td>31</td>
<td>70</td>
<td>10</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Rely on Female Method</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>72</td>
<td>199</td>
<td>202</td>
<td>52</td>
<td>51</td>
</tr>
</tbody>
</table>

*Source: RH program, Majuro, Ebeye, & Outer Islands*
Children with Special Health Care Needs (CSHCN)

The Maternal and Child Health (MCH) Program in Majuro provides screening, medical examination, evaluation, tracking, and referral of CSHCN for RMI. CSHCN are referred mainly to Shriners’ Hospital in Honolulu for further treatment. Children ages 0–21 years old are accepted under this program. The MCH Block Grant is being utilized for bringing in children from Outer Islands for follow up with visiting specialists and to Honolulu if necessary to continue the specialized management and evaluation.

Shriners Hospital consulted conducted their yearly visit in September 2011. They screened new patients and follow up with patients that were referred. Orthopedic CSHCN cases were referred to Shriners in 2011.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>FY2008</th>
<th>FY2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint/Bone Deformity or Fracture</td>
<td>83</td>
<td>87</td>
<td>18</td>
<td>26</td>
<td>120</td>
</tr>
<tr>
<td>Hearing Problems</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Burns (any kind)</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Cleft Palate/Lip</td>
<td>14</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Club foot</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Congenital Deformed/Anomalies</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Hydrocephalus</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Spinal Bifida</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cardiac</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Extra Fingers</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>104</td>
<td>27</td>
<td>36</td>
<td>138</td>
</tr>
</tbody>
</table>

Source: CSHCN Registration, MCH – Majuro Office

There are a total of 207 children with special health care needs (CSHCN). 11 CSHCN were referred to Shriners Hospital in FY2012.
New Born Hearing Screening

Table 45: New Born Hearing in Majuro, FY2012

<table>
<thead>
<tr>
<th>Inpatient</th>
<th>Outpatient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screened</td>
<td>Passed</td>
</tr>
<tr>
<td>• Passed</td>
<td>No. OPD Screening</td>
</tr>
<tr>
<td>• Inconclusive</td>
<td>Deceased</td>
</tr>
<tr>
<td>• Referred</td>
<td>No Info</td>
</tr>
<tr>
<td>Not Screened</td>
<td>Inconclusive</td>
</tr>
<tr>
<td>• Missed</td>
<td>Referred</td>
</tr>
<tr>
<td>• NICU</td>
<td>Refused = 0</td>
</tr>
<tr>
<td>• Refused/transfered out</td>
<td>Scheduled = 0</td>
</tr>
<tr>
<td>• Deceased</td>
<td>Discontinued – 0</td>
</tr>
<tr>
<td>Hearing Status</td>
<td>Total Recommended for Evaluation = 39</td>
</tr>
</tbody>
</table>

436 newborn were not screened during the fiscal year because of prolong process of procurement of medical supplies for the program. Because RMI does not have ENT specialist, specialist consultants visit RMI to provide services. There are mothers who do not show up for the infants appointments as well.

In August 2012, Project Officer visited the RMI New Born Hearing Screening Program with the Audiologist and ENT Surgeon. Patients that needed the specialists were seen and provided care.

Goal for FY2013 is to identify and activate ways to improve and maintain the flow of the program’s services.
### Table 46a: RMI Immunization Coverage for Children 19-35 months, FY2011

<table>
<thead>
<tr>
<th>Immunizations</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Outer Islands</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of 19-35 months</td>
<td>981</td>
<td>355</td>
<td>377</td>
<td>1,713</td>
</tr>
<tr>
<td>BCG</td>
<td>923 (34.1%)</td>
<td>355 (100%)</td>
<td>349 (97.2%)</td>
<td>1627 (96%)</td>
</tr>
<tr>
<td>DTAP4</td>
<td>663 (67.6%)</td>
<td>354 (99.7%)</td>
<td>219 (61%)</td>
<td>1236 (72.9%)</td>
</tr>
<tr>
<td>MMR1</td>
<td>771 (78.6%)</td>
<td>355 (100%)</td>
<td>301 (83.8%)</td>
<td>1427 (84.2%)</td>
</tr>
<tr>
<td>HepB3</td>
<td>756 (77.1%)</td>
<td>355 (100%)</td>
<td>190 (52.9%)</td>
<td>1301 (76.8%)</td>
</tr>
<tr>
<td>Hib1</td>
<td>900 (91.7%)</td>
<td>354 (99.7%)</td>
<td>349 (97.2%)</td>
<td>1603 (94.6%)</td>
</tr>
<tr>
<td>OPV3</td>
<td>796 (81.1%)</td>
<td>355 (100%)</td>
<td>210 (58.5%)</td>
<td>1361 (80.3%)</td>
</tr>
<tr>
<td>No. of Children Fully Immunized</td>
<td>663</td>
<td>354</td>
<td>206</td>
<td>1,223</td>
</tr>
<tr>
<td>Full Immunization Coverage</td>
<td>68%</td>
<td>99.7%</td>
<td>55%</td>
<td>72%</td>
</tr>
</tbody>
</table>

### Table 46b: RMI Immunization Coverage for Children 19-35 months, FY2012

<table>
<thead>
<tr>
<th>Immunizations</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Outer Islands</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of 19-35 months</td>
<td>2,259</td>
<td>324</td>
<td>895</td>
<td>3,478</td>
</tr>
<tr>
<td>DTAP4</td>
<td>1,342 (59.4%)</td>
<td>321 (99%)</td>
<td>306 (34.2%)</td>
<td>1969</td>
</tr>
<tr>
<td>MMR1</td>
<td>1,601 (70.9%)</td>
<td>324 (100%)</td>
<td>767 (85.7%)</td>
<td>2692</td>
</tr>
<tr>
<td>HepB3</td>
<td>1,779 (78.8%)</td>
<td>324 (100%)</td>
<td>600 (67.0%)</td>
<td>2703</td>
</tr>
<tr>
<td>Hib1</td>
<td>2,112 (93.5%)</td>
<td>321-99%</td>
<td>874 (97.7%)</td>
<td>3307</td>
</tr>
<tr>
<td>OPV3</td>
<td>1,787 (79.1%)</td>
<td>324 (100%)</td>
<td>567 (63.4%)</td>
<td>2,678</td>
</tr>
<tr>
<td>No. of Children Fully Immunized</td>
<td>1,241</td>
<td>321</td>
<td>284</td>
<td>1,846</td>
</tr>
<tr>
<td>Full Immunization Coverage</td>
<td>55%</td>
<td>99%</td>
<td>32%</td>
<td>53%</td>
</tr>
</tbody>
</table>

Immunization Coverage Rate for 19 to 35 months is completing the 4-3-3-1-1 (DTaP-OPV-HepB-HIB-MMR) vaccination protocol. Immunization program needs to reach 95% immunization coverage rate. In FY2012, Immunization Program in Ebeye achieved 99% complete immunization coverage. The fully immunized coverage is 53% for the Marshall Islands.

### Table 47: RMI Immunization Coverage Rate

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>95%</td>
<td>92%</td>
<td>94%</td>
<td>93%</td>
<td>68%</td>
<td>55%</td>
</tr>
<tr>
<td>Kwajalein</td>
<td>92%</td>
<td>96%</td>
<td>98%</td>
<td>99%</td>
<td>99.7%</td>
<td>99%</td>
</tr>
<tr>
<td>Outer Islands</td>
<td>51%</td>
<td>60%</td>
<td>71%</td>
<td>56%</td>
<td>55%</td>
<td>32%</td>
</tr>
<tr>
<td>RMI</td>
<td>79%</td>
<td>83%</td>
<td>89%</td>
<td>84%</td>
<td>72%</td>
<td>53%</td>
</tr>
</tbody>
</table>
**Graph 10: Immunization Trend in RMI**

![Graph showing Immunization Trend in RMI]

**Table 48: Immunization Outer Islands Outreach Mobile Visits, FY 2012**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Enewetak</td>
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<tr>
<td>Ailuk</td>
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<tr>
<td>Ailinglaplap</td>
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<td>Namdrik</td>
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<tr>
<td>Kili</td>
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<td>Utrik</td>
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<tr>
<td>Likiep</td>
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</tr>
</tbody>
</table>
There were a lot of challenges in the manners of collection and analysis of data due to duplication of registration of children, multiple names given to a child, movement of children from one zone to another or from one island/atoll to another. One important factors to this dilemma is untimely availability of transportation from the urban centers to Outer Islands. The total coverage for Majuro tremendously dropped to 55% also due to data entry in terms of lateness in entering data and inability to keep track of children moving from one locality to another, which disrupted the manner of calculation.
Table 50: Other Vaccines Administered

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevnar</td>
<td>682</td>
<td>2,643</td>
<td>2,398</td>
<td>2,758</td>
<td>3,391</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>502</td>
<td>1,355</td>
<td>1,807</td>
<td>2,021</td>
<td>2,000</td>
</tr>
</tbody>
</table>

Source: Immunization Program

Accomplishments

- No report of vaccine preventable diseases since 2003.
- Revised the measles elimination plan that was developed in 2005.
- Maintained 100% Hepatitis B birth dose in the two urban hospitals of Majuro and Ebeye since 2005.
- Prevalence rate of 1.8% chronic hepatitis B virus (HBV) infection among children aged 4-9 years, born since the implementation of routine childhood hepatitis B vaccination.
- Eligible for the certification of hepatitis B control goal in the World Health Organization Western Pacific Region.
**IMMUNIZATION**

- Introduction of new vaccines in 2008 - 2010 (Pneumococcal, Rotavirus, HPV, H1N1,Td, Tdap, Meningococcal) and extended to the outer atoll communities.
- Hepatitis B Coordinator in Majuro and Ebeye
- Finalized National Immunization Program Handbook
- Update Immunization yellow card to include new vaccines for children, adolescents and adults.
- Trained all the Public Health nurses in implementing the WebIZ registry.
- Ebeye Hospital has achieved 99% immunization coverage for the third straight year.
- Marshall Islands is able to plan their own vaccine need based on the allotted funds by CDC using the online VTrcks Spend Plan.
- We have received great assistance with CDC Public Health Advisor
- Additional funding through a Prevention and Public Health Funds (PPHF)grant on Vaccine Storage and Handling
- We have continued support form CDC Immunization branch and World Health Organization.

**Challenges:**

- Late, completeness and accuracy of data entry in WebIZ
- Meeting the Immunization Schedule for 19 to 35 months with limited trips to visit Outer islands because of Geographical location and staff
- Vaccine storage in Outer Islands Health Centers

**Way Forward:**

- Hire a Data entry person
- Train Health Assistants in vaccine administration
- Implement a vaccine shipment policy to Outer Islands
- National Immunization Conference in Majuro
- Continuous refresher training and data checking on WebIZ
- Implement the PPHF grant on vaccine storage and handling
- Training and implementation of VTrcks Spend Plan, Inventory and Ordering
- Training and implementation of WebIZ in Ebeye Hospital
The dental routines provided in this area include tooth extractions, fillings, dental hygiene, fluoride treatment, and regular check-ups for Diabetes Program, and Prenatal. A total of 17,146 dental encounters were treated with 2,929 restorative procedures done in FY2012. There were 16 Outer Islands visited this year. The Public Health Clinic in Majuro started tracking the diabetic patients that have dental examination in 2010.

Table 51: Key Outcome Measures for Dental Program

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dental Encounters</td>
<td>12,653</td>
<td>3,807</td>
<td>2,482</td>
<td>11,425</td>
<td>3,984</td>
<td>745</td>
<td>11,528</td>
<td>3,343</td>
<td>2,275</td>
</tr>
<tr>
<td><strong>Target: Infants and Children</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of infants or children who received fluoride varnishing</td>
<td>2,427</td>
<td>288</td>
<td>51</td>
<td>2,411</td>
<td>846</td>
<td>114</td>
<td>644</td>
<td>277</td>
<td>0</td>
</tr>
<tr>
<td>Number of schoolchildren who received annual dental examination</td>
<td>831</td>
<td>323</td>
<td>468</td>
<td>1,183</td>
<td>393</td>
<td>114</td>
<td>1,261</td>
<td>958</td>
<td>1,475</td>
</tr>
<tr>
<td>Number of schoolchildren who receive health talks on oral hygiene</td>
<td>3813</td>
<td>1301</td>
<td>468</td>
<td>1,183</td>
<td>393</td>
<td>114</td>
<td>1,261</td>
<td>958</td>
<td>1,475</td>
</tr>
<tr>
<td><strong>Target: Youth and Adults</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of restorative procedures done annually</td>
<td>2,580</td>
<td>1,050</td>
<td>70</td>
<td>2,724</td>
<td>1,261</td>
<td>6</td>
<td>2,291</td>
<td>638</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of DM patients with annual dental/oral examination</td>
<td>75.2%</td>
<td>0</td>
<td>33.6%</td>
<td>56%</td>
<td>0</td>
<td>*</td>
<td>43.6%</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Number of prenatal clinic users with annual dental/oral examination</td>
<td>398</td>
<td>195</td>
<td>0</td>
<td>392</td>
<td>165</td>
<td>0</td>
<td>377</td>
<td>111</td>
<td>0</td>
</tr>
</tbody>
</table>

*Data entry for Majuro is still in progress

Table 52: No. of Dental Encounters

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>10,825</td>
<td>11,365</td>
<td>12,673</td>
<td>12,653</td>
<td>11,425</td>
<td>11,528</td>
</tr>
<tr>
<td>Ebeye</td>
<td>4,528</td>
<td>4,912</td>
<td>3,560</td>
<td>3,807</td>
<td>3,984</td>
<td>3,343</td>
</tr>
<tr>
<td>Outer Islands</td>
<td>1,910</td>
<td>1,811</td>
<td>1,647</td>
<td>2,482</td>
<td>745</td>
<td>2,275</td>
</tr>
<tr>
<td>Total</td>
<td>17,263</td>
<td>18,088</td>
<td>17,880</td>
<td>18,942</td>
<td>16,154</td>
<td>17,146</td>
</tr>
</tbody>
</table>

Source: Dental Department - Majuro, Ebeye & Outer Islands
ORAL HEALTH

The total number of children who received fluoride varnish during FY2010 was 2,766, 3,401 in FY2011 and 1,261 in FY2012. The fluoride varnish data in FY2012 decreased by 73% because the grant that supported this activity ended in 2011. They were also given tooth brushes and fluoride tooth paste, effective tooth brushing instruction sessions at every Fluoride Varnish application visit. The students attending Special Education program also received similar treatment.

Dental staff visits the schools every year to provide sealant to students in Head Start and grade 1, 2, 5 and 6. A total of 215 teeth were sealed during the year at least for Majuro. Weekly clinics are held for children who are six months to 4 years old for fluoride treatment and educating their mothers on proper cleaning of teeth. All the children in the Fluoride Varnish Program received tooth brushes and toothpaste every visit.

A total of 377 pregnant women in Majuro were examined and given oral health education on 1st prenatal visit by Dental Assistants. Pregnant women who needed extractions and fillings were referred to the Providers. Patients with follow-up treatment were given appointments but despite that there were low number of return patients.

Ebeye Dental Program

There were only 3,343 encounters including 1,793 emergency encounters, 512 treatment and 1,138 preventive encounters in this FY that is 8.5% increase from FY11. Annual dental examinations for school children in all elementary schools were not performed for more than 3 years due to the absence of Dental Hygienist. The dental hygiene in all schools was given by the visiting Rotary Club of Hawaii Dental Team and Canvasback dental team in the dental clinic during their mission.

There was significantly improved in DM patient’s annual oral checkup and decrease in the number of prenatal clinic users who received dental and oral health examination. The slight drop of pregnancy visits could be attributed to the absence of its coordinator for sometimes. We had 277 Fluoride Varnish applications administered in FY2012; due to unavailability of fluoride varnish. Dental preventive measures were performed by the dentists and dental nurses.
Outer Islands

Table 53: Dental Outer Islands Visit

<table>
<thead>
<tr>
<th>Atoll/Island</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utrik</td>
<td>55</td>
<td>38</td>
<td>93</td>
</tr>
<tr>
<td>Namu(Loen,Mae,Majkin,Namu)</td>
<td>96</td>
<td>102</td>
<td>198</td>
</tr>
<tr>
<td>Lib</td>
<td>24</td>
<td>17</td>
<td>41</td>
</tr>
<tr>
<td>Lae</td>
<td>53</td>
<td>24</td>
<td>77</td>
</tr>
<tr>
<td>Ujae</td>
<td>41</td>
<td>65</td>
<td>106</td>
</tr>
<tr>
<td>Wotho</td>
<td>19</td>
<td>13</td>
<td>32</td>
</tr>
<tr>
<td>Ebon</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Jaluit</td>
<td>12</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td>Mili</td>
<td>131</td>
<td>124</td>
<td>255</td>
</tr>
<tr>
<td>Arno</td>
<td>133</td>
<td>121</td>
<td>254</td>
</tr>
<tr>
<td>Ailinglaplap &amp; Jabat</td>
<td>234</td>
<td>306</td>
<td>540</td>
</tr>
<tr>
<td>Jaluit</td>
<td>23</td>
<td>21</td>
<td>44</td>
</tr>
<tr>
<td>Aur</td>
<td>62</td>
<td>46</td>
<td>108</td>
</tr>
<tr>
<td>Maloelap</td>
<td>78</td>
<td>85</td>
<td>163</td>
</tr>
<tr>
<td>Ebon</td>
<td>194</td>
<td>135</td>
<td>329</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>1,155</strong></td>
<td><strong>1,120</strong></td>
<td><strong>2,275</strong></td>
</tr>
</tbody>
</table>

Note that these were the only outer health centers visited by the MOH mobile team in FY2012. The dental team was about to see and treat a total of 2275 encounters, both children and adults.
Challenges:

- The Targeted Maternal and Child Oral Health System Services Grant (TOHSS) ended in August 2011. The Dental Department struggles to find funding sources to support the activities that were previously budgeted under the TOHSS grant.
- Need to Replace and hire 2 additional staff in Majuro Dental Program.
- New dental chairs are needed in the clinics.
- The EpilInfo system use for gathering patient’s information needs upgrading with the latest version.
- The level of understanding of patients to maintain their oral environment and proper tooth brushing technique is comparatively low and health education need to be strengthen.
- Additional dental assistants are needed to provide essential during the mobile visits to the outer given the huge influx of patients coming the dental clinic.
- Extraction is the only procedure provided to the patients in the outer islands due to lack of proper equipment in the outer islands to handle sensitivity. However, community education on oral health is conducted proactively.
Way Forward:
1. The program aims to reach 90% of all 6 year old children will receive three Topical Iodine and Fluoride Varnish annually.
2. Continue to increase percentage of population who has regular dental check-ups. Expand Oral Health Workforce.
3. Continue to increase the number of patients served. Increase the number of children who receive fluoride varnishing and dental sealants.
4. Increase the number of school children seen for oral and dental examination.
5. Continue to increase the number of students who receive health talks or education on dental hygiene.
6. Continue to increase the number of restorative procedures annually. Increase the number or percentage of DM patients with annual dental examination.
7. Continue to increase the number or percentage of prenatal care users with annual dental examination.
8. Continue to increase the number of patients screened for Oropharyngeal Cancer.
9. Requesting the Primary Health Care (PHC) management to replace the staffs who have resigned and AWOL.
10. Both PHC and management of Dental Department must work together to continue the TOHSS.
11. The Biomed Department must provide preventive maintenance and to calibrated the equipment each quarter and/or work on the broken dental units and the compressor/power suction machine.
Friends Don’t Let Friends Smoke
World No Tobacco Day 2011
The top 3 main diagnosis for the mental health cases are Schizophrenia, Suicide, and Major Depressive Disorder. Patients are referred by: 1.) Other medical subspecialties; in-patient or out-patient, 2.) Other government agencies, 3.) Family Members, and 4.) Walk-in patients who come in for psychiatric consultations, and counseling. These are patients whose symptoms are florid acute warranting prompt evaluation and management.

