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Designing an Health Insurance Scheme for Government Employees in Bangladesh: A Concept Paper[1]

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[1] This concept paper is based on the report prepared by the author for the Pay and Services Commission, Government of Bangladesh. The author is grateful to the Pay and Services Commission, Government of Bangladesh for providing all necessary supports and logistics for conducting the study. However, the views expressed in this paper are entirely those of the author' and do not necessarily reflect the views of Pay and Services Commission or any other affiliated organizations.

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Designing an Health Insurance Scheme for Government Employees in Bangladesh: A Concept Paper

Abstract

Introduction: Introducing compulsory health insurance for government employees bears immense importance for stepping towards universal healthcare coverage in Bangladesh. Lack of scientific study on designing such scheme, in the Bangladesh context, motivates this paper.

Objectives: The study aims at designing a comprehensive insurance package simultaneously covering health, life and accident related disability risks of the public employees, where the health component would extend to all dependent family members.

Methods: We mainly analysed, due to lack of data on the target population for actuarial calculation, the MIS data of group health insurance schemes (offered to various corporate houses) of some reputed insurance companies in Bangladesh. In addition, we consulted with various stakeholders including insurance companies and Insurance Development and Regulatory Authority. Our predicted loading costs including inflationary factor ranges from 10-15 percent.

Findings: We have outlined the structure of a *contributory* and *cashless* health insurance scheme for the public servants and their eligible family members initially for a block period of 5 years. This offers a comprehensive list of surgical and no-surgical inpatient care (including complicated maternal care) available in the public hospitals and empanelled private hospitals. The coverage includes pre-existing illnesses, but excludes dental and ophthalmic care. The scheme offers a benefit of 5 Lakh Taka for covering all medical costs (excluding transport charges) of inpatient care for a block period of 5 years and 5 Lakh Taka for death benefit.[3] The estimated premium is 500 Taka per month (400 Taka per month for health insurance and 100 Taka per month for life and accident related disability insurance).The hospitalization benefit is on a floater basis i.e. the total coverage can be availed of individually or collectively by the employees and their eligible family members during the said block period with no restriction on the number of times of availing. Subscription may be deducted from salary or medical allowance. If the spouse is also a government employee then subscription may be deducted from one of them.

Conclusions: Some infrastructural constraints need to be addressed while introducing the scheme. These, for example, are capacity constraints of public hospitals; lack of provision of local fund in the public hospitals for regular maintenance of medical equipment and continuous supply of reagents for diagnostic tests to smoothen the services and increasing quality of care; provision of sufficient amount of all necessary drugs in the public hospitals; lack of an effective referral chain in the public hospitals; capacity constraints of the existing insurance companies; and lack of third party administrator (TPA). Establishing a powerful autonomous body is also crucial, due to capacity constraints of the existing insurance companies, to carry the risk of such a big pool of population. The main role of this body is to manage insurance fund, carry the risk and to monitor and supervise the health services to be provided under the scheme. The role of the insurance companies may be limited to claim settlement, issuing of smart card, etc.

JEL classification: I13 - Health Insurance

1. Introduction

There is, globally, significant cost escalation of health care over the years for various reasons including epidemiological transition (e.g., increasing the proportion of non-communicable diseases, NCDs), demographic transitions (e.g., increasing the proportion of aging

[3] The exchange rate of 1 US Dollar is 80 Taka.

population), increasing demand for health care due to increase in awareness level and technological innovations. This is a severe threat to the health sector of many developing countries, especially those who finance health care from general taxation. Thus, many developing countries have moved towards alternative health care financing mechanisms. Thailand, China, Vietnam, South Korea and Indonesia, in Asia, are more advanced in this arena and already have reformed their health system via adopting various innovative schemes including social health insurance. Some state of India (e.g., Tamil Nadu) has also achieved much progress in introducing various health insurance schemes including an exclusive health insurance for government employees and their eligible family members.

