Operational Plan

1. Name of the Operational Plan(OP): **Non Communicable Disease Control (NCDC)**
2. Name of the Sector Programme: Health, Population and Nutrition Sector Development Programme (HPNSDP)
3. Sponsoring Ministry: Ministry of Health & Family Welfare
4. Implementing Agency: DGHS, Mohakhali, Dhaka.
5. Implementation Period:
    a) Commencement: July, 2011
    b) Completion: June, 2016
6. Objective of the OP:

6.1 General Objective:

To reduce mortality and morbidity caused by Non-Communicable Diseases (NCDs) through strengthening health service delivery in the management & referral for NCDs, promoting healthy lifestyle & practices and developing an effective public health surveillance system.

6.2 Specific Objective:

- To promote the development and implementation of effective, integrated, sustainable, and evidence-based public policies on chronic disease and public health problems, their risk factors, and determinants.
- To encourage and support the development and strengthening of countries' capacity for better surveillance of chronic diseases, their consequences, their risk factors, and the impact of public health interventions.
- To foster, support, and promote social and economic conditions that address the determinants of chronic diseases and empower people to increase control over their health and to adopt healthy behaviors.
- To facilitate and support the strengthening of the capacity and competencies of the health system for the integrated management of chronic diseases and their risk factors.

7. Estimated Cost:

7.1 PIP & OP Cost:

	Total	GOB	PA (RPA)	Source of PA
Approved cost of the PIP (Development)	2217666.17	860350.12	1357316.05 (869791.03)	Pool & Non Pool Fund
Estimated Cost of the OP.	51911.00	13824.00	38087.00 (27787.00)	Pooled Fund including JICA, WHO, UNICEF & Others
Cost of OP as % of PIP	2.34%	1.61%	2.81% 3.19%	

7.2 Estimated Allocation (According to Financing Pattern):

	Financing Pattern	2011-12	2012-13	2013-14	2014-15 & 2015-16	Total	Source of Fund
GOB	GOB Taka	2,756.31	3,435.16	3,432.44	4,200.08	13,824.00	-
	(Foreign Exchange)	-	-	-	-	-	-
	CD-VAT	-	-	-	-	-	-
	Total GOB	**2,756.31**	**3,435.16**	**3,432.44**	**4,200.08**	**13,824.00**	
PA	RPA (Through GOB)	5,557.40	6,946.75	6,946.75	8,336.10	27,787.00	Pool Fund including JICA
	RPA (Others)	-	-	-	-	-	-
	DPA	2,060.00	2,575.00	2,575.00	3,090.00	10,300.00	WHO, UNICEF & Others
	Total PA=	**7,617.40**	**9,521.75**	**9,521.75**	**11,426.10**	**38,087.00**	-
Grand Total=		**10,373.71**	**12,956.91**	**12,954.19**	**15,626.18**	**51,911.00**	-

8. OP Management Structure and Operational Plan Components (Attached Management set up at Annexure-I):

8.1 Line Director: Additional Director General (Planning and Research)/ Director (on deputation), DGHS

8.2 Major Components of OP and their Programme Managers / DPM:

Major Components	**Program Manager**	**Deputy Program Manager**
Conventional NCD including Major NCDs like Cardio Vascular Diseases (CVD), Peripheral Vascular Disease (PVD), Cerebral Vascular Diseases (Stroke), Cancer, Diabetes, Chronic Obstructive Pulmonary Diseases (COPD), Arsenicosis, Renal Diseases, Deafness, Osteoporosis, Congenital Anomalies, Oral Health, Thalassemia.	Programme Manager -1 (NCD)	Deputy Programme Manager (Conventional NCD)
Non Conventional NCD (Road Safety and other Traffic Injuries Prevention, Child Injury including Drowning, Sports Injury, Snake bite and Suicidal Injury, Violence against Women(VAW) including Acid Burn)		Deputy Programme Manager (Non Conventional NCD)
Occupational Health & Safety (Industrial & Agriculture) and Strengthening to Institute of Public Health (IPH)	Programme Manager- 2 (PHI)	Deputy Programme Manager (OHS & IPH)
Climate Change, Air Pollution, Water Sanitation & Other Environmental Health issues		Deputy Programme Manager (CC&EH)
Emergency preparedness and Response (EPR), Post Disaster Health Management and Emergency Medical Services (EMS).		Deputy Programme Manager (EPR)
Mental Health, Autism, Tobacco, Alcohol & Substance Abuse.		Deputy Programme Manager (MHAT&SA)

8.3 Manpower in the development budget:

(Taka in Lakh)

Sl. No.	Name of the Post	Number of post	Pay Scale	Grade	Consolidated Pay per Person/ month	Total Month	Total Pay	Requirement Method
A. Officer								
1.	Technical Consultant	4	18500-29700/=	6	29,375.00	54	63.45	Direct Requirement
2.	Surveillance Medical Officer	5	12000-21600/=	8	19,300.00	54	52.11	Direct Requirement
3.	Field Monitoring Officer	10	8000-16540/=	10	13,500.00	54	72.90	Direct Requirement
B. Staff								
1.	Programme Assistant	1	6400-14255/=	11	11090.00	54	5.99	Direct Requirement
2.	Office Assistant cum Computer Operator	2	4700-9745/=	16	8605.00	54	9.29	Direct Requirement
3.	Driver	3	4700-9745/=	16	8605.00	54	13.94	Out Sourcing
4.	MLSS	3	4100-7740/=	20	7750.00	54	12.56	Out Sourcing
5.	Cleaner	2	4100-7740/=	20	7750.00	54	8.37	Out Sourcing
	Total(A+B)=	**30**	**-**	**-**		**-**	**238.61**	

NB: The salary is estimated as consolidated pay as per circular of MOF. In case of outsourcing, the process of recruitment will be on the basis of final concurrence/ guideline from the Planning Commission and MOF.

9 Description:

a) Background information, current situation and its relevance to National Policies, Sectoral policy, MDG, Vision2021, Sixth five year plan, MTBF etc.

The burden of chronic non-communicable diseases (NCD), especially heart disease, stroke, hypertension, diabetes, cancer and chronic respiratory disease, is rising in low and middle-income countries like our country. NCD deaths account for 60% of all deaths in the world and one in two deaths in the Asian region. Policies and strategies relating to the NCDs is at the early stage compared to the compared to communicable disease. Programmes on NCDC has not established well till now. Reduction of morbidity and premature mortality due to the 'conventional' non-communicable diseases (NCDs) and for OPHI will require appropriate actions at all levels from primary prevention to treatment and rehabilitation in an integrated manner. The government will, in partnership with local government bodies and the private sector, create greater awareness of, and provide Comprehensive prevention services for the control of unhealthy diet and lifestyle related major NCDs, such as cardio-vascular diseases, cancer and diabetes, COPD etc. together with the assistance of Bureau of Health Education. Existing preventive and curative measures with respect to all NCDs and OPHI will further be expanded and strengthened to increase access to these services. The capacity at all stages, to implement NCD programs will be further strengthened through providing effective number of personnel, training, logistics and funding. Some of the major issues relating to NCD is described below:

Component 1: Conventional NCD including Major NCDs like Cardio Vascular Diseases (CVD), Cerebral Vascular Diseases (Stroke), Cancer, Diabetes, Chronic Obstructive Pulmonary Diseases (COPD), Arsenicosis, Renal Diseases, Deafness, Osteoporosis, Congenital Anomalies, Oral Health, Thalassemia.

Cardio-Vascular Disease (CVD): Due to the lack of a good surveillance system, there is little population-based data on CVDs. However, national source estimated that cardio- and cerebro-vascular diseases remain the second biggest cause of death followed by asthma and respiratory diseases (BBS 2008). Cardiovascular disease has an age standardized mortality rate of 411 per 100,000 (WHO 2009a). Ischemic heart disease is the leading cause of death in Bangladesh and is responsible for 12% of all mortality. The recently conducted Bangladesh Maternal Mortality and Health Care Survey (BMMS) 2010 estimated that circulatory diseases remain as the second leading cause of death among women of reproductive age (13-49 years) in Bangladesh, accounting for 16% of total deaths (NIPORT 2011). Among the population 30 years and above ischemic heart disease constitutes 7.7% and stroke constitutes 8.9% of hospital admissions (WHO SEARO 2007). Tertiary level hospital data from 2003-2009 showed that both admissions and outdoor visits in National Institute of Cardiovascular

Diseases (NICVD) increased by 107% and 75% respectively (MIS-DGHS 2010). The National Heart Foundation Hospital and Research Institute (NHFH&FI) studied the characteristics of heart failure patients from January 2005- August 2006 and reported that the mean ages was 54 years (no gender analysis), and that hypertensive heart disease was the most common cause of heart failure (Kabiruzzaman 2007).

Bangladesh Household Income and Expenditure Survey (HIES) 2010 collected information on chronic illnesses and duration of ailment from the Bangladeshi households. The preliminary report of 2010 HIES reported that 7.3% of population have chronic heart disease, with 7.2% among rural and 7.7 among urban population. The average duration of ailment for CHD is found to be 75.4 months in HIES 2010 (BBS 2011).

A hospital-based cross-sectional study on 14,009 patients at a tertiary cardiac hospital in Dhaka city found that 14.1% of the patients were diagnosed as heart failure patients and the mean age of hospitalization was found to be 54.1 years - remarkably lower than other related studies done abroad. In this study, majority of the patients (35.8%) had ischemic heart disease (IHD) as the principal etiological factor but this frequently coexisted with a history of hypertension (46.8%). Diabetes Mellitus (DM) co-existed with IHD in 41.4% of patients (Kabiruzzaman et al. 2010)

Cerebral-Vascular Diseases (Stroke): Stroke constitutes about 9% of the hospital admission among those aged 30 or above. A CC based preventive approach along with monitoring hypertension will be introduced during the next sector program. The rate of hypertension could be further reduced by applying the cost effective prophylactic measure. Cerebrovascular disease (or stroke) is the sixth leading cause of death in Bangladesh and is responsible for 6% of total deaths (WHO 2006).

Hypertension: Although much has been published, there is no representative sample of hypertension among adults in Bangladesh and in the studies that exist no standardized methodology has been employed to necessarily distinguish between high blood pressure readings and a diagnosis of hypertension. A non-systematic review conducted by Zaman and Rouf (1999) included three articles which employed non-standard hypertension definitions and were limited to populations based in Dhaka during 1979-1994. Because of heterogeneity and a lack of appropriate categorization in the primary studies, the review was inconclusive on the prevalence of hypertension in Bangladesh and recommended that a large scale hypertension study be undertaken. Studies with relatively small sample sizes (240 urban and rural) such as the India-Bangladesh study conducted by the Hypertension Study Group in 2001, found an overall hypertension rate of 65% in populations over 60 years of age, have given way in recent years to more rigorously designed studies with sample sizes greater than 2,000 (Razzaque et al. 2009; Sayeed et al. 2002). The later studies found lack of physical activity, overweight, age and higher socioeconomic status positively associated with higher levels of hypertension and/or high blood pressure. Although the WHO STEPS methodology has been applied in numerous studies conducted in Bangladesh by BRAC, ICDDR,B and

other agencies, Bangladesh did not report prevalence of raised blood pressure nor prevalence of known hypertension and its treatment in World Health Organization Regional Reports (WHO-SEARO 2007a). Although there is no representative sample of hypertension in Bangladesh, hypertensives attending clinics have been used to test interventions for tobacco cessation and to capture the clustering of metabolic factors (Ahmed, Choudhury S, & Zaman MM 2007; Siddique et al. 2008)

The 2006 Bangladesh Urban Health Survey (UHS) looked at hypertension (using a single reading of blood pressure and self-reported medication use for hypertension in adults over 35 years) in slum and non-slum areas of the six largest City Corporations in Bangladesh (Dhaka, Chittagong, Khulna, Rajshahi, Barisal and Sylhet). The survey found that 25% of slum dwelling and 38% of non-slum dwelling women had hypertension. Among men 18% were hypertensive in the slums and 25% in the non-slum areas. Hypertension increased with age, wealth quintile, and education. Among 64.3% of non-slum women aged 60-69 had hypertension compared to 37.1% of slum women of the same age (NIPORT 2008).

Recently conducted Bangladesh NCD Risk Factor Survey 2010 reported that 11.2 million people in Bangladesh (5.8 million men and 5.4 million women) to be hypertensive. The study also found that 10.8 million people were overweight, out of which 6.7 million were females, and 13 million had large waist circumference (2.5 million men and 10.5 million women), which is defined as a circumference of more than 94 cm for men and more than 80 cm for female (WHO BD 2011).