**Table 54: No. of Registered Cases in Mental Health Program**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Outer Islands</th>
<th>RMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>283</td>
<td>20</td>
<td>11</td>
<td>314</td>
</tr>
<tr>
<td>2009</td>
<td>338</td>
<td>20</td>
<td>11</td>
<td>369</td>
</tr>
<tr>
<td>2010</td>
<td>366</td>
<td>20</td>
<td>11</td>
<td>397</td>
</tr>
<tr>
<td>2011</td>
<td>54</td>
<td>53</td>
<td>0</td>
<td>107</td>
</tr>
<tr>
<td>2012</td>
<td>131</td>
<td>22</td>
<td></td>
<td>153</td>
</tr>
</tbody>
</table>

Source: Mental Health Program, Majuro & Ebeye

Table 54 shows that there were 153 patients who received medications and mental health counseling.

**Table 55: Data on Suicide Cases**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Attempted</th>
<th>Completed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>16</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>2009</td>
<td>14</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>2010</td>
<td>25</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>2011</td>
<td>33</td>
<td>13</td>
<td>46</td>
</tr>
<tr>
<td>2012</td>
<td>11</td>
<td>8</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Mental Health Program, Majuro & Ebeye

**Table 56: Suicide Cases in RMI by Type and Location**

<table>
<thead>
<tr>
<th>Types of Suicide</th>
<th>Majuro/Outer Islands</th>
<th>Ebeye</th>
<th>Total</th>
<th>Majuro/Outer Islands</th>
<th>Ebeye</th>
<th>Total</th>
<th>Majuro/Outer Islands</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>12</td>
<td>1</td>
<td>13</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Attempted</td>
<td>10</td>
<td>1</td>
<td>11</td>
<td>17</td>
<td>16</td>
<td>33</td>
<td>16</td>
<td>9</td>
<td>25</td>
</tr>
</tbody>
</table>
It is worth knowing that suicides related with alcohol were done at the height of intoxication. Family members should be very sensitive in identifying any sign of depression and detection of an early signs of suicide attempt with other members. Hanging is the most common method of suicide. This fiscal year has the highest suicide cases. All attempted cases received mental health counseling from the Human Services Program.

**Achievements:**

Mental Health GAPS Training was conducted by the New South Wales Institute of Psychiatry. Doctors, Human Services Staff, Ebeye Mental Health Program Staff, WUTMI, KIJLE and Public Safety. There were 101 participants.

1 Public Health physician and 1 Staff Nurse were assigned to Majuro Human Services and Mental Health program. Through the grant, the program received one vehicle that will be used to conduct outreach activities. Olmstead Grant approved and amount funded increased from $10,000 to $18,000. Continued training was approved and funded by the Psychiatric Department of University of New Wales, New Zealand.

The program provide the following services:

1. Home visits to give medications and bring clients to the clinic for consultation with the physicians, nurses, and counselors.
2. The program provides pscho-education to family, community and schools.
4. Program visits the Outer Islands to conduct screening to new clients and follow up visits to old clients.

Community Activities:
- Sexual Violence presentation in Youth to Youth in Health, Salvation Army,
- Presentations on depression and suicide in the Women’s Health Conference and Youth Summer Program of Ministry of Internal Affairs
- Presentations of HIV/AIDS, Sexual Violence, Nutrition, Teen Pregnancy and Alcohol Abuse in the Outer Islands visits.

Ebeye Mental Health Program

Depression and suicide particularly in the youth population is a major concern of the health system. The rate of attempted suicide cases was lower than previous FY. Out of (6) unsuccessful attempted suicide cases this year and (1) successful or completed suicide cases was reported. This year all completed suicide cases were younger age group than last year. We continue to give our best efforts to provide suicide awareness and prevention activities to the high school students. Moreover, alcohol use has a very strong correlation with the suicide cases.

On this fiscal year, 610 elementary students received health talks on Alcohol and Substance Abuse, tobacco and betel nut, smokeless tobacco. 234 High school students received health talks on Prevention of Suicide and Depression. Mental health screening survey was conducted after the health talks to the students.

Depression Survey

The survey was conducted to 234 freshmen from all six high schools on Ebeye this FY using questionnaire on PHQ (Patient Health Questionnaire)-9 Modified for teens. The participants’ age ranged from 12 years old to 19 years old and comprised of 49% female and 51% female. Findings revealed that most of the students have minimal to mild depression. Even though a small percentage of students has serious thoughts of hurting themselves and have tried to make an attempt. It shows that some young people are having symptoms of depression at some time in their lives. Survey findings are as follows:
Table 57: Depression Survey, FY2012

<table>
<thead>
<tr>
<th>#</th>
<th>Questions</th>
<th>Not at all Score 1</th>
<th>Several Days Score 2</th>
<th>&gt;Half the Days Score 3</th>
<th>Nearly Every Day Score 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feeling down, depressed, irritable or hopeless</td>
<td>111</td>
<td>110</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>Little interest or pleasure in doing things</td>
<td>91</td>
<td>126</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Trouble falling asleep, staying asleep or sleeping too much</td>
<td>131</td>
<td>86</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Poor appetite, weight loss or overeating</td>
<td>122</td>
<td>81</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Feeling tired or having little energy</td>
<td>119</td>
<td>101</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Feeling bad about yourself- or feeling that you are a failure or that you have left yourself or your family down</td>
<td>140</td>
<td>76</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Trouble concentrating on things like schoolwork, reading or watching TV</td>
<td>118</td>
<td>91</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>8</td>
<td>Moving or speaking slowly that other people could have noticed? Or the opposite- being so fidgety or restless that you were moving around a lot more than usual</td>
<td>149</td>
<td>72</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Thoughts that you would be better off death or of hurting yourself in some way</td>
<td>162</td>
<td>57</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>In the past year have you felt depressed or sad most days, even if you felt OK sometimes?</td>
<td>114</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>Questions</th>
<th>Not difficult at all</th>
<th>Some-what difficult</th>
<th>Very difficult</th>
<th>Extremely difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>If you are experiencing any of the problem on this form, how difficult have these problems made it for you to do your work, take care of things at home get along with others</td>
<td>101</td>
<td>105</td>
<td>121</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Has there being a time in the past month when you have had serious thoughts about ending your life</td>
<td>44(19%)</td>
<td>190(81%)</td>
</tr>
<tr>
<td>13</td>
<td>Have you ever, in your whole life, tried to kill yourself or made a suicide attempt</td>
<td>31(13%)</td>
<td>203(87%)</td>
</tr>
</tbody>
</table>

The survey shows 19% of the students have serious thoughts about ending their lives in the past month and 13% have tried to kill themselves or made a suicide attempt in their whole life.
**Table 58: Students with stages of Depression, FY2012**

<table>
<thead>
<tr>
<th>Description</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Depression (Score 1-4)</td>
<td>44</td>
<td>57</td>
</tr>
<tr>
<td>Mild Depression (Score 5-9)</td>
<td>49</td>
<td>38</td>
</tr>
<tr>
<td>Moderate Depression (Score 10-14)</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Moderately Severe Depression</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

No students fall in Severe Depression (score 20-27)

**Table 59: Students who tried to commit Suicide, FY2012**

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>15</td>
<td>6</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>13</td>
<td>31</td>
</tr>
</tbody>
</table>

Those who attempted suicide are mostly fall in 15 and 16 years age group out of which male are more dominant than female. This indicates that young people are at risk for depression and suicidal attempt.

We engaged and informed the parents of the screening results to those whose scores are 10 and above and follow up was done to them. Our program informed the principals from six schools about the survey results and we give lectures on early detection on depression to the teachers and PTA. We will continue the same to sophomore students in next year (Cohort Study).

One case of child sexual assault and one case of child physical abuse were reported in FY2012.

**Way Forward:** The program will continue to strengthen public health awareness on the availability of services. Strengthen referral system of mental health cases. Better intervention strategies will be instituted in the program. It is also important that the general population is knowledgeable in detecting the early signs of suicide in order to strengthen community collaboration for patient referral and counseling.
During the reporting year, the program was able to coordinate major initiatives and planned activities for year 2012 plan of action. The CPPW basically is to supplement the diabetes & tobacco collaborative performance agreement (CPA), and its main objectives are to promote policy & environmental change at community or national level.

Achievements:

- The program received the 4th Year budget period for Diabetes and Tobacco Grant and continued to implement a supplemental fund that focus on Chronic Disease Plan
- The program produce weekly Health Promotion in media, radio program & newspaper advertisements. In the table below, it summarizes the advertisements in V7AB and Marshall Islands Journal

### Table 60: V7AB Radio Program & Marshall Islands Journal, FY2012

<table>
<thead>
<tr>
<th>Radio Programs</th>
<th>News Paper Advertisement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco &amp; Alcohol</td>
<td>Tobacco &amp; Alcohol</td>
</tr>
<tr>
<td>Food Safety</td>
<td>Food Safety</td>
</tr>
<tr>
<td>STD</td>
<td>STD</td>
</tr>
<tr>
<td>BMI (Body Mass Index)</td>
<td>BMI (Body Mass Index)</td>
</tr>
<tr>
<td>Flu Vaccine</td>
<td>Flu Vaccine</td>
</tr>
<tr>
<td>Back Pain</td>
<td>Back Pain</td>
</tr>
<tr>
<td>Type II Diabetes</td>
<td>Type II Diabetes</td>
</tr>
<tr>
<td>Heart Disease &amp; Stroke</td>
<td>Heart Disease &amp; Stroke</td>
</tr>
<tr>
<td>Cancer</td>
<td>Cancer</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>Vitamin A</td>
</tr>
<tr>
<td>Tobacco</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>Vitamin A</td>
</tr>
<tr>
<td>Cancer</td>
<td>Cancer</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>Malnutrition</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Smoking</td>
<td>Smoking</td>
</tr>
<tr>
<td>Breast feeding</td>
<td>Breastfeeding</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td></td>
</tr>
<tr>
<td>3 Food Groups</td>
<td>3 Food Groups</td>
</tr>
<tr>
<td>20 topics</td>
<td>20 topics</td>
</tr>
</tbody>
</table>

Source: Health Promotion, Primary Health Care Services

- “Unare Peid Project” in Jaluit, provided Diabetes screening, Foot Care, Cooking Demonstration, Nutrition Education, Physical Activity. Incentives were given during the 1 week visit in Jaluit Schools and Community. Ninety six (96) participants were accounted
HEALTH PROMOTION AND DISEASE PREVENTION

during this project from Jaluit Community and the Schools. 57% of them were diabetic, 21% were pre-diabetic, 51% of them were obese & 36% were overweight

- During the World Diabetes Day”, the program visited Delap Elementary School, Rairok Elementary School, NVTI, Rita Elementary School, Majuro Middle School, Laura Elementary School, Coop School, Ajeltake School, and SDA Elementary School for diabetes education: important steps to take to prevent diabetes at an early age, foot care education: how to protect your foot from amputations, nutrition and physical activity. Cooking demonstrations and diabetes screening with the Volunteer group in Ajeltake community.
- World AIDS Day: The program provided education on HIV/AIDS disease, prevention, and medication during the World Aids Day. We collaborated with TB Program, STD/HIV Program, Youth to Youth in Health, and MOH Laboratory. Another activity during the Worlds Aids Day is that the program provided 30 minutes HIV/AIDS video and 15 minutes questions & answers in Laura, NVTI, Coop and MIHS.
- The program’s JOCV volunteer in partnership with JOCV nurse in Maternity provided education on nutrition, breastfeeding, counselling and raising the babies in a healthy lifestyles to pregnant women in the Prenatal Clinic. An average of 20 pregnant women every 1st visit.
- Health Education were provided in Ulien Elementary School in Arno. Healthy Lifestyle, Nutrition Education, teen pregnancy, and condom education for protection of STD/HIV AIDS.
- HPDP collaborated with Cancer Program, Kumit Bobrae coalition, KIJLE, WUTMI, MIEPI, YTYIH, Cancer Support Group, and Public Safety in raising Cancer Awareness in the schools
- Conducted a training on Foot Care under the LEAP Program, Nutrition, Physical Activity and Healthy Lifestyle in the Community, Schools and Working Places
- HPDP and Reproductive Health program provided Health Awareness & Education Young Mothers& Girls.
- The Diabetes Task Force has regular quarterly meeting. We discussed the achievements, challenges and plan to improve the Diabetes One Stop Shop.
- Program celebrated the National Health Month by visiting the schools with combination of different Public Health Program and Health promotion and disease prevention program. We provided education on TB, Leprosy, Nutrition and Physical Activity to Laura Elementary School & Woja Elementary school with all the Teachers & Students. 150 participated in Woja Elementary school and 240 for Laura Elementary School.
- During the International Family Day, the program provided lectures on Basic First Aid, eye injury, burn, fall injury and physical to the young boys. There were 140 participants. This activity was in collaboration with the Ministry of Health, Bill Fish, Chamber of Commerce and Internal Affairs.
- World No Tobacco Day, Protect Our Children, Stop Tobacco Single Sales” Campaign Awareness was accomplished from Rita all the way to Rairok. WNTD Committee members are NGO, MALGOV, MIEPI, MOH. Public Safety
- MOH and Kijle conducted “Improving Health Through Home Gardening (Ekkat Imoko nan Ejmou e)" Project in Ajeltake. We started the project with a walkathon. 40 people participated on this project.
• The program staff joined the Wotje Outreach Mobile Team in providing health promotion on foot care, physical activity, nutrition, cooking demonstration and gardening demonstration.

• In collaboration with HPDP and MCH SSDI Program, Taiwan Health Center conducted a BMI Screening in the public schools in Majuro.

• HPDP provided health education in Assembly of God and Full Gospel Church on Non Communicable Disease, Healthy Lifestyle, Nutrition and Physical Activity.

• NCD Forum was conducted in the Marshall Islands. This activity is in partnership with WHO. We discussed the WHO PEN (Package of Essentials for Non Communicable Diseases).
Breastfeeding – New Born

Tables below contain data collected from Maternity, Pediatric, and Public Health on Breastfeeding, Pediatric Malnutrition cases, and Vitamin A distribution.

Table 61: Number of Babies Exclusively Breastfed upon Discharge from Majuro Hospital

<table>
<thead>
<tr>
<th></th>
<th># of Live Birth Registered</th>
<th># of Breastfed</th>
<th># of Exclusively Breastfed</th>
<th>Baby on IV Fluid only</th>
<th># of mix Feeding</th>
<th># of Bottle Fed Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
<td>876</td>
<td>870</td>
<td>829</td>
<td>43</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>Percentage</td>
<td>100%</td>
<td>99%</td>
<td>95%</td>
<td>0.049%</td>
<td>0.019%</td>
<td>0.001%</td>
</tr>
</tbody>
</table>

Source: Clinical Data – Maternity Unit, Majuro Hospital

Nurses continue to implement proper attachment between the newborn and the mother after delivery at the delivery room. BFHI (Baby Friendly Hospital Initiative) has been a great challenge for the nurses due to limited resource, staff, and not enough space in the delivery room.

Table 62: FY2012 Breastfeeding Information in Well Baby Clinic, Majuro

<table>
<thead>
<tr>
<th>Age</th>
<th>Children Registered</th>
<th>Breastfed</th>
<th>Exclusively Breastfed</th>
<th>Mix feeding</th>
<th>Bottle fed only</th>
<th>Food only</th>
<th>Underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6 months</td>
<td>1,483</td>
<td>867</td>
<td>611</td>
<td>452</td>
<td>894</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>7-12 months</td>
<td>719</td>
<td>141</td>
<td>70</td>
<td>277</td>
<td>59</td>
<td>41</td>
<td>15</td>
</tr>
<tr>
<td>13-24 months</td>
<td>19</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>10</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>&gt;24 months</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>2,227</td>
<td>1,009</td>
<td>683</td>
<td>742</td>
<td>963</td>
<td>64</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Well Baby Clinic at Public Health – Worksheets, Majuro Hospital

Table 63: FY2012 Breastfeeding Information in Well Baby Clinic, Ebeye

<table>
<thead>
<tr>
<th>Age</th>
<th>Children Registered</th>
<th>Breastfed</th>
<th>Exclusively Breastfed</th>
<th>Mix feeding</th>
<th>Bottle fed only</th>
<th>Food only</th>
<th>Underweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6 months</td>
<td>175</td>
<td>161</td>
<td>137</td>
<td>25</td>
<td>13</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7-12 months</td>
<td>152</td>
<td>128</td>
<td>0</td>
<td>152</td>
<td>44</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>13-24 months</td>
<td>19</td>
<td>278</td>
<td>0</td>
<td>362</td>
<td>138</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>&gt;24 months</td>
<td>1014</td>
<td>24</td>
<td>0</td>
<td>41</td>
<td>27</td>
<td>987</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>1,360</td>
<td>591</td>
<td>137</td>
<td>580</td>
<td>222</td>
<td>992</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Well Baby Clinic at Public Health – Filemaker Program, Ebeye Hospital
Pediatrics High Risk Program:

Table 64: Malnourished Children Admitted to Majuro Hospital

<table>
<thead>
<tr>
<th>Year</th>
<th>0-1 years</th>
<th>2-5 years</th>
<th>&gt;5 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2012</td>
<td>34</td>
<td>2</td>
<td>2</td>
<td>38</td>
</tr>
</tbody>
</table>

Vitamin A Supplement

Table 65: Vitamin A Supplement activity in Majuro, FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 month</td>
<td>100</td>
<td>138</td>
<td>238</td>
</tr>
<tr>
<td>6 months-1 year</td>
<td>320</td>
<td>257</td>
<td>577</td>
</tr>
<tr>
<td>2-4 years old</td>
<td>371</td>
<td>405</td>
<td>776</td>
</tr>
<tr>
<td>Others &gt;5 years up</td>
<td>1,211</td>
<td>1,433</td>
<td>2,644</td>
</tr>
<tr>
<td></td>
<td>2,002</td>
<td>2,233</td>
<td>4,235</td>
</tr>
</tbody>
</table>

There are 4,235 Vitamin A distributed to children in Majuro community and Public Elementary Schools as well. 322 Mothers in Ebeye received Vitamin A Supplement during postpartum.