Bangladesh, like other developing counties, is also experiencing challenges of cost escalation in its health sector due to the similar factors as explained earlier. People need to pay, as stated in Bangladesh National Health Accounts (BNHA) 1993-2012, about two-thirds of health outlays from out-of-pocket (OOP) payments while government contribution is 26 % and remainder is th**e** donor contribution (Health Economics Unit, HEU, 2012)**.** Evidence shows that out-of-pocket outlays for health care (especially for NCDs and hospitalization) are a visible threat to the poverty reduction initiatives in Bangladesh (Hamid et al, 2014). Presumably, thus, Bangladesh stands to gain hugely if viable alternative mechanisms can be found to finance the provision of health care away from the OOP payments mode. Developing appropriate risk-pooling modalities such as low-cost *voluntary* micro health insurance (MHI) schemes has gained some popularity in the rural setting of Bangladesh. However, this is not a viable route for dealing with chronic NCDs and catastrophic illnesses. Moreover, there is little evidence of the replicability and scalability due, presumably, to both demand and supply side constraints. There is also little possibility of flourishing *voluntary* health insurance market in urban setting due to the same reasons. Although, now-a- days, group health insurance is becoming popular among the different corporate houses (including bank, cell phone, pharmaceutical), the coverage may not be commensurate to the level of premium due to small pool of population.

The medical allowances (a flat amount of BDT 700 per month) currently being paid to the government employees is very meagre compared to the growing cost of health care. The benefits offered by the existing group (life) insurance are similarly most inadequate in replacing the lost earnings. Although public servants are entitled to receive all kinds of health care at free of costs from public hospitals upon demonstrating proper documents, the

experience shows that there is little chance of receiving timely and comprehensive care (e.g., timely hospital admission and surgical facilities, appropriate nursing, drug, diagnostic and cabin services) due to capacity constraints and huge rush in public facilities. The common picture, as seen, in public hospitals that the patients requires buying drugs and seeking diagnostic services from private pharmacies (outside the hospital premises) and private diagnostic centres respectively. In addition, attendants of the patients need to play the key role of nursing and taking care of the patients due to lack of adequate staff (e.g., nurses, ward boys, cleaners) as well as, sometimes, their negligence. The situation is more acute for the lower grade employees (e.g., third and fourth class employees), who have the absolute majority (See Appendix Table A1). A *compulsory* health insurance scheme offering timely and comprehensive coverage as well as one stop solution, thus, may be a potential alternative for government employees especially for lower grade ones. However, there is no scientific study on the feasibility of introducing such scheme in Bangladesh. Lack of scientific study in this area motives this paper. Thus, the study aims at exploring the feasibility of introducing a comprehensive insurance package simultaneously covering health, life and accident related disability risks of the public employees, where the health component would extend to all dependent family members.

The organization of the paper is as follows. Section 2 briefly explains the methods. Section 3 illustrates rationale of exclusive health insurance for government employees. Section 4 analyses the initiatives taken by different institutions for designing health insurance for government employees of Bangladesh. Section 5 illustrates the experience of health insurance for government employees in the developing countries. Section 6 & 7 depict, respectively, a prototype health, life and accident related disability insurance for government employees. Section 8 illustrates whether the existing infrastructure is compatible with implementing such scheme. Section 9 provides some conclusions and depicts the way forward.

2. Methods

We have primarily reviewed the group health insurance schemes adopted by different corporate houses of Bangladesh including Dhaka University. We have also reviewed the health insurance schemes of public servants of some developing countries (especially, Thailand and Tamil Nadu, India). In addition, we have consulted with various stakeholders including potential beneficiaries (both central and district levels), insurance companies (both life and non-life) in both public and private sectors, hospitals (both public and private) in central, divisional and district levels, Health Economics Unit of MOHFW and relevant

experts in the sector. We have also consulted with different relevant professional bodies including Bangladesh Medical Association (BMA) and Association of BCS doctors. In addition, we have consulted with Insurance Development and Regulatory Authority (IDRA). The data on group insurance scheme of Dhaka University is the key building block of the study. In addition, we have used MIS data of the Niramoy Micro Health Insurance scheme piloted jointly by Instituted of Microfinance (InM) and Green-Delta Insurance Company (GDIC) Ltd (known as InM-GDIC model of micro health insurance). We have also consulted with various documents including health bulletins available in the website of Directoriate General of Health Services of Bangladesh.

