

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Childhood Obesity

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	25%		25%	
704	Nutrition and Hunger in the Population	25%		25%	
724	Healthy Lifestyle	25%		25%	
802	Human Development and Family Well-Being	25%		25%	
Total		100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	1.5	0.0
Actual Paid Professional	5.3	0.0	2.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
142350	0	97703	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
12085	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

PCC: Prevalence of overweight in Palauan children was estimated at 33% of which 75% will become obese in later years (MOH, 2010). Diet quality through a nation-wide green revolution program, nutrition education, school gardening, and redirecting researches on childhood obesity, as well as increasing physical activities are being done to address the problem.

CMI: The collaboration among health services staffs and our staff has conducted program activities in the communities in the outer islands. The continued strong supports from the landowners, NGOs and other organizations are the driving force for the successful implementation of such collaboration to combat child obesity.

COM-FSM: Program participants were trained to monitor obesity through body mass index (BMI) with emphasis on healthy and balance diet and to engage in regular physical activity like playing sports and doing home gardening. Awareness programs conducted to school children, youths and young adults, homemakers, and to interest groups in the communities. Other awareness activities were conducted to new Peace Corps volunteers, State Hospital Nurses, COM-FSM staff during Development Staff Day, COM-FSM Health Fair Day, and World Food Day. Cooking displays and contests were also presented during these events. The importance of local foods, calories in food, and the 'Let's Go Local' food campaign are components of awareness programs. Extension also assisted by reviewing and recommending improvement to Early Childhood Education (ECE) catering lunch menu.

2. Brief description of the target audience

PCC: The targeted audience included 2-8 year old children and their teachers, parents, school administrators, policy makers, and coordinated efforts among agencies such as Ministry of Education (MOE), Ministry of Health (MOH), Palau Community College (PCC), Bureau of Agriculture (BOA), Head start, Council of Chiefs, and Association of Principals.

CMI: Target audience included housewives, young mothers, school dropouts, youths and school aged children.

COM-FSM: The targeted audiences included children, teachers, parents, school administrators, policy makers, and others.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	173	540	310	747

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	3	0	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of conference papers and publications on childhood obesity.

Year	Actual
2012	3

Output #2

Output Measure

- Number of trainings conducted on childhood obesity and physical activity.

Year	Actual
2012	3

Output #3

Output Measure

- Number of extension publications on childhood obesity and physical activity.

Year	Actual
2012	6

Output #4

Output Measure

- Number of training conducted on proper diet and physical activity.

Year	Actual
2012	15

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of persons with increased knowledge in healthy food choices and physical activity.
2	Number of program participants adopting recommended practices on healthy food choices and physical activity.
3	Reduction in the number of obese children.

Outcome #1

1. Outcome Measures

Number of persons with increased knowledge in healthy food choices and physical activity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	1841

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

PCC: Thirty three percent of Palauan children are obese. Nutrition education and physical activity are needed as intervention to combat malnutrition and childhood obesity.

CMI: Increase of sicknesses affecting many that are related to diabetes, hypertension and childhood obesity, conditions that have continued to plagued generations.

COM-FSM: Families, communities and governments are concerned about incidence of childhood obesity, which can lead to chronic diseases like diabetes, heart problems, etc. This is due to a lack of knowledge in food preparation and food selection.

What has been done

PCC: A baseline survey was conducted by MOH in Palau to assess the incidence of obesity in children.

CMI: Agents continued to hold workshops and trainings about obesity in the communities.

COM-FSM: At community events, training and personal contacts occurred; sharing and demonstrations took place. Surveys and follow ups reviews were performed. In Pohnpei, sixteen training workshops were conducted throughout ECE programs.

Results

PCC: The MOH survey (2010) showed that 33% are overweight and the chance of becoming obese in later years was estimated at 75%.

CMI: Some mothers reported that they are now aware and being alerted to what kinds of food being served to the family.

COM-FSM: Dependence on imported convenient canned and snack food leads many families to eating unhealthy food that cause obesity and later on non-communicable diseases (NCDs). Children with sedentary lifestyles are vulnerable to childhood obesity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

Number of program participants adopting recommended practices on healthy food choices and physical activity.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	252

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

PCC: There is a need to improve diet quality and increase physical activities so training and nutrition education must be conducted.

CMI: Unbalance diets had negatively impacted the food consumption of children and as a result increases number of children with obesity. It does also have a huge implication on the National and Local Governments resources.

COM-FSM: Dependence on imported convenient canned and snack food leads many families to eating unhealthy food that cause obesity and later on non-communicable diseases (NCDs). Children with sedentary lifestyles are vulnerable to childhood obesity.

What has been done

PCC: Programs on "green revolution", school gardening, nutrition education, and implementing research on childhood obesity (CHL) by Local Action Committee (LAC) were done to improve diet quality, and to increase physical activities, several agencies practiced fitness activities for weight loss and launched "Biggest Loser" contests as incentives .

CMI: The extension agent and health educators continued to educate people in the communities.

COM-FSM: Information, Education and Communications (IEC), cooking demos, and training in healthy lifestyles like gardening and eating balanced diets were done.

