#### Introduction

Marikina is a lush valley bounded by mountain ranges and sliced by a river, and is one of the seventeen cities and municipalities comprising the Metro Manila area. It represents about 3.5% of the total land area of Metro Manila, and is just approximately 16 kilometers away from the City of Manila, passing from the Quezon City area. The total land area of Marikina is approximately 2,198 hectares or 21.98 square kilometers divided into fourteen different Barangays.

The state of health in Marikina has greatly improved since the last decade. This is reflected by the decreasing trend in death rates and the changing disease patterns. The improvement of health resulted primarily from the partial control of communicable diseases, which can be mostly attributed to public health interventions such as intensified health education, vector control, provision of potable water, construction of toilet facilities and mass immunization, to cite a few.

While still contending with communicable diseases, the City of Marikina now have to face chronic and lifestyle-related diseases such as Cancer, Cerebrovascular Diseases, Cardiovascular Diseases and Diabetes. These chronic diseases remain the main causes of premature death and disability in the city, and deprive the citizens the chance to enjoy many years of healthy and active lives. Industrialization imposes a big threat on the health of Marikenos, lifestyles and habits are changing, there is a rapid increase in the consumption of unhealthy food, which in conjunction with tobacco use and an inactive lifestyle, threatens to undermine the health gains made by reducing the number of infectious diseases in the city.

Health in any populace is an integral indicator of community development it is affected by, and in turn affects the whole make up of the community's socio-economic system. In the City of Marikina, health is viewed as both a means and an end in itself. The improvement of the quality of life, including health, is the core objective of socio-economic development, therefore, inputs to improve health must not be viewed as a consumption, but also as a long-lasting investment to the overall development of the city, thus, this project proposal.

#### **Demographic Data and Analysis**

The population of Marikina has been slowly increasing over the past twelve years, from a total population of 331,634 in 1992 to an estimate of 422,803 at this present time. In 1994, Marikina has developed 106 hectares of privately owned lands for resettlement of almost 22,226 informal settlers in the city, paving the way for the influx of migrants from the different provinces of the country. This factor has contributed immensely to the steady increase of population in the area, and has increased the diversity in culture, religion, beliefs and customs among the citizens. Based on the recent census, there were more females in the city than males, and these females belong to the reproductive age group, another factor in the rise in the population of the land.

From a total population of 422,803, the city now has a total of 92,757 households, with an average household size of 4.71 and a population density of 199.

#### **Environmental Indices**

In 2002, there were a total of 86,539 households surveyed within the city, for which 85,674 or 99% have access to level III type of water supply, while 865 or 1% have access to level II type of water supply. As compared to the 1998 survey data wherein only 90.76% had access to level III type of water supply, while 9.24% had access to level II type of water supply. Since 2002, Marikina City boasts of a 100% accomplishment of households having sanitary toilet facilities. Food establishments are monitored regularly and are required to have sanitary permits and health certificates for their workers. Since 1998, 100% of the food handlers within the city have complied with the needed food handlers permit, so as with the different food establishments in the city.

Garbage disposal within the city is mainly through the solid waste collection and disposal operations, wherein the city boasts of a high garbage collection efficiency rate of 99%, with a zero backlog. Cost wise, Marikina could speak well of its garbage collection cost, which is the cheapest in the whole of Metro Manila at P87 per person per year.

Air pollution is one of the observed environmental problems in some parts of the city. Industrialization has come with a price in this once sleepy town due to several big establishments in some Barangays of the city. Appropriate measures such as walkthrough surveys of establishments, are being conducted to address this problem, to alleviate if not totally control the emission of pollutants produced by the different operations of these establishments.

## **Health Status Analysis**

The state of health in Marikina has greatly improved and continues to improve since the start of the decade. This improvement is reflected on the improving vital health indices of the place since 1994. Crude death rate, infant mortality rate and maternal mortality rate continues to decrease until this present time. Likewise, crude birth rate has steadily decreased through the years.