3. Rationale of Introducing Health Insurance for Public Servants of Bangladesh

Introduction of a compulsory health insurance scheme offering timely and comprehensive care as well as one stop solution, as argued earlier, is important for government employees especially for lower grade ones. However, a fundamental question arises whether introducing an exclusive health insurance scheme for public servants compatible with the objectives (e.g., providing quality health care to all, ensuring equity and enhancing efficiency) of the health sector. Due to tremendous cost escalation, financing health care from general taxation, as depicted earlier, alone is not sufficient to meet the health care need of the population. Health insurance, as an alternative financing mechanism, has earned much respect worldwide. Private health insurance market usually has failed or has not flourished in many developing countries due to both demand and supply side constraints including adverse selection and moral hazard. Social health insurance (a compulsory insurance mechanism applicable mainly for those who are in the payroll of public and private institutions) has become popular in many West European countries including Germany and France. This has also been introduced, as depicted earlier, in some developing countries (e.g., Thailand, China, Vietnam, South Korea, and Indonesia). The massive informal sector and lack of relevant infrastructure (e.g., appropriate hospitals, insurance companies, Third Party Administrator) are major barriers of introducing social health insurance in many developing countries like Bangladesh. Hence, covering all population with a single scheme is not feasible; multiple schemes like Tamil Nadu and Thailand may be useful to cover all the population. Introducing a *contributory* as well as *compulsory* health insurance scheme for public servants may be a starting point of introducing SHI in Bangladesh. Note that currently there are about one million public servants including third and fourth class employees which cover a sizable portion (about 6%) of employees in the formal sector of Bangladesh (See Appendix Table

A1). This scheme either may be gradually extended to cover the employees of the autonomous institutions, private institutions in the formal and semi-formal sectors or may lead to develop separate scheme for them via gaining knowledge and experience, and developing insurance infrastructure. Introduction of such scheme may create various positive externalities. For example, quality of health care provided by public hospitals needs to be improved via properly equipping the hospitals and conducting necessary renovations and extensions as suggested by the executives of public hospitals (both District Hospitals and Medical Colleges Hospitals). The benefits of this improvement may spread to the general patients. Insurance often suggests providing health care through accredited hospitals for proper safety and satisfaction of the patients. Health care provision through accredited hospitals may lead to increase quality of both public and private hospitals. This may also lead to increasing both quality and price competition among the private hospitals themselves and quality competition between the private and public hospitals. This may also be useful for the general patients.

4. Earlier Initiatives of Introducing Health Insurance for Government Employees of Bangladesh

Health Economics Unit (HEU), Ministry of Health and Family Welfare (MOHFW), conducted a study, immediate after its inception in 1998, for exploring the health insurance options of 'Civil Servants' of Bangladesh for the first time (Health Economics Unit, 1998). The study mainly highlighted sources of financing, costing and management issues. The study also outlined some potential modalities of health insurance (e.g., family saving fund approach, HMO-style managed care Approach and private insurance approach) for the civil servants of Bangladesh. In addition, the study argued for establishing a 'Health Insurance Commission' to administer the insurance funds, oversee the insurance scheme and to monitor health care quality and health care provider network functions. The report also suggested to the said 'Health Insurance Commission' for introducing medical audit to evaluate the quality of care provided for civil servants. However, the study did not sketch out benefit, premium contribution and implementation procedures.[4]

In a recent initiative, HEU has designed a health care financing strategy (to be implemented over the period of 2012-2032) aiming at achieving universal health coverage (UHC) by