Cancers: According to the *National Cancer Control Strategy and Plan of Action 2009-2015*, cancer is a high priority for Bangladesh because of its economic impact. Most (66%) cancer patients are of working age (30-65 years) and can be lost from the nation's workforce prematurely (DGHS 2008). There is no national cancer registry although information is reported from specialty institutions, public health hospitals, and outpatient facilities. It is estimated that Bangladesh currently has around 4 million cancer patients, at least 200,000 to 800,000 new cancer cases are added to the total every year (Cancer Program 2010; MIS 2009). The facility based morbidity profile has cancer as the 29th out of 30 leading causes of morbidity representing 0.01% of total morbidity (MIS 2009). However, overall population projections estimated that cancer was the main cause in 7.5% of deaths in Bangladesh in 2005. In 2008, 70.7% of cancer deaths occur in men and 27.3% occur in women (DGHS 2008; MIS 2009). However, cancer deaths are projected to constitute 12.7% of deaths by 2030 (DGHS 2008). In 2005, age-standardized death rates per 100,000 population suggest that mouth and oropharynx cancers were the leading cause of cancer deaths in Bangladesh for both genders (27 per 100,000 for men and 22.5 per 100,000 for women). The same analysis had trachea/bronchus/lung (25 per 100,000) and oesophagus (11 per 100,000) cancers as the second and third leading cause of cancer deaths for men. Among women, cervical cancer (21 per 100,000) was second and breast cancer (16 per 100,000) was third (DGHS 2008). The recently conducted Bangladesh Maternal Mortality and Health Care

Survey (BMMS) 2010 estimated that cancer remains the leading cause of death among women of reproductive age (13-49 years) in Bangladesh, accounting for 21% of total deaths (NIPORT 2011).

The flagship public institution for cancer related services is the National Institute of Cancer Research and Hospital (NICRH) in Dhaka with an estimated capacity of serving approximately 100,000 cancer patients per year. NICRH's most frequently reported cancers are: respiratory system (22.2%), digestive organ (20.8%), breast (12.7%), female genital organs (12.1%) and lip, oral cavity, pharynx (10.9) (MIS 2009). Together, the burden of female related cancers is greater than the leading cause of cancer admissions (Respiratory system) so that special emphasis is given here to female related cancers. Bangladesh reported that less than 5% of women ages 50-69 were screened with mammography in the three years prior to the World Health Survey (2000-2003).The low percentage reported was typical for low income countries where no equity analysis to look at the distribution of mammography screening across the population was performed (WHO 2008a). Of the total global burden of cervical cancer, one third of all cases are in South Asian nations, yet no strategies for prevention, screening or treating of the disease let alone efforts to target high risk groups are well developed (Sankaranarayanan et al. 2008). A small study (n=472) of histopathology of cases in the Mymensing district (under Dhaka division) found that cervical cancer was the leading cancer reported among females (Talukdar 2007). 2010 HIES, however, reported the prevalence of cancer to be only 0.4% with an average duration of ailment for 58.4 months (BBS 2011). Coordination and cooperation is needed among all parties including BSMMU, NGOs etc. who are working on cancer with leadership of DGHS.

Diabetes: Population data indicate an increasing trend in diabetes prevalence especially in urban areas, just double (10.5% in urban Dhaka) (WHO, 2007). This could reflect the effect of unplanned urbanization that lacks the environment for physical activity, consumption of junk food and exposure to stressful life in cities. The reduction in the prevalence of diabetes in urban areas will be addressed by developing awareness, educating people on the causes and consequential effects, motivating people to changing the life style, etc through a large scale BCC program implementation during the next sector program. Diabetes corner will be gradually established at tertiary and secondary hospitals.

Chronic Obstructive Pulmonary Diseases (COPD): Prevalence of COPD (Asthma) in people aged 30 or above is 3% in the general population and 6% in medical college inpatients. The National Institute of Diseases of Chest and Hospital (NIDCH) the only referral hospital for chest diseases in Bangladesh, admits about 4500 patients annually in the department of respiratory medicine, of them 19% suffer from COPD. Smoking and indoor air pollution and thought to be the most two important causes of COPD in Bangladesh.

Arsenicosis: It was in 1993 that the department of Public Health Engineering found for first time arsenic in 4 tube wells in ChapaiNawabgonj. 8 patients with Arsenicosis were identified by the experts of NIPSOM. But increasingly water in many districts has become contaminated. A national policy for arsenic mitigation was approved in 2004 and an implementation plan for arsenic mitigation was formulated in the same year. Now arsenic contamination exceeds by far the Bangladesh drinking water standard of 50 microgram per liter. The GOB together with the stakeholders has undertaken a wide range of arsenic mitigation strategies guided by the national Policy for Arsenic Mitigation issued in 2004, and the Implementation Plan for Arsenic Mitigation. However as of 2009, despite massive efforts to provide safe water supplies in arsenic affected areas, a water quality survey in 2009 has found that 12.6% of drinking water samples collected from 13,423 households around the country do not meet the arsenic standard for drinking water. This is equivalent to approximately 20 million people still being exposed to excessive quantities of Arsenic. Patients are gradually increasing and in 2008-2009 the number of patients identified was 38,320, in 2009-2010 the number of patients was 46,000 now being around 56,728. Recent knowledge of health threats posed by arsenic indicates that it gives rise to cancer, Diabetes Mellitus and cardiovascular disease. Knowledge of penetration of Arsenic in the food chain makes urgent action absolutely essential. At present, DGHS is conducting awareness programs, training of health care service providers and patient screening programs. DPHE conducts water screening for arsenic. But due to lack of manpower of DPHE at field level, these interventions have become weaker. As DGHS has enough manpower, it can run programs to strengthen water screening at community level.

Renal Diseases (Kidney Diseases): Kidney disease is a worldwide public health problem. According to the World Health Report 2002 and Global Burden of Disease (GBD) project, diseases of the kidney and urinary tract contribute to the global burden of diseases, with approximately 850,000 deaths every year and 15,010,167 disability-adjusted life years. They are the 12^{th} cause of death and the 17^{th} cause of disability worldwide. Kidney disease is associated with premature mortality, decreased quality of life, and increased health-care expenditures. Untreated kidney disease can result in end-stage renal disease and necessitate intensive treatment.

Chronic kidney diseases take years for the damage to organs to be noticeable because there are no symptoms, which is why the disease is often called the "silent killer." According to the World Health Organization, an ageing population, and increasing rates of hypertension and type-2 diabetes are driving the increase of ESRD. There are currently 170 million patients with diabetes: approximately 30% of them have diabetic nephropathy, and this proportion is even higher in least developed country like Bangladesh.

A recent study showed that over 20 million people in the country suffer from some form of chronic kidney disease or another, and 40,000 die every year from kidney failure. A kidney patient reportedly needs about 250,000 taka to 300,000 taka each year for

dialysis. On the other hand, about 250,000 taka is required for kidney transplantation and for meeting immediate medical expenses and this costly treatment is out of reach of the 95 percent of the patients. So the renal disease should be addressed in the next sector programme.

Deafness (Hearing Disability): About 13 million people are suffering from variable degree of hearing loss (HL) in Bangladesh of which 3 million are suffering from severe to profound HL leading to disability. Deafness and hearing impairment are major but neglected causes of disability. Early detection of impaired hearing and proper management could prevent permanent hearing disability. Early detection at the primary level and for the management of these cases, strengthening of services at the secondary and tertiary level will be initiated. The strategic plan developed for control of hearing disability (Deafness), will play an important role for implementation of hearing disability related activities in the next sector program.

Osteoporosis: Aging of population is now a global phenomenon. In 1950, there were about 200 million persons aged 60 and over in the world, constituting 8.1 per cent of the total global population. By the year 2050, there will be a nine fold increase; the world's elderly population is projected to be 1.8 billion people, about 20 per cent of the total 9.8 billion people. The median age of the world population will jump from 23.5 years in 1950 to 36.2 years in 2050. Bangladesh has same experience. The elderly population of Bangladesh is also increasing in a remarkable rate. Fracture related to osteoporosis is a major public health problem among the ageing population in all developed countries. It is estimated that between 13% and 18% of post-menopausal white women in USA (4-6 million) have osteoporosis and an additional 30% to 50% (13 to 17 million) have low bone density at hip. About 1.3 million fractures that occur annually in the USA in people over age 45 are due to osteoporosis. In Bangladesh, there is no exact data regarding the incidence and prevalence of osteoporosis. Some studies have shown that in Bangladesh, older people become especially prone to disabling disorders such as arthritis, osteoporosis, etc. Special health care for reducing such type of morbidities in the elderly population is yet to receive attention. Preventive activities like awareness, promotion of diet, exercise, early screening and management of osteoporosis and its complications needs to be initiated and strengthened.

Congenital Anomalies: In Bangladesh from hospital, report 5-10% of new born baby take birth with congenital anomalies. It is one of the five causes of neonatal mortalities. This is due to lack of awareness of carrying mother. These babies who born with congenital anomalies are burden to family also burden for society and country.

Congenital Hypothyroidism: Congenital hypothyroidism is an inborn error of thyroid disorder. Around the world, the most common cause of congenital hypothyroidism is iodine deficiency, but in most of the developed cases are due to a combination of known and unknown causes. Most commonly there is a defect of development of the thyroid gland itself, resulting in an absent (athyreosis) or underdeveloped (hypoplastic) gland. The latest national survey shows that about 17% of the population is suffering

from thyroid disorder. Early detection of the disorder is very important. If a child is detected of the disorder in time, treatment can be started and thus the baby can be saved from permanent disability. The treatment is very simple. The baby needs one or two tablets of thyroxin daily which is easily available and costs only 2-3 taka daily. Newborn screening for detection of congenital hypothyroidism under the Ministry of Health & Family Welfare needs to be established. Institute of Nuclear Medicine & Ultrasound of Bangladesh Atomic Energy Commission which is now working on the issue at BSMMU can be the focal point for the activity. The proposed activity will open an avenue of universal newborn screening in Bangladesh which is already included in the health ministry's guideline for neonatal health care. Many babies will be saved from mental & physical retardation.

Oral Health: Lack of knowledge and awareness regarding oral hygiene are the main issues which cause oral diseases to be a public health problem. Preventive approach through mass education and raising awareness will be the priority oral health intervention. Similarly adoption of proper cleaning procedure of the oral cavity and bringing strict restrictions in bad habits could reduce most of the common and complicated oral diseases.

Thalassemia: Thalassemia is the most common genetic disorder in Bangladesh. According to WHO 5% of the population that is 5.9 million people are Thalassemia carriers and each year 5,187 new babies are born with Thalassemia (WHO/HDP/HB/GL/94.1, 1994). Thalassemia is the tenth most common disease among 5-14 years old patients of government medical college hospitals (Health Bulletin 2009). Preventive measures and awareness campaign could be instrumental to combat the disease. The priorities are screening for Thalassemia, provision for genetic counseling services, prenatal diagnosis, and creating public awareness to prevent marriage among carriers. It is also important to setup adequate laboratory services in government medical colleges, human resource development and training on standard care of Thalassemia in next sector Programme.

Activities:

- Establishment of National centre for NCDs as an Umbrella organization for NCD alliance
- Translation of newly revised national strategy and action plan of NCD & Deafness into activities
- Capacity development workforce on advocacy, health promotion and prevention of NCDs like Cardio Vascular Diseases (CVD), Peripheral Vascular Disease (PVD), Cerebral Vascular Diseases (Stroke), Cancer, Diabetes, Chronic Obstructive Pulmonary Diseases (COPD), Arsenicosis, Renal Diseases, Deafness, Osteoporosis, Congenital Anomalies, Oral Health, Thalassemia.
- Consultations & workshops for the development of methodology and tools, database and data sources

- Support associations and civil society organizations working to prevent and control NCDs.
- Conduct advocacy and sensitization Programme to ensure support among stakeholders for establishment of sustainable urbanization.
- Orientation training of physician of Government health facilities for promoting ‘for promoting of NCD prevention and management of NCD patients
- Training of non governmental physician specially private medical college (General practitioner) practitioner (GP) with the focus of NCD prevention diagnosis and treatment
- Capacity development of health service provider, on feasible screening/diagnostic methods of the targeted NCDs and risk factor (Diabetes, Hypertension, obesity etc)
- Training of emergency physicians and MOs on death certification
- Orientation training of Government & non Government health service providers like nurses, medical assistants, technologists, and field level, health & family planning workers.
- Advocacy on prioritization of NCD prevention and control among NGOs and private health care provider
- Mass Awareness rising initiative on NCD prevention
- Mass Awareness rising initiative on NCD risk factor
- ‘Brush after meal’ promotion campaign initiative among population
- Advocacy for inclusion of ‘NCD Epidemiology, prevention and control in medical education curriculum
- Advocacy for Inclusion of ‘NCD Epidemiology, prevention and control’ in public health education curriculum
- Sensitization meeting with policy makers about NCD epidemic
- Advocacy of healthy lifestyle among children (Leaflet publication, distribution, demonstration etc)
- Advocacy for inclusion of information about healthy lifestyles in the school curricula and including
- Mass media campaign to inform people about NCDs and their Risk Factors
- Mass media campaigns to inform people about earlier signs of NCDs to encourage people to seek health care /advice for detection of NCD
- Mass media advertisement and billboard establishment on NCD health promotion message through harvesting corporate social responsibility
- Piloting of NCD counseling centers at three NCD model Upazilla.
- Piloting population based cancer registry at NCD model upazilla
- Replication of NCD programme throughout the whole country within 2016 same as NCD model upazilla and establishment NCD corner
- Promotion of self breast examination through raising awareness
- Population based screening of oral & cervical cancer