Lifestyle-related diseases such as Cancer, Cerebrovascular diseases, Cardiovascular diseases, Hypertension and Diabetes are included in the top ten leading causes of morbidity and mortality in the area. Chronic diseases are on the rise in the city due to the kind of diet that people have, the vices that they cherish, inactive lifestyles, and from the different occupational and environmental conditions that people are subjected to day after day.

Though non-communicable diseases have slowly gained ground through the years, communicable diseases are still evident and very much a threat to the health of the populace. The communicable diseases included in the ten leading causes of mortality and morbidity are Pneumonia, Tuberculosis, Upper Respiratory Tract Infections and Skin diseases. This can be partially attributed to the overcrowding being observed in the resettlement areas, where most of the data being reported are from the communities within the resettlement areas, and from which most of the clients of the different health centers come from.

In Marikina, the Nutrition Program of the City Health Office focuses on reducing and preventing the incidence of malnutrition among the newborn, pre-schoolers, pregnant and lactating mothers, the elderly, and individuals afflicted with different ailments. There is a periodic weighing of all these targeted clients and provision of appropriate counter measures to prevent malnutrition. Although the incidence of under nutrition has slowly declined in the city, one is to note for the emergence of overweight children and adults in the area.

#### **Health Resources**

The public health services of Marikina have improved its performance through the years with the able support of its Local Government and the added support from the National Government. At this present time, the city has a total of 144 health facilities, for which 22 are government-owned. These include 17 public health centers (one for each Barangay, except for the two most populated Barangays, they have two each, and one main health center), 1 government hospital, 7 private hospitals, 1 social hygiene clinic, 1 public family planning clinic, 1 senior citizens healthy lifestyle center, 1 clean food laboratory, 10 privately owned lying-in clinics and 105 private medical clinics.

The city has a total of 19 Rural Health Physicians, 16 Dentists, 16 Nurses, 45 Midwives, 8 Nutritionists, 5 Medical Technologists, 10 Sanitary Inspectors, 2 Food Technologists, and 153 Volunteer Health Workers all distributed in the 17 public health centers of the city. Based on the 2002 survey report, there are a total of 168 private medical practitioners in the city involved in the different specialties of medicine.

# Reducing the Fat of the Land: Promotion of Healthy Diet and Physical Activity through Urban Planning

# A Project Proposal by the City of Marikina for the WHO Awards on Healthy Cities 2004

## Background

Non-communicable diseases continue to be major health problems in most of the countries in the world. The increasing prevalence of chronic and disabling conditions have posed serious economic burden to affected countries, which takes considerable resources to ameliorate these health challenges. Recent statistics in the Western Pacific Region shows that Cardiovascular Diseases account for more than 3 million deaths each year, prevalence rates for Hypertension exceeded 10% and contributes significantly to the incidence of Stroke, Coronary Heart Disease, Heart Failure and Renal Failure. Another public health dilemma is Diabetes, where currently, there is an estimated 30 million people afflicted with this debilitating disease. Smoking, diets rich in saturated fats and lack of physical activity all contribute to this unhealthy lifestyle, which is the primary precursor of all these diseases being mentioned.

In Marikina City, there is a slow emergence of these chronic illnesses, shifting the trend of disease burden from the communicable to the non-communicable diseases. There is an average of 1-2 deaths per day from these lifestyle related illnesses, and a total of 1031 reported morbidity cases of these diseases based on the 2003 data of the city. The City Nutrition Coordinators have reported the increase in the number of overweight children and the increasing consumption of energy dense and less fresh food by the community through the passing years. The City Health Office along with the Department of Education Culture and Sports in the city, have noted the increasing preponderance of smoking among adults, but most strikingly, among high school students. It has been observed that a big proportion of people in the city are leading inactive lives, ride vehicles to and from work, spends their weekends drinking alcoholic beverages and consumes food with little nutritional value due to financial pressures and problems in their family life.