[4] Siddiquee and Rahman (2013) reviewed existing health protection schemes for the formal sector employees including 'ready-made-garments' (RMG) sector. There is no health protection scheme, as reported by the study, currently available for the government employees in Bangladesh.

introducing some alternative financing mechanisms including health insurance both formal and informal sector (Health Economics Unit, HEU, 2012). The initial focus of the strategy is the piloting of the Shasthyo Shuroksha Karmasuchi (SSK), a social health protection scheme for the rural poor via establishing the Health Equity Fund/ National Health Security Office (an autonomous agency to handle the financing of the social health protection program). The SSK is a non-contributory health insurance scheme for the below poverty line (BPL) population to provide comprehensive inpatient care. The strategy also illustrated the designing of social health protection scheme for formal sector employees (public, private and NGOs) by 2016. However, the procedures for designing the latter are still in the conceptual stage.

Jiban Bima Corporation (JBC) with the advice of Ministry of Public Administration has attempted to design a group life insurance package including some hospitalization benefit (2 lakh Taka) for the government employees of 18-59 years age. This is a one year policy in which health benefit is spread to spouse and two children up to 21 years age. The total coverage is 10 lakh Taka (of which 80% for life insurance coverage and remainder for hospitalization coverage) and annual premium is 22000-25000 Taka (i.e., about 2000 Taka per month). In addition to 10% co-insurance the hospitalization coverage is divided into 10 different heads and there is some restriction in each head. There is also a long list of exclusion criteria including pre-existing illness, born disability and mental illness. The benefit package, especially for the health component is not much lucrative (benefit is also not cashless) and premium is prohibitively high. Moreover, some crucial issues have not been clearly defined (e.g., health care providers, premium collection, regulation, dispute settlement).

5. Experience of Insurance for Government Employees in the Selected Developing Counties

Quite a large number of developing countries have introduced social health insurance scheme (e.g., China, Thailand, Vietnam, South Korea, Indonesia, Tamil Nadu, Ghana, Kenya, Colombia) in which government employees are covered. However, there is not much evidence on exclusive health insurance for government employees and their family members. Currently there are few examples of the latter. Tamil Nadu (India) and Thailand are prominent among those. Tamil Nadu government of India initiated a compulsory insurance scheme for government employees including their eligible family members in 2008 for a block period of

4 years (2008-2012).[5] Based on the experience of initial phase the scheme has made more comprehensive and is being implemented for another block period of 4 years (2012-2016). The scheme charges, as per the official document, RS 150 per month (thus, RS 1800 per year and government contributes RS 290) to each employee and offer a benefit of RS 4 Lakh for the block period mentioned above (Government of Tamil Nadu, 2012).[6] This is a *cashless* model which covers a wide range of illnesses and surgical procedures excluding maternal and dental care. The health care is provided by a large number of accredited hospitals empanelled. United Indian Insurance Company, the leading general insurance company in India, has implemented the scheme with the assistance of a third-party administration (TPA**).**

Thailand introduced a wide range of health insurance schemes for achieving universal health coverage: Civil Servants Medical Benefit Scheme (CSMBS) for government employees and retirees, state enterprise employees and retirees and their family members (spouses, children and parents); Social Security System for employees of all private enterprises, voluntary health insurance scheme and medical welfare scheme (Health Insurance System Research Office, 2012). The CSMBS scheme provides comprehensive health benefit including inpatient and outpatient services in public and private hospitals. Beneficiaries are not required to pay any premium. The government covers all costs from general taxation. Although the scheme started with fee-for service payment system, now-a-days the scheme follows diagnostic related group (DRG) for reimbursing medical services (including physician fees, OT charges, diagnostic costs, medicine) and fee-for-services for high costs medicine, room and board, instruments and organs.

6. An Outline of the Health Insurance Scheme for the Government Employees of Bangladesh

We have sketched out a potential health insurance scheme which will cover both surgical and non-surgical impatient care and emergency care including accidents and injuries for the public servants of Bangladesh.