- ‘Well Women Clinic’ initiative in model Upazilla for providing screening services for hypertension, diabetes, breast and cervical cancer to adult women along with other services in NCD Corner.
- Promotion of walk to school campaign
- Advocacy to free the foot path and make it commuter friendly
- Designation of park for Physical exercise (Early morning club, Provision of Facility and security)
- Establishment of cancer registry at specialized and tertiary Hospitals later on secondary & primary health facilities
- Establishment of stroke registry at specialized and tertiary Hospitals later on secondary & primary health facilities
- Evidence generation on burden of rheumatologic diseases
- Development of training modules and IEC materials on NCD prevention & management
- Development of population specific clinical guidelines for care of Selected NCDs (Hypertension, Diabetes, Heart disease, Cancer and Mental health problem)
- Supply of NCD screening logistics (BP machine, Glucometer, Measuring tape, field surveillance register etc.) and register to the field health staff of the community clinic
- Observance of important days for NCD related diseases and events ("World No Tobacco Day", "World Health Day", "World Cancer Day", "World Hypertension Day", "World COPD Day", "World Diabetes Day". World Mental Health Day,etc.)
- Establishment of NCD notification and reporting system at UHC
- Periodical National NCD including risk factor survey
- Operational research on prevalence of risk factors and social determinants of NCDs
- Operational research on distribution and determinants of selected NCDs
- Identification of sustainable prevention strategy
- Orientation of religious leaders about NCDs and utilizing them for health promotion
- Meetings with policy makers, program managers and special group to form pro-NCD strategy policy/strategy and their implementation
- Implementation agenda first in upcoming UN NCD Summit
- Strengthening of mass awareness programs on Arsenic free safe drinking water
- Testing tube wells water at Health facilities for prevention of Arsenicosis.
- Improve patient screening (house to house searching) programs.
- Identification, Diagnosis and management of Arsenicosis Patient.
- Capacity building of human resources and facilities for effective case management and referral
- Establishment of Rehabilitation center for disabled Arsenicosis patients
- Conducting surveys, research on Arsenicosis
- Updatation of National Arsenic Mitigation policy and strategy
- Strategic partnership with local bodies and community based organization regarding the mitigation of Arsenicosis.

- Further collaboration between DGHS and DPHE at field level to strengthen water screening at the community level.
- Translation of newly develop strategy & action plan on deafness
- Capacity development of physicians, nurses and health workers and other health service providers on prevention, diagnosis and management of Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Campaign for raising awareness about renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia among general population
- Formation of patient support group of Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Development of awareness on Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Development of teaching modules and IEC materials on Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Development of Strategy and Action plan on prevention, diagnosis and management of Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Development of patient registry in different health facilities on Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Study survey, epidemiological surveillance and Research on Renal disease, Deafness, Osteoporosis, Congenital anomalies and Thalassemia
- Strengthening of existing BanNet & InfoBase and further inclusion of electronic database at the DGHS (Logistics, human resource & IT and Network)
- Strengthening of existing Website and its maintenance
- Periodic publication of newsletters, reports
- Strengthening routine MIS for hospital statistics on Arsenicosis and inter-linking with DGHS MIS.

Component 2: Non Conventional NCD (Road Safety and other Traffic Injuries Prevention, Child Injury including Drowning, Sports Injury, Snake Bite and Poisoning, Violence against Women (VAW) including Acid Burn)

Road Safety and Injury Prevention: The Bangladesh Health and Injury Survey 2005 showed that an estimated 30,000 children die each year due to injury. This represents 38% of all deaths among children 1-17 years of age. In total approximately 70,000 deaths occur each year due to injury (burning, drowning, acid and accidents at work). Some 40 to 45% of injuries are due to road traffic accidents in urban areas and 54% of them are pedestrians.

The NCD strategy (2007-2010) will be the guiding principle to implement NCD related programs, e.g., dialogue with the Ministry of Communication and Transportation for safety policies and regulation, enhance skills of MOHFW service providers to handle injury patients, build up awareness of the people on pedestrian safety measures, dialogue with Ministries of Industries and Commerce to prevent/ protect from hazards and injuries from industrial products, imported products and wastes etc. A separate strategy document will be developed by the line director, NCD for prevention, control and management of injuries.

To reduce this burden, regular dialogue will be held with the traffic department and transport workers, especially drivers will be oriented to road safety measures and practices, e.g., using walkways, over-bridges, using belts, helmets etc. Community mobilization will be done in collaboration with urban NGOs and city corporation authorities to keep walkway free of any hindrance which discourage people from using walkways.

Child Injury including Drowning: Among the other injuries the most common causes are: fall, burn, cut, transport related, machinery related, from falling objects, violence etc. Burn injury occurs to over 170,000 children per year with over 30,400 of permanent disability. According to the same source almost 770 children are injured each day out of which almost 10 children are disabled. About 350 children suffer from cut injury each day, 5 becoming permanently disabled. Almost 6,000 children are accidentally poisoned each year-16/ day. Over 17,000 children are injured by machines each year, i.e., 50/day; During 1996-2006 there were more than 5,000 deaths, mostly among children from river based accidents (drowning) and 50,000 disabilities (The Daily Ittefaq 3.12.09). In 1983, according to an estimate of the LD, NCD's office 9% of all deaths among children 1-4 years of age was due to drowning. By 2000 this has risen by 53% Bangladesh While death from all causes among children is showing a declining trend, this, from drowning is showing an escalating trend (Draft strategy document on Injury Prevention, UNICEF, WHO 2010), e.g., almost 17,000 children are drowned per year and 68,000 becomes victims of near drowning. This is slightly more than 50% of the 30,000 children who die per year from injury. A good number of Athletes became

victim of sports injuries in the during the time of Sports and practice due to lack of in time intervention a good number o promising Athletes became derailed from their carrier.

Violence against Women (VAW) including Acid Burn, Sports Injury, Suicidal Injury &, Snakebite Injury etc.: Violence against women and girls is a problem of pandemic proportions. At least one out of every three women around the world has been beaten, coerced into sex, or otherwise abused in her lifetime, with the abuser usually someone known to her. This is perhaps the most pervasive human rights violation that we know today, as it devastates lives, fractures communities, and stalls development. A population study done by ICDDR, B confirms the high levels of domestic violence and also confirms that it remains a major public health problem in Bangladesh. Since husbands are the greatest perpetrators of violence against women, effective interventions would need to target them. High levels of domestic violence in Bangladesh imply that a large proportion of the women accessing health services are victims of violence. A good number of Young girl and female now a day became victims of acid burn which needs community motivation. GOB interventions to provide health care support to women victimized by violence are highly needed. According to WHO report in 2010 suicide and attempt to suicide ten to twenty times more. Bangladesh hospital statistics records that patient coming in emergency department out of which 20% due to suicide. Annual incidence of snake bite in research Bangladesh is 623.4/100000 person per year. An estimated 6041 individual died due to snake bite annually in Bangladesh.

Activities:

- Establishment of National Injury centre in DGHS
- Translation of newly developed Strategy and Action plan on Injury Prevention including Child Injury into action
- Replication of the result of piloting experience of three upazilla Injury Prevention throughout the whole country
- Capacity development (doctors, nurses, field workers and other service providers) on injury prevention, BLS, ALS, EMS, Violence against women(acid burn)
- Capacity development of doctors, nurses, field workers and other service providers, sports organizer, sportsman on Violence against Women(VAW) including Acid Burn, Sports Injury, Suicidal Injury &, Snakebite Injury
- Training of drivers on traffic law & enforcement and safe driving
- Training of household people on home safety and children on swimming
- Strengthening Pre hospital care of all injuries
- Establishment of rehabilitation centre in different health facilities for injury disabled
- Mass awareness workshops on prevention of all injuries
- Development of training materials/ modules/ algorithms of all IEC materials
- Study survey, epidemiological surveillance and research on all injuries

- Translation of newly developed Road Safety Decade of Action Plan of 2011- 2020 into action
- Mass awareness on Injury Prevention among the community people, road users and drivers
- Demonstration of school children on road safety
- Advocacy for formation of national task force on injury prevention
- Workshops/consultation meetings to develop the communication strategy, plan, messages & materials on injury prevention
- To combat Road Traffic Accidents ensure the use of seat belts, helmets and child restraints, prohibition of alcohol and mobile phone use during driving of the drivers through motivation work
- Development and showing documentary films/TV stops/Radio spots on injury
- Training of community based Workers on Injury Prevention Counseling
- Translation of EMS piloting experience in all Health facilities
- Introduction of Injury registry
- Supply of all logistics for Injury prevention and management
- Strategic partnership with local bodies (relevant ministries), community based organizations and relevant NGOs
- Strengthening of existing MIS regarding Injury reporting
- Development of National Guideline on snakebite, suicidal injury, sports injury & Violence against women (acid burn)
- Strengthening of the existing OCC centers and replication to other health facilities

Component 3: Occupational Health and Safety (Formal and non-formal sector) & Strengthening to Institute of Public Health (IPH)

Occupational Health: Globally the issue of health and safety of industrial workers has evolved into Occupational Health and Safety. But the Occupational Health and Safety Services in Bangladesh is still in the developmental stage. It refers only to some extent to the needs of workers in the industries (both formal and informal) or in some manufacturing process, which and is poor in terms of both quality and quantity. Moreover it does not cover all recognized occupations of the country, e.g. construction, transport and agricultural workers are not covered under the present legislation.

There is a little scope for DGHS to undertake activities related to occupational health and safety such as to identify occupational health hazards, prevalence of occupational diseases and injuries, and preventive measures. The existing occupational health unit of DGHS is not empowered to look into the occupational health and safety status and occupation related diseases in the relevant sectors. Over the years no occupational diseases have been reported to the Inspectorate of Factories and Establishments, even those declared as to be modifiable by the law. However, with the rapid industrialization the unsafe use of chemicals, number of industrial accidents, fire, etc, there is an increasing need to establish occupational related health care services, as well as hospitals near industrial areas. A major portion of the workers from the informal sectors is at risk of developing acute and chronic toxicity, due to exposure to many toxic pesticides, chemicals and fertilizers, occurrence of occupational diseases and injuries. The current rules and regulation should be modified to empower the occupational health unit, so that they can work with more authority to oversee the occupational health and safety status and to employ occupational health graduates and experts in the industries and relevant sectors.

At the central level an autonomous institute for 'Environmental and Occupational Safety and Health' manned by relevant multidisciplinary personnel should be established. Environmental health and Occupational health are cross-disciplinary areas, concerned not only with protecting the safety, health and welfare of people engaged in work or employment, but also with the environment and the community. Nowadays, issues of environmental degradation, climate change and environmental pollutions are resultant effect of anthropogenic activities being domestic or occupational. Rapid industrialization with lack of best practices on industrial hygiene is now taking its toll.

Occupational Safety: The goal of all environmental / occupational health and safety programs is to foster a safe environment everywhere. It also protects co-workers, family members, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the environment and the workplace. It may involve interactions among many subject areas, including occupational medicine, occupational (or industrial) hygiene, public health, safety engineering, chemistry, health physics, ergonomics, toxicology, epidemiology, environmental health, industrial relations,

public policy, industrial sociology, medical sociology, social law, labor law and occupational health psychology. Unfortunately, we are yet to produce these experts in our country. To produce more experts on environmental and occupational health, this institute should be established. It will have two distinct divisions: Environmental Health and Occupational Health and Safety, but they will work in collaboration with each other. It will carry out academic courses and research work, as well as monitoring many environmental and occupational health issues such as climate change and occupational diseases. It will also develop preventive intervention and control measures, which will be cost-effective, available and acceptable locally.

Strengthening to Institute of Public Health: During HNPSP, strengthening of IPH was one of the components of the NCD&OPHI OP. During 2003-2011 there were activities relating to strengthening the laboratories of IPH including the food safety laboratory, Intra-venous Fluid and Cell Culture Laboratory. But due to the lack of experts on these fields, the components could not be accomplished. Later Food Testing Laboratory is going to be established with the technical support from FAO under another TA project. IPH currently provide training and conduct research in the fields of microbiology, clinical pathology, epidemiology, food safety, vaccines and rabies control. The institute has faculty with post-graduate degrees in public health and laboratory science. IPH needs to be strengthened through providing necessary equipments and training to the concerns working in IPH and in the field as well. Support to IPH should continue from the NCDC OP and other concern OPs as well.