The City Government of Marikina with the help of funding agencies have provided the citizens with walkways, sidewalks, bicycle lanes, and through its own efforts, the city have erected pathways and walkways along the Marikina River, have assigned an office to regulate and prohibit stray dogs from the streets, have placed lights on every street and have coordinated well with the Philippine National Police to decrease the crime rate to make the city safe day and night. The City Government have also provided the citizens with markets that are clean and only sells fresh food, have provided opportunities for citizens to be employed and earn a decent living, and have provided mothers who cares for children at home with projects to augment the income of their husbands. The City Government of Marikina through the City Council, have passed a number of ordinances and resolutions supporting the policies in Nutrition and Anti-Smoking Campaign.

With all these provided for, there is still the surge of non-communicable diseases in the city, which has been very difficult to prevent if not totally control. The interplay of the abovementioned factors has been causing the City Government serious economic burden without the citizens being aware of it. These health problems can be prevented and their complications postponed if only the right strategies feasible for the setting of the city be implemented, thus, this project proposal.

#### Introduction

This project proposals aim to promote healthy diet and physical activity in our city by replicating projects from our *primary applicant*, which is **Ichikawa City in Japan**. Being the *secondary applicant* of Ichikawa City, we are proposing to replicate their projects in the Improvement of Smoking Manners and Healthy Diet and Nutrition Program. Aside from the projects we propose to replicate, this proposal also embodies incorporations of activities on promotion of physical activity to the projects being replicated, so as to make the project holistic with regards to reducing the fat of the land.

An individual, is the prime beneficiary of health services, he should adapt a healthy lifestyle and have healthy habits, and should serve as health advocates to make given interventions effective. The family should provide health-related support and education to its members to promote and ensure that they have a healthy home and environment. This is what we envision in our city, and through the success of these projects, we hope to attain these objectives in the very near future.

#### **Healthy Nutrition Promotion Program Project Proposal**

#### Rationale

Community participation in any health project is one of the most effective strategies in health education and promotion. Empowering people to be responsible for their own health and that of their families has been proven to give rewarding results both for the community as well as for the service providers. In this proposal, the project aims to promote Healthy Nutrition and Physical Activity through community mobilization, a project replicated from Ichikawa City, although physical activity has also been focused on, with this project. The projects goal is to tap Community Leaders who are respected figures in the community, and also members of the community themselves, to promote Healthy Nutrition and Physical Activity among their community members. The project hopes to replicate the accomplishment of Ichikawa City in their promotion of Healthy Nutrition among their constituents, and also to promote physical activity to our constituents, to make the project holistic in our effort to reduce lifestyle-related diseases. The project expects to achieve an increase in the awareness and knowledge of citizens on healthy nutrition and physical activity, to empower them to be responsible for their own health as well as that of their families, to make good judgement on how to budget the family income but still make wise choices on the selection of healthy and nutritious food for their family, to enlighten and eventually change the negative attitude and practices of citizens on good nutrition and healthy lifestyle, to obtain health related information from the community through the health promoters, and eventually, to uplift the nutritional status and promote a healthy lifestyle to all the citizens of Marikina City. With this, the project aims to decrease the rising incidence of lifestyle related diseases in the city.

## **Objective**

- 1. To be able to promote a healthy lifestyle by encouraging the citizens of Marikina to adapt the healthy nutrition program through community participation.
- 2. To be able to promote physical activity by incorporating into the healthy nutrition program a regular physical fitness program for all citizens.
- 3. To be able to empower the citizens with the responsibility of their own health and that of their families.
- 4. To be able to get feedback and other health-related information from the community health promoters to be used for improvement of health status and future health policies to be proposed.

### **Actual Implementation**

The aim of the project is to promote healthy diet and physical activity in the community through community organization and mobilization. The project will tap Community Leaders to be active *health promoters* on a voluntary basis. The Community Leaders would be trained on giving lectures on Healthy Nutrition, giving Cooking Demonstrations, would be trained on collecting data from the community members and would be trained on "Hataw Bayan," which is the activity incorporated into the project to promote physical activity in the community.