6.1. General features of the scheme

This will be a *contributory* and *cashless* health insurance scheme initially for the public servants (including the employees autonomous institutions/corporations) and their eligible

[5] Tamil Nadu has also introduced comprehensive health insurance for the poor and the low income people.
[6] See http://www.tnnhis2012.com/Gov_29.pdf

family members (as depicted below) and extendable to the employees of the formal private sector. *The contribution should be explicit so that the employees hold the correct notion of health insurance; otherwise, in future, there will be continuous pressure on the government to increase the benefit limit (i.e., coverage limit) of the scheme.* The government contribution may be equivalent to VAT and tax. The government may also contribute to the premium of lower grade employees (e.g., third and fourth class employees) to some extent. The scheme will be compulsory in nature and to be implemented for a block period of 5 years. Subscription (i.e., premium) may be deducted from salary or medical allowance. If the spouse is also a government employee then subscription may be deducted from one of them (e.g., the *younger of the two).* The benefit (as depicted below) will be on a floater basis i.e. the total coverage can be availed of individually or collectively by the employees and their eligible family members during the said block period with no restriction on the number of times of availing.

Public servants of various government ministries and directorates, and autonomous bodies/corporations in the regular payroll and their eligible family members may be primarily the members of the scheme. The Employees appointed on the following terms may not be covered under this scheme: (a) employees of the MPO colleges and schools (b) consolidated pay/fixed pay / honorarium, (c) daily wages, (d) contract basis, (e) re-employment, (f) temporary basis and (f) outsourcing.

We may use the following eligibility criteria of inclusion of the family members: (i) legal spouse of the employee; (ii) children of the employee - till they get employed or married or attain the age of 25 years whichever is earlier and dependent on the employee; and (iii) parents of the employee till they attain the age of 65 years.

All types of illnesses and surgical procedures excluding dental and ophthalmic may be considered. M*aternity* (for the first and the second child) may be included only for complicated cases. The coverage will include the cost of medicines, laparoscopic or open surgeries, doctor and attendant fees, room charges, diagnostic charges, dietary charges availed in the approved hospitals. Transport Charges shall be excluded. The coverage will also include pre-existing illnesses.

6.2. Premium and benefit package

One requires having the knowledge of the population size to be covered, hospitalization rate of the target population and inflation adjusted loading costs, among others, to outline the

potential premium and corresponding benefit. We have used secondary and/or MIS data, due to lack of time and recourse constrains, obtained from various documents and institutions. Although there are currently more than 1 million government employees, for simplicity, we have assumed that a pool of 1 million government employees to be primarily incorporated in the scheme. The national average household size is 4.5 (BBS, 2010). If we follow the eligibility criteria as depicted earlier (also in Table 2) we may predict that the eligible household size for the government employees stands at 4. Thus, the total population to be covered may stand at 4 million.

Hospitalization data is not available for the target population, population based hospitalization data in the national level is also not currently available in Bangladesh or in any developing countries. We have mainly analysed the MIS data of the group health insurance, for predicting hospitalization rate, offered to Dhaka University employees (including teachers, officers, and third and fourth class staff) and their family members by Pragati Life Insurance Ltd. The data show that annual claim rate for hospitalization of the teachers and officers is 10 percent and of the low-grade employees (third and fourth class staff) is 6 percent (See Table A2 in the Appendix). Note that the employees' part of this health insurance is compulsory, but the family members' part is voluntary. Hence, there are some inbuilt incentives for not including the low risk members of the family as premium is quite sizable (Taka 3,900 annually per person). The underlying reasons for high claim rate for hospitalization of the first category may be inclusion of the high risk family members and/or members with pre-existing illnesses or conditions. Note that maternal care is included in this package. This is, however, presumable that claim rate for hospitalization may reduce as the pool of population increases.