Results

PCC: Six classes on nutrition education were conducted; 3 states had school gardens and residents were encouraged to plant and consume vegetables. LAC in the CHL project was formed. Several agencies had fitness programs like "Biggest Loser" as role models for obese children.

CMI: There is an increase in the number of walk-a-thons and physical activities.

COM-FSM: Participants with NCD problems in their families and other interested individuals utilized local produce in cooking nutritious and affordable food to their families, friends and relatives. This happened at family meals and during special occasions. Schools promoted gardening. Some women's groups undertook family and community gardening. Community and school groups requested programs. Family members are enjoying delicious, nutritious and affordable meals and have been sharing dishes during celebrations and community functions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

Reduction in the number of obese children.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	189

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

PCC: Obese children need to undergo physical activity and improve diet quality.

CMI: Unbalance diets had negatively impacted the food consumption of children and as a result increases number of children with obesity. It does also have a huge implication on the National and Local Governments resources.

COM-FSM: Alarmed at the fast increasing rate of NCD problems, the Chuuk government issued an emergency health status of the state to reduce the burden among individuals, families and government expenditures for medication and medical referrals.

What has been done

PCC: School children and the community established school and community gardens, resulting in greater physical activity, consumption of more vegetables leading to reduction in obesity. Several agencies practiced physical fitness programs like "Biggest Loser".

CMI: Extension agents collaborated with health educators to educate people in the communities on healthy food and healthy lifestyles.

COM-FSM: Various stakeholders formed inter-agency coalitions and programs addressing the possible causes of NCDS like obesity. They employed public campaigns, cooking demos and physical fitness exercises including gardening to address the concern with NCDs.

Results

PCC: Reduction in childhood obesity resulted from greater physical activity and consumption of more vegetables because of the school and community gardens established. "Biggest Loser" fitness programs resulted in more weight loss in obese individuals in the community.

CMI: Increase in the number of community scheduled walk-a-thons and preschool physical activities.

COM-FSM: Multi-sectorial campaigns, training, gardening and cooking demonstrations improved

community choices of nutritious food and methods to prepare meals using local healthy produce. Gardening was also adopted in several communities through women's groups. People have adopted the practice of preparing nutritious dishes during gatherings and competition particularly during World Food Day events.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
724	Healthy Lifestyle
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

PCC: The increasing number of obese children in Palau may be caused by developments in technology like too much television viewing and playing games in the computers, sedentary lifestyles like access to cars instead of walking, and convenience of eating imported foods which are oftentimes fattening and not eating healthy local foods.

CMI: Constraints of acquiring needed supplies on time to implement activities that were being scheduled, with delayed PO payment processing time. Continue challenges of the distances between islands and with fuel being very expensive.

COM-FSM: Inclement weather, population migration to mainland US and territories, limited project budget allotment and conflicting community events affected outcomes. Inconsistent production of fruits and vegetables and higher costs of locally grown foods in the markets and stores are causing people to actually apply gained knowledge/skills to reduce the rates of obesity. Preference of eating unhealthy foods such as rice due to cost, ease to obtain and prepare and expected storage life was shown in homemakers 24 hour food recall.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

PCC: Evaluation results showed reduction in childhood obesity due to greater physical activity and consumption of more vegetables from the school and community gardens established. "Biggest Loser" fitness programs in the various local agencies have awarded person showing the greatest weight loss.

CMI: More families are seeking help, tests are conducted before and after, during each given demonstration and outreach. More mothers are requesting the office, to have more recipes. Landowners are strongly backing up the ongoing activities especially making sure people in their communities get involved.

COM-FSM: Evaluation results show that decision makers became well informed about causal factors leading to NCDs. Food choices and preparation were enhanced by the use of more local foods, vegetables and local protein foods such as fish and sea foods as against canned meat and fish. Physical fitness by walking or gardening gained acceptance for public health maintenance. Participants increased skills and knowledge in regards to nutrition, health, and management and the utilization of meager resources as compared with the non-participating groups or communities. Participants increased knowledge on proper diets. There are increased numbers of home gardens to provide fruits and vegetables for family consumption.

Key Items of Evaluation

PCC: Incentives must be given to the participating agencies in reducing childhood obesity in the form of physical activity equipment. Schools with the highest production of food and vegetables should be given equipment for food processing to prolong the shelf life of their produce.

CMI: As these programs continued, it is difficult to cover all areas in the Marshall Islands because of islands remoteness. As many citizens are now relying more on imported food it is sad to note that local food are not very popular any more. More people do prefer to choose eating imported food because it is easily accessible rather than acquiring a local food where more work has to be done in order to access it. This major setback must also be part of the situation contributing to the epidemic of childhood obesity and of high NCDs in the Marshall Islands.

COM-FSM: Various stakeholders including decision and policy makers supported the campaigns against leading causes of NCDs. People recognized local foods as more nutritious than imported junk and canned foods. Brisk walking and gardening were recognized as excellent physical fitness activities. Good diets preventing non-communicable diseases and obesity rely on producing and consuming local produce containing low salt, low in saturated fat and refined carbohydrates. Extension activities increased the number of participants partake in the program, increased the number of people who possessed health certificates to qualify them to prepare snacks and refreshments for general public; and showed increased seedling production and numbers of gardeners.