Table 66: Non-School Children (under 1 year) Ebeye, FY2012

<table>
<thead>
<tr>
<th>Community</th>
<th>Registered</th>
<th>Received Vit.A</th>
<th>% Received Vit. A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>84</td>
<td>75</td>
<td>89</td>
</tr>
<tr>
<td>Zone 2</td>
<td>106</td>
<td>97</td>
<td>92</td>
</tr>
<tr>
<td>Zone 3</td>
<td>88</td>
<td>74</td>
<td>84</td>
</tr>
<tr>
<td>Santo</td>
<td>33</td>
<td>29</td>
<td>88</td>
</tr>
<tr>
<td>Ebadon</td>
<td>3</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>Mejatto</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Carlos &amp; Carlson</td>
<td>3</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>320</td>
<td>279</td>
<td>87</td>
</tr>
</tbody>
</table>

Table 67: Vitamin A Activity on Non-School-Age Children (1-4 yrs. old) Ebeye, FY2012

<table>
<thead>
<tr>
<th>Community</th>
<th>Registered</th>
<th>Received Vit. A</th>
<th>Received Deworming</th>
<th>% Received Vit. A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone 1</td>
<td>692</td>
<td>636</td>
<td>249</td>
<td>92</td>
</tr>
<tr>
<td>Zone 2</td>
<td>923</td>
<td>839</td>
<td>323</td>
<td>91</td>
</tr>
<tr>
<td>Zone 3</td>
<td>804</td>
<td>668</td>
<td>269</td>
<td>83</td>
</tr>
<tr>
<td>Santo</td>
<td>199</td>
<td>161</td>
<td>62</td>
<td>81</td>
</tr>
<tr>
<td>Ebadon</td>
<td>21</td>
<td>17</td>
<td>14</td>
<td>81</td>
</tr>
<tr>
<td>Mejatto</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Carlos &amp; Carlson</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>2661</td>
<td>2343</td>
<td>939</td>
<td>0</td>
</tr>
</tbody>
</table>
Ebeye Health Promotion Program:
- HIV/STI program, Immunization Program, Substance Abuse Program, Reproductive Health Program visited all schools to give health talks
- On this fiscal year, 610 elementary students attended health presentations on Alcohol and Substance Abuse, tobacco and betel nut, smokeless tobacco
- 234 high school students attended presentation on prevention of suicide and depression.
- Conducted preventive activities on promoting healthy life style in the community in Kwajalein Atoll.
- Participated in translating and helping patients during the Canvasback missions.
- Participated in Leprosy screening activities at all elementary schools.
- Work site exercise program is well established after office hours 3 days a week led by HE Program at the hospital lobby not only the hospital staffs but also the staffs from other department joined the exercise.

Challenges:
- After mother & baby were discharged from the Maternity Ward, mothers tend to stop breastfeeding their babies for no reason which indicate there is a need for aggressive education and awareness activities on breastfeeding practice to prevent or reduce morbidity and mortality among infants and young children.
- Program needs more staff to strengthen health promotion activities.

Way Forward:
For the program to continue capacity building in the areas listed below from the previous year:
1. Strengthen the referral of diabetic patients from Outpatient, ER, and Admission Wards to the Public Health Diabetic Clinic for regular consultancy and management of their diabetes.
2. Recruit a Tobacco Coordinator to strengthen the tobacco activities.
3. Finalize the Regulations under the RMI Framework Convention on Tobacco Control (FCTC) and Food Safety Legislation.
4. Coordinate with other program areas and partners to strengthen health promotions activities in the outer islands.
5. Collaborate with the Community Health Councils in developing or implementing and monitoring community health program.
6. Conduct RMI STEPwise approach to surveillance (STEPS). The last STEPS was done in 2002.
8. Establish the Declaration on State of Emergency Against NCDs for Marshall Islands.
9. Plan and implement activities for State of Emergency Against NCDs.
Diabetes remains the leading cause of mortality and morbidity in RMI. In FY 2010, 23% of registered deaths are due to diabetes related diseases such as the End Stage Renal Failure, Uremia, and Septicemia. Diabetes is a life style disease that can be prevented. The Ministry of Health has been advocating healthy lifestyle through physical activities and healthy eating habits. The Diabetes Wellness Center continue to partner with MOH in the promotion of healthy lifestyles. Health promotion through posters, presentations, and meetings are ways to communicate to the community about the effect of diabetes and how to prevent it. The Health Promotion and Disease Prevention Unit is implementing the KUMIT NCD plan to address the Non Communicable Diseases.

In FY2012, MOH celebrated the World Diabetes Day with the community. As such, community health screening and health promotion activities were conducted during the World Diabetes Day and throughout the fiscal year.

### Table 68: Prevalence Rate of Diabetes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>52,701</td>
<td>53,236</td>
<td>54,065</td>
<td>54,439</td>
<td>53,158</td>
<td>53,158</td>
</tr>
<tr>
<td>Majuro</td>
<td>1694</td>
<td>1570</td>
<td>1369</td>
<td>1385</td>
<td>1357</td>
<td>1,009</td>
</tr>
<tr>
<td>Ebeye</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>623</td>
<td>623</td>
<td>785</td>
</tr>
<tr>
<td>Majuro and Ebeye</td>
<td>2,294</td>
<td>2,170</td>
<td>1,969</td>
<td>2,008</td>
<td>1,980</td>
<td>1,794</td>
</tr>
<tr>
<td>Prevalence Rate*</td>
<td>435</td>
<td>408</td>
<td>364</td>
<td>369</td>
<td>372</td>
<td>337</td>
</tr>
<tr>
<td>Increase/Decrease</td>
<td>6.2%</td>
<td>10.8%</td>
<td>1.4%</td>
<td>0.81%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Per 10,000 Population

Majuro Diabetes data for FY2012 is registered diabetes cases in Public health CDEMS. Data entry in Medical Records, Majuro Hospital is still on going for encounters of FY2012.

**Graph 12: Prevalence of Diabetes**
## Diabetes Related Amputation

<table>
<thead>
<tr>
<th>Type of Amputation</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Majuro</td>
<td>Ebeye</td>
</tr>
<tr>
<td>Major Amputation (BKA/AKA/BEA)</td>
<td>28</td>
<td>5</td>
</tr>
<tr>
<td>Disarticulation/Partial Amputation</td>
<td>27</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>11</td>
</tr>
</tbody>
</table>

### Majuro Diabetes Program
- The program continues to implement and improve the diabetes registration using the Chronic Disease Electronic Management System (CDEMS). CDEMS is a registry system for all Chronic Diseases. CDEMS help the Physician manage the patient better because of availability of laboratory results, services given, medications that patients are taking, and record of their visits. In this fiscal year, the program continue to have regular Diabetes task force meeting to review the program activities and data. Staff use the reports from CDEMS to analyze the diabetic patients to improve health care services. The CDEMS started in FY2011.

### Table 69: Diabetes Patients enrolled in the CDEMS

<table>
<thead>
<tr>
<th>Age</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Unknown</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>15-19</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>20-24</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>25-29</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>30-34</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>35-39</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>40-44</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>45-49</td>
<td>31</td>
<td>60</td>
</tr>
<tr>
<td>50-54</td>
<td>38</td>
<td>62</td>
</tr>
<tr>
<td>55-59</td>
<td>50</td>
<td>82</td>
</tr>
<tr>
<td>60-64</td>
<td>43</td>
<td>65</td>
</tr>
<tr>
<td>65-69</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>70-74</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>75-79</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>80+</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>242</td>
<td>388</td>
</tr>
</tbody>
</table>
Since program started, 637 diabetic patients have enrolled in FY2011. In FY2012, the number of enrollees increased to 1,009. These patients are seen during the Diabetic Clinic in Public Health. A total of 1,357 old and new diabetes patients that were seen in Majuro Hospital and Majuro Public Health Clinic.

- Diabetes One Stop Shop continue the one stop shop consists of diabetes management in Public Health, Foot Care Clinic, Health Education, Dental services, Radiology Services, and Laboratory Services
- Diabetes Task Force was established in FY2011 to discuss and coordinate the ongoing activities in the Diabetic clinic, challenges, outreach, and improvements.

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic Patient Registered</td>
<td>654</td>
<td>1,009</td>
</tr>
<tr>
<td>Patients that visited for the year</td>
<td>575 (87.9%)</td>
<td>622 (61.5%)</td>
</tr>
<tr>
<td>Pts. Avg Visits</td>
<td>3.05</td>
<td>3.11</td>
</tr>
<tr>
<td>1. Average HbA1c of &lt; 7.0%</td>
<td>3.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td>2. At least 90% of patients have at least 2 HbA1c/year</td>
<td>7.7%</td>
<td>3.9%</td>
</tr>
<tr>
<td>3. At least 70% of patients have SMG sessions</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. At least 40% of patients have BP &lt;130/80 mmHg</td>
<td>47.8%</td>
<td>46.3%</td>
</tr>
<tr>
<td>5. At least 75% of patients (55 years and older) have current prescriptions for ACE Inhibitors</td>
<td>6.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td>6. At least 60% of patients (40 years and older) have current prescriptions for Statins</td>
<td>7.7%</td>
<td>22%</td>
</tr>
<tr>
<td>7. At least 70% of patients have dilated eye exam for the past year</td>
<td>13%</td>
<td>25.1%</td>
</tr>
<tr>
<td>8. At least 70% of patients have comprehensive foot exam for the past year</td>
<td>42.8%</td>
<td>45%</td>
</tr>
<tr>
<td>9. At least 70% of patients have dental examination for the past year</td>
<td>33.6%</td>
<td>*</td>
</tr>
<tr>
<td>10. At least 90% of patients have Influenza vaccination for the past year</td>
<td>39.1%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

*Data entry for Majuro is still in progress

**Majuro Diabetes Foot Care Clinic**

The Foot Care Clinic opens every Monday and Friday mornings in Majuro Hospital. The primary goal of the new offered service is to perform the five LEAP components as follows: (1) Foot Screening (2) Management of Simple Foot Problem (3) Patient Education (4) Daily Self-Inspection and (5) Footwear selection. The clinic tends to reduce the prevalence of ulcer and amputation. Long term goal for the DFC Clinic is to decrease the number of amputation performed at the hospital.
## Diabetes

### Table 71: Diabetes Foot Care Encounter

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>New referrals</td>
<td>346</td>
<td>335</td>
<td>250</td>
</tr>
<tr>
<td>Follow-up</td>
<td>254</td>
<td>518</td>
<td>272</td>
</tr>
<tr>
<td>Total Encounter</td>
<td>600</td>
<td>853</td>
<td>519</td>
</tr>
</tbody>
</table>

In FY 2012, 250 diabetic cases were screened (foot sensory examination, foot care education/management; nutrition counseling)

- 45% (113 new referrals) have poor sensation and at risk for foot problems/complication.
- 20% have foot ulcer/wound (48 patients were referred by the surgeons, OPD dressing & self-referred to DFC for foot care management)
- 73% of compliant patients had healed ulcer; 11% had amputation; 16% are still receiving foot care management.

### Ebeye Diabetes Program

The program received a 5-Year CDC-AAPCHO (Association of Asian Pacific Community Health Organizations) project grant to eliminate Diabetes-related disparities in vulnerable populations. In Fiscal Year 2011 (Year 1 of the project) – the program was able to re-establish and strengthen the Kwajalein Diabetes Coalition and complete 4 major needs and assets assessment related to Diabetes.

In FY 2012, there were 476 registered users and 3,826 encounters for Diabetes and Hypertension. Diabetes Users and encounters comprised of 476 and 2490 respectively. DM-related hospital deaths ranks first and accounts for 66.6% (26/39) of deaths amongst adults.

### Table 72: Key Outcome Measures for Ebeye Diabetes Program

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>PECS DATA REGISTRY SIZE</td>
<td>446</td>
<td>413</td>
<td>476</td>
</tr>
<tr>
<td>1. Average HbA1c of &lt; 7.0%</td>
<td>9.6%</td>
<td>10.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td>2. At least 90% of patients have at least 2 HbA1c/year</td>
<td>5.4%</td>
<td>2.1%</td>
<td>39.6</td>
</tr>
<tr>
<td>3. At least 70% of patients have SMG sessions</td>
<td>17%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>4. At least 40% of patients have BP &lt; 130/80 mmHg</td>
<td>41.3%</td>
<td>29%</td>
<td>37.4</td>
</tr>
<tr>
<td>5. At least 75% of patients (55 years and older) have current prescriptions for ACE Inhibitors</td>
<td>62.6%</td>
<td>69.6%</td>
<td>66.9</td>
</tr>
<tr>
<td>6. At least 60% of patients (40 years and older) have current prescriptions for Statins</td>
<td>20.2%</td>
<td>26.4%</td>
<td>23.7</td>
</tr>
<tr>
<td>7. At least 70% of patients have dilated eye exam for the past year</td>
<td>33.8%</td>
<td>11.14%</td>
<td>NR</td>
</tr>
<tr>
<td>8. At least 70% of patients have comprehensive foot</td>
<td>9.4%</td>
<td>8.78%</td>
<td>10.9%</td>
</tr>
</tbody>
</table>
### Diabetes

<table>
<thead>
<tr>
<th>Exam for the past year</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. At least 70% of patients have dental examination for the past year</td>
<td>61.8</td>
<td>51</td>
<td>43.6</td>
</tr>
<tr>
<td>10. At least 90% of patients have Influenza vaccination for the past year</td>
<td>99</td>
<td>99</td>
<td>99</td>
</tr>
</tbody>
</table>

One of the main highlights of Ebeye’s Diabetes Program is its significant accomplishments in terms of its partnership with the community – the Kwajalein Diabetes Coalition (KDC). The coalition which includes the health center diabetes program staffs embarked on a year-long strategic planning activities and capacity building trainings to address the overwhelming burden of diabetes in the Kwajalein Atoll community. This is in part of a Five-Year project with the CDC and the Association of Asian Pacific Community Health Organizations (AAPCHO) to eliminate diabetes-related health disparities in vulnerable populations.

Some of the highlight activities of the Kwajalein Diabetes Coalition on this fiscal year are as follows:

- Diabetes Awareness during the Memorial Day celebrations where KDC bagged first price in the float contest. The coalition distributed hundreds of informational materials about the coalition and the work they intend to do for the community. They also distributed health informational materials and in the process, strengthened partnerships with various sectors and leaders of the community.
- Problem and Objective Assessment Analysis completed March 2012
- Face to Face Meeting with CDC, AAPCHO, and three other Community Health Centers involved in the five-year AAPCHO project as part of its capacity building training. This was conducted in Hawaii where 10 coalition members participated.
- Evidence-Based Policy, System, and Environmental Change interventions completed
- Coalition Building Workshop
- Face to face meeting with ROC, CMILG, and OEPPC to strategically plan for the community and home gardening programs
- Kwajalein Diabetes Coalition officially chartered on August 2012
- KDC secured an NIH-Research Diabetes Research grant in partnership with American Samoa Diabetes Coalition
- KDC changed its Tool Assessments and drafted 3 Years Strategic Plan named DIAK Plan

The three-year strategic plan which utilizes the Socioecological Model focusing on Physical Activity, Nutrition, and Health Care Management will be implemented from October 2012 to September 2015. The plan’s overall goal is to improve the lives of people living with diabetes by implementing policy, system, and environmental change interventions in the community to assist diabetics in improving glycemic control and reducing complications of the disease.
Cancer is the 2nd leading cause of death in RMI. It affects the female population more than the male. The death is attributed to breast cancer, cancer of the cervix, liver cancer, and of course, lung cancer.

### Table 73: Death Due to Type of Cancer, FY2012

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Lung</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Breast</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Nasopharyngeal</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Laryngeal</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Ovary</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Kidney</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Leukemia</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Submandibular</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pancreas</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Colon</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Neck</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Liver</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Stomach</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Urinary Bladder</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Brain Tumor</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lumber</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Uterus</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>15</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>


The NCCCP Cancer Registry was developed to link with the Medical Records, Laboratory, and Vital Statistics for confirmed cases and possible cases of cancer.

### Table 74: Registered New Cancer Cases Per Site FY2012

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>M</th>
<th>F</th>
<th>Ebeye</th>
<th>Majuro</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>18.2</td>
</tr>
<tr>
<td>Cervical Cancer</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>13.6</td>
</tr>
<tr>
<td>Uterine Cancer</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>Lung</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>Leukemia</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4.6</td>
</tr>
<tr>
<td>Prostate</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4.6</td>
</tr>
<tr>
<td>Laryngeal</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4.6</td>
</tr>
</tbody>
</table>
Graph 13: Cancer Incidence and Prevalence Rate

For the last consecutive years shown, the prevalence rate of cancer continued to escalate significantly. The table shows that it has reached up to a prevalence rate of 42 percent. That means more people continue to suffer from cancer. The prevalence rate continues to increase partly due to (1) unsanitary environment, (2) radiation, (3) Vitamin A deficiency, (4) life-styles,
such as excessive smoking and heavy consumption on alcohol. Nevertheless, the incidence rate demonstrates a declining mobility from an incidence rate of 12 in FY 2011 to an incidence rate of 8 in FY 2012. Several comparative studies have indicated that cancer in males in the Marshall Islands is about 3.8 times higher than the males in the United States and 3.09 times higher for females in the Marshall Islands compared to the females in the United States. There is a tendency to believe that the both incidence and prevalence rates in the Marshall Islands will continue to decline given a vigorous intensification of the NCD strategic response plan is in place.

Accomplishments/Success

- The 5 year grant from 2007-2012 ended in June 2012. A new funding opportunity was awarded to RMI by CDC. The main goal for the new grant is to continue our efforts in reducing the burden of the three top preventable cancers in the RMI, which are cervical; breast; and colorectal. The program continues to rebuild and integration of coalitions to one National Coalition. The new grant was awarded late June 2012.
- The Cancer Support Group (CSG) meets regularly to update on the group’s goals and objectives related to those of the program’s work plan; conduct outreach to community and speak openly about experience as cancer survivors and constant struggles. CSG engage in fundraising activities, raise awareness on early cancer detection joined the mobile teams to the Outer Islands to expand their activities.
- NCCCP Staff and Cancer Coalition established partnership with Marshall Islands Epidemiology, KJLE, YTYIH, MOE, Majuro Clinic, SSA, WUTMI and MOH Health Promotion for the February 2012 Health Fair. The group to visit the community and the schools including MIHS, MMS, LHS, DES, SDA, WES, AES, and Rairok Elementary School. Since the theme incorporated Healthy Lifestyle, the main message was to educate on the risk factors for cancer and emphasize the importance of prevention.
- On the 24th of February, all the programs in the Bureau of Primary Health Care Services in Majuro had a general assembly. Each program presented their program goals, objectives, successes and challenges. For the 5 years, the program had supported building capacity in screening services, build partnerships, and is still in the process of bringing trainings to Majuro and Ebeye such as VIA, interventional radiology, pap smear screenings, developing and Evaluation plan, patient navigations, and Palliative care.
- The NCCCP supports the Cytology, PapSmear Screening for 8 Laboratory Technicians and Health Care Providers from Majuro, Ebeye and 177 Health Care Program. The goal of the training was to localize the screening services and to sustain the training by conducting it every year aiming for capacity building in cervical cancer screening services.
• In late March 2012, The RMI Ministry of Health (MOH) in partnership with JABSOM Geriatric Medicine Department, University of Hawaii conducted a 5 day Navigation Workshop from 26 – 30 March, 2012 at the International Conference Center (ICC). The goals of the trip were:
  1. To create a culturally appropriate navigation curriculum for RMI.
  2. To train lay volunteers from NGOs and faith-based organizations to become navigators.
A total of 35 navigators from local organizations such as cancer survivor’s support group, Salvation Army, Latter Day Saints, Jieikne, Bat-Kan Weto, Drenlik Weto, Youth to Youth in health, Kabile, and Ministry of Health were trained. Participants were given a certificate at the end of the training, this meant a lot to them.

• Trainings
  1. November 2011, the NCCCP attended a regional meeting in Guam. Topics are: a. NCD concepts such as Pacific Partnerships for Tobacco Free Islands; Pacific Chronic Disease Coalition; Pacific Basin Medical Association; Pacific Islands Primary Care Association; and Breast and Cervical Cancer Programs, b.) NCD Road map; c.) QA/QI/HRH Initiatives d.) HIS/Data/Epi and Vital Statistics.
  2. February 13th - 17th, together with NCD program, NCCCP Coordinator attended a conference in San Diego, California for Coordinated Chronic Disease Prevention and Health Promotion Grantee Meeting. Recently, there was an initiative to bring together all the NCD programs.
3. In March 2012, the Cancer Registrar and the Cancer Coordinator visited Ebeye to work with the registry and to attend a coalition meeting to update the cancer coalition’s work plan and activities.