The MIS data of Nirmoy Micro Health Insurance Scheme piloted by Institute of Microfinance (InM) and Green Delta Insurance Company in a rural location of Mymensingh (where all pre-existing diseases and maternal care were included) show 2.5% annual hospitalization rate. Similar level of hospitalization rate is also predicted for designing a health insurance scheme for garment workers and their eligible family members. The opinions of the relevant experts also suggest that annual hospitalization rate at the national level may vary from 2.5-3 percent. All these efforts lead to drawing the inference that hospitalization rate for this particular segment of population may vary from 2.5-3 percent (i.e., 25-30 per thousand population). However, hospitalization rate may increase, due to moral hazard problems, to some extent once health insurance is introduced. Thus, we have conducted a sensitivity analysis using all potential hospitalization rates (See Table 1).

We have consulted with some prominent insurance companies to get the idea about loading costs or administrative costs. The results of these consultations suggest that loading costs may vary between 10-15 percent of the total premium. We have predicted different loading costs including inflationary factor for different levels of premium ranging from 10-25 percent.

We have estimated the potential benefit or coverage limit using the information depicted above (see Table 1). It is seen, in Table 1, that level of benefit limit varies with the level of premium and hospitalization rate. Our estimation shows that maximum coverage may vary between 5-8 lakh Taka for a block period of 5 years if premium is fixed for each employee at TK 400 per month. More conservatively we can presume that the maximum coverage for a block period of 5 years is 5 lakh Taka while monthly premium for each employee is 400 TK. As mentioned earlier, this benefit will be on a floater basis i.e. the total coverage can be availed of individually or collectively by the employees and their eligible family members during the said block period with no restriction on the number of times of availing. A summary of the proposed scheme is presented in Table 2.

Table 1: Level of premium and corresponding level of benefit for the employee and eligible family members

Hospitalization rate or inpatient rate (IP)	**Level of benefit* (in TK**)**				
	Subscription at TK 100	Subscription at TK 200	Subscription at TK 300	Subscription at TK 400	Subscription at TK 500
If IP is 2.5%	1,80,000	3,84,000	6,12,000	8,44,800	10,80,000
If IP is 3%	1,50,000	3,20,000	5,10,000	7,04,000	9,00,000
If IP is 3.5%	1,28,571	2,74,286	4,37,143	6,03,429	7,71,429
If IP is 4%	1,12,500	2,40,000	3,82,500	5,28,000	6,75,000

Note: * Assuming government contribution is equivalent to VAT
**The exchange rate of 1 US Dollar is 80 Taka.

Table 2: Summary of the proposed Health Insurance Scheme

Attributes	Description
Time period	A block period of 5 years and one year for preparing the ground.
Type of insurance	Compulsory and contributory
Members	Public servants of different government ministries, directorates, departments and autonomous corporations in the regular payroll and their eligible family members. The employees appointed on the following terms may not be covered under this scheme: (a) employees of the MPO colleges and schools (b) consolidated pay/fixed pay / honorarium, (c) daily wages, (d) contract basis, (e) re-employment, (f) temporary basis and (f) outsourcing.
Eligibility criteria for family members	(i) Legal Spouse of the Employee; (ii) Children of the Employee - till they get employed or married or attain the age of 25 years whichever is earlier and dependent on the Employee; (iii) Parents of the Employee till they attain the age of 65 years.
Premium payment modality	Subscription may be deducted from salary or medical allowance. If the spouse is also a government employee then substation may be deducted from one of them (i.e., the *younger of the two).*
Contribution of government to premium	The contribution of the government should be equivalent to VAT and Tax (as applicable).
Benefit payment modality	Cashless
Level of treatment and Type of hospital	**Treatment covered:** Hospitalization care. A comprehensive list of treatment and surgeries (maternity may be covered for the first child and the second child for complicated cases only) available in the accredited public (especially District Hospitals and above) and accredited private hospitals given that there will be a strong and effective referral system between all listed hospitals. **Exclusions:** Ophthalmic care, dental care; comprehensive physical examinations or thorough medical check-up with over-night hospital stay; patients not followed referral system. The coverage includes the cost of medicines, laparoscopic or open surgeries, doctor and attendant fees, room charges, diagnostic charges, dietary charges availed in the approved hospitals. Transport charges are excluded. The coverage also includes pre-existing illnesses of the list.
Premium	The suggested premium per month for each employee is TK 400
Potential Benefit	The potential benefit is at least 5 Lakh Taka while monthly premium is TK 400 for each employee. The benefit will be on a floater basis i.e. the total coverage can be availed of individually or collectively by the employees and their eligible family members during a block period of 5 years with no restriction on the number of times of availing.