Activities:

- Translation of newly Developed National Strategy on Occupational Health and Safety into action
- Piloting of three Industries of different trade on Occupational Health and Safety
- Replication of piloting experience to all industries of the country
- Development and implementation of sustainable qualitative OHS care providers at GOB and NGO Level.
- Development and publication of posters, pamphlets, booklets and books to be produced to spread the message of occupational health and safety.
- Training on occupational health, safety, industrial hygiene and ergonomics for physicians, nurses, Para-medics, safety professionals, regulatory staff and industrial workers
- Training of professionals and farmers on agricultural hazards
- Development of National Strategy and Action Plan on Agricultural hazards
- Piloting of three geographical area having different of cultivation
- Replication of piloting experiences of agricultural hazards throughout the whole country
- Development of training modules and IEC materials on Occupational health and safety and agricultural hazards

- Development of registry on industrial injury, occupational hazards and Agricultural hazards
- Study survey, KAP study, Epidemiological surveillance and Research on agricultural hazards
- Short training in hygiene and safe work practices for workers
- Arrangement of Training and Advocacy for factory owners and factory management
- Mass awareness among workers on occupation specific health problem, or disease, existing laws, rights and privileges
- Mass awareness development on agriculture hazards
- Arrangement of programs on health education about safety through different publication, demonstration and appraisal
- Study survey, KAP study, Epidemiological surveillance and Research on occupational health and safety and agricultural hazards,
- Development and continuation of monitoring, evaluation on OHS compliance
- Development of uniform OHS reporting system and interlinking with existing MIS
- Coordination among the relevant ministries for Occupational health and safety and agricultural hazard
- Intersectoral collaboration with relevant ministries and NGO regarding Occupational health and safety and agricultural hazard,
- Training on Good Manufacturing Practice (GMP), Good Laboratory Practice (GLP) and administrative training for IPH Personnel and other related Health personals
- Training on Water and Food Safety Issues- including setting permissible limits for additives, preservatives and food colors etc. for the Sanitary Inspectors and Lab Personnel
- Strengthening of IV fluid, plant and other departments of IPH

Component 4: Climate Change, Air Pollution, Water Sanitation & Other Environmental Health issues.

Climate Change: The changing climate will inevitably affect the basic requirements for maintaining health: clean air and water, sanitary environments, sufficient food and adequate shelter. Many diseases and health problems may be exacerbated by climate change.The health concerns and vulnerabilities due to climate change will burden both communicable and non-communicable diseases. All people will be affected by natural disaster and a changing climate, but the initial health risks will be on the groups bearing most of the resulting disease burden, i.e., poor, children, women and elderly people. Creating a well coordinated approach for protecting health from climate change remains a great challenge for the government. Effective surveillance system needs to be developed and institutional capacity to manage these problems including of health professionals. Bangladesh in recent years has experienced some severe effects of climate change. To build capacity and strengthen health systems to combat the health impact of climate change, the Climate Change and Health Promotion Unit of MOHFW is very keen to focus on adaptation and mitigation plan on climate change. It has been widely recognized that the health sector does not receive adequate funding in proportion to the extent of the problem. It's a cross cutting issue with many OPs but NCD will be lead OP as Emergency preparedness and disaster responses are placed under NCD.

Air Pollution: ARI and other respiratory diseases form the largest share of the reported disease burden in Bangladesh and air pollution is one of the leading causes of respiratory disease. In rural households the use of bio mass as cooking fuel is the main cause of indoor air pollution; Vehicular air pollution is a major cause of respiratory distress in Urban Bangladesh.

Water, Sanitation & Other Environmental Health issues: The water supply coverage in Bangladesh stands at approximately 97 %. However, the safety of water for human consumption is often suspected: a recent WHO/SEARO study concluded that no SEARO country has an adequate national program of drinking water quality and surveillance. In recent years the problem of arsenic contamination of ground water has further caused large sections of the population to risk exposure due to the absence of alternative safe water supply solutions. Also, large differences in quality occur between rural, peri-urban and urban areas, causing risk of substitution with sources of poor quality. Sanitation coverage in the country is estimated at around 40%, with wide differences between rural and urban areas.

Effective water supply and sanitation coverage in Bangladesh is significantly lower than the estimates. Especially, the rapidly growing urban centers need support aimed at developing sustainable water and sanitation systems.

Substantial further investment in water supply and sanitation infrastructure, and greater sector efficiency, are needed to achieve the Millennium Development Goals (MDG) for water supply and sanitation and other closely related MDGs for child mortality.

Attention needs to be given to improve understanding of the contribution of poor water supply, sanitation and hygiene to the national burden of disease. School health needs strengthening as a vital point of intervention for life-skills education for sanitation and hygiene, and for helminthes control and nutrition.

The Government of Bangladesh has initiated a multi-year program on total sanitation starting in October 2003. Water quality surveillance in some 120 towns re-started. Together with continued laboratory strengthening, an overall surveillance system, covering bacteriological and chemical parameters needs to be developed. With frequent natural disasters, collaboration between water supply, health and disaster preparedness sectors should lead to a greater response capacity.

Activities:

- Development of National Strategy and Action Plan on Climate Change, Air Pollution, Water Sanitation & Other Environmental Health issues
- Translation of National Strategy into action
- Institutionalize CCHPU (Climate Change Health Promotion Unit) in DGHS for mainstreaming climate change and health issues as a co-benefit in all climate related negotiations in home and abroad.
- Increase capacity in health services on disease surveillance skills and techniques
- Increase awareness of health consequences of climate change, Air Pollution, Water Sanitation & Other Environmental Health issues
- Strengthen the capacity of health systems to provide protection from climate-related risks through e-Health and Telemedicine;
- Capacity building for health consequences of climate change, Air Pollution, Water Sanitation & Other Environmental Health issues
- Training of Field heath staff, on feasible screening/diagnostic methods of the targeted Diseases
- Mass awareness on health and wealth impact due to climate change**,** Air Pollution, Water Sanitation & Other Environmental Health issues
- Advocacy for notification of climate sensitive disease
- Development of training modules and IEC materials on climate change, indoor and outdoor air pollution, other environmental issues, safe water and sanitation,
- Coordination of Emergency Medical Service (EMS) and School Health Promotion to reduce health hazards during disasters emergencies related with climate change.
- Study survey, Epidemiological surveillance and Research on assessment of health impact of climate change**,** Air Pollution, Water Sanitation & Other Environmental Health issues
- Analysis of facility health record for determining the trend and direction of change in disease pattern and distribution due to climate change**,** Air Pollution, Water Sanitation & Other Environmental Health issues
- Sensitization and orientation of health facility staff on targeted climate attributed vector borne, water borne and emerging diseases etc

- Adaptation and Mitigation Initiative and promotion of climate change induce health problems at all level of health facility including community
- Developing material on efficient energy use during service delivery at all level of health care services
- Coordination among the relevant ministries to reduce health hazards related to climate change**,** Air Pollution, Water Sanitation & Other Environmental Health issues
- Strict coordination between CCHPU (Climate Change Health Promotion Unit) and Crisis management Centre during disaster.

Component 5: Emergency Preparedness and Response (EPR), Post Disaster Health Management and Emergency Medical Services.

Emergency Preparedness and Response (EPR), Post Disaster Health Management: The geographical location and the topographical features of the country make Bangladesh vulnerable to natural disasters. The EP&R Program of the DGHS is responsible for the health response to natural and man-made disasters/emergencies, in close co-operation and partnership with other agencies.

The main strategies mentioned in the OP of the PIP aim to increase the level of readiness at all tiers of the health system and improve the capacity of the sector for coordinated post-disaster management. Standard national guidelines for mass casualty management as well as manual for local level health response will be issued and necessary training will be conducted. Standardization of emergency health supplies and their stockpiling will be part of the readiness program for flood, cyclone, tornado and earthquake. A TA supported strategic study will be commissioned. EP&R activities will be strengthened. Trainings will be arranged for health and family planning staff in collaboration with Civil Defense Department and Red Crescent Society, Community Volunteers on risk/ vulnerability assessment, vulnerability reduction, disaster mitigation, review of emergency preparedness and humanitarian assistance. Guidelines, protocols and standard operating procedures (SOP) will be developed.

Emergency Medical Services (EMS): Bangladesh has made significant progress in recent times in many of its social development indicators particularly in health. Although most of the health indicators show steady gains and the overall health status of the population has improved some of this progress is uneven. The major constraint identified towards reaching the MDGs and other national health goals are shortages in skilled health workforce, appropriate logistic support, uneven skill mix and effective programme operations. A large part of the morbidity and mortality rates can be attributed, in addition to many other factors, to the problem in tackling emergency patients at different tiers of the health system, especially at the district level and below. As a result patients with even minor health emergencies are referred from the primary, to the secondary and eventually to the tertiary level facilities. This causes out of pocket financial involvement; precious time is lost in transferring the patients, through an ill developed transportation system resulting in increased morbidity and mortality. Upazilla health complexes (UHC) have a critical role in managing emergencies and in linking communities to the larger health care system. At present, efficiency and effectiveness of emergency services in the district hospitals and the UHC are compromised by shortage of skilled professional staffs, poor use of resources, nonfunctioning equipment, and lack of transportation and inadequate supply of life saving medicine and supplies and a poor referral system. Strengthening emergency services at the district and Upazilla level would bring quality health care closer to the

door steps of the people and would allow the medical college hospitals and the specialized hospitals to deliver their functions effectively paving way for a meaningful and functional health system.

Activities:

- Development of national Strategy for Mass Causality Management
- Development of Academic Curriculum based on Mass Causality Management
- Development of IEC materials for sensitization of service providers on EPR and Disaster management
- Development of Contingency planning at all level of Health facilities
- Strengthening capacity of hospital services on EPR and disaster management including mock drill
- Establishing System for early warning sign for early preparation for health service delivery in disaster prone area
- Capacity development of community volunteers on disaster preparedness and response and establish network of volunteers
- Initiate program on Hospital Preparedness in Emergencies for hospital personnel
- Generation of prediction model using baseline and routine data to forecast risk, intensity and size of impact of disaster.
- Piloting of Medical College, District & Upazilla Hospital on EPR & Disaster Management
- Replication of piloting experiences throughout the whole country
- Translation of national Strategy for mass casualty management
- Operational research on the performance of intervention on EPR & Disaster Management
- Adoption of Mitigation Initiative and promotion of it at all level including community
- Strengthening of all Health facilities & temporary Health rescue center and mobile hospital with logistics
- Establishment of National Crisis Management Center and Archive Center for disaster records and in linking with all health facilities.
- Internetworking of all Health facilities with National Crisis Management Center and Archive Center.
- Strengthening of National Institute of Health Disaster Management.

Component 6: Mental Health, Autism, Tobacco, Alcohol & Substance Abuse.

Mental Health: The National survey on mental health in Bangladesh showed that 16.1% of the adult population of the country suffers from some form of mental disorder, requiring immediate treatment. In an urban survey the prevalence of mental disorders including mood, sleep, anxiety and substance related disorders was found to be 28%. Among the hospitalized cases, schizophrenia is the main disorder. A WHO sponsored community survey showed prevalence of child mental disorders of 18.35%, epilepsy 2.02%, mental retardation 3.81% and substance abuse 0.78%. Given the emerging size of the mental health problems amid changing life styles and in pursuance of government's strong commitment for adequately addressing the counseling and treatment of mental health, partnerships with the media and NGOs will be developed to raise public awareness about appropriate attitude towards and behaviour with mental patients.

Three types of service providers/ volunteers may be helpful for mental health related services at the community level: public sector workers, NGO/ CBO workers and school and religious teachers, who could be trained to identify and counsel substance abuse and mental and emotional cases, provide and follow up simple treatment as per feasibility, provide life skill training and refer serious cases to an appropriate facility. The Mental Health Act, now in draft form, will be given a legal form.

Autism: According to the estimate of Ministry of Social Welfare total number of persons with Autism spectrum disorders (ASDs), could be as high as 1, 4 million of whom only a few hundred have been diagnosed. One estimation is also that one child in 500 in Bangladesh has autism, meaning that the approximate number of children with ASDs in Bangladesh is no less than 280,000.

The general attitude towards autism is mostly negative and it is seen as a social barrier. Even today, autism is considered a God-given curse and children with ASDs are taken as possessed by the Devil. Also bad parenting is accused: mothers going out to work still get the blame. There is a lack of knowledge about ASDs even among doctors. Very often, children are misdiagnosed and given antipsychotic drugs by psychiatrists. In Bangladesh, there are only 20 schools for disabled children. According to the MDGs, every child has a right to education. However, the general education system in Bangladesh does not meet the needs of disabled children, especially the ones with autism. In Bangladesh, only three special education schools are working exclusively with children with ASDs. Autism spectrum disorders (ASDs) includes (i) Classical Autism, (ii) Aspergen Syndrome (iii) Pervasive developmental Disorders (PDD)

Tobacco Use: According to Global Adult Tobacco Survey (2009), 58.9% of the male adult surveyed use tobacco and 28.7% of the females use tobacco. Of the adult population 60% smoke and 27% consume smokeless tobacco. Smoking is more pervasive among the poor (70%) and among those who have no education (73%) (NIPORT, 2009). There are over 1.2 million cases of tobacco related illnesses in

Bangladesh each year and around 9% of all deaths in a year (57,000 deaths) in the country are result of tobacco use (WHO, 2008).

LD, NCD may take the lead to mobilize the school text book board to include topics on harmful effects of tobacco e.g. effects on heart and chest and substance abuse in school curriculum. BHE will be supported in mounting anti-tobacco and anti-substance use messages. A policy may be adopted to increase tax on hard drinks and tobacco. All tobacco products need to be packaged in such a manner that pictures and worded warnings may be printed as per the Tobacco Control Law 11 of 2005. The law itself also needs some modification to include public parks as smoking prohibited areas and increase the fine (now Taka 100) if the law is contravened. National anti tobacco campaigns should be started. Two separate strategic plans were developed for control of NCD & Tobacco which hopefully will play an important role in the implementation of the next sector program.