The planned schedule of activities for the project have an allotted time of 3 months to simultaneously implement the project in the different communities, and eventually, the project hopes that the community would be able to adapt the projects outcome and lead healthy lifestyles. A minimal budget has been allocated to support the activities of the project, specially the cooking demonstrations and other supplies and materials needed in the actual project implementation. An initial meeting with their respective community members was included in the plan to facilitate the participation of the community members in the process of planning out their activities, which hopes to achieve a higher success rate for the project.

The respective roles of the Community Leaders would be to act as community organizers, to act as primary health promoters and to feedback whatever health information they would gather to the City Health Office. The City Health Office in turn would be delegating the different Rural Health Physicians and Nutritionists of each Public Health Centers to act as Supervisors of the project in their respective areas. They would continuously monitor the implementation of the project, provide solutions to problems and analyze collected data that were submitted to them by the Community Leaders. After which, they would submit the collated data to the City Health Office for further analysis and the analyzed data would be used to improve service delivery and for policy-making purposes.

The scope of activities that the project would undertake includes Nutrition Lectures regarding healthy diet and nutrition, with more focus on children to start them young on leading healthy lifestyles, lectures on the different lifestyle-related diseases, lectures on the health services that they could avail within the city, cooking demonstrations on proper handling and cooking of food, making the right choices in selecting and buying food for the family at the least possible cost, cooking demonstrations on how to make vegetables more attracting and interesting to young children, find suitable spots for backyard gardening or a spot for the whole community to plant herbal medicines and vegetables, to make a tour of the community and talk with all the sari-sari stores to encourage them to sell healthy and nutritious food, and at the same time to ensure that the surroundings of the community are clean and walkable to promote physical activity among their constituents.

"Hataw Bayan" is an exercise program from the Department of Health National Office, which was implemented among all the Local Government Units since 1996 for the promotion of physical activity among all the government employees. The project aims to adapt this program by incorporating it into the regular activities of the communities. All Community Leaders and members shall be taught the "Hataw Bayan" exercise for them to adapt and eventually pave the way in starting regular physical fitness activities in their respective areas. The exercise program should be incorporated into the regular project activities of each community.

### Improvement of Smoking Manners Program Project Proposal

#### Rationale

Around 20,000 Filipinos die every year due to smoking-related diseases. It was estimated that smoking-related diseases have affected 252,460 Filipinos, 80 percent of those will be men in their productive years, and 5 percent of them will die from these diseases. Active smoking has been implicated in 83 percent of all cancer cases and 30 percent of all cancer deaths. It is also the most important risk factor for Coronary Heart Disease, causing 35 percent of deaths from Cardiovascular ailments. Passive smoking results in similar risks for Cancer and Cardiovascular diseases. Infants and children of parents who smoke are more likely to be hospitalized due to Bronchitis or Pneumonia, and more likely to experience chronic cough frequently. Premature deaths from all these smoking-related diseases were estimated to cost an annual loss of 13 billion pesos. Even with the annual revenue of 21.4 billion pesos from the tobacco industry, the nation still has an annual loss of 46.4 billion pesos from the costs of smoking-related diseases.

Cigarette smokers in the City of Marikina have been observed to increase in number. What with the increasing pressures of daily life, some turn to smoking to relieve them of their stresses. Others, especially the curious adolescents, try out smoking due to peer pressure and the "macho" image of being a smoker. But are these smokers truly aware of where they might end up to when they don't give up the habit? A question raised in many forums, but even the well-bred and knowledgeable individuals have their own stories to tell why they smoke, and they have always taken on a defensive stand whenever asked if they know the health consequences of smoking.