6.3. Opinions of the government employees regarding the proposed scheme

We have talked to quite a good number (over 100) of government employees of different categories in the central, district and upazila levels for seeking their opinions regarding the proposed scheme. Most of the respondents had a positive response regarding the scheme. However, some argued for introducing the scheme initially for the lower grade employees (e.g., second class, third class and fourth class employees). Few argued for the provision of different levels of benefit as well as premium for different groups of employees (e.g., higher benefit for the higher grade employees). Some also argued for adding the top class private

hospitals including Apollo, United and Square hospitals for provision of health care under the scheme. Some raised a fundamental question regarding the importance of health insurance where government employees are entitled to receive all kinds of health care from government hospitals at free of costs.

6.4. Incentives for reducing moral hazard

Demand side

It is apprehended that there will be an upsurge of utilization in the last couple of years in a 5 year cycle of the health insurance program. To address this particular aspect of moral hazard, the insured can be offered some 'no claim bonus' (e.g., 15-20% of total premium paid) or some enhancement of the benefit limit or coverage limit by a significant amount (e.g., one lakh Taka) in the next cycle for those who will have minimal claim 'no claim'.

Supply side

Lack of appropriate reimbursement mechanisms, in the insurance system, often leads the hospitals to provide excess care. The method of reimbursement relates to the way in which health care providers are paid for the services they provide. Different mechanisms (e.g., capitation, fee-for-services and diagnostic related group or DRG) affect the quantity and quality of health care by different degree. Capitation is useful for primary health care program where the provider is paid annually a negotiated amount of money per capita of a target population. This method restricts the providers to supply the excess care. Under 'fee-for-services' the hospital is paid against the number of services provided per case with a negotiated price. This method leads the hospitals to provide excess care via increasing the length of hospital stay, prescribing some unnecessary diagnostic tests and so on. Under diagnostic related group (DRG) the hospital is paid an average price per case in each individual diagnostic group. This is the widely accepted reimbursement mechanism for restricting the supply of excess care. Thailand follows DRG for reimbursing medical services (including physician fees, OT charges, diagnostic costs, medicine) and fee-for-services for high costs medicine, room and board, instruments and organs. The mixture of DRG and fee-for-services (especially for high cost medicine, room and board, instrument and organs) may be also useful for reimbursing the hospitals in Bangladesh.

7. An Outline of Life and Accident-related Disability Insurance for the Government Employees of Bangladesh

Under the existing group life insurance provision, operated by Welfare Board of the government employees, each employee pays Taka 40 at a flat rate per month. This is contributory for the 1st class and the 2nd class officers and government pays for the 3rd and the 4th class employees. The maximum coverage (one time payable) is 24 times of the basic salary or maximum one lakh Taka. Some measures have been taken recently to enhance this amount to 1.7 lakh Taka. All employees in the government departments and institutions and listed autonomous institutions are the members of the scheme. The benefit of the scheme is not commensurate to the level of premium. In addition, people are often discouraged to apply for this benefit due to long procedural delay.