Substance Abuse (Alcohol and other addictive drugs): In Bangladesh, the consumption of alcohol is strictly prohibited both as a social function and as a religious right by most of the religions. However, information obtained from law enforcement authorities, treatment providers and other sources indicate that alcohol abuse is becoming more common. Although the problem is more serious in urban areas of the country (probably due to easy accessibility of alcoholic beverages), there are indications that it is emerging at an increasing rate in rural areas. The level of alcohol consumption reported during 2003 for Bangladesh was below 0.5 litre per capita (WHO 2004). However, the latest report by WHO estimated that the average per capita consumption by Bangladeshi population of age 15 and more during 2003-2005 to be 0.2 litres of pure alcohol, and among the drinkers the average was 4.47 (for males 4.59 litres and for females 2.98 litres). The report also estimated that among males of age 15 years or more, the proportion of heavy episodic drinkers was 7.5% compared to 3.3% among adult females in 2003 (WHO 2011).

Alcohol is being produced by some pharmaceutical industries in Bangladesh. Moreover, some crude forms are produced and used by the poor, usually by fermentation of boiled rice, sugar-cane, and molasses. Although no systematic assessment has been undertaken so far to establish the prevalence and patterns of substance abuse in Bangladesh, reports from different governmental and non-governmental drug addiction and treatment centres and from various journals and studies report increasing drug-related crimes in the country (WHO 2004).

It is noted that the younger generation, especially students, are most vulnerable to this problem. At least 90 Bangladeshis died in 1998, including 70 in Gaibandha, after consuming illegal homemade alcohol. In the following year, there was an incident of alcohol poisoning in the north-eastern town of Narsingdi, about 50 miles from the capital Dhaka, where 96 people reportedly died and more than 100 hospitalized as a result of drinking illegal homemade liquor. In a 1995 study of 30 male multiple drug users (aged 20 years and above) it was found that alcohol was one of the most

frequently used drug (50% of the sample reported use of alcohol prior to the interview) (Ahmed & Ara 2001).

Among the urban population, the proportion of men reporting 'ever use' of drugs and alcohol were identical across slums and non-slum areas of City Corporations (around 12%), and notably lower than among men in District Municipalities (17.3%) (NIPORT, 2008). A recent study by the World Bank in Bangladesh found that nearly one in every ten street children of age 11-19 years in major metropolitan cities has ever consumed alcohol (Mahmud, Karar & Claeson 2011).

Bangladesh is straddling the demographic and epidemiological transitions with a notable increase in the burden of NCDs, particularly CVDs, hypertension, hypercholesterolemia, diabetes, and injuries. Several risk factors contribute to this changing disease pattern including increased consumption of tobacco, poor diet, and low physical activity. Coupled with other social determinants such as poverty, low education, urbanization, and changing lifestyle, the risk to NCDs becomes increasingly higher. These combined factors have a trans-generational effect and long lasting impact on the population.

Activities:

- Development of National Strategy for the management of mentally ill health persons
- Capacity development of primary health care physicians, nurses and health workers on mental health
- Training of religious leaders, traditional healers, & faith healers of model upazilla
- Mass awareness & coordination meetings about mental health with health work force
- Development of Training modules & IEC material for use at different levels of service delivery
- Advocacy for updating course curriculum in MBBS with the inclusion of required topics in psychiatry
- Establishment of psychiatric illness registry at specialized and tertiary Hospitals
- Study survey, epidemiological surveillance, research on mental health
- Advocacy for one month placement of internee doctors in psychiatry
- Piloting of Upazilla for integration of Mental Health into primary health service delivery systems
- Replication of piloting experience country wide
- Establishing A "Help Hotline" for 24 hours emergency help in National Institute of Mental Health, Dhaka,
- Mass awareness development of service providers, parents, volunteers, social workers for the management of Autistic child
- Capacity development of service providers, parents community volunteers on Autism

- Development of IEC materials, training modules on Autism
- Development of National Strategic of Action plan on Autism
- Translation of National Strategy into Action after development
- Establishment of rehabilitation center for child with Autism illness
- Strengthening of rehabilitation center for Autism illness child with all logistics
- Establishment of Autism illness registry at all levels of Health facilities
- Research and study survey on Autism
- Development of mass awareness among the people about the harm of tobacco
- Mass media campaign against smoking in public
- Campaign to raise awareness about harm of smokeless tobacco
- Study survey, epidemiological surveillance & operational research on distribution and determinants of tobacco use and its impact
- Anti tobacco campaign among high school children
- Tobacco cessation clinic initiative (Establishment of counseling hotline center)
- Series of workshops with policy makers and lawyers, professional bodies and law enforcing body for enforcing FCTC
- Capacity development of health service providers about the harmful use of tobacco
- Intersectoral collaboration with a view to Review of tax policy; Increase of tobacco tax by NBR, Amendment of Tobacco Control Law
- Mass awareness development on substance abuse like alcohol and other addictive drugs
- Capacity development of health service providers about the harmful use of alcohol
- Anti alcohol campaign among high school children
- Mass media campaign against substance abuse like alcohol and other addictive drugs
- Development of strategy & action plan for prevention & control of alcohol & other addictive drugs
- Intersectoral collaboration with relevant stakeholder for prevention & control of alcohol & other addictive drugs
- Establishment of rehabilitation center for substance abused like alcohol and other addictive drugs & drug addicted
- Study survey, epidemiological surveillance & research on substance abuse like alcohol and other addictive drugs.

b) Related Strategy in the PIP:

The following mentioned strategies are included in the PIP to control the NCDs:

i) Strengthening BCC activities for prevention of NCDs, and diagnosis and management of kidney diseases, diabetes and arsenicosis patients in primary, secondary and tertiary hospitals.

ii) Strengthening prevention awareness and diagnosis of CVD in all three tiers of facilities in the health system and treatment and management in secondary and tertiary hospitals.

iii) Screening for early detection of cancer and strengthening diagnosis and management including palliative care of cancer patients in secondary and tertiary hospitals.

iv) Implementing the strategic action plan on injury prevention, NCD and Tobacco Control.

v) Expanding Emergency Medical Services.

vi) Environmental Health and Climate Change focusing the emergency preparedness and response (EPR), mitigation and adaptation relating to longer-term health effects of climate change.

vii) Promote the Establishment of an autonomous institute for Environmental and Occupational Safety and Health Structurally

viii) Strengthen the Climate Change and Health Promotion Unit (CCHPU)

ix) Strengthening activities of the CCHP Unit to combat the health impact of climate change and updating guidelines for health protection from adverse effects and pre and post disaster situation.

x) Developing an advanced preparedness plan to face the consequences of climate change.

xi) Standardizing emergency health supplies and their stockpiling as part of readiness program on climate change.

10 Priority activities of the OP:

The NCDC operational plan consists of six priority programs. The priority activities under the programs are as follows:

Development, formulation and up gradation of National Strategic Papers: Development of National Strategy and Action Plan on Climate Change, Air Pollution, Water Sanitation & Other Environmental Health issues, prevention & control of alcohol & other addictive drugs, National Strategy for the management of mental health and others.

Capacity Building of Health Service Providers and relevant stakeholders through orientation and training : Capacity building initiative through training and orientation of physicians, nurses, Para-medics, Lab technician, pharmacist, health assistants and family welfare assistants, safety professionals (particularly Sanitary Inspector) and other related stakeholders on prevention and control of NCDs such as occupational health and safety, industrial hygiene, agricultural hazards, autism, harmful use of tobacco, Good Manufacturing Practice (GMP), Good Laboratory Practice (GLP),Water and Food Safety, injury prevention, Basic Life Support, Advanced Life Support, Emergency Medical Services, Violence against Women (VAW) including Acid Burn, Sports Injury, Suicidal Injury, Snakebite Injury, Traffic law & enforcement and safe driving, home safety, children on swimming and others.

Preparation of Training Module:. Training module for all health service providers for relevant topics on conventional and non conventional NCDs will also developed for conduction training session at different levels of health services.

Mass awareness raising activities: Mass Awareness rising initiative on NCD prevention, NCD risk factor, about earlier signs of NCDs to encourage people to seek health care /advice for detection of NCD particularly Injury Prevention among the community people, road users and drivers, occupation specific health problem, or disease, existing laws, rights and privileges, agriculture hazards, health and wealth impact due to climate change, Air Pollution, Water Sanitation & Other Environmental Health issues, Autistic child, smoking in public, harm of smokeless tobacco and substance abuse like alcohol and other addictive drugs. Mass media advertisement and billboard establishment on NCD health promotion message through harvesting corporate social responsibility. Information, Education and Communication material (IEC) like poster, leaflet, flipchart, documentary film, electronic billboard and other related materials will be developed. Advertisement on electronic media, advertisement and special souvenir at print media will be arranged in this regard. Observance of important days for NCD related diseases and events ("World No Tobacco Day", "World Health Day", "World Cancer Day", "World Hypertension Day", "World COPD Day", "World Diabetes Day". World Mental Health Day etc.).

Piloting , model demonstration and scale up: Piloting of NCD counseling centers at three NCD model Upazilla. Well Women Clinic' initiative in model Upazilla for providing screening services for hypertension, diabetes, breast and cervical cancer to adult women along with other services in NCD Corner. Piloting of three Industries of different trade on Occupational Health and Safety. Piloting of three geographical area having different of cultivation. Replication of NCD programme throughout the whole country within 2016 same as NCD model upazilla and establishment NCD corner.

Strengthening Surveillance System and Management Information System: Strengthening of existing BanNet & InfoBase and further inclusion of electronic database at the DGHS (Logistics, human resource & IT and Network). Strengthening of existing Website and its maintenance .Periodic publication of newsletters, reports. Strengthening routine MIS for hospital statistics on NCDs and inter-linking with DGHS MIS**.** Establishment of cancer registry at specialized and tertiary Hospitals later on secondary & primary health facilities. Establishment of stroke registry at specialized and tertiary Hospitals later on secondary & primary health facilities

Supporting institutional development: Support by providing logistics, pharmaceuticals products and other equipments for institutional development on NCDs. Institutionalize CCHPU (Climate Change Health Promotion Unit) in DGHS for mainstreaming climate change and health issues as a co-benefit in all climate related negotiations in home and abroad. Establishment of National Crisis management Center and Archive Center for disaster records and in linking with all health facilities. Establishment of rehabilitation center for child with Autism illness. Strengthening of rehabilitation center for Autism illness child with all logistics. Strengthening of the existing OCC centers and replication to other health facilities. Supply of all logistics for Injury Prevention and Management. Establishing A "Help Hotline" for 24 hours emergency help in National Institute of Mental Health. Strengthening of National Institute of Health Disaster Management and National centre for NCDs as an Umbrella organization for NCD alliance are important priority activities in this OP.

Operational Research and Survey: Study survey, epidemiological surveillance & research on substance abuse like alcohol and other addictive drugs, distribution and determinants of tobacco use and its impact , assessment of health impact of climate change, Air Pollution, Water Sanitation & Other Environmental Health issues occupational health and safety and agricultural hazards, all injuries ,Periodical National NCD risk factor survey and Periodical National NCD survey

Coordination and Partnership: Activities will be carried out to boost up the ongoing coordination and collaboration within Government departments and ministries. Partnership and collaboration will be also established between civil society organization and other non-government national and international organizations.

11. Relevant Result Frame Work Indicators (RFW) & OP Level indicators:

11.1 Relevant RFW Indicators:

The activities under this OP contribute to ensuring the quality and equitable health care for all citizens of Bangladesh. More specifically, the activities planned contribute to Result 1.1, increased utilization of essential HPN services and Result 1.3, improved awareness of healthy behaviors

11.2 OP level indicators (Output/Process):

Sl. No.	Indicators	Unit of Measurement	Baseline with source	Projected target	
				Mid 2014	Mid 2016
(1)	(2)	(3)	(4)	(5)	(6)
1	Number of Upazilla and below health facilities providing hypertension screening	Number of Upazilla	NA (NCD)	142 Upazilla	472 Upazilla
2	Number of Upazilla and below health facilities providing diabetes screening	Number of Upazilla	NA (NCD)	142 Upazilla	472 Upazilla
3	Number of service providers trained on NCD screening and management	Number of person	70,000 (NCD)	15,000	26,760
4	Number of service providers trained on major NCDs in District and below level	Number of person	NA (NCD)	1000	20,000
5	NCD Prevention, control and management Strategy developed and implemented	No of Strategy	02 (NCD)	7	11
6	Number. of awareness campaigns on injury (traffic, child and other injuries)	Number of Upazilla covered	NA (NCD)	142	330
7	Number of District Hospital & Upazilla level facilities providing early detection of Cancer (Cervix, Breast, and Oral) screening	Number of facilities	NA	59	133
8	Number of districts provided occupational health safety training and awareness in factories	Number of factories covered	NA (NCD)	7	13
9	Number of Surveillance points on Climate Sensitive Disease developed	Number of facilities	NA (NCD)	3	6
10	Environment & Occupational Health center established –in NIPSOM	Number of facilities	NA (NCD)	Done	Done

Sl. No.	Indicators	Unit of Measurement	Baseline with source	Projected target	
				Mid 2014	Mid 2016
(1)	(2)	(3)	(4)	(5)	(6)
11	Number of Educational Institutes (Schools/College/ University) covered for Anti Tobacco campaign	Number of Educational Institutes covered	NA (NCD)	700	1000
12	Number of disaster prone Upazilla completed training of Health personnel on disaster preparedness.	Number of upazilla covered	NA (NCD)	40	64
13	Number of Upazilla with trained Service Providers on management of VAW	Number of upazilla covered	NA	175 Upazilla	380

11.3 Source and methodology of data collection to measure/preparation of annual progress report :

a) Monthly and Quarterly report form from Upazilla and district level

b) Monthly Progress report

c) Annual Report of NCD Programme of DGHS

d) MIS report

e) BDHS Survey

f) Global Adult Tobacco Survey (GATS)

g) Tobacco Survey.