4. In May 2012, the NCCCP Coordinator attended a Cancer Council of the Pacific Islands (CCPI) meeting held in Honolulu, Hawaii focusing on the Regional NCCCP work plan/action plan for Prevention, Screening, Data, Quality of Life, and Evaluation. There were many discussions on collaboration efforts with other NCD programs as well as integrating the chronic care model into all the programs.

5. In June 2012, Majuro and Ebeye staff participated and presented 3 projects in Intercultural Cancer Conference in Houston. The three projects were Coalition Building, Breast and Cervical trainings for local nurses in Ebeye, and development of Cancer Screening Guidelines.

6. In August, all DCPC DP12-1205 grantees had a “kick-off meeting” to revisit topics that pertain to Chronic Disease and Prevention. The meeting objectives included:
a) Have a working knowledge of the National Center for Chronic Disease Prevention and Health Promotions’ (NCCDPHP) four domains.

b) Have a working knowledge of how the National Comprehensive Cancer Control Program supports the NCCDPHP’s four domains.

c) Have a working knowledge of policy, systems, and environmental change and its role in comprehensive cancer control.

7. In April 2012, NCCCP Coordinator attended The Pacific Chronic Disease Coalition Meeting in Hawaii. PCDC discussed the regional projects like: a.) Collaborative Training in FSM; b.) PITCA presentations free-up 902 Supplemental funds; possible paper/study publications; c.) more funding from CDC for RMI LEAP program.

- The cancer program has been promoting awareness and activities through the journal weekly, outreach activities by our cancersupport group on high risk factors for NCD and prevention measures.

- Ebeye Cancer Control Program
  - The Ebeye Cancer Program with collaboration with the Community Health Workers (CHOWs) for continuing outreach and information dissemination on the importance of screening for early detection of cancer. The Cancer Coalition Group got actively involved in the activities of the CEED Legacy Project grant.
  - The NCCCP staff and Ebeye cancer coalition group sponsored a Bingo Event through the Pacific CEED Grant for awareness of Cervical and Breast Cancer. There was a presentation on cancer prevention, awareness and early detection treatment.
  - Pathway to Care (Community Navigation): Three participants attended the 5 days training in Majuro given by MOH in partnership with JABSOM Geriatric Medicine Department, University of Hawaii. The goal of the training is to create a culturally appropriate navigation curriculum for RMI and to train lay volunteers from NGOs and faith-based organizations to become navigators.
Table 75: Ebeye Cancer Program Activities Highlights

<table>
<thead>
<tr>
<th>Activities</th>
<th># of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling</td>
<td>367</td>
</tr>
<tr>
<td>Cancer Evaluation</td>
<td>395</td>
</tr>
<tr>
<td>Total No. of women did Pap Smear and CBE</td>
<td>200</td>
</tr>
<tr>
<td>Women underwent Mammography in Kwajalein Hospital</td>
<td>4</td>
</tr>
<tr>
<td>No. of Abnormal findings from Pap Test and CBE</td>
<td>14</td>
</tr>
<tr>
<td>No. of patients underwent Proctosigmoidoscopy</td>
<td>2</td>
</tr>
<tr>
<td>Mastitis</td>
<td>3</td>
</tr>
<tr>
<td>No. of Confirmed Cancer cases</td>
<td>5</td>
</tr>
<tr>
<td>No. of Suspected Cases</td>
<td>1</td>
</tr>
<tr>
<td>Total No. of patients referred to TAMC</td>
<td>1</td>
</tr>
<tr>
<td>Total No. of patients for off island referral approved by NMRC</td>
<td>1</td>
</tr>
<tr>
<td>Total No. of FOBT requested</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>(29 negatives, 2 positives)</td>
</tr>
<tr>
<td>Total No. of Oral Cancer Screening</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>(1 confirmed, Oral cancer)</td>
</tr>
</tbody>
</table>

Challenges:
- The cancer program cannot purchase clinical supplies because it is not allowable in the grant.
- The mammography machine is not functional.
- The program continued to encounter late payments for contracts which delays the training program and resulted in not spending the allocated fund in this fiscal year.

Way Forward:
1. Appeal to the traditional leaders to play an active leadership role in substance abuse prevention and lifestyle and behavior changing.
2. NCCCP will conduct and intensify training in Visual Inspection of the Cervix with Acetic Acid (VIA) for cervical cancer screening
3. NCCCP will continue the collaboration with stakeholders, coordinate the activities of Cancer Support Group, and continue community outreach and public awareness
4. The program will continue to work closely with other NCD Programs to assists with a NCD State Plan and NCD National Coalition
Tuberculosis

The Republic of the Marshall Islands is one of the three remaining countries in the Western Pacific that was not able to reach the threshold for TB elimination set by the WHO. The TB program does receive assistance in terms of grants and technical assistance from both WHO and CDC to combat the disease. Irrespective of both, the Tuberculosis continued to be in rampant.

Since the Marshall Islands NTP adapted and implemented the DOTS (Directly Observed Therapy Short Course) strategy to: 1.) effectively ensure a high cure rate, 2.) the emergence of acquired drug resistance is prevented, and 3.) a high case detection rate is ultimately maintained to:
- Reduce TB mortality, morbidity and disease transmission of the infection; and
- Prevent the development of Multi Drug Resistance (MDR) TB
- An effective TB program has a high cure rate, low level of acquired drug resistance, and ultimately a high case detection rate

Long-Term Targets
- Achieve a success cure rate of 95% from detected new sputum smear-positive TB cases; and treatment
- Detect 85% of existing sputum smear-positive TB cases

Strategies of the Program:
- Sustained political commitment to increase human and financial resources and make TB control a nationwide priority integral to the national health system.
- Access to quality-assured TB sputum microscopy for case detection among persons presenting with, or found through screening to have, symptoms of TB (most importantly prolonged cough). Special attention is necessary for case detection among HIV-infected people and other high-risk groups, such as household contacts of infectious cases and people in institutions.
- Standardized short-course chemotherapy for all cases of TB under proper case management conditions, including direct observation of treatment. Proper case management conditions imply technically sound and socially supportive treatment services.
- Uninterrupted supply of quality-assured drugs with reliable drug procurement and distribution systems.
- Recording and reporting system enabling outcome assessment of all patients and assessment of overall program performance. This is the basis for systematic program monitoring and correction of identified problems.

DOTS plus Strategy – MDR/HIV
- Reduce the transmission of MDR by strict isolation and compliance
- HIV-TB co-infection, HIV test by TB patients, vice-versa
- Maintenance of second line drugs and ARV drugs
- Implement active HIV and MDR screening
- HIV screening among TB cases
- TB screening among HIV cases
Table 76: TB Registered Cases

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New Pulmonary Smear Positive</td>
<td>30</td>
<td>30</td>
<td>37</td>
<td>48</td>
<td>44</td>
<td>38</td>
</tr>
<tr>
<td>Pulmonary Smear Negative</td>
<td>82</td>
<td>74</td>
<td>45</td>
<td>56</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>ExtraPulmonary TB</td>
<td>43</td>
<td>28</td>
<td>34</td>
<td>51</td>
<td>60</td>
<td>25</td>
</tr>
<tr>
<td>Relapse</td>
<td>13</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Treatment after Default</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment after Failure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Transfer in</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>173</td>
<td>144</td>
<td>125</td>
<td>166</td>
<td>156</td>
<td>101</td>
</tr>
<tr>
<td>Prevalence Rate Per 10,000</td>
<td>33</td>
<td>27</td>
<td>23</td>
<td>30</td>
<td>29</td>
<td>19</td>
</tr>
</tbody>
</table>

Graph 14: Tuberculosis Trend from FY2007 to FY2012

TB Prevalence Rate Per 10,000

FY2007: 33
FY2008: 27
FY2009: 23
FY2010: 30
FY2011: 29
FY2012: 19
The graph on pulmonary smear positive TB shows that more females, ages 25 to 34, are affected than males. Furthermore, the same graph indicates that males, ages 35 to 44 seem to be affected than female. The graph on pulmonary smear negative shows that female, ages 0 to 4 are infected more than male counterparts. Generally, the younger population gets more affected than the older population.

Looking at the graph, the younger population is more prone to be affected than the older population both males and females. Such demonstration of the situation calls the TB program to intensify its early detection and contact tracing efforts amongst the younger population. Enhancement of the TB program effort will certainly increase the number of both new pulmonary positive smear as well as the negative smear pulmonary.
### Table 77a: TB Treatment Outcome FY2011

<table>
<thead>
<tr>
<th>Description</th>
<th>Cured</th>
<th>Completed</th>
<th>Died</th>
<th>Failed</th>
<th>Defaulted</th>
<th>Transferred out</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Pulmonary Smear Positive</td>
<td>45</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>New Pulmonary Smear Negative</td>
<td>0</td>
<td>48</td>
<td>11</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>New Extra Pulmonary</td>
<td>0</td>
<td>60</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Relapse</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment after Default</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment after Failure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Transfer in</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Table 77b: TB Treatment Outcome FY2012

<table>
<thead>
<tr>
<th>Description</th>
<th>Cured</th>
<th>Completed</th>
<th>Died</th>
<th>Failed</th>
<th>Defaulted</th>
<th>Transferred out</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Pulmonary Smear Positive</td>
<td>31</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>New Pulmonary Smear Negative</td>
<td>0</td>
<td>23</td>
<td>7</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>New Extra Pulmonary</td>
<td>0</td>
<td>50</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Relapse</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment after Default</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Treatment after Failure</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Transfer in</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### Table 78: TB-HIV Testing

<table>
<thead>
<tr>
<th>Description</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HIV Testing for TB Patients</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of TB patients tested for HIV</td>
<td>114</td>
<td>55</td>
</tr>
<tr>
<td>Number of TB patients who tested positive</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Number of TB patients who tested negative</td>
<td>73</td>
<td>55</td>
</tr>
<tr>
<td>Number of TB patients whose test was indeterminate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Number of HIV infected TB patients receiving</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-retroviral therapy</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Co-trimoxazole preventive therapy</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 79: Active MDR TB Cases in Majuro, FY2012

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Complete Treatment</th>
<th>No. of Contacts</th>
<th>Contacts (-) TST</th>
<th>Contacts (+) TST</th>
<th>Contacts CT</th>
<th>Contacts on Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 4</td>
<td>February 2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case 5</td>
<td>Still on treatment</td>
<td>31</td>
<td>18</td>
<td>13</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Case 6</td>
<td>Still on treatment</td>
<td>143</td>
<td>123</td>
<td>20</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>174</td>
<td>141</td>
<td>33</td>
<td>9</td>
<td>24</td>
</tr>
</tbody>
</table>

MDR-TB

Table 80: Active MDR TB Cases in Ebeye, FY2012

<table>
<thead>
<tr>
<th>Case ID</th>
<th>Complete Treatment</th>
<th>No. of Contacts</th>
<th>Contacts (-) TST</th>
<th>Contacts (+) TST</th>
<th>Contacts CT</th>
<th>Contacts on Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 7</td>
<td>Still on treatment</td>
<td>27</td>
<td>25</td>
<td>2</td>
<td>2</td>
<td>Completed</td>
</tr>
<tr>
<td>Case 8</td>
<td>Still on treatment</td>
<td>84</td>
<td>59</td>
<td>25</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Case 9</td>
<td>Still on treatment</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>125</td>
<td>95</td>
<td>30</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

During FY2012, the Marshall Islands had a total of 9 cases of MDR-TB. Furthermore, six (6) cases out of the total are still taking drugs to continue their treatment regiments. There is a total of 44 contact cases that is still on treatment. The contacts who refused treatments were further advised to visit the TB clinic as soon as symptoms began to show.

Table 81: Ebeye Tuberculosis Screening FY2012

<table>
<thead>
<tr>
<th>Description</th>
<th>No. Screened</th>
<th>No. of New Cases</th>
<th>IPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Screening for TB (food handlers, students, walk-in clients, DM patients, Referrals)</td>
<td>799</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Routine Screening for Contacts of TB Patients</td>
<td>238</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Diabetes Screening</td>
<td>245</td>
<td>55</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>1,282</td>
<td>9</td>
<td>50</td>
</tr>
<tr>
<td>#</td>
<td>Indicator</td>
<td>FY06</td>
<td>FY07</td>
</tr>
<tr>
<td>----</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>% of new pulmonary (NPTB) suspects who have 3 initial sputum collected consecutively</td>
<td>84%</td>
<td>93%</td>
</tr>
<tr>
<td>2</td>
<td>% of new pulmonary (NPTB) with at least 1 sputum collected by the end of intensive treatment phase</td>
<td>84%</td>
<td>86%</td>
</tr>
<tr>
<td>3</td>
<td>% NPTB sputum smear positive cases with at least 1 sputum collected within continuation treatment phase</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>4</td>
<td>% NPTB cases who convert MTB culture from positive to negative</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>5a</td>
<td>% of any drug resistance</td>
<td>4.7%</td>
<td>0%</td>
</tr>
<tr>
<td>5b</td>
<td>% of MDR-TB Drug resistance</td>
<td>4.7%</td>
<td>0%</td>
</tr>
<tr>
<td>6</td>
<td>% NPTB sputum smear positive cases who receive all treatment under DOT</td>
<td>85%</td>
<td>83%</td>
</tr>
<tr>
<td>7</td>
<td>% of TB patient reviewed at least 3 times during the course of treatment</td>
<td>64%</td>
<td>100%</td>
</tr>
<tr>
<td>8</td>
<td>% of MTB culture positive cases who are tested and received drug susceptibility results</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>9</td>
<td>% of TB patients who start and complete treatment within the reporting jurisdiction</td>
<td>64%</td>
<td>61%</td>
</tr>
<tr>
<td>10</td>
<td>% of sputum smear positive cases who completed treatment and cured within the reporting jurisdiction</td>
<td>93%</td>
<td>50%</td>
</tr>
<tr>
<td>11</td>
<td>% of TB cases (age determined by jurisdiction) who receive a test for HIV</td>
<td>87%</td>
<td>95%</td>
</tr>
<tr>
<td>12</td>
<td>% of TB cases which meet CDC counting criteria</td>
<td>33%</td>
<td>88%</td>
</tr>
<tr>
<td>13</td>
<td>% of suspects who are confirmed as cases</td>
<td>65%</td>
<td>58%</td>
</tr>
<tr>
<td>14</td>
<td>% of TB cases who also had a diagnosis of Diabetes (before or during treatment for TB)</td>
<td>33%</td>
<td>100%</td>
</tr>
</tbody>
</table>

100% of sputum positive cases are on DOTS.

**Achievements**

MOH actively provide Direct Observation Therapy (DOT) to TB Patients. TB Isolation Ward in Majuro is operational. There is a clear need to intensify implementation of the USAPI Standards for the Management of Tuberculosis and Diabetes. The aim is to strengthen the management of regular RB patients to prevent MDR-TB.

**Challenges**

- The need to have a dedicated staff for the Ebeye TB Isolation Ward
• Bringing in TB contacts from outer islands for x-ray and work up is costly.
• There is always the challenge for space, human resources and laboratory capacity when new program requirements are addressed
• There is also co-infection of TB with HIV and Diabetes.
• Because the TB patients are given daily medications at homes, vehicles need regular maintenance to ensure transportation is available for DOT. Public knowledge about TB is a barrier for cooperation from the communities and families to ensure compliance for treatment is successful. Funding sources is a continuous challenge knowing that Global Fund may end within the next year or so.
• Needs equipment during mobile team visits to the Outer Islands such as microscope and portable X-ray machine
• There are still patients who refuse prophylaxis treatment

**Way Forward**
1. The National TB Program will intensify Diabetes screening for TB patients and DOT program to prevent increase in the number of MDR-TB.
2. Majuro NTP will start the TB screening for Diabetic patients.
3. The TB Program will conduct TB 101 training for Public Health Nurses as part of the MOH Human Resource Development
5. Reduce the prevalence of TB by 90%, strengthen the early detection of TB cases, enhance the contact tracing of TB, strengthen public awareness through media campaign, increase the percentage of identified contacts of infectious cases 90%, increase the percentage of evaluations for identified contacts of infectious cases to 90%, increase the percentage of contacts of infectious cases who are eligible for treatment for LTBI and complete treatment in RMI to 60%.
6. With the closing of Global funds, MOH will advocate for additional financial assistance and identify the true and actual needs of the National TB Program. With the help of Health Promotion and Disease Prevention Unit, we will empower the general public with knowledge. Adopt the concept of volunteered Health Care Workers (HCW)
Program Goal
By 2015, the RMI will eliminate HD by reducing the prevalence rate to 1/10,000 or 6/60,000. Leprosy is curable with Multi Drug Therapy (MDT) which can also prevent disability and deformity. There are 2 classification type of Leprosy: Paucibacillary (PB) Leprosy – one to five skin lesions and Multibacillary (MB) Leprosy – 6 or more skin lesions

Burden of Disease for FY2011
Prevalence rate: 45/10,000
New case detection rate: 26/10,000
Incubation period: 3-10mos

Burden of Disease for FY2012
Prevalence rate: 50/10,000
New case detection rate: 29/10,000
Incubation period: 3-10mos

Program Objectives
- Ensure patient treatment compliance
- Treatment is available at all times, no stock outs
- Contact tracing and household investigations are conducted
- yearly for all index cases for five years
- Change treatment guideline to DOT for DAYS 1-28

Treatment
Monthly Multi Drug Therapy MDT (PB) – duration of 6-9mos
Monthly Multi Drug Therapy MDT (MB) – duration of 12-18mos
Monthly supervised treatment or DOT (DAY 1) – 3 drugs including rifampin
Unsupervised Daily treatment (DAYS 2-28) – no rifampin

Table 81: Leprosy Cases

<table>
<thead>
<tr>
<th>Description</th>
<th>FY2011</th>
<th></th>
<th></th>
<th>FY2012</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MB</td>
<td>PB</td>
<td>Total</td>
<td>MB</td>
<td>PB</td>
<td>Total</td>
</tr>
<tr>
<td>No. of Cases on Treatment at the Beginning of the Year</td>
<td>67</td>
<td>36</td>
<td>103</td>
<td>65</td>
<td>44</td>
<td>109</td>
</tr>
<tr>
<td>No. of New Adult Cases Detected</td>
<td>42</td>
<td>31</td>
<td>73</td>
<td>34</td>
<td>57</td>
<td>91</td>
</tr>
<tr>
<td>No. of New Cases 0-14 years detected</td>
<td>18</td>
<td>29</td>
<td>47</td>
<td>24</td>
<td>40</td>
<td>64</td>
</tr>
<tr>
<td>No. of Old Cases started treatment</td>
<td>13</td>
<td>9</td>
<td>22</td>
<td>18</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>No. of New Cases Detected with Grade 1-3 Disability</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>No. of Cases Classified as RFT, T/O, Defaulted</td>
<td>69</td>
<td>63</td>
<td>132</td>
<td>52</td>
<td>68</td>
<td>120</td>
</tr>
<tr>
<td>No. of Cases on Treatment at the End of the Year</td>
<td>71</td>
<td>42</td>
<td>113</td>
<td>89</td>
<td>76</td>
<td>165</td>
</tr>
</tbody>
</table>
### Table 83: Registered New Cases by Type, Gender and Age

<table>
<thead>
<tr>
<th>Age</th>
<th>FY2011</th>
<th></th>
<th>FY2012</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Total</td>
<td>Female</td>
</tr>
<tr>
<td>&lt;15</td>
<td>10</td>
<td>10</td>
<td>19</td>
<td>47</td>
</tr>
<tr>
<td>15+</td>
<td>17</td>
<td>20</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>30</td>
<td>33</td>
<td>54</td>
</tr>
</tbody>
</table>

### Table 84: New Registered by Atoll

<table>
<thead>
<tr>
<th>Atoll</th>
<th>MBA</th>
<th>MBC</th>
<th>PBA</th>
<th>PBC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ailinglaplap</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Arno</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Ailuk</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Aur</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Ebeye</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Ebon</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Enewetak</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Jabat</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Jaluit</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Kili</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lib</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Majuro</td>
<td>21</td>
<td>5</td>
<td>11</td>
<td>14</td>
<td>51</td>
</tr>
<tr>
<td>Mili</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Maloelap</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>NamdriK</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Namu</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Ujae</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>18</td>
<td>30</td>
<td>29</td>
<td>124</td>
</tr>
</tbody>
</table>

### Table 85a: Treatment Outcome, FY2011

<table>
<thead>
<tr>
<th></th>
<th>Complete Tx</th>
<th>Defaulted</th>
<th>TransferOut</th>
<th>StoppedD/C Tx</th>
<th>Died</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>53</td>
<td>10</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>69</td>
</tr>
<tr>
<td>PB</td>
<td>54</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>63</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>17</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>132</td>
</tr>
</tbody>
</table>
Table 85b: Treatment Outcome, FY2012

<table>
<thead>
<tr>
<th></th>
<th>Complete Tx</th>
<th>Defaulted</th>
<th>TransferOut</th>
<th>StoppedD/C Tx</th>
<th>Died</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>44</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>53</td>
</tr>
<tr>
<td>PB</td>
<td>60</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>9</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>120</td>
</tr>
</tbody>
</table>

- For FY 2012: Number of cases registered in Majuro:67 (41%), Outer Islands:76 (46%), 177 Atolls:9 (5.4%), Ebeye:13 (8%)
- Number of children registered: 62 (38%). The number of children with leprosy is still high.