The City Government of Marikina have passed resolutions and ordinances through the City Council supporting the Anti-Smoking Law of the National Government, and has focused primarily on adolescents by enacting an ordinance prohibiting the sale of cigarettes to minors and the smoking ban to minors. *Republic Act number 9211* of the National Government embodies prohibition of smoking in public places and smoking ban to minors. With all these in place, we can still see high school students puffing their lungs away in sari-sari stores and citizens smoking on the streets and other public places, exposing people around them with the dangers of second hand smoke.

This project proposal seeks to improve the smoking manners of Marikenos and hopes eventually, that the citizens would be more aware of the fatal consequences of the vice that they cherish, and become more responsible citizens by following the given laws of the land, and ultimately control their urge to smoke in public places, thereby, reducing the propensity of exposing others to second hand smoke and thus, reducing the number of cigarettes that they consume in a day. This project also aims to clean the environment through the reduction of pollutants coming from smoking and through waste reduction, by prohibiting throwing of cigarette butts into the streets and other places. With this in mind, the City Government of Marikina aims to reduce smoking-related diseases and consequently lifestyle-related diseases through this replicated project.

The proposed project aims to improve the smoking manners of Marikenos, if not totally prevent the use of tobacco, through community mobilization and organization. Community organization is one of the more powerful tools in health promotion and implementation. It is through the awareness and responsibility of community members that they are in charge of their own health as well as their families, that they become more responsible and cooperative with regards to health projects such as this.

The project proposes to form a "core groups" in the city, composed of members of the Church, Bantay Bayan members, Local Government Officials, Barangay Leaders, Community Leaders, Teachers, Professionals, School Organizations, Volunteer Health Workers, Health personnel and the community members themselves. The project shall have the objective of fully implementing the different ordinances and resolutions on Anti-Smoking Law. The role of the formed core group shall be to monitor and supervise the patrolling of their respective areas, on a voluntary basis, for the proper implementation of the law. Those found to be violating the law shall be monetarily penalized and will be made to do community service. Lectures on the health consequences of smoking shall be given by the formed core group to identified audiences, such as the youth in school and the community members.

Another arm of the project is the City Health Office Sanitation Section and Public Health Centers. Yearly, the Sanitation Section of the City Health Office inspects and requires all business establishments within the city to acquire sanitary permits. This could be very useful for the project, as the prohibition of smoking in public places is going to be implemented, the Sanitation Section should require that all business establishments within the city to put a no smoking sign in their establishments and actively implement it. And also, all sari-sari stores shall be required to implement the ordinances of the city, which is the smoking ban to minors wherein included is the prohibition of selling cigarettes to minors. Those found to be violating this law through their regular inspections would have their sanitary permits revoked, thereby making the establishment eligible for closure. An initial meeting with the different business establishments shall first be done prior to full implementation. Another arm of the project are the 17 Public Health Centers of the city, which could be "Smoking Cessation Clinic." All the Rural Health Physicians as well as their health staff in their respective health centers shall be made to undergo a training on the program of Smoking Cessation and how to set up a Smoking Cessation Clinic. With this, all the citizens who wish to quit smoking, but find it difficult to do so, can go the Smoking Cessation Clinics for support and rehabilitation.

#### **Objectives:**

- 1. To promote a healthy lifestyle by improving the smoking manners of the citizens in Marikina through community mobilization and organization.
- To reduce the number of smoking-related diseases in the City of Marikina by increasing the awareness of the populace regarding the heath consequences of smoking.
- 3. To be able to help in Marikina a healthy city through proper discipline on throwing of cigarette butts on the street and reduction of second hand smoke in public places.
- 4. To reduce the number of lifestyle-related diseases in the City of Marikina by reducing the number of smokers in the city through awareness campaigns and proper implementation of the Anti-Smoking Law.
- 5. To empower the citizens on the responsibility of their own health as well as that of their families.
- 6. To get feedback from the community and other health related information to be used for the improvement of service delivery and for future health policies to be proposed.

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