12. Estimated Budget:

12.1 Estimated summary of development budget:

(Taka in Lakh)

Name of the Component	Economic Code	GoB	Project Aid			Total	% of total Cost
			RPA		DPA		
			Through GOB	Others			
1	2	3	4	5	6	7	8
a) Revenue Component							
Pay of Officers	4500	115.56	-	-	-	115.56	0.22%
Pay of Establishment	4600	27.22	-	-	-	27.22	0.05%
Allowances	4700	257.22	-	-	-	257.22	0.50%
Supply & Services	4800	12587.74	26137.47	-	9847.71	48571.92	91.25%
Repair and Maintenance	4900	10.00	20.22	-	6.69	36.91	0.71%
Sub-Total(a)=		**12,659.21**	**25,335.50**	**-**	**10,300.00**	**48,294.71**	**93.03%**
b) Capital Component							0.00%
Acquisition of Asset	6800	726.26	1629.31		446.60	2802.17	6.77%
Construction	7000	100.00	0.00	-	-	100.00	0.19%
Sub-Total(b)=		826.26	1629.31		446.60	2902.17	**6.97%**
Grand Total(a+b)=		**13,824.00**	**27,787.00**	**-**	**10,300.00**	**51,911.00**	**100.00%**

12.2 Estimated Detailed Budget (Input wise):

13. Year-wise Physical and Financial Target During OP Period:

Agency: DGHS

Name of the OP: Non-communicable Disease Control

(Taka in Lakh)

14. Location-wise break-up of the components:

(Taka in Lakh)

Name of the Components	National	Amount	Name of Division	Amount	Name of District	Amount	Name of Upazilla	Amount
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Conventional NCD including Arsenicosis, Major NCDs,	√	983.69	All 7 Division	1967.39	All 64 District	5185.85	All	9836.93
Non Conventional NCD	√	544.61	All 7 Division	1089.22	All 64 District	2412.26	All	4446.1
Occupational Health and Safety and Strengthening to Institute of Public Health (IPH)	√	286.06	All 7 Division	572.11	All 64 District	3002.39	All	1660.55
Climate Change, Air Pollution, Water Sanitation & Other Environmental Health issues	√	296.06	All 7 Division	592.11	All 64 District	2072.39	All	2960.54
EPR, Post Disaster Health Management and EMS	√	426.58	All 7 Division	853.17	All 64 District	2986.08	All	4265.84
Mental Health, Autism, Tobacco, Alcohol & Substance Abuse.	√	273.56	All 7 Division	547.11	All 64 District	1914.89	All	2735.51
Total=		**2810.56**		**5621.11**		**17573.86**		**25905.47**

15. Log Frame (As per Annexure- II):

16. Annual Procurement Plan for Goods, Works, Services (Separate table for a. Goods, b. Works, c. Services): (As per Annexure- III a, b, c)

17. List of Machinery & Equipments (Annexure-IV):

18. List of Furniture-Fixture (Annexure-V):

19. List of Vehicle (Annexure-VI):

20. List of training and estimated cost (Annexure-VII):

21. Related Supporting Documents (if any): N/A.

22. Name & Designation of officers responsible for the preparation of this OP:

a) Prof. Dr. Khondhaker Md. Shefyetullah
Line Director, NCD & OPHI,
DGHS, Mohakhali, Dhaka.

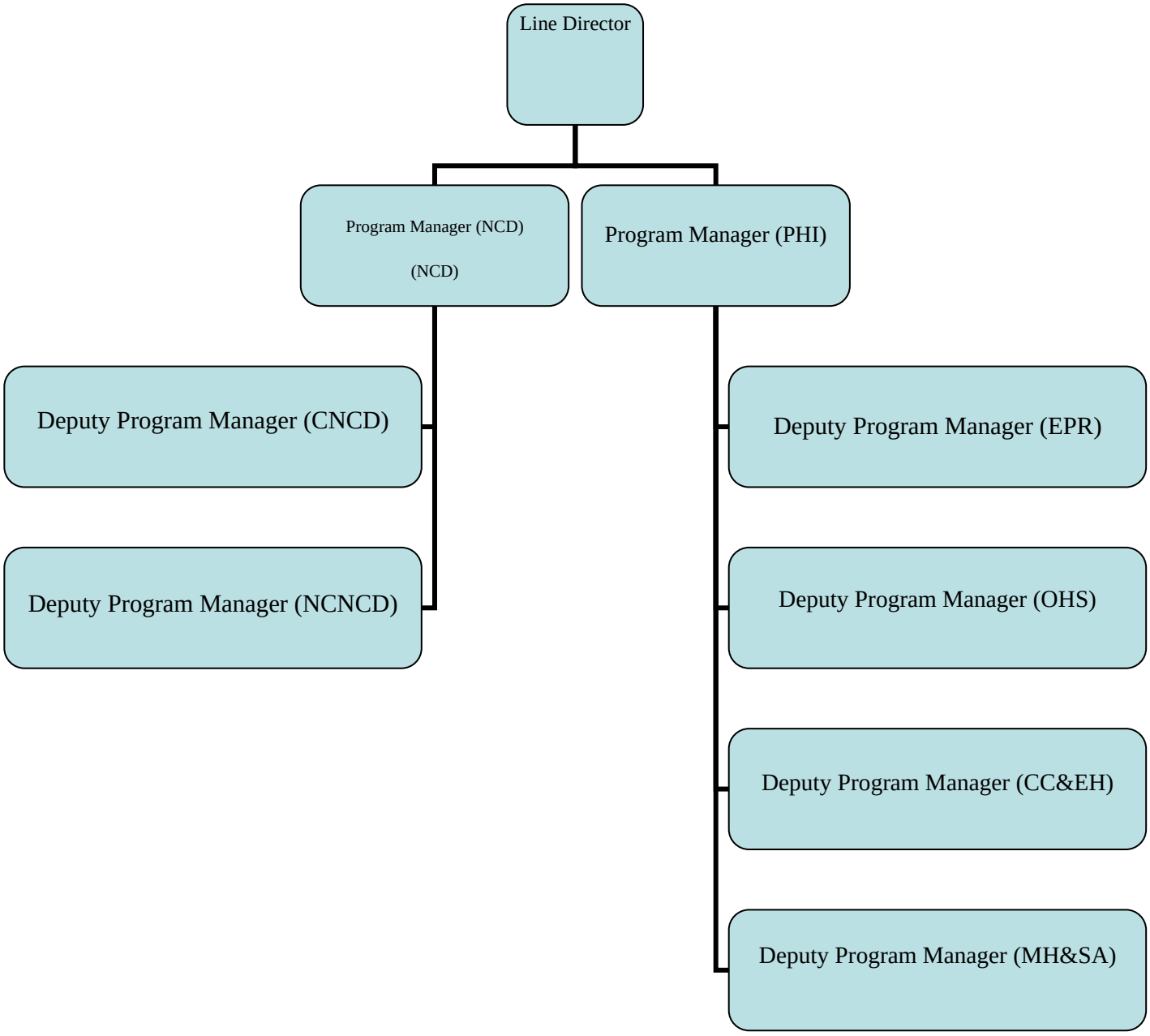
b) Dr. A.K.M. Jafar Ullah
Programme Manager, NCD & OPHI,
DGHS, Mohakhali, Dhaka.

23. Recommendation and Signature of the
Head of the Implementing Agency with seal & date:

24. Recommendation of the Signature of the
Secretary of the sponsoring Ministry with seal & date:

Annexure-I

Organogram for NCD



Annexure-II

Logical Framework of Non Communicable Disease (NCD), 2011- 2016

(i) Planned date completion: June 2016

(ii) Date of summary preparation: September 2011

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Goal: Reduced mortality and morbidity through improving health service for protecting people from non-communicable diseases and other public health problems	Reduced mortality and morbidity caused by non communicable diseases		
Purpose: Increased awareness on non-communicable diseases with cautionary prevention	1) 60% people aware on detection of hypertension 2) 60% people aware on detection of diabetes	NCD survey	
Outputs: Strengthening diagnosis and management of kidney diseases, diabetes and arsenicosis patients in primary, secondary and tertiary hospitals	- 472 Upazilla and below health facilities providing hypertension screening - 472 Upazilla and below health facilities providing diabetes screening - 70,000 service providers trained on Arsenicosis screening and management - 18,900 service providers trained on major NCDs in District and below level including Arsenicosis	Quarterly OP report (district wise)	Support from HPNSDP and continued
Strengthening prevention awareness and diagnosis of CVD in all facilities in the health system and treatment and management in secondary and tertiary hospitals	- NCD Prevention, control and management Strategy developed and implemented - 85,000 be awared on injury (traffic, child and other injuries through workshop - 192 number of District Hospital & Upazilla level facilities providing early detection of Cancer (Cervix, Breast, and Oral) screening	Quarterly OP report	Support from schools and NGOs received
Screening for early detection of cancer and strengthening diagnosis and management including palliative care of cancer patients in secondary and tertiary hospitals.	- 13 districts provided occupational health safety training and awareness in factories - 6 Surveillance points on Climate Sensitive Disease developed - Environment & Occupational Health center established –in NIPSOM	Quarterly OP report Event report	Reporting system

Expanding Emergency Medical Services Environmental Health and Climate Change focusing the emergency preparedness and response (EPR), mitigation and adaptation relating to longer-term health effects of climate change	- 1000 Educational Institutes (Schools/College) covered for Anti Tobacco campaign - 64 disaster prone Upazilla completed training of Health personnel on disaster preparedness - 380 Upazilla with trained Service Providers on management of VAW - Strengthen the Climate Change and Health Promotion Unit (CCHPU) - Promote the Establishment of an autonomous institute for Environmental and Occupational Safety and Health Structurally		introduced and regularly updated
Inputs/activities: 1) NCD screening and expansion of NCD services 2) Injury Prevention 3) BCC activities 4) Establishment of NCD Cell 5) NCD surveillance 6) Curative care for NCD 7) Cancer registry 8) Capacity Building 9) Occupational health 10) Hospital Preparedness in Emergencies 11) Awareness on Osteoporosis	- Implementing the strategic action plan on injury prevention, NCD and Tobacco Control - Strengthen BCC activities for prevention of all conventional and non conventional NCDs - Establishment of NCD Coordination Cell and dissemination of information - NCD surveillance and screening - Conduct National NCD survey - Organize health promotion in school for raising awareness and prevention of NCD - Impart curative care for NCD - Initiation of Cancer registry - Piloting on Model Upazilla for NCD prevention, best practice hospitals on NCD control, injury prevention - Arrangement of Training , Advocacy for factory owners and factory management for prevention of occupational health hazards - Mass awareness among workers on occupation specific health problem, or disease, existing laws, rights and privileges - Development of uniform OHS reporting system - Development and implementation of sustainable qualitative OHS care providers at GOB and NGO Level - Ensuring the availability of appropriate and user's friendly Personal Protective Equipment (PPE)	OP Report (Quarterly)	Smooth coordination with IEDCR and other programme established and maintained Periodic program review mechanism established Timely funding of the OP received

	- Initiate program on Hospital Preparedness in Emergencies (HOPE) for hospital personnel - Establishing System for early warning sign for early preparation for health service delivery in disaster prone area - Training for community volunteers on Disaster Preparedness and response - Conduct base-line study on climate change and health impact in climate sensitive areas - Conduct operational research on climate change and health impact in climate sensitive areas - Promotion of Adaptation/ Mitigation Initiative on climate change and health impact at all level including community - Developing guideline, promotion material and conduct training for health personnel on efficient energy use during service delivery at all level of health care services - Conduct disease Surveillance System related to impact of Climate Change - Implementing of regulation from upcoming UN NCD Summit September 2011and set World Road Safety Decade activities for Bangladesh 2011-2020 - Creating greater awareness on Osteoporosis through BCC - Develop reporting and recording system for NCD, Injury cases at the district and Upazilla level - Improve patient screening (house to house searching) programs - Capacity building of human resources and facilities for effective case management and referral - Strategic partnership with local bodies and community based organization regarding the mitigation of Arsenicosis - Strengthening routine MIS system for hospital statistics on osteoporosis complications		

Annexure- III (a)

PROCUREMENT PLAN OF GOODS FOR OPERATIONAL PLAN NCDC(Year 2011-12)