The proportion of children on treatment is an indication of the level of ongoing transmission in the community.

Table 86: High Proportion of Children on Treatment

<table>
<thead>
<tr>
<th>Place</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Ailinglaplap</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Arno</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Ebeye</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Jaluit</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Ujae</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Achievements:
- There was a consistent contact screening for old and new cases which resulted to increase of case detection.
- Improvement in case handling in Outer Islands
- Increase in patients voluntarily reporting to the clinic
- Posters available to show the community the impact of treatment.
- Increase in number of presentations to the community/schools.
- We provide juice and skin ointments for patients.
- We receive new information from training to improve patient care.
- We improve in case detection and treatment.
- The World Leprosy Day falls on January 29th this year. As part of the World Leprosy Day activities and Leprosy Elimination Program, Ebeye Leprosy Program started community awareness campaign by giving community health talks and distributing of Leprosy pamphlets at various areas on Ebeye and Outer Islands as shown in the table.
### Table 87: Leprosy Awareness Activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activities</th>
<th># of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2/15/12 North Loi</td>
<td>Early Diagnosis on Leprosy health talk; Distribution of the HE pamphlets and skin screening of the participants</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>2/15/12 Guegeegue</td>
<td>Early Diagnosis on Leprosy health talk; Distribution of the HE pamphlets and skin screening of the participants</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>2/20/12 Ebeye Hospital Lobby</td>
<td>Power Point presentation of Leprosy and Early Diagnosis</td>
<td>46</td>
</tr>
<tr>
<td>4</td>
<td>2/27/12 Carlos and Carlson Islands</td>
<td>Health talks on Leprosy and Skin screening</td>
<td>40 students (Carlos)</td>
</tr>
<tr>
<td>5</td>
<td>3/2/12 Santo Island</td>
<td>1. Leprosy Awareness Presentation and distribution of the pamphlets 2. Skin screening to the students from Santo Elementary School</td>
<td>56 186 students</td>
</tr>
<tr>
<td>6</td>
<td>3/30/12 Kwajalein Atoll High School</td>
<td>Health talk on Leprosy</td>
<td>380 Students</td>
</tr>
<tr>
<td>7</td>
<td>5/8/12 Ebadon Island</td>
<td>Distribution of the health education pamphlets</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>9/21/12 Carlson Island</td>
<td>Refill MDT and contact tracing</td>
<td>12 contacts</td>
</tr>
</tbody>
</table>

From these activities, Ebeye Leprosy Program found out two new cases, one suspect case, one relapse case, and one defaulter case.

- Improve Skin Screening Program in School

**Skin Screening Program at Schools in Ebeye (April to May 2012)**

Ebeye Leprosy Program visited 7 elementary schools from April 18 to May 4, 2012. Out of 2,129 enrolled students 1,579 students were screened and 166 students (10.5%) were found out to have some skin lesions. Scabies is the most common infection. We found out 2 new Leprosy cases and 2 registered cases on treatment among the students. Incidence rate of Leprosy among elementary students is 25.3/10,000 population FY 2012. The number of students screened in individual school is mentioned in the table below. The team referred all the students with skin lesion to the hospital for further management. Two new Leprosy cases are registered and under MDT now.
Table 87: Skin Screening of Ebeye Elementary Students

<table>
<thead>
<tr>
<th>Schools</th>
<th>Enrolled Students</th>
<th># of Students Screened</th>
<th># of students with Skin Lesion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 QOPES</td>
<td>201</td>
<td>166 (82.5%)</td>
<td>9 (5.42%)</td>
</tr>
<tr>
<td>2 Calvary</td>
<td>69</td>
<td>45 (65.2%)</td>
<td>9 (20%)</td>
</tr>
<tr>
<td>3 ECES</td>
<td>90</td>
<td>77 (85.5%)</td>
<td>6 (7.79%)</td>
</tr>
<tr>
<td>4 Jabro</td>
<td>132</td>
<td>99 (75%)</td>
<td>7 (7.07%)</td>
</tr>
<tr>
<td>5 SDA</td>
<td>224</td>
<td>191 (85.2%)</td>
<td>12 (6.28%)</td>
</tr>
<tr>
<td>6 EPES</td>
<td>1241</td>
<td>838 (67.5%)</td>
<td>117 (13.96%)</td>
</tr>
<tr>
<td>7 GEMS</td>
<td>172</td>
<td>163 (94.7%)</td>
<td>6 (3.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>2129</td>
<td>1579 (74.1%)</td>
<td>166 (10.5%)</td>
</tr>
</tbody>
</table>

Table 89: Summary of Population Screening FY2012

<table>
<thead>
<tr>
<th>Description</th>
<th>Majuro/Outer Islands</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of People Screened</td>
<td>18,878</td>
<td>1,836</td>
<td>20,714</td>
</tr>
<tr>
<td>Number of Suspects</td>
<td>389</td>
<td>6</td>
<td>395</td>
</tr>
<tr>
<td>No. of Cases Detected</td>
<td>54</td>
<td>6</td>
<td>60</td>
</tr>
</tbody>
</table>

Challenges:

- Delayed diagnosis and misdiagnosis in Outer Islands
- Inconsistent reporting of cases from Outer Islands
- Limited knowledge on Leprosy amongst health workers
- Patients refuse/non-compliant to treatment

Way Forward

- Additional Leprosy trainings will be conducted for health workforce.
- The program will conduct public awareness through media campaign to increase public’s knowledge on Leprosy.
- Strengthen health education activities the general public.
- Implement the Leprosy Elimination Plan.
- Conduct in service trainings for Health Assistants and School Teachers.
- Improvement of case handling
- Establish partnership/collaboration with NGOs
- Continue with FCS/Population screening
Sexually transmitted infection poses as one of the greater risks among all ages, but more so for the youths. Syphilis and Chlamydia remain to be the two most common form of STI which threaten the livelihood out of the population. The Marshall Islands, although, it has been considered a low prevalence for HIV, RMI cannot live with a feeling of complacency. All the known and recommended measures have been postulated as our protection and control procedure.

### Table 90: STI/HIV Cases

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Syphilis</td>
<td>486</td>
<td>90</td>
<td>342</td>
<td>63</td>
<td>165</td>
<td>31</td>
<td>87</td>
<td>34</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>107</td>
<td>20</td>
<td>116</td>
<td>21</td>
<td>96</td>
<td>18</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>393</td>
<td>73</td>
<td>331</td>
<td>61</td>
<td>152</td>
<td>29</td>
<td>120</td>
<td>23</td>
</tr>
<tr>
<td>HIV</td>
<td>10</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

*Source: STI/HIV Program, Majuro & Ebeye. Prevalence rate is per 10,000*

### Table 91: RPR Testing, FY2012

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Majuro Male</th>
<th>Male Total</th>
<th>Majuro Female</th>
<th>Female Total</th>
<th>Ebeye Male</th>
<th>Male Total</th>
<th>Ebeye Female</th>
<th>Female Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15</td>
<td>139</td>
<td>1</td>
<td>191</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>15 - 19</td>
<td>531</td>
<td>2</td>
<td>696</td>
<td>6</td>
<td>59</td>
<td>1</td>
<td>130</td>
<td>3</td>
</tr>
<tr>
<td>20 - 24</td>
<td>435</td>
<td>10</td>
<td>654</td>
<td>13</td>
<td>193</td>
<td>7</td>
<td>198</td>
<td>13</td>
</tr>
<tr>
<td>25 - 29</td>
<td>234</td>
<td>14</td>
<td>411</td>
<td>21</td>
<td>133</td>
<td>4</td>
<td>171</td>
<td>15</td>
</tr>
<tr>
<td>30 - 34</td>
<td>133</td>
<td>4</td>
<td>389</td>
<td>15</td>
<td>100</td>
<td>1</td>
<td>106</td>
<td>8</td>
</tr>
<tr>
<td>35 - 39</td>
<td>90</td>
<td>5</td>
<td>283</td>
<td>7</td>
<td>77</td>
<td>4</td>
<td>85</td>
<td>1</td>
</tr>
<tr>
<td>40 - 44</td>
<td>83</td>
<td>2</td>
<td>192</td>
<td>3</td>
<td>46</td>
<td>2</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>45 - 49</td>
<td>68</td>
<td>3</td>
<td>150</td>
<td>1</td>
<td>41</td>
<td>0</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>50 +</td>
<td>81</td>
<td>1</td>
<td>216</td>
<td>1</td>
<td>36</td>
<td>5</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,794</td>
<td>42</td>
<td>3,182</td>
<td>68</td>
<td>694</td>
<td>25</td>
<td>808</td>
<td>44</td>
</tr>
</tbody>
</table>

114
The table below shows the Status & Staging of Syphilis cases which presents the actual number of syphilis cases. The close case is a case that laboratory test came out positive but the titer level is low. It is categorized under close case. There are 61 cases of syphilis in Majuro and 26 syphilis cases in Ebeye.

**Table 92: Status of Syphilis, FY2012**

<table>
<thead>
<tr>
<th>Status of the Syphilis</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close case</td>
<td>49</td>
<td>42</td>
<td>91</td>
</tr>
<tr>
<td>New Case</td>
<td>43</td>
<td>24</td>
<td>67</td>
</tr>
<tr>
<td>Re-infection</td>
<td>18</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>68</td>
<td>178</td>
</tr>
</tbody>
</table>

**Table 93 Staging of Syphilis, FY2012**

<table>
<thead>
<tr>
<th>Staging</th>
<th>Majuro</th>
<th>Ebeye</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Syphilis</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Secondary Syphilis</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Early Latent Syphilis</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Late Latent Syphilis</td>
<td>46</td>
<td>60</td>
<td>106</td>
</tr>
<tr>
<td>Unknown/Unclear</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Neonatal Syphilis</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>68</td>
<td>129</td>
</tr>
</tbody>
</table>

**Table 94: Chlamydia Testing, 2012**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th></th>
<th></th>
<th></th>
<th>Female</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Majuro</td>
<td></td>
<td></td>
<td></td>
<td>Ebeye</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>&lt;15</td>
<td>8</td>
<td>1</td>
<td>18</td>
<td>3</td>
<td>26</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15 - 19</td>
<td>187</td>
<td>16</td>
<td>166</td>
<td>29</td>
<td>353</td>
<td>45</td>
<td>1</td>
<td>0</td>
<td>11</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>20 - 24</td>
<td>112</td>
<td>5</td>
<td>118</td>
<td>20</td>
<td>230</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>5</td>
<td>25</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>25 - 29</td>
<td>83</td>
<td>3</td>
<td>50</td>
<td>10</td>
<td>133</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>1</td>
<td>20</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>30 - 34</td>
<td>52</td>
<td>2</td>
<td>60</td>
<td>7</td>
<td>112</td>
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<td>1</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>35 - 39</td>
<td>24</td>
<td>0</td>
<td>37</td>
<td>6</td>
<td>61</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>40 - 44</td>
<td>29</td>
<td>0</td>
<td>16</td>
<td>2</td>
<td>45</td>
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<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>45 - 49</td>
<td>12</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>18</td>
<td>1</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>50 +</td>
<td>11</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>16</td>
<td>4</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>518</td>
<td>32</td>
<td>476</td>
<td>77</td>
<td>994</td>
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<td>0</td>
<td>77</td>
<td>11</td>
<td>79</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
Table 95: Chlamydia Treatment to Pregnant Women in Majuro

<table>
<thead>
<tr>
<th>Age Group</th>
<th># of Pregnant Women</th>
<th># Given Treatment</th>
<th>#Refuse to Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majuro</td>
<td>855</td>
<td>806</td>
<td>49</td>
</tr>
<tr>
<td>Ebeye</td>
<td>337</td>
<td>337</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,192</td>
<td>1,143</td>
<td>49</td>
</tr>
</tbody>
</table>

Presumptive Treatment and HIV Pre-Counselling is provided for all Pregnant Women. 96% of pregnant women who came in to the Prenatal Clinic were treated for Chlamydia.

Table 96: Gonorrhea Testing, FY2012

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Majuro</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td># Test</td>
<td># Test</td>
<td></td>
<td># Test</td>
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<td></td>
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<td># Test</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>15 - 19</td>
<td>9</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>34</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>14</td>
<td>1</td>
<td>19</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>20 - 24</td>
<td>3</td>
<td>0</td>
<td>61</td>
<td>3</td>
<td>64</td>
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<td>2</td>
<td>1</td>
<td>26</td>
<td>2</td>
<td>28</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>25 - 29</td>
<td>2</td>
<td>2</td>
<td>36</td>
<td>5</td>
<td>38</td>
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<td>2</td>
<td>1</td>
<td>21</td>
<td>0</td>
<td>23</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>30 - 34</td>
<td>2</td>
<td>0</td>
<td>39</td>
<td>0</td>
<td>41</td>
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<td>3</td>
<td>2</td>
<td>11</td>
<td>1</td>
<td>14</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>35 - 39</td>
<td>3</td>
<td>0</td>
<td>17</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>40 - 44</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>9</td>
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<td>0</td>
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<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>45 - 49</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>50 +</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>Not Stated</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Total</td>
<td>23</td>
<td>3</td>
<td>191</td>
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<td>214</td>
<td>11</td>
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<td>85</td>
<td>5</td>
<td>99</td>
<td>14</td>
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116
### Table 97: Majuro HIV Testing, FY2012

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Majuro</th>
<th></th>
<th></th>
<th>Ebeye</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
<td># Test</td>
<td>+</td>
</tr>
<tr>
<td>&lt;15</td>
<td>5</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>15 – 19</td>
<td>284</td>
<td>0</td>
<td>443</td>
<td>0</td>
<td>727</td>
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<tr>
<td>20 – 24</td>
<td>278</td>
<td>0</td>
<td>405</td>
<td>0</td>
<td>683</td>
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<td>30 – 34</td>
<td>98</td>
<td>0</td>
<td>180</td>
<td>0</td>
<td>278</td>
<td>92</td>
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<tr>
<td>35 – 39</td>
<td>76</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>179</td>
<td>69</td>
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<tr>
<td>40 – 44</td>
<td>75</td>
<td>0</td>
<td>38</td>
<td>0</td>
<td>113</td>
<td>36</td>
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<td>45 – 49</td>
<td>45</td>
<td>0</td>
<td>17</td>
<td>0</td>
<td>62</td>
<td>35</td>
</tr>
<tr>
<td>50 +</td>
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<td>0</td>
<td>28</td>
<td>0</td>
<td>84</td>
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<tr>
<td>Total</td>
<td>1,058</td>
<td>0</td>
<td>1,474</td>
<td>0</td>
<td>2,532</td>
<td>585</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
<td>996</td>
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### Table 98: RMI Current HIV Cases FY2012

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15 – 19</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20 – 24</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>25 – 29</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>30 – 34</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>35 – 39</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>40 – 44</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>45 – 49</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50 +</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>
SEXUALLY TRANSMITTED DISEASE

There are still eight (8) people living with HIV. Seven (7) of HIV patients are on ART treatment while one (1) is not on medication due to the side effects of the ART. All are seen and followed up monthly by program staff and they are doing great.

Accomplishments

- Transitional Funding Mechanism (TFM) for both HIV and TB for Global Fund to continue funding beyond 2015 were submitted accordingly.
- Ongoing implementation of the Chlamydia Presumptive Treatment
- Drafted the STD/HIV National Strategic Plan
- Completed and submitted the Global AIDS Progress Report

- Completed and submitted the HIV Prevention Annual Progress Report (APR) along with the Federal Financial Report (FFR)
- For HIV awareness, the program conducted HIV screening for the Baseball players and basketball players.
- Ebeye STD Program: For FY2012 the STD/HIV Prevention Program has strengthened its capacity. In addition to one new regular staff, 4 medical providers contributes to the STD prevention efforts through clinical management. STD test kits were also acquired through grants which ensure testing for at least a year. A total of 1,009 pre-test counseling and 637 post-test counseling were done this year. The purpose of the counseling is to educate the patients about the test for STDs; to assess behavioral risk factors; and to impart preventive measures against transmission of STDs. For World AIDS Day, STI/HIV Program Physician, Coordinator and 1 health educator visited all high schools and two elementary schools to conduct health talk on World AIDS Day and Prevention and Awareness of HIV/AIDS. Around 951 students also attended the health talk during the World AIDS Day.

On November 2011, 347 students from all schools of Kwajalein Atoll were given STI/HIV talk and condom demonstration. On July 2012, health education on STD/HIV were given to 45 male youths who are working with WAAM project at Mala Mike. Prior to the initiation of the WAAM project in Ebeye these 45 male youths went through counseling and STI/HIV testing. 1,009 clients were given one on one HIV and STD counseling. On December 16th of 2011, our program assisted Ms. Rylie Yamashaki of JOVC conducted health education to 64 students from Father Haacker High School. Condom demonstration of both male and female were demonstrated. Four hundred condoms were supplied to Ebeye Hotel this FY 2012. There were 35 walk in clients who came in to the clinic for supply of condoms this fiscal year. All positive STI cases were given condom as well.
SEXUALLY TRANSMITTED DISEASE

Trainings/Meetings:

- HIV-TB Co-infection case presentations to the MOH Staff.
- One program staff attended Fiji HIV Clinical Training in May 2012.
- Three doctors and one program nurse attend Annual AETC Training in Hawaii in June 2012.
- HIV Clinical Training in Majuro

Challenges:

National STI Program: All staff need clinical refresher training for STD and HIV comprehensive management and CTR Training. There is no dedicated program vehicle to do contact tracing for partners and ARV distribution but a temporary car rental which is shared with other Public Health Programs and Public Health Administration. We also experience delay in receiving test results from the Laboratory such Chlamydia and Gonorrhea which delays the activities for the program. Office supplies are not replenished on time.