Ministry/Division			Ministry of Health and Family Welfare
Agency			DGHS
Procuring Entity Name & Code			LD, NCDC
OP Name & Code			Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(GOODS)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
GD-1	Vaccine and medicine	Lot	As per List/ LS	OTM	CMSD	GOB/PA	478.38	-	30 September	1 December	1 February
GD-2	Medical and Surgical Supplies	Lot	As per List/ LS	OTM	CMSD	GOB/PA	123.50	-	30 September	1 December	1 February
GD-3	Computer Consumables	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	24.03	-	15 October	15 December	15February
GD-4	Machinery and Other Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	173.68	-	15 October	15 December	15February
GD-5	Computer and Accessories	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	10.00	-	15 October	15 December	15February
GD-6	Office Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	43.87	-	15 October	15 December	15February
GD-7	Furniture and Fixtures	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	46.00	-	15 October	15 December	15February
GD-8	Lab Equipment	Lot	As per List/ LS	OTM	CMSD	RPA	34.73	-	30 September	1 December	1 February
GD-9	Air cooler	Lot	As per List/ LS	RFQ	Line Director	RPA	11.33		15 October	15 December	15February
	Total=						**945.52**				

Annexure- III (a)

PROCUREMENT PLAN OF GOODS FOR OPERATIONAL PLAN NCDC(Year 2012-13)

Ministry/Division			Ministry of Health and Family Welfare
Agency			DGHS
Procuring Entity Name & Code			LD, NCDC
OP Name & Code			Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(GOODS)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
GD-1	Vaccine and medicine	Lot	As per List/ LS	OTM	CMSD	GOB/PA	1,247.54	-	15 July	15 September	15 December
GD-2	Medical and Surgical Supplies	Lot	As per List/ LS	OTM	CMSD	GOB/PA	321.63	-	15 July	15 September	15 December
GD-3	Computer Consumables	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	51.79	-	1 July	1 September	1 December
GD-4	Motor Vehicles	Lot	As per List/ LS	OTM	CMSD	RPA	230.00	-	15 July	15 September	15 December
GD-5	Machinery and Other Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	430.28	-	1 July	1 September	1 December
GD-6	Computer and Accessories	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	10.00	-	1 July	1 September	1 December
GD-7	Office Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	112.25	-	1 July	1 September	1 December
GD-8	Furniture and Fixtures	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	60.00	-	1 July	1 September	1 December
GD-9	Lab Equipment	Lot	As per List/ LS	OTM	CMSD	RPA	135.86	-	15 July	15 September	15 December
GD-10	Air cooler	Lot	As per List/ LS	RFQ	Line Director	RPA	33.97		1 July	1 September	1 December
	Total=						**2633.32**				

Annexure- III (a)

PROCUREMENT PLAN OF GOODS FOR OPERATIONAL PLAN NCDC (Year 2013-14)

Ministry/Division			Ministry of Health and Family Welfare
Agency			DGHS
Procuring Entity Name & Code			LD, NCDC
OP Name & Code			Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(GOODS)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
GD-1	Vaccine and medicine	Lot	As per List/ LS	OTM	CMSD	GOB/PA	1,294.49	-	15 July	15 September	15 December
GD-2	Medical and Surgical Supplies	Lot	As per List/ LS	OTM	CMSD	GOB/PA	369.45	-	15 July	15 September	15 December
GD-3	Computer Consumables	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	45.85	-	15 July	15 September	15 December
GD-4	Machinery and Other Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	347.51	-	1 July	1 September	1 December
GD-5	Computer and Accessories	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	20.50	-	1 July	1 September	1 December
GD-6	Office Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	101.72	-	1 July	1 September	1 December
GD-7	Furniture and Fixtures	Lot	As per List/ LS	RFQ	Line Director	GOB/PA	15.00	-	1 July	1 September	1 December
GD-8	Lab Equipment	Lot	As per List/ LS	OTM	CMSD	RPA	60.28	-	15 July	15 September	15 December
GD-9	Air cooler	Lot	As per List/ LS	RFQ	Line Director	RPA	30.68		1 July	1 September	1 December
	Total=						2285.48				

Annexure- III (a)

PROCUREMENT PLAN OF GOODS FOR OPERATIONAL PLAN(2014-2016)

Ministry/Division	Ministry of Health and Family Welfare
Agency	DGHS
Procuring Entity Name & Code	LD, NCDC
OP Name & Code	Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(GOODS)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
GD-1	Vaccine and medicine	Lot	As per List/ LS	OTM	CMSD	GOB/PA			15 October	15 December	15 February
GD-2	Medical and Surgical Supplies	Lot	As per List/ LS	OTM	CMSD	GOB/PA			15 October	15 December	15 February
GD-3	Computer Consumables	Lot	As per List/ LS	RFQ	Line Director	GOB/PA			15 October	15 December	15 February
GD-4	Motor Vehicles	Lot	As per List/ LS	OTM	CMSD	RPA			15 October	15 December	15 February
GD-5	Machinery and Other Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA			15 October	15 December	15 February
GD-6	Office Equipments	Lot	As per List/ LS	RFQ	Line Director	GOB/PA			15 October	15 December	15 February
GD-7	Furniture and Fixtures	Lot	As per List/ LS	RFQ	Line Director	GOB/PA			15 October	15 December	15 February
GD-8	Lab Equipment	Lot	As per List/ LS	OTM	CMSD	RPA			15 October	15 December	15 February
GD-9	Air cooler	Lot	As per List/ LS	RFQ	Line Director	RPA			15 October	15 December	15 February

Annexure- III (c)

PROCUREMENT PLAN OF SERVUCES FOR OPERATIONAL PLAN (2011-12)

Ministry/Division	Ministry of Health and Family Welfare
Agency	DGHS
Procuring Entity Name & Code	LD, NCDC
OP Name & Code	Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(Services)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
SP-1	Research on CNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	40.00	-	15 October	15 December	15 February
SP-2	Research on NCNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	40.00	-	15 October	15 December	15 February
SP-3	Research on OSH	Nos	2	QCBS	LD/DGHS	RPA/DPA	40.00	-	15 October	15 December	15 February
SP-4	Research on Climate Change	Nos	1	QCBS	LD/DGHS	RPA/DPA	40.00	-	15 October	15 December	15 February
SP-5	Research on EPR and Post Disaster health	Nos	2	QCBS	LD/DGHS	RPA/DPA	30.00	-	15 October	15 December	15 February
SP-6	Mental Health and Autism	Nos	2	QCBS	LD/DGHS	RPA/DPA	30.00		15 October	15 December	15 February
	Total:						**220.00**				

Annexure- III (c)

PROCUREMENT PLAN OF SERVUCES FOR OPERATIONAL PLAN (2012-13)

Ministry/Division	Ministry of Health and Family Welfare
Agency	DGHS
Procuring Entity Name & Code	LD, NCDC
OP Name & Code	Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(Services)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
SP-1	Research on CNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-2	Research on NCNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-3	Research on OSH	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-4	Research on Climate Change	Nos	1	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-5	Research on EPR and Post Disaster health	Nos	2	QCBS	LD/DGHS	RPA/DPA	35.00	-	1 July	1 September	1 December
SP-6	Mental Health and Autism	Nos	2	QCBS	LD/DGHS	RPA/DPA	40.00		1 July	1 September	1 December
	Total:						**275.00**				

Annexure- III (c)

PROCUREMENT PLAN OF SERVUCES FOR OPERATIONAL PLAN (2013-14)

Ministry/Division	Ministry of Health and Family Welfare
Agency	DGHS
Procuring Entity Name & Code	LD, NCDC
OP Name & Code	Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(Services)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
SP-1	Research on CNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-2	Research on NCNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-3	Research on OSH	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-4	Research on Climate Change	Nos	1	QCBS	LD/DGHS	RPA/DPA	50.00	-	1 July	1 September	1 December
SP-5	Research on EPR and Post Disaster health	Nos	2	QCBS	LD/DGHS	RPA/DPA	35.00	-	1 July	1 September	1 December
SP-6	Mental Health and Autism	Nos	2	QCBS	LD/DGHS	RPA/DPA	40.00		1 July	1 September	1 December
	Total:						**275.00**				

Annexure- III (c)

PROCUREMENT PLAN OF SERVUCES FOR OPERATIONAL PLAN (2014-16)

Ministry/Division	Ministry of Health and Family Welfare
Agency	DGHS
Procuring Entity Name & Code	LD, NCDC
OP Name & Code	Non-Communicable Disease Control

OP Cost (in lakh Taka)	
51911.00	Total
13824.00	GOB
38087.00	PA

Package No.	Description of procurement package as per OP(Services)	Unit	Quantity	Procurement method & (Type)	Contract Approving Authority	Source of funds	Estd. cost in Lakh Taka	Indicative Dates			
								Not used in Goods	Invitation for Tender	Signing of Contract	Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12
SP-1	Research on CNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	60.00	-	1 July	1 September	1 December
SP-2	Research on NCNCD	Nos	2	QCBS	LD/DGHS	RPA/DPA	60.00	-	1 July	1 September	1 December
SP-3	Research on OSH	Nos	2	QCBS	LD/DGHS	RPA/DPA	60.00	-	1 July	1 September	1 December
SP-4	Research on Climate Change	Nos	1	QCBS	LD/DGHS	RPA/DPA	60.00	-	1 July	1 September	1 December
SP-5	Research on EPR and Post Disaster health	Nos	2	QCBS	LD/DGHS	RPA/DPA	40.00	-	1 July	1 September	1 December
SP-6	Mental Health and Autism	Nos	2	QCBS	LD/DGHS	RPA/DPA	50.00		1 July	1 September	1 December
	Total:						**330.00**				

Annexure-IV

List of Machineries and Equipments

(Tk. in Lakh)

Sl No	Name of the Equipments	Unit Price	Quantity	Estimated Cost
1	2	3	4	5
1	Air Compressor (for Dental Unit)	0.50	14	7.00
2	Air Conditioner	0.90	30	27.00
3	Arsenic Kit (Digital)	1.50	130	195.00
4	Arsenic Kit (Visual)	0.07	500	35.00
5	Arsenic Test Refill Pack	0.03	500	15.00
6	B.P Machine	0.03	500	15.00
7	Computer (Desk top) with CD writer	0.50	30	15.00
8	Computer (Laptop)	1.00	30	30.00
9	Conference Room sound system	1.00	6	6.00
10	Dental Unit & all accessories with intra oral camera	10.00	35	350.00
11	Diabitometer	0.05	500	25.00
12	Digital Camera for MCH and SH	0.40	100	40.00
13	Digital Video camera	1.00	6	6.00
14	ECG Machine	2.00	350	700.00
15	Electric Kettle	0.10	10	1.00
16	Fax Machine	0.25	10	2.50
17	Filling Mechine for IPH	5.00	5	25.00
18	Fridge(-85 degree C)	12.00	3	36.00
19	Generator 10KV	25.00	2	50.00
20	Intercom system	0.50	6	3.00
21	Intr-oral X-Ray Mechine (70KV)	3.00	7	21.00
22	IPS (1500w)	1.00	6	6.00
23	Lipid Profile Measurement Kit (Cardio Check)	1.50	500	750.00
24	Micro-motor	0.20	14	2.80

Sl No	Name of the Equipments	Unit Price	Quantity	Estimated Cost
1	2	3	4	5
25	Nebulizer Machine	0.10	500	50.00
26	PCR Mechine	3.00	2	6.00
27	PH Meter	1.00	6	6.00
28	Photocopier	5.00	6	30.00
29	Printer	0.30	30	9.00
30	Refrigerator	1.00	10	10.00
31	Scanner	0.20	6	1.20
32	Stethoscope	0.01	500	5.00
33	UPS	0.15	30	4.50
34	Water filter (Electric)	0.30	6	1.80
35	Wheel Chair	0.15	500	75.00
	Total =			2561.80

Annexure-v

List of Furniture and Fixtures

Sl No	Name of the Furniture	Unit Price	Quantity	Estimated Cost
1	2	3	4	5
1	Almirah (Wood & Steel)	0.30	60	18.00
2	Book Shelf	0.28	30	8.40
3	Computer Chair	0.10	60	6.00
4	Computer Table	0.20	60	12.00
5	Conference Table Set	5.00	6	30.00
6	Executive Chair	0.30	15	4.50
7	File Cabinet	0.20	30	6.00
8	Full Secretariat Table	0.35	20	7.00
9	Half Secretariat Table	0.25	40	10.00
10	Laboratory Table	0.30	10	3.00
11	Visitors Chair	0.15	100	15.00
12	Workstation	5.00	6	30.00
	Sub-Total:			149.90

Annexure-VI

List of Vehicle

S.L No.	Name of the Vehicle	Purpose of Vehicle	Unit Price	Quantity	Estimated Cost
1	**2**	**3**	**4**	**5**	**6**
1	Jeep	For PM, official use & field visit	50.00	1	50.00
2	Pick Up Van	For six DPM of concern programme for the field visit	30.00	6	180.00
	Total =				**230.00**

Annexure-VII

Training program for Human Resource Development

(TK in lac)