Ebeye STD Program: Shipment of Urine to Majuro for Chlamydia and Gonorrhea testing is still a problem. This year no urine specimens send to Majuro for testing. The target to test at least 500 at risk youth and pregnant mothers for Chlamydia was not achieved. Supplies especially tests kits usually runs out and it takes a long time before it can be replenished

Way Forward:

1. Review the current methods for surveillance, reporting, detection, and education to determine the reason for the steady increase in STDs.
2. Continue CTR activities (HIV/AIDS) to target high risk groups (young adolescents, STD clients, TB cases, pregnant mothers).
3. Continue to provide acute and long-term care for HIV/AIDS cases through various sources/grants (i.e. RYAN WHITE FOUNDATION).
4. Continue the surveillance program for detection, confirmation and monitoring programs through the Global Fund/SPC – detection, confirmation and monitoring and CDC grants.
5. Continue STD/HIV screening activities through contact tracing.
6. Continue health education – on STD/HIV prevention through mass media, schools, Youth-to-Youth NGO community gatherings.
7. Continue to improve data collection.
8. Continue to provide health care services utilizing the Youth to Youth in Health.
9. Strengthen health promotion and educational activities for community awareness.
MEDICAL REFERRAL SERVICES

The Medical Referral Service has been given the responsibility of providing relevant treatment of the cases that would not be able to be treated locally in selected health care facilities in Honolulu, Philippines, and Taiwan.

In Honolulu, approved health care providers in Honolulu are as follows: 1.) Straub Clinic and Hospital, 2.) Kapiolani Medical Center, 3.) Wahiawa General Hospital, 4.) Honolulu Medical Group, 5.) Mililani Physician Center, and 6.) Pali Momi Medical Center

In the Philippines, the Third Party Administrator which is JMI oversees the operation in the Philippines in collaboration with a RMI Medical Liaison Officer. Following is a list of the approved health care providers in Philippines: 1.) Asian Hospital, 2.) Saint Luke’s Medical Center, and 3.) Medical City

In Taiwan, the Wan Fang Hospital and National Taipei Hospital are the approved health care providers.

Basic Referral

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu &amp; USAKA</td>
<td>9</td>
<td>3</td>
<td>7</td>
<td>11</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Philippines</td>
<td>80</td>
<td>109</td>
<td>103</td>
<td>43</td>
<td>84</td>
<td>69</td>
</tr>
<tr>
<td>Taipei Veteran</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ebeye Hospital</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>Total Basic Referrals</td>
<td>89</td>
<td>112</td>
<td>109</td>
<td>54</td>
<td>94</td>
<td>74</td>
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<tr>
<td>Tripler Hospital (PIHCP)</td>
<td>22</td>
<td>16</td>
<td>22</td>
<td>44</td>
<td>44</td>
<td>29</td>
</tr>
<tr>
<td>Shriners’ Hospital</td>
<td>13</td>
<td>11</td>
<td>15</td>
<td>11</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>27</td>
<td>37</td>
<td>55</td>
<td>52</td>
<td>46</td>
</tr>
</tbody>
</table>

| Total Referrals        | 124     | 139     | 147     | 109     | 146    | 120    |

Table 99: Basic Referral Activity
The Supplemental Health Plan thus far proved to be a self-sustaining plan. The Plan’s improved performance resulted from increased collections of premiums and the reduction of health services expenses as members utilizing Philippines for medical care and check-ups. Enrollees in the Supplemental Health Plan have expressed their satisfaction for receiving health services in the Philippines.

### Table 100: Top Ten Diagnosis for Off-Island Referral

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY 2010</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthopedic</td>
<td>30</td>
<td>30</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>Cancer</td>
<td>23</td>
<td>21</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Congenital</td>
<td>23</td>
<td>11</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>14</td>
<td>11</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>14</td>
<td>9</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Neurology</td>
<td>12</td>
<td>7</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Urology</td>
<td>6</td>
<td>5</td>
<td>OBGYN</td>
<td>4</td>
</tr>
<tr>
<td>Surgical</td>
<td>4</td>
<td>OBGYN</td>
<td>3</td>
<td>Internal Medicine</td>
</tr>
</tbody>
</table>

### Table 101: Supplemental Health Plan Enrollee

<table>
<thead>
<tr>
<th>Description</th>
<th>FY2008</th>
<th>FY2009</th>
<th>FY2010</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident Members</td>
<td>822</td>
<td>938</td>
<td>995</td>
<td>946</td>
<td>918</td>
</tr>
<tr>
<td>Non- Resident Members</td>
<td>40</td>
<td>46</td>
<td>48</td>
<td>151</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Members at Beginning of year</strong></td>
<td>862</td>
<td>984</td>
<td>1,043</td>
<td>1,097</td>
<td>1,099</td>
</tr>
<tr>
<td>New Members</td>
<td>191</td>
<td>155</td>
<td>143</td>
<td>93</td>
<td>87</td>
</tr>
<tr>
<td>Terminated Members</td>
<td>69</td>
<td>93</td>
<td>169</td>
<td>80</td>
<td>179</td>
</tr>
<tr>
<td><strong>Total Active Members End of Year</strong></td>
<td>984</td>
<td>1,046</td>
<td>1,017</td>
<td>1,110</td>
<td>920</td>
</tr>
</tbody>
</table>

### Table 102: Supplemental Health Plan Users

<table>
<thead>
<tr>
<th>Referral Site</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td>121</td>
<td>79</td>
<td>81</td>
<td>104</td>
<td>73</td>
</tr>
<tr>
<td>Honolulu</td>
<td>214</td>
<td>175</td>
<td>256</td>
<td>138</td>
<td>98</td>
</tr>
<tr>
<td>Taiwan</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>335</td>
<td>254</td>
<td>337</td>
<td>258</td>
<td>179</td>
</tr>
</tbody>
</table>
MEDICAL REFERRAL SERVICES

Accomplishments:
1. RMI was rated as the top ranks on referral cases accepted by Tripler from all the Pacific Islands. RMI take advantages of services under the Tripler Army Medical Center.
2. JMI-Edison, Third Party Administrator (TPA), oversees all the RMI patients in the Philippines with collaboration with the RMI liaison Officer
3. Implementing and streamlining key individuals involved in the co-managing process of approved referral cases prior to travel such as Pediatrician will now co-manage with Orthopedic.
4. Completed the Medical Referral Guidelines to be submitted to the Health Services Board Members for approval.
5. Furnished Ebeye Medical Referral Office with a new computer and ALL in one scanner, copier, and printer.
6. Number of referrals decreased from 146 in 2011 to 120 for 2012.
7. Successfully completed the pre-bidding process for the Honolulu Housing Complex.
8. Steady number of supplemental members this year compared to FY2011.
9. Contract for Taipei Veterans’ General Hospital is in the reviewing process.
10. Claims turn-around time of processing met the 30 days turn-around time.

Challenge:
1. Poor communication lines and transportation on Ebeye.

Way Forward:
1. Ensure claims are processed and paid within the turnaround time of 30 days.
2. Work closely with the local physicians, to maintain positive relationship with our outside Health Care Providers such as Tripler Army’s Medical Center and Shriner’s Hospital for Children.
3. Work closely with the Medical Referral Committee to find ways to help decrease the number of off island referrals.
4. Work closely with the patient coordinator in Philippines and Majuro to be more involved in patient care services and be attentive to the patients/referrals.
5. Smooth and Efficient running of the program.
6. Explore more healthcare possibilities in Asia.
7. Ensure proper coordination for supplemental referrals to Honolulu, Manila, or Taiwan.
8. Ensure that off island referrals do not exceed its budget.
Out-Patient Clinical Services

The Out-Patient Services (OPS) has continued to be the foremost mechanism in the delivery of primary and clinical care services. The OPS is a one-stop shop where patients can access various services with just one visit. Most primary health care clinics are held in the morning while specialty clinic (OPD) services are held in the afternoon.

**Graph 16: Ebeye Hospital’s Outpatient Encounters Trend**

![Graph 16: Ebeye Hospital’s Outpatient Encounters Trend](graph.png)

**Graph 17: Majuro Hospital’s Outpatient Encounters Trend**

The data reflected for FY2012 is still in progress, Data entry is ongoing.

The Out-Patient Services also has the task to spearhead the various Special Medical Team missions in Majuro and Ebeye. Organizations such as the Canvasback Team, the Taiwan Mobile Medical Team, and consultants from other services visit our health bureaus almost every year to provide medical services that are not readily available in our bureaus.
Admission Services

Table 103: Admission Encounter by Service Ward

<table>
<thead>
<tr>
<th>Ward</th>
<th>FY2009 Majuro Hospital</th>
<th>FY2009 Ebeye Hospital</th>
<th>FY2010 Majuro Hospital</th>
<th>FY2010 Ebeye Hospital</th>
<th>FY2011 Majuro Hospital</th>
<th>FY2011 Ebeye Hospital</th>
<th>FY2012 Majuro Hospital</th>
<th>FY2012 Ebeye Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TB</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>ICU</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>18</td>
<td>16</td>
<td>54</td>
<td>85*</td>
</tr>
<tr>
<td>Medical</td>
<td>684</td>
<td>334</td>
<td>713</td>
<td>363</td>
<td>633</td>
<td>171</td>
<td>726</td>
<td>589</td>
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<tr>
<td>Maternity</td>
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<td>423</td>
<td>1,997</td>
<td>423</td>
<td>1,793</td>
<td>673</td>
<td>1,255</td>
<td>410</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>604</td>
<td>663</td>
<td>499</td>
<td>552</td>
<td>500</td>
<td>577</td>
<td>673</td>
<td>566</td>
</tr>
<tr>
<td>Surgical</td>
<td>529</td>
<td>106</td>
<td>502</td>
<td>164</td>
<td>463</td>
<td>272</td>
<td>442</td>
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</tr>
<tr>
<td>Total</td>
<td>4,037</td>
<td>1,533</td>
<td>3,721</td>
<td>1,502</td>
<td>3,408</td>
<td>1,709</td>
<td>3,152</td>
<td>1,764</td>
</tr>
</tbody>
</table>

* Include referrals from other wards

Radiology Services

Ebye Hospital Radiology Services

- Routine x-ray services carried during the period.
- PACS system’s x-ray plate (large size) was damaged and a replacement part was purchased.
- Shimatzu portable x-ray machine is currently damage. Parts have been ordered.

Table 104: X-Ray Procedures Performed in Ebeye Hospital FY2012

<table>
<thead>
<tr>
<th>Procedures</th>
<th>1st Q</th>
<th>2nd Q</th>
<th>3rd Q</th>
<th>4th Q</th>
<th>Total</th>
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<tbody>
<tr>
<td>Abdomen</td>
<td>44</td>
<td>33</td>
<td>94</td>
<td>27</td>
<td>198</td>
</tr>
<tr>
<td>Barium enema</td>
<td>0</td>
<td>2</td>
<td>20</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Barium swallow</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Chest</td>
<td>402</td>
<td>340</td>
<td>477</td>
<td>385</td>
<td>1,604</td>
</tr>
<tr>
<td>Extremities</td>
<td>133</td>
<td>198</td>
<td>172</td>
<td>71</td>
<td>574</td>
</tr>
<tr>
<td>Head and Neck</td>
<td>22</td>
<td>31</td>
<td>57</td>
<td>8</td>
<td>118</td>
</tr>
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<td>IVP</td>
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<td>0</td>
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<td>Oral</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pelvis</td>
<td>13</td>
<td>10</td>
<td>27</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>Lumbar</td>
<td>44</td>
<td>38</td>
<td>41</td>
<td>42</td>
<td>165</td>
</tr>
<tr>
<td>UGIS</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>EKG</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>658</td>
<td>652</td>
<td>903</td>
<td>548</td>
<td>2,761</td>
</tr>
</tbody>
</table>
Majuro Hospital Radiology Services

- Procedures done in Majuro Hospital Radiology Services:

<table>
<thead>
<tr>
<th>Procedures</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKG</td>
<td>1,236</td>
</tr>
<tr>
<td>Ultrasound</td>
<td>96</td>
</tr>
<tr>
<td>XRay</td>
<td>7000</td>
</tr>
<tr>
<td>CT Scan</td>
<td>410</td>
</tr>
<tr>
<td>Total</td>
<td>8,742</td>
</tr>
</tbody>
</table>

- One current employees studying in Fiji to become a local radiologist

Rehabilitation Services

Ebeye Hospital

- Continued providing rehabilitation services to OPD and referral clients.

<table>
<thead>
<tr>
<th></th>
<th>1st Q</th>
<th>2nd Q</th>
<th>3rd Q</th>
<th>4th Q</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Patient</td>
<td>83</td>
<td>79</td>
<td>88</td>
<td>99</td>
<td>349</td>
</tr>
<tr>
<td>Inpatient</td>
<td>15</td>
<td>23</td>
<td>10</td>
<td>13</td>
<td>61</td>
</tr>
<tr>
<td>Outpatient</td>
<td>68</td>
<td>56</td>
<td>78</td>
<td>86</td>
<td>288</td>
</tr>
<tr>
<td>New referrals</td>
<td>20</td>
<td>17</td>
<td>30</td>
<td>41</td>
<td>108</td>
</tr>
<tr>
<td>Total</td>
<td>312</td>
<td>298</td>
<td>337</td>
<td>343</td>
<td>1,290</td>
</tr>
</tbody>
</table>

Majuro Hospital

The rehabilitation department remained short-staffed. The department only consists of 5 staff (2-physiotherapist/including the rehab director, 2 therapy technicians and 1 prosthetic technician). Majority of the rehab patients need thorough assistance/supervision during treatments. Mostly, each patient receives 1-2 hours of therapy each therapy sessions.

<table>
<thead>
<tr>
<th></th>
<th>1st Q</th>
<th>2nd Q</th>
<th>3rd Q</th>
<th>4th Q</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>New referrals</td>
<td>123</td>
<td>117</td>
<td>84</td>
<td>157</td>
<td>481</td>
</tr>
<tr>
<td>Average number of treatments per day</td>
<td>37</td>
<td>40</td>
<td>33</td>
<td>38</td>
<td>37</td>
</tr>
<tr>
<td>Total treatments for the quarter</td>
<td>1,956</td>
<td>2,164</td>
<td>1,665</td>
<td>1,850</td>
<td>7,635</td>
</tr>
</tbody>
</table>
Accomplishment:

- November 2011: Involvement of the rehabilitation department in World Diabetes Month activities. Visited various schools throughout November month to conduct lectures on foot care, healthy lifestyle and physical activity in collaboration with health promotion department, Taiwan Health Center and DWC. (List of schools: DES, NVTI, MMS, LES, RES, Rairok Elementary School, Ajeltake Elementary Schools, MIHS, COOP and SDA).

- December 2011: “Rehabilitation Patients Day” was conducted last December 23, 2011. Rehab staff facilitated fun activities, games and education on healthy lifestyle for patients. Feedback about the offered services was also carried out to further improve the services, meeting the needs and demands of rehab patient. 75 patients/family participated in the event.

- January 2012: In collaboration with the HPDP Department, one week “Diabetes Foot Care Training was conducted to the new Health Assistants. Wound care, off-loading techniques and foot care assessment were taught theoretically and on-the-site training.

- March 2012: Participation in Patient Navigator Train-the Trainer Workshop, Cancer Program last March 28, 2012. Rehabilitation Director lectured 2 topics such as Gait/Transfer/ ROM exercises and Diabetic Foot Care.

- April 2012: Through the Health Promotion, the rehab department received 95 pcs of foot care kit (which includes: nail clipper, nail file and mirror) that will be given out to patients at the diabetes foot care clinics.

- May 2012: Therapy Technicant participated in the Wojte Outreach last May 17-31, 2012. Foot care screening was performed to diabetic patients and foot care presentations at Wojte Elementary School and High School. 10 canes were also provided to needy people in Wojte.
**Hospital Services**

- June 2012: Staff attended the 1st Pacific Island Community Based Rehabilitation Forum in Nandi Fiji from June 12-15, 2012. The objective of the conference are to initiate CBR in the Marshall Islands and to implement and evaluate the effectiveness of the program for the disabled people.

- August 2012: Large involvement of the Rehabilitation Department in the Canvasback Orthopedic Team who provided surgical & therapeutic treatment to patients with different conditions. Rehabilitation Staff together with the visiting Physiotherapist from Canvasback successfully provided treatments to post-op and non-operative cases done carried out by the Canvasback Team. 40 patients were referred for extensive physical therapy assessment and treatments including patients with Total Knee Replacements, Shoulder Surgery & other post-op cases.

- August 2012: The department received different types of supports, braces and mobility devices from Canvasback Team. These were also used to patients who underwent surgery and medical therapy.

- September 2011: Participation in the Diabetes Primary Care Training facilitated by the MOH and Taiwan Health Center. Director, participated in the Diabetes Primary Care Training and presented the “Diabetes Foot Care Clinic & Rehabilitation Treatment Procedure” at ICC in September 24-26, 2012.

---

**Table 108: Rehabilitation Department's Referral information**

<table>
<thead>
<tr>
<th>Activity</th>
<th>FY 2009</th>
<th>FY 2010</th>
<th>FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Majuro Hospital</td>
<td>Ebeye Hospital</td>
<td>Majuro Hospital</td>
</tr>
<tr>
<td>New Referrals</td>
<td>502</td>
<td>167</td>
<td>423</td>
</tr>
<tr>
<td>Average # of Treatments Per day</td>
<td>31</td>
<td>10</td>
<td>29</td>
</tr>
<tr>
<td>Completed Prostheses</td>
<td>8</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Total Treatments Per Quarter</td>
<td>7,717</td>
<td>2,679</td>
<td>6,910</td>
</tr>
</tbody>
</table>
Laboratory Services

Ebeye Hospital Laboratory Services

- Successful Lab Day Celebration. PIHOA sponsored Lab Day was carried out during the 1st quarter. Activities included Oratory and Poster competition between all Ebeye High Schools.
- Laboratory Standard Operating Procedures (SOP) have been reviewed, printed and implemented.
- Working on standardizing the lab forms –New forms sent for printing and expected to be implemented in 1st quarter FY13.
- Working on waste management and disposal protocols in preparation of the new incinerator and waste sterilizer’s installation.
- External Quality Control-PPTC –performing well
- Cytology Training for 2 Lab technicians in Majuro Lab
- Received Blood Bank Fridge purchased through the Global Fund and Blood Bag Centrifuge donated from Kwajalein Hospital.
- Fecal Occult Blood testing kits were received and testing was commenced in the 2nd quarter.