	Total (2011-16)		2011-12		2012-13		2013-14		2014-16	
	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
1	2	3	4	5	6	7	8	9		
a) Local										
Short Cource	24,713	5,779.71	2,324	565.61	6,286	1,530.11	7,717	1,642.65	8,386	2,041.34
Medium Course	-	-	-	-	-	-	-	-	-	-
Long Course	-	-	-	-	-	-	-	-	-	-
Sub-total(a)		**5,779.71**		**565.61**		**1,530.11**		**1,642.65**		**2,041.34**
b) Foreign										
Short Cource	25	225.00	5	45.00	10	90.00	5	45.00	5	45.00
Medium Course	-	-	-	-	-	-	-	-	-	-
Long Course	-	-	-	-	-	-	-	-	-	-
Subtotal(b)				**45.00**		**90.00**		**45.00**		**45.00**
Grand Total(a+b)=		**6,004.71**		**610.61**		**1,620.11**		**1,687.65**		**2,086.34**

Estimated Allocation for Training:

(TK in Lakh)

Year	Total (=3+4)	GOB	PA (=5+6+7)	RPA through GOB	RPA others	Other than RPA (DPA)
1	2	3	4	5	6	7
2011-12	610.61	350.60	277.31	272.31	-	5.00
2012-13	1,620.11	354.48	1,312.44	862.07	-	450.37
2013-14	1,687.65	354.48	1,626.42	725.91	-	900.51
2014-16	2,086.34	240.44	1,908.34	945.11	-	543.43
Total (2011-16)=	6,004.71	1,300.00	4704.71	2,805.40	-	1,899.31

Annexure-VIII

TOR (Provisional) of Officers under Non-communicable Diseases Control, DGHS

Sl No	Name of the Post	Number of post	Task / Job to be done	Pre qualification for recruitment	Mode of Recruitment	Payment at the Grade	Remarks
1	Technical Consultant	4	1. Development of Strategic Planning of Total NCD & OPHI Programme & Action Plan to ensure the Quality of health care services in Govt and Private sector. 2. Strengthening of GOB capacity for planning, implementation & evaluation. 3. Develop operation plan with the collaboration of Line Director, NCD & OPHI, DGHS. 4. Making Liaison of LD, NCD & OPHI, DGHS 5. Project approach & Implementation and ensure the critical institutional step during implementation. 6. Responsible for initiating training programme, schedule, budgeting, module etc. 7. Co-ordination between Project office & Line Director 8. Making liasion of different related organization 9. Any other Job assigned by the LD or higher authority.	1. Must have MBBS, MPH & other Post-graduate degree 2. Working experience in Total Quality Management in Health Services Management for 10 years 3. Working Experience in managing the programme/project management 4. Computer literacy in MS word, Excel, Power point	Direct Recruitment	Grade 6	
2	Surveillance Medical Officer	5	1. To assist in planning of the activities of NCD & OPHI Programme 2. Co-ordination between Project office & Line Director 3. Strengthening the mechanism for collaboration and coordination 4. Make liasion of different organization	1. Must have MBBS degree 2. Working experience with any programme 3. Working experiences in planning, budgeting, monitoring and evaluation process. 4. Computer literacy in MS word, Excel, power point	Direct Recruitment	Grade 8	

Sl No	Name of the Post	Number of post	Task / Job to be done	Pre qualification for recruitment	Mode of Recruitment	Payment at the Grade	Remarks
3	Field Monitoring Officer	10	1. Work together with the PM to establish an effective planning and mentioning system for activities 2. Prepare the Log frame and statistic of QA 3. Regular DATA entry of activities and reporting	1. Graduation in any discipline with computer skill; ability to speak and write English; 2. Experience in using computer word processing packages (e.g., Word, Excel, Power Point & Access). 3. Must have MA or MSc fluent in spoken and written English	Direct Recruitment	Grade 10	

Annexure -IX

List of Medicine for Arsenicosis Patients:

S.L #	Item Name
1.	Antioxidant Tablet (Beta Carotene 6 mg+ Vitamin –C 200 mg + Vitamin – E 50 mg)- 20's Bottle
2.	Ferrous Sulphate 150 mg + Folic Acid 0.5 mg + Zinc Sulphate Monohydrate 61.8 mg Capsule 10'x1 blister
3.	Urea Salicylic Acid ointment (10% Urea + 20% Salicylic Acid) , 20 mg Tube 100's Box

List of Medicine for EPR & Disaster

SL	Item Name
1.	Inj: Cholera Saline -1000ml
2.	Inj: Cholera Saline-500ml
3.	Bleaching Powder 45kg
4.	Bleaching Powder 50kg
5.	Chlrohexidine gluconate cetramide savlon
6.	Tab:Ciprofloxacin -250mg
7.	Tab:Ciprofloxacin -500mg
8.	Tab: Co-trimoxazole -960mg
9.	Tab: Erythromycin -500 mg
10.	Tab: WPT
11.	Cap:Cephradine -500 mg
12.	Cap:Flucloxacillin-250mg
13.	Syp: Co-trimoxazole-100ml
14.	Syp:Erythromycin-100ml
15.	Disposable Syringe (5ml)
16.	Disposable Syringe (10ml)
17.	Cap: Amoxycillin-250mg
18.	Cap: Tetracycillin-250mg
19.	Cap: Cephradine-500mg
20.	Cap: Doxycycline-100mg
21.	ORS
22.	Tab:Antacid - 650mg
23.	Tab:Chlorpheniramine Maletet -4mg
24.	Tab:Ciprofloxacin-500mg
25.	Tab: Diclofenac -50mg
26.	Tab:Metronidazole -400mg
27.	Tab:Paracetamole-500mg
28.	Tab: Nalidixic Acid-500mg
29.	Tab: Ciprofloxacin -500mg
30.	Tab: Erythromycin -250 mg

List of medicine of NCD Disease

01. Cardiovascular Disease (CVD)

SL NO	Preparation	Name of Drugs
1	Tablet	Amiodarone200mg
2	Capsule	Disopyramide 100mg
3	Injection	Lignocaine hydrochloride 2% solution in 50ml bottle
4	Tablet	Sloatol Hydrochloride 80mg
5	Tablet	Digoxin.25mg
6	Tablet	Glyceryltrinitrate.5mg
7	Injection	Glyceryltrinitrate 1mg/ml
8	Spray	Glyceryltrinitrate400mcg/metered dose
9	Tablet	Isosorbide Dinatrate10mg
10	Tablet	Isosorbide Mononitrate20mg
11	Tablet	Amlodipine Besylate 5mg
12	Tablet	Diltiazem Hydrchloride 30mg, 60 mg
13	Tablet	Nifidipine 10mg
14	Tablet	Verapamil 80mg
15	Tablet	Nicorandil 5mg,10mg
16	Tablet	Almitrine 30mg +Raubasin 10mg
17	Tablet	Bencyclane100mg
18	Tablet	Vinpocetine 5mg
19	Tablet	Oxypentyphiline 400mg
20	Tablet	Levocarnitine 330mg
21	Injection	Dobutamine HCL250mg/20ml
22	Injection	Dopamine200mg/5ml
23	Injection	Heparin 5000 I.U/ml
24	Injection	Enoxaparin 4000/6000 I.U/ampoule
25	Tablet	Warfarin 5mg
26	Tablet	Aspirin 75mg
27	Tablet	Clopidogrel 75mg
28	Tablet	Aspirin 75mg + Clopidogrel 75mg
29	Injection	Streptokinase 1.5 million Unit
30	Injection	Adronochrome Monosemicarbazone 5mg/1ml
31	Tablet	Adronochrome Monosemicarbazone 2.5mg
32	Injection	Aminocaproic Acid
33	Injection	Phytomenadionex 2mg/.2ml
34	Capsule	Tanexamic Acid 250mg/500mg
35	Injection	Tanexamic Acid 500mg/5ml
36	Capsule	Fenofibrate 200mg
37	Tablet	Atrovastatine 10mg, 20mg
38	Tablet	Fluvastatine 20mg,40mg,80mg

02. List of medicine for Hypertension

SL NO	Preparation	Name of Drugs
1	Tablet	Methyldopa
4	Tablet	Propranolol 10mg/40mg
5	Tablet	Atenolol 50mg
6	Tablet	Carvidolol 6025 mg/12.5mg
7	Injection	Frusemide 20mg/2ml
8	Tablet	Metoprolol 50mg
9	Tablet	Captopril 25mg
10	Tablet	Enalapril meleate 5mg/10mg
11	Tablet	Losartan potassium25mg/50mg
12	Tablet	Valsartan 40mg/80mg/160mg
13	Tablet	Thiazide 25mg/50mg
14	Tablet	Frusemide40mg
15	Tablet	Torasemide 2.5mg
16	Tablet	Spirolactone 25mg
17	Tablet	Spirolactone 50mg+Frusemide20mg
18	Tablet	Thiazide 50mg +Amiloride 5mg
19	Tablet	Thiazide 25mg + Triamtrene 50mg
20	Injection	Manitol 20%
21	Tablet	Acetazolamide 250mg
22	Tablet	Atenolol 50mg +Amoldipine 5mg
23	Tablet	Benzapril 10mg + Amoldipine5mg
24	Tablet	Indapamide1.25mg +Perindopril 4mg
25	Tablet	Losartan 50mg+Hydrochlorothiazide12.5 mg
26	Tablet	Valsartan 80mg+Hyrochlorthiazide 12.5mg

03. Drug List for Diabetes Mellitus

SL NO	Preparation	Name of Drugs
1.	Tablet	Glibenclamide 5mg
2.	Tablet	Glicalzide 80mg
3.	Tablet	Gilipizide 5mg
4.	Tablet	Metformin HCL 850mg
5.	Tablet	Gilipizide 2.5mg + Metformin HCL 250mg
6.	Tablet	Repaglinide
7.	Injection	Insulin 100ml/1 unit

04. List of medicine for COPD

SL NO	Preparation	Name of Drugs	
1.	Tablet	Salbutamol 4mg	
2.	Syrup	Salbutamol	
3.	Inhaler	Salbutamol	
4.	Inhaler	Salmeterol	
5.	Tablet	Terbutaline 2.5mg	
6.	Syrup	Terbutaline	
7.	Injection	Adrenaline 1 mg in 1 ml	
8.	Injection	Ephedrine25mg/5ml	
9.	Tablet	Ephedrine15mg	
10.	Inhaler	Ipratropipium Bromide	
11.	Tablet	Enalapril meleate 5mg/10mg	
12.	Tablet	Losartan potassium25mg/50mg	
13.	Tablet	Valsartan 40mg/80mg/160mg	
14.	Tablet	Aminophyline 100mg	
15.	Tablet	Aminophyline Retered	
16.	Injection	Aminophyline 125 mg/5ml	
17.	Tablet	Theophyline SR 300mg	
18.	Syrup	Theophyline	
19.	Inhaler	Salbutamol + Ipratropium bromide	
20.	Inhaler	Sodium Chromoglycate	
21.	Inhaler	Beclomethasone Dipropionate	
22.	Inhaler	Budesonide	
23.	Inhaler	Salmetrol +Fluticasone	
24.	Syrup	Dextromethorphan	
25.	Tablet	Ketotifen 1mg	
26.	Syrup	Ketotifen 1mg/5ml	
27.	Tablet	Montelukast 5mg/10mg	
28.	Syrup	Dextromethorphan+Pseudoephidrine	
29.	Injection	Naloxon .4mg/1ml	
30.	Injection	Promethazine HCL	
31.	Tablet	Promethazine HCL 10mg	
32.	Syrup	Promethazine HCL 5mg/5ml	

05. List of medicine for Cancer

SL NO	Preparation	Name of Drugs
1	Tablet	Busulphan 2mg
2	Tablet	Chlorumbucil 2mg
3	Injection	Endoxan 1gm/2gm /vial
4	Tablet	Malphalan 2mg
5	Injection	Uromitexan 400mg/ampoule
6	Injection	Bleomycin 15mg/ampoule
7	Injection	Mitomycine 10mg/vial
8	Tablet	Capecitabine 500mg
9	Injection	Fluorouracil 250mg in 10ml
10	Injection	Gemcitabine
11	Tablet	Mercaptapurine 2.5mg
12	Tablet	Methotrexate 50mg
13	Injection	Methotrexate 50mg/vial
14	Tablet	Folinic acid15mg
15	Injection	Folinic acid15mg
16	Injection	Etoposide 20mg/ml
17	Injection	Vinblastine
18	Injection	Vincristine 2mg/2ml
19	Injection	Bevacizumab 25mg/ml
20	Injection	Cisplatin 50mg/vial
21	Injection	Docetaxel 20mg
22	Capsule	Imatinib 100mg
23	Injection	Irinotecan 20mg/ml
24	Injection	Paclitaxel 30mg/5ml vial
25	Capsule	Retinoic acid10mg
26	Injection	Herceptin 440mg/vial
27	Tablet	Azathioprine 50mg
28	Injection	Rituximab 10ml/50ml vial
29	Injection	Interferon
30	Tablet	Flutamide 250mg
31	Tablet	Tamoxifen 10mg/20mg
32	Injection	Filgrastim30 million unit/1ml
33	Injection	Lenograstim 34 million I.U