Training / Certification

- On-going training: POLHN PPTC –3 Lab technicians enrolled in the distance learning / On Line Course.
- Supervisor has enrolled in Fiji National University Public Health post graduate courses.
- 1-Laboratory technician attended a HIV meeting in Majuro.
- 1 Lab technician attended the Monitoring and evaluation framework Seminar in Majuro in April
- 2 Lab technicians participated in the PITCA Meeting in Palau

Table 109: Diagnosis/Reason for Majuro Rehabilitation Services

<table>
<thead>
<tr>
<th>Reason</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back Pain</td>
<td>141</td>
<td>111</td>
</tr>
<tr>
<td>Degenerative Joint Disease</td>
<td>31</td>
<td>21</td>
</tr>
<tr>
<td>Musculoskeletal problem (shoulder, hip pain etc.)</td>
<td>173</td>
<td>132</td>
</tr>
<tr>
<td>Total Knee Replacement (TKR)</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Arthritis</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>DM Foot Complication (amputation, debridement)</td>
<td>116</td>
<td>81</td>
</tr>
<tr>
<td>Stroke</td>
<td>42</td>
<td>43</td>
</tr>
<tr>
<td>Fracture</td>
<td>29</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>100</td>
<td>79</td>
</tr>
<tr>
<td>TOTAL</td>
<td>643</td>
<td>500</td>
</tr>
</tbody>
</table>
Hospital Services

- 1 Lab technician attended the APHL Conference in Seattle

<table>
<thead>
<tr>
<th>Table 110: Laboratory Hospital Work Volume FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Hematology</td>
</tr>
<tr>
<td>Serology</td>
</tr>
<tr>
<td>Immuno-hematology</td>
</tr>
<tr>
<td>General Bacteriology</td>
</tr>
<tr>
<td>Parasitology-1</td>
</tr>
<tr>
<td>Biochemistry</td>
</tr>
<tr>
<td>Off-island specimen ref</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Way Forward

- Consistent Monthly Meeting
- Hire a Hematology /Blood Bank Technician with cytology and histology knowledge -critical for producing quality work in these 2 sections and to help in the setting up of Histology/cytology sections.
- Create a Lab Receptionist Post. The receptionist is needed to record and log all incoming lab orders; record and log all completed test results and distribute to requesting departments.

Majuro Hospital Laboratory Services

The laboratory conducted in 17,816 phlebotomies, processed 48,838 specimens through 249,285 tests and shipped 823 TB sputa, 364 immunochemistry and 3 tissue specimens.

Two new trainee staff were recruited. International visitors appraised laboratory in good standing. 8 staff continued to participate in Pacific Paramedical Training Center’s online advanced training programs especially in STI and biochemistry. Pacific Paramedical Training Center, NZ (PPTC) sponsored two laboratory staff for training in Blood cell morphology and Clinical biochemistry for 4 weeks duration.

Through Secretariat of Pacific Community (SPC), Laboratory Department was trained on CD4 cell counting method and algorithm of confirming and TB Sputa Management Course was conducted.

Microbiology supervisor and Housekeeping Division have consistently worked and made every effort to keep laboratory clean; disinfection of all the benches and regular bio waste disposal is observed. Hospital Infection Control: Laboratory participation in this activity has been regular and more concentrated in areas with high prevalence of MRSA (Methicillin resistant staphylococcus aureus).
**Way Forward:**

1. Localizing immunochemistry testing,
2. Overseas training of staff,
3. Revising policy and planning of the laboratory’s goals and objectives, Implementing basic level training programs for junior staff,
4. Introducing new laboratory request forms. Altering the pattern/format of lab data collection and analysis to make the process simple to clearly segregate hospital from PHC work and costs,
5. Monitoring stock take on fortnightly basis resulting, Using Global Tb Fund allocations for 9th period
6. Training of laboratory staff in screening of pap smears in diagnosis of cervico vaginal diseases including pre cancers and cancers,
7. Training of staff (Majuro & Ebeye laboratory) in Tb sputa management, and arranging retraining and shipping licenses to the staff.

**Table 111: Majuro Hospital Laboratory Work Volume FY2012**

<table>
<thead>
<tr>
<th>Work volume indicators</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Total</th>
<th>Weekly averages:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1). Encounters</td>
<td>8,488</td>
<td>7,441</td>
<td>8,586</td>
<td>9,612</td>
<td>34,127</td>
<td>656</td>
</tr>
<tr>
<td>2). Phlebotomies</td>
<td>7,190</td>
<td>6,114</td>
<td>4,305</td>
<td>5,067</td>
<td>22,865</td>
<td>436</td>
</tr>
<tr>
<td>3). Specimens</td>
<td>14,732</td>
<td>11,960</td>
<td>12,172</td>
<td>14,636</td>
<td>53,659</td>
<td>1032</td>
</tr>
<tr>
<td>4). Tests</td>
<td>50,002</td>
<td>51,373</td>
<td>55,869</td>
<td>69,685</td>
<td>226,929</td>
<td>4364</td>
</tr>
<tr>
<td>5). Shipments</td>
<td>62</td>
<td>40</td>
<td>48</td>
<td>21</td>
<td>171</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td><strong>80,474</strong></td>
<td><strong>76,928</strong></td>
<td><strong>80,980</strong></td>
<td><strong>99,021</strong></td>
<td><strong>337,542</strong></td>
<td><strong>6,483</strong></td>
</tr>
</tbody>
</table>

**Table 112: Summary of Majuro Laboratory Activities, FY2012**

<table>
<thead>
<tr>
<th>Subdivisions</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB microscopy</td>
<td>217</td>
<td>162</td>
<td>268</td>
<td>77</td>
<td>724</td>
</tr>
<tr>
<td>Microbiology</td>
<td>2,566</td>
<td>2,986</td>
<td>4,053</td>
<td>4,904</td>
<td>14,509</td>
</tr>
<tr>
<td>Immunology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a). STI serology</td>
<td>1,764</td>
<td>1,884</td>
<td>1,855</td>
<td>3,147</td>
<td>8,650</td>
</tr>
<tr>
<td>b). CT diagnosis</td>
<td>254</td>
<td>-----</td>
<td>650</td>
<td>208</td>
<td>1,112</td>
</tr>
<tr>
<td>c). NON STI</td>
<td>1,208</td>
<td>36</td>
<td>23</td>
<td>13</td>
<td>1,280</td>
</tr>
<tr>
<td>Hematology</td>
<td>4,808</td>
<td>3,146</td>
<td>2,356</td>
<td>2,772</td>
<td>13,082</td>
</tr>
<tr>
<td>Blood bank</td>
<td>1,436</td>
<td>1,093</td>
<td>626</td>
<td>999</td>
<td>4,154</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>1,938</td>
<td>2,168</td>
<td>1,762</td>
<td>2,116</td>
<td>7,984</td>
</tr>
<tr>
<td>Histo-cytology</td>
<td>463</td>
<td>413</td>
<td>531</td>
<td>472</td>
<td>1,879</td>
</tr>
<tr>
<td>Referred specimens</td>
<td>78</td>
<td>72</td>
<td>48</td>
<td>87</td>
<td>285</td>
</tr>
<tr>
<td><strong>Total specimens</strong></td>
<td><strong>14,732</strong></td>
<td><strong>11,960</strong></td>
<td><strong>12,172</strong></td>
<td><strong>14,795</strong></td>
<td><strong>53,659</strong></td>
</tr>
</tbody>
</table>
Pharmacy Services

Majuro Hospital Pharmacy Services

The data for the first three months of this FY is not reflecting the true figures since they were generated from the old computerized system, the Fred System. The new system was installed in November of 2011 and was fully running towards the end of December 2011.

- Installation of the computerized inventory system, the mSupply. Funded by WHO. The program was installed in November 2011 by a visiting consultant.
- Pharmacy technicians had two weeks attachment at Palau Hospital for job experience and to learn pharmacy works in other neighboring pacific island countries. The project was funded by WHO.
- JICA provided a Japanese volunteer for 6 months attachment in Majuro Hospital Pharmacy Department from March to September 2012.
- Another pharmacist was recruited from Fiji to assist us and at the same time works with the Hospital Preparedness program.
- The new computerized system really speeds up work and improves the management of our stock. We conducted two physical counts or general stock taking this year. Msupply is still yet to be fully utilized to improve stock level at all time or to reduce stock-outs to zero level.

<table>
<thead>
<tr>
<th>FY2012</th>
<th>No. of Prescription</th>
<th>Average No. of Script per day</th>
<th>No. of items dispensed</th>
<th>No. of items per Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2011</td>
<td>6489</td>
<td>216</td>
<td>9529</td>
<td>1.46</td>
</tr>
<tr>
<td>November 11</td>
<td>4881</td>
<td>162</td>
<td>7772</td>
<td>1.59</td>
</tr>
<tr>
<td>December 11</td>
<td>5587</td>
<td>186</td>
<td>8564</td>
<td>1.53</td>
</tr>
<tr>
<td>January 12</td>
<td>3718</td>
<td>119</td>
<td>9951</td>
<td>2.68</td>
</tr>
<tr>
<td>February 12</td>
<td>3426</td>
<td>118</td>
<td>9158</td>
<td>2.68</td>
</tr>
<tr>
<td>March 12</td>
<td>3936</td>
<td>127</td>
<td>10526</td>
<td>2.68</td>
</tr>
<tr>
<td>April 12</td>
<td>4502</td>
<td>150</td>
<td>10053</td>
<td>3</td>
</tr>
<tr>
<td>May 12</td>
<td>4299</td>
<td>1,38.6</td>
<td>9863</td>
<td>3</td>
</tr>
<tr>
<td>June 12</td>
<td>3927</td>
<td>1,30.9</td>
<td>10625</td>
<td>3</td>
</tr>
<tr>
<td>July 12</td>
<td>4,080</td>
<td>140</td>
<td>10,202</td>
<td>2.5</td>
</tr>
<tr>
<td>August 12</td>
<td>4,432</td>
<td>152</td>
<td>11,604</td>
<td>2.62</td>
</tr>
<tr>
<td>September 12</td>
<td>3,661</td>
<td>130.75</td>
<td>9,821</td>
<td>2.68</td>
</tr>
<tr>
<td>Total</td>
<td>52,938</td>
<td>1,770.25</td>
<td>117668</td>
<td>29.42</td>
</tr>
</tbody>
</table>
The pharmaceutical budget for Majuro hospital was consumed toward the end of the fiscal year.

Chief Pharmacist attended a One week training in Sydney, June 2012 on National Medicine Policy

Two pharmacy technicians attended week training on pharmacy basic skills training organized by UNFPA & University of Canberra here in the RMI.

The chief pharmacist attended, as an observer, a training in Nadi organized by UNFPA & University of Canberra. The training was to improve pharmacy skills and competencies for pharmacy technicians and to see if the training is relevant for the RMI.

Continuing on the job training in the pharmacy. The two pharmacists is responsible for these up skilling on a day to day basis.

Ebeye Hospital Pharmacy Services

- Continue providing normal Pharmacy services
- Working with doctors on the formulary review and update
- Working on bulk purchasing in preparation of the new storage facility opening.
- Preparing for relocation of pharmaceutical to the new storage facility in FY2013
- Continue collaborating with USAPI Pharmacy Association of standardizing formulary and protocols
- There is no Inventory database to manage stocks. The department is currently doing inventory manually. There is inventory management software that was purchased 3 years ago but has not been implemented due to the resignation of the IT network administrator prior to the installing and training of the software. The software will be implemented as soon as the new IT administrator is hired.
This section provides the actual costs of services for areas presented in the tables. If all the actual costs for services are added, it will clearly show that the Ministry of Health’s budget is not even sufficient to provide health care services. Cost analysis of services section is a new addition to the Ministry’s annual report to show the actual costs of services for only two areas in the Ministry: Operating Theatre/Room and Laboratory Services based on the number of patients and types of medical supplies needed.

### Table 114: Actual Cost of Services Per Disease in Pediatric Ward, FY2012

<table>
<thead>
<tr>
<th>Disease Types</th>
<th>Pts. in 2012</th>
<th>Ave stay</th>
<th>Ward costs (medicines)</th>
<th>Meals ($13.00/Day)</th>
<th>Cost 1 patient</th>
<th>Actual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory Diseases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronchiolitis/RAD</td>
<td>276</td>
<td>10Days</td>
<td>$465.85</td>
<td>$130.00</td>
<td>$595.85</td>
<td>$164,455.00</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>252</td>
<td>10days</td>
<td>$73.12</td>
<td>$130.00</td>
<td>$203.12</td>
<td>$51,187.00</td>
</tr>
<tr>
<td><strong>Malnutrition types</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Kwashiorkor</td>
<td>53</td>
<td>10days</td>
<td>$197.74</td>
<td>$180.00</td>
<td>$377.74</td>
<td>$20,020.22</td>
</tr>
<tr>
<td><strong>Iron Deficiency/ Anemia</strong></td>
<td>28</td>
<td>10days</td>
<td>$72.45</td>
<td>$180.00</td>
<td>$252.45</td>
<td>$7,061.00</td>
</tr>
<tr>
<td>AGE/Dehydration /Amoebiasis/Giardiasis</td>
<td>84</td>
<td>10 days</td>
<td>$572.46</td>
<td>$130.00</td>
<td>$702.46</td>
<td>$59,007.00</td>
</tr>
<tr>
<td>Sepsis</td>
<td>44</td>
<td>10days</td>
<td>$547.97</td>
<td>$130.00</td>
<td>$677.97</td>
<td>$30,509.00</td>
</tr>
<tr>
<td>CNS Infection</td>
<td>9</td>
<td>10days</td>
<td>$82.78</td>
<td>$130.00</td>
<td>$212.78</td>
<td>$1,916.00</td>
</tr>
<tr>
<td>Cerebral Palsy / seizure Disorder</td>
<td>22</td>
<td>10 days</td>
<td>$14.20</td>
<td>$130.00</td>
<td>$144.20</td>
<td>$3,173.00</td>
</tr>
<tr>
<td><strong>Tuberculosis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Pulmonary TB</td>
<td>13</td>
<td>10days</td>
<td>$366.61</td>
<td>$130.00</td>
<td>$496.61</td>
<td>$6,456.00</td>
</tr>
<tr>
<td>b) TB Maintenance Phase</td>
<td></td>
<td>120 days(10 days)</td>
<td>$131.62</td>
<td>$130.00</td>
<td>$261.62</td>
<td>$1,832.00</td>
</tr>
<tr>
<td><strong>Cardiac Cases</strong></td>
<td>18</td>
<td>10 days</td>
<td>$54.68</td>
<td>$130.00</td>
<td>$184.68</td>
<td>$3,325.00</td>
</tr>
<tr>
<td><strong>Infections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otitis Media</td>
<td>9</td>
<td>10 days</td>
<td>$223.50</td>
<td>$130.00</td>
<td>$353.50</td>
<td>$3,180.00</td>
</tr>
<tr>
<td>Typhoid Fever</td>
<td>13</td>
<td>15days</td>
<td>$482.95</td>
<td>$195.00</td>
<td>$677.95</td>
<td>$8,814.00</td>
</tr>
<tr>
<td>Scabies/ Pyoderma/Abscess</td>
<td>76</td>
<td>10days</td>
<td>$440.68</td>
<td>$130.00</td>
<td>$570.68</td>
<td>$43,372.00</td>
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<tr>
<td><strong>Febrile Seizure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Seizures, cerebral palsy</td>
<td>22</td>
<td>10 days</td>
<td>$24.50</td>
<td>$130.00</td>
<td>$154.50</td>
<td>$3,399.00</td>
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</table>
### Table 115: Actual Cost of Services Per Disease in Internal Medicine, FY2012

<table>
<thead>
<tr>
<th>Disease Types</th>
<th>Patient s in 2012</th>
<th>Average Stay</th>
<th>Supplies</th>
<th>Medicine costs 10dys</th>
<th>Meals</th>
<th>Cost 1 Patient</th>
<th>Actual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory Diseases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pneumonia (mild)</td>
<td>14</td>
<td>3 days</td>
<td>$6.00</td>
<td>70.20</td>
<td>$45.00</td>
<td>$121.20</td>
<td>$1,697</td>
</tr>
<tr>
<td>Pneumonia (severe)</td>
<td>92</td>
<td>5 days</td>
<td>$15.00</td>
<td>121.17</td>
<td>$75.00</td>
<td>$211.17</td>
<td>$19,428</td>
</tr>
<tr>
<td>Lung Abscess/Pleural effusion</td>
<td>11</td>
<td>5 days</td>
<td>$15.00</td>
<td>148.92</td>
<td>$75.00</td>
<td>$238.92</td>
<td>$2,628</td>
</tr>
<tr>
<td>COPD/ Asthma</td>
<td>39</td>
<td>3 days</td>
<td>$3.00</td>
<td>$25.04</td>
<td>$45.00</td>
<td>$73.04</td>
<td>$2,849</td>
</tr>
<tr>
<td><strong>Pulmonary Diseases (Bronchitis)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bronchial Asthma</td>
<td>35</td>
<td>3 days</td>
<td>$6.00</td>
<td>$111.77</td>
<td>$45.00</td>
<td>$162.77</td>
<td>$5,697</td>
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<tr>
<td>Dub Anemia</td>
<td>36</td>
<td>3 days</td>
<td>$6.00</td>
<td>$65.10</td>
<td>$45.00</td>
<td>$116.10</td>
<td>$4,180</td>
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<tr>
<td><strong>Cellulitis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cellulitis</td>
<td>4</td>
<td>5 days</td>
<td>$20.00</td>
<td>$69.92</td>
<td>$75.00</td>
<td>$164.92</td>
<td>$660</td>
</tr>
<tr>
<td>Gouty Arthritis Acute Attacks</td>
<td>8</td>
<td>5 days</td>
<td>$15.00</td>
<td>$52.31</td>
<td>$75.00</td>
<td>$142.31</td>
<td>$1,138</td>
</tr>
<tr>
<td><strong>Typhoid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typhoid</td>
<td>5</td>
<td>7 days</td>
<td>$30.00</td>
<td>$326.98</td>
<td>$105.00</td>
<td>$461.98</td>
<td>$2,310</td>
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<tr>
<td>Dengue Fever</td>
<td>106</td>
<td>5 days</td>
<td>$20.00</td>
<td>$100.00</td>
<td>$75.00</td>
<td>$195.00</td>
<td>$20,670</td>
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<tr>
<td><strong>Liver Diseases</strong></td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Acute Hepatitis</td>
<td>17</td>
<td>3 days</td>
<td>$35.00</td>
<td>$51.82</td>
<td>$45.00</td>
<td>$131.92</td>
<td>$2,243</td>
</tr>
<tr>
<td>Chronic hepatitis</td>
<td>20</td>
<td>5 days</td>
<td>$25.00</td>
<td>$42.42</td>
<td>$75.00</td>
<td>$142.42</td>
<td>$2,848</td>
</tr>
<tr>
<td><strong>Diabetes Mellitus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPG&gt;140 overweight &amp; hypertension</td>
<td>80</td>
<td>3 days</td>
<td>$6.00</td>
<td>$39.17</td>
<td>$54.00</td>
<td>$99.17</td>
<td>$7,934</td>
</tr>
<tr>
<td>With wound</td>
<td>15</td>
<td>10 days</td>
<td>$30.00</td>
<td>$75.44</td>
<td>$180.00</td>
<td>$285.44</td>
<td>$4,282</td>
</tr>
<tr>
<td>with ESRD</td>
<td>39</td>
<td>3 days</td>
<td>$6.00</td>
<td>$35.17</td>
<td>$54.00</td>
<td>$95.17</td>
<td>$3,712</td>
</tr>
<tr>
<td><strong>Hypertension, cardiac and related disorders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myocardial Infarction (Upon admission)</td>
<td>30</td>
<td>7 days</td>
<td>$21.00</td>
<td>$366.90</td>
<td>$105.00</td>
<td>$492.90</td>
<td>$14,787</td>
</tr>
</tbody>
</table>
Due to shortage of beds, patients are kept not more than 3 days in ward. Only critical patients are kept 5 days or more days. Occupancy rate of inpatient ward is 100%. Many patients continue with medications while at home, and continue to seek medical treatment. Medicine costs increase more than above mentioned costs. Often same patients visit as outpatients, and continue medications in chronic illnesses.

Table 116: Procedure costs of General Surgery Patients in OR and Ward FY2012

<table>
<thead>
<tr>
<th>SURGERY TYPES</th>
<th>No. of Surgeries</th>
<th>Time</th>
<th>Ave Stay</th>
<th>Treatment cost of 1 patient</th>
<th>Actual Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explo Lap/ Omentectomy</td>
<td>4</td>
<td>90</td>
<td>6dys</td>
<td>$4,487.00</td>
<td>$17,948.00</td>
</tr>
<tr>
<td>Explo , CBD exploration</td>
<td>2</td>
<td>90</td>
<td>7 days</td>
<td>$4,502.00</td>
<td>$9,004.00</td>
</tr>
<tr>
<td>Ex.Lap.Jejunojejunostomy</td>
<td>2</td>
<td>90</td>
<td>7 days</td>
<td>$4,502.00</td>
<td>$9,004.00</td>
</tr>
<tr>
<td>Choleddochojunostomy</td>
<td>2</td>
<td>120</td>
<td>21 days</td>
<td>$5,487.00</td>
<td>$10,974.00</td>
</tr>
<tr>
<td>Cholecystectomy</td>
<td>2</td>
<td>90</td>
<td>5 dys</td>
<td>$4,487.00</td>
<td>$8,974.00</td>
</tr>
<tr>
<td>Appendectomy</td>
<td>21</td>
<td>60</td>
<td>5 dys</td>
<td>$3,463.00</td>
<td>$72,723.00</td>
</tr>
<tr>
<td>Thyroidectomy</td>
<td>3</td>
<td>90</td>
<td>15 days</td>
<td>$4,192.00</td>
<td>$12,576.00</td>
</tr>
<tr>
<td>Cystostomy</td>
<td>1</td>
<td>60</td>
<td>7 days</td>
<td>$3,412.00</td>
<td>$3,412.00</td>
</tr>
<tr>
<td>Thoracostomy</td>
<td>2</td>
<td>60</td>
<td>7 days</td>
<td>$3,514.00</td>
<td>$7,028.00</td>
</tr>
<tr>
<td>Explore Maxillary sinus</td>
<td>1</td>
<td>90</td>
<td>7 days</td>
<td>$2,575.00</td>
<td>$2,575.00</td>
</tr>
<tr>
<td>Mandibular.Int.fixa</td>
<td>1</td>
<td>90</td>
<td>7 dys</td>
<td>$2,575.00</td>
<td>$2,575.00</td>
</tr>
<tr>
<td>Orif (plate &amp;screw)</td>
<td>1</td>
<td>90</td>
<td>10 days</td>
<td>$2,912.00</td>
<td>$2,912.00</td>
</tr>
<tr>
<td>Athrocenthesis</td>
<td>1</td>
<td>40</td>
<td>6 days</td>
<td>$2,575.00</td>
<td>$2,575.00</td>
</tr>
<tr>
<td>Lap, Hemostatic rep, ovary Lt</td>
<td>1</td>
<td>90</td>
<td>7 days</td>
<td>$3,430.00</td>
<td>$3,430.00</td>
</tr>
<tr>
<td>Wound explore</td>
<td>8</td>
<td>60</td>
<td>7 dys</td>
<td>$2,717.00</td>
<td>$21,736.00</td>
</tr>
<tr>
<td>Excision upperlip</td>
<td>1</td>
<td>60</td>
<td>7 days</td>
<td>$2,562.00</td>
<td>$2,562.00</td>
</tr>
<tr>
<td>Fasiotomy</td>
<td>9</td>
<td>60</td>
<td>5 days</td>
<td>$1,682.00</td>
<td>$15,138.00</td>
</tr>
<tr>
<td>Release Z Plasty</td>
<td>1</td>
<td>60</td>
<td>3 days</td>
<td>$2,562.00</td>
<td>$2,562.00</td>
</tr>
<tr>
<td>Trans Metatarsal Amputation</td>
<td>7</td>
<td>45</td>
<td>20 days</td>
<td>$4,065.00</td>
<td>$28,455.00</td>
</tr>
<tr>
<td>UGI Endoscopy</td>
<td>4</td>
<td>40</td>
<td>1 day</td>
<td>$1,405.00</td>
<td>$5,620.00</td>
</tr>
<tr>
<td>Procedure</td>
<td>Hours</td>
<td>Days</td>
<td>Days</td>
<td>Charges</td>
<td>Charges</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>------</td>
<td>------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Laryngo, esophagoscopy</td>
<td>2</td>
<td>40</td>
<td>1 day</td>
<td>$1,405.00</td>
<td>$2,810.00</td>
</tr>
<tr>
<td>Disarticulation</td>
<td>3</td>
<td>60</td>
<td>14 days</td>
<td>$2,201.00</td>
<td>$6,603.00</td>
</tr>
<tr>
<td>Inguinal hernia repair</td>
<td>4</td>
<td>90</td>
<td>7 days</td>
<td>$3,612.00</td>
<td>$14,448.00</td>
</tr>
<tr>
<td>Debridement (spinal./IV)</td>
<td>44</td>
<td>60</td>
<td>21 days</td>
<td>$2,749.00</td>
<td>$120,956.00</td>
</tr>
<tr>
<td>Incisional herniorraphy</td>
<td>3</td>
<td>60</td>
<td>3 days</td>
<td>$3,613.00</td>
<td>$10,839.00</td>
</tr>
<tr>
<td>Incisional herniotomy</td>
<td>2</td>
<td>60</td>
<td>3 days</td>
<td>$3,612.00</td>
<td>$7,224.00</td>
</tr>
<tr>
<td>Umblical hernorrhapy</td>
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<td>90</td>
<td>7 days</td>
<td>$1,615.00</td>
<td>$1,615.00</td>
</tr>
<tr>
<td>Hydrocoele repair</td>
<td>1</td>
<td>60</td>
<td>7 days</td>
<td>$2,562.00</td>
<td>$2,562.00</td>
</tr>
<tr>
<td>Mesh Hernirraphy</td>
<td>1</td>
<td>90</td>
<td>7 days</td>
<td>$3,612.00</td>
<td>$3,612.00</td>
</tr>
<tr>
<td>Amputation (AKA,BKA)</td>
<td>15</td>
<td>60</td>
<td>30 days</td>
<td>$4,965.00</td>
<td>$74,475.00</td>
</tr>
<tr>
<td>Tracheostomy</td>
<td>6</td>
<td>45</td>
<td>14 days</td>
<td>$1,855.00</td>
<td>$11,130.00</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td>5</td>
<td>45</td>
<td>7 days</td>
<td>$1,304.00</td>
<td>$6,520.00</td>
</tr>
<tr>
<td>Gastroscopy</td>
<td>5</td>
<td>30</td>
<td>14 days</td>
<td>$1,745.00</td>
<td>$1,745.00</td>
</tr>
<tr>
<td>Bronchoscopy</td>
<td>1</td>
<td>30</td>
<td>1 day</td>
<td>$349.00</td>
<td>$349.00</td>
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<tr>
<td>Iliostomy</td>
<td>3</td>
<td>45</td>
<td>5 days</td>
<td>$1,287.00</td>
<td>$3,861.00</td>
</tr>
<tr>
<td>I&amp;d/debridement</td>
<td>2</td>
<td>60</td>
<td>30 days</td>
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<td>$6,864.00</td>
</tr>
<tr>
<td>Incision&amp;drainage</td>
<td>29</td>
<td>30</td>
<td>14 days</td>
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<td>$65,598.00</td>
</tr>
<tr>
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<td>1</td>
<td>45</td>
<td>21 days</td>
<td>$3,940.00</td>
<td>$3,940.00</td>
</tr>
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<td>Gastrostomy tube insert</td>
<td>1</td>
<td>45</td>
<td>21 days</td>
<td>$3,940.00</td>
<td>$3,940.00</td>
</tr>
<tr>
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<td>2</td>
<td>30</td>
<td>10 days</td>
<td>$514.00</td>
<td>$1,028.00</td>
</tr>
<tr>
<td>jejunostomy Tube insert</td>
<td>1</td>
<td>30</td>
<td>10 days</td>
<td>$514.00</td>
<td>$514.00</td>
</tr>
<tr>
<td>Wound/Closure stump</td>
<td>11</td>
<td>30</td>
<td>14 days</td>
<td>$2,202.00</td>
<td>$24,222.00</td>
</tr>
<tr>
<td>Full thick skin graft</td>
<td>4</td>
<td>60</td>
<td>21 days</td>
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</tr>
<tr>
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<td>60</td>
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<td>$985.00</td>
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<td>30</td>
<td>7 days</td>
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<td>$454.00</td>
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<tr>
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<td>3</td>
<td>20</td>
<td>3 days</td>
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<tr>
<td>Circumcision</td>
<td>8</td>
<td>15</td>
<td>1 day</td>
<td>$358.00</td>
<td>$2,864.00</td>
</tr>
<tr>
<td>Cod (burned case)</td>
<td>2</td>
<td>30</td>
<td>1 day</td>
<td>$826.00</td>
<td>$1,652.00</td>
</tr>
<tr>
<td>Tendon repair</td>
<td>2</td>
<td>60</td>
<td>15 days</td>
<td>$3,564.00</td>
<td>$7,128.00</td>
</tr>
<tr>
<td>Remove index finger</td>
<td>1</td>
<td>60</td>
<td>7 days</td>
<td>$2,262.00</td>
<td>$2,262.00</td>
</tr>
<tr>
<td>Repeat scalp dressing</td>
<td>2</td>
<td>30</td>
<td>10 days</td>
<td>$499.00</td>
<td>$998.00</td>
</tr>
<tr>
<td>Incisional bx/biopsy</td>
<td>5</td>
<td>20</td>
<td>2 days</td>
<td>$405.00</td>
<td>$2,025.00</td>
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<tr>
<td>Open biopsy</td>
<td>1</td>
<td>40</td>
<td>2 days</td>
<td>$861.00</td>
<td>$861.00</td>
</tr>
<tr>
<td>Excision,Buccal mass</td>
<td>1</td>
<td>60</td>
<td>10 days</td>
<td>$2,262.00</td>
<td>$2,262.00</td>
</tr>
<tr>
<td>Excision Lipoma</td>
<td>3</td>
<td>30</td>
<td>2 days</td>
<td>$394.00</td>
<td>$1,182.00</td>
</tr>
<tr>
<td>Excision Keloid</td>
<td>4</td>
<td>30</td>
<td>2 days</td>
<td>$378.00</td>
<td>$1,512.00</td>
</tr>
<tr>
<td>Excision mass</td>
<td>8</td>
<td>50</td>
<td>14 days</td>
<td>$856.00</td>
<td>$6,848.00</td>
</tr>
<tr>
<td>Excision breast mass</td>
<td>4</td>
<td>50</td>
<td>7 days</td>
<td>$3,891.00</td>
<td>$15,564.00</td>
</tr>
<tr>
<td>Excision fibro adenoma</td>
<td>1</td>
<td>50</td>
<td>2 days</td>
<td>$405.00</td>
<td>$405.00</td>
</tr>
<tr>
<td>Procedure</td>
<td>No. of Procedure</td>
<td>Time in minutes</td>
<td>Av stay</td>
<td>Treatment cost 1 patient</td>
<td>Total cost</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------------</td>
<td>-----------------</td>
<td>---------</td>
<td>--------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>C/Section</td>
<td>74</td>
<td>40</td>
<td>3 days</td>
<td>$1,670.00</td>
<td>$123,580.00</td>
</tr>
<tr>
<td>BTL</td>
<td>17</td>
<td>60</td>
<td>1 day</td>
<td>$1,475.00</td>
<td>$25,075.00</td>
</tr>
<tr>
<td>C/Section &amp; BTL</td>
<td>29</td>
<td>60</td>
<td>3 days</td>
<td>$1,720.00</td>
<td>$49,880.00</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>2</td>
<td>60</td>
<td>3 days</td>
<td>$1,750.00</td>
<td>$3,500.00</td>
</tr>
<tr>
<td>D&amp;C</td>
<td>5</td>
<td>45</td>
<td>1 day</td>
<td>$935.00</td>
<td>$4,675.00</td>
</tr>
<tr>
<td>Vaginal postpartum laceration</td>
<td>1</td>
<td>40</td>
<td>3 days</td>
<td>$1,157.00</td>
<td>$1,157.00</td>
</tr>
<tr>
<td>ovarian Cystectomy</td>
<td>1</td>
<td>40</td>
<td>3 days</td>
<td>$1,890.00</td>
<td>$1,890.00</td>
</tr>
<tr>
<td>Repair Labial cyst</td>
<td>1</td>
<td>40</td>
<td>2 days</td>
<td>$720.00</td>
<td>$720.00</td>
</tr>
<tr>
<td>Cervical Bx</td>
<td>3</td>
<td>45</td>
<td>1 day</td>
<td>$1,059.00</td>
<td>$3,177.00</td>
</tr>
<tr>
<td>LEEP</td>
<td>5</td>
<td>40</td>
<td>1 day</td>
<td>$1,120.00</td>
<td>$5,600.00</td>
</tr>
<tr>
<td>Expo lap/Salpingectomy</td>
<td>6</td>
<td>60</td>
<td>3 days</td>
<td>$1,375.00</td>
<td>$8,250.00</td>
</tr>
<tr>
<td>EUA/Staging Cervical Bx</td>
<td>4</td>
<td>40</td>
<td>1 day</td>
<td>$355.00</td>
<td>$1,420.00</td>
</tr>
<tr>
<td>ERPOC</td>
<td>2</td>
<td>40</td>
<td>1 day</td>
<td>$1,157.00</td>
<td>$2,314.00</td>
</tr>
<tr>
<td>Evacuation Hematoma</td>
<td>1</td>
<td>30</td>
<td>1 day</td>
<td>$1,066.00</td>
<td>$1,066.00</td>
</tr>
<tr>
<td>Complete Curettage</td>
<td>7</td>
<td>30</td>
<td>1 day</td>
<td>$1,075.00</td>
<td>$7,525.00</td>
</tr>
<tr>
<td>Punch Biopsy</td>
<td>1</td>
<td>15</td>
<td>1 day</td>
<td>$355.00</td>
<td>$355.00</td>
</tr>
<tr>
<td>complex delivery</td>
<td>1</td>
<td>45</td>
<td>1 day</td>
<td>$270.00</td>
<td>$270.00</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td></td>
<td></td>
<td></td>
<td>$240,454.00</td>
</tr>
</tbody>
</table>

Table 117: Cost Analysis of Reproductive Health Care (OR & Ward Costs)
### Table 118: Cost Analysis of Orthopedic Surgery, FY2012 (OR & Ward)

<table>
<thead>
<tr>
<th>Surgery types</th>
<th>No. of Surgeries</th>
<th>Time</th>
<th>Ave stay</th>
<th>Treatment cost of 1 patient</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orif/Nail femur(major)</td>
<td>1</td>
<td>60</td>
<td>30 days</td>
<td>$3,255.00</td>
<td>$3,255.00</td>
</tr>
<tr>
<td>Orif &amp; k wire</td>
<td>1</td>
<td>21</td>
<td>21 days</td>
<td>$3,033.00</td>
<td>$3,033.00</td>
</tr>
<tr>
<td>Close Reduction</td>
<td>5</td>
<td>30</td>
<td>3 days</td>
<td>$1,412.00</td>
<td>$7,060.00</td>
</tr>
<tr>
<td>Debridement</td>
<td>13</td>
<td>30</td>
<td>21 days</td>
<td>$2,847.00</td>
<td>$37,011.00</td>
</tr>
<tr>
<td>Osteotomy &amp; Debridement</td>
<td>1</td>
<td>30</td>
<td>30 days</td>
<td>$2,224.00</td>
<td>$2,224.00</td>
</tr>
<tr>
<td>Below Knee amputation</td>
<td>10</td>
<td>60</td>
<td>30 days</td>
<td>$3,877.00</td>
<td>$38,770.00</td>
</tr>
<tr>
<td>Above knee amputation</td>
<td>3</td>
<td>60</td>
<td>30 days</td>
<td>$3,797.00</td>
<td>$11,391.00</td>
</tr>
<tr>
<td>Below elbow amputation</td>
<td>2</td>
<td>40</td>
<td>30 days</td>
<td>$3,797.00</td>
<td>$7,594.00</td>
</tr>
<tr>
<td>Amputation digit</td>
<td>5</td>
<td>30</td>
<td>5 days</td>
<td>$1,488.00</td>
<td>$7,440.00</td>
</tr>
<tr>
<td>Trans Metatarsal amputation</td>
<td>3</td>
<td>40</td>
<td>30 days</td>
<td>$3,797.00</td>
<td>$11,391.00</td>
</tr>
<tr>
<td>Skeletal Traction</td>
<td>5</td>
<td>30</td>
<td>14 days</td>
<td>$1,612.00</td>
<td>$8,060.00</td>
</tr>
<tr>
<td>Aspiration left knee</td>
<td>1</td>
<td>20</td>
<td>3 days</td>
<td>$1,442.00</td>
<td>$1,442.00</td>
</tr>
<tr>
<td>Disarticulation toes</td>
<td>8</td>
<td>20</td>
<td>5 days</td>
<td>$2,134.00</td>
<td>$17,072.00</td>
</tr>
<tr>
<td>Incision and drainage</td>
<td>1</td>
<td>30</td>
<td>14 days</td>
<td>$2,262.00</td>
<td>$2,262.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>62</strong></td>
<td></td>
<td></td>
<td><strong>$ 158,005.00</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Table 118: Cost Analysis of Pathology laboratory services

<table>
<thead>
<tr>
<th>Material cost(Reagents,chemicals, supplies)</th>
<th>FY2011</th>
<th>FY2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>STD detection</td>
<td>$457,447.00</td>
<td>$488,886.00</td>
</tr>
<tr>
<td>Blood transfusion process including STD screening</td>
<td>$125,735.04</td>
<td>106,022.00*</td>
</tr>
<tr>
<td>Microbiology: detection of infections</td>
<td>$44,469.76</td>
<td>$73,202.00</td>
</tr>
<tr>
<td>NON STI Immunology</td>
<td>$890.26</td>
<td>$370.00</td>
</tr>
<tr>
<td>Biochemistry(detection, follow up, diabetes, T B gout, diseases of liver, kidney, heart, detection of abnormal fats, effects of drugs on organs)</td>
<td>$57,282.96</td>
<td>$69,904.00</td>
</tr>
<tr>
<td>overseas referrals</td>
<td>$33,086.95</td>
<td>$22,090.00</td>
</tr>
<tr>
<td>Phlebotomies</td>
<td>$21,380.00</td>
<td>$31,747.00</td>
</tr>
<tr>
<td>Hematology ( detection of blood disease)</td>
<td>$27,112.07</td>
<td>$67,280.00</td>
</tr>
<tr>
<td>Histo Cytology; detection of ST D, T B, Pre cancers, cancers and others</td>
<td>$14,179.67</td>
<td>$25,616.00</td>
</tr>
<tr>
<td>T B sputa analysis</td>
<td>$35,528.24</td>
<td>$29,645.00</td>
</tr>
</tbody>
</table>

1. A new technology is implemented to detect STD, in Public Healthsurveillance. Though specimen load has increased costs are reduced due to low reagent costs.
2. Phlebotomy load was more due to Dengue fever Public health testing.