Given this backdrop, we have attempted to sketch out a more lucrative and innovative package which includes death benefit, accident related disability allowance and forced saving opportunity. In order to design the scheme we have mainly analysed data of the group life insurance offered by Delta Life Insurance to the employees of Dhaka University. In addition, we have consulted with some renowned actuary in this field. This will be a compulsory and contributory policy for all employees for whole service tenure. The nature of the policy is endowment. Our analysis suggests that by charging premium at TK 100 per month for each employee throughout his/her service tenure the following benefit may be offered: (i) death benefit (one time): TK 5 lakh; (ii) sizable accident related disability benefit (this needs actuarial calculation to fix the exact figure) per month till attaining the retirement age; and (iii) providing cash back the whole amount of premium paid (e.g., Taka 3600 if one works for 30 years) plus profit (as appropriate) subject to proper investment of accumulated fund.

8. Compatibility of the Current Level of Infrastructure with Implementing the Proposed Health and Life Insurance Schemes for Government Employees of Bangladesh

The institutions or infrastructures required for implementing the schemes are: health care providers, insurance companies, Third Party Administrator (TPA) and supervision and monitoring authority. We have depicted below whether the current state of these institutions are compatible with successful implementation of the schemes.

8.1. Health care providers

The scheme aims at providing timely and comprehensive hospitalized care through both public hospitals (e.g., District Hospitals, Medical College Hospitals and Specialized Hospitals) and private hospitals. However, there are some challenges, as depicted in the consultation meetings with the executives of hospitals, Civil Surgeons, BMA and BCS Doctor Association, to implement the scheme with public hospitals. Some of them are illustrated here.

Capacity constraints: There are severe capacity constraints in the 100-bed District Hospitals (e.g., more than 150% bed occupancy, insufficient cabin facilities and/or existing cabins are not usable in most of the cases, no cabin facility in some cases). Thus, it requires, as suggested, some renovations and extensions for building new cabin block. The situation is much better in the 250-bed District Hospitals and Medical College Hospitals (outside Dhaka). However, sometimes, it may be difficult to reserve some cabins for the insured of the scheme due to the pressure of local elite, as reported.

Constraints to provide timely and comprehensive care: As per the design the beneficiaries of the scheme are entitled to receive *one stop solution* as well as all kinds of care including physician services, medicine, diagnostic and nursing services in exact amount and on timely manner. However, currently there are some constrains to provide some of these care in exact amount and on timely manner. For example, government procured drugs available in the drug store run by public hospitals do not meet the need of the patients in most of the cases. Thus, hospitals need local procurement of some drugs to meet the need of the patients of the health insurance scheme. Lack of proper maintenance of equipment leads the patients to abstain from receiving exact and timely care. The hospitals do not have any local fund for quick maintenance of the equipment and purchasing any reagents or kids while running out. The executives of all the public hospitals suggest that government should allow retaining about 50 percent of the money earned from user fees for quick maintenance of the equipment as well as emergency expenses needed to smoothen the services and increasing the quality of care. Note that government earlier offered a provision of withdrawing 50 percent of the revenue earnings after depositing the whole amount to the government treasure. However, this provision was stopped by a writ in the High Court in 2010. Recently High Court has dismissed the writ. There is an economic code, as reported by some Civil Surgeons, for depositing the money; but no economic code for claiming the money back.

Pricing of services: It is often difficult to fix the prices of the services offered by the public hospitals due to lack of regular pricing policy. However, there are some user fees, although these are highly subsidized, in all level of public hospitals which have more than 50 beds. These user fees may be a starting point to fix the prices of the services in the public hospitals.

Establishing effective referral system: Strong and effective referral mechanism leads to reduce demand side moral hazard (e.g., inclination to the excess use of health care) as well as reap the benefit of the scheme effectively. Although there is a well designed hospital network the current referral chain in the public hospitals is not much effective (e.g., the patients often seek admission directly at the higher level hospitals or the higher level hospitals often do not honour the referral of the lower level hospitals), as reported. Thus, some measures (e.g., educating the beneficiaries via radio, television and print media that higher level hospitals will not entertain any patient without proper referral letter from the lower level hospitals; honouring the referral letter of the lower level hospitals by the higher level hospitals; and imposing restrictions on admission into the higher level hospitals without proper referral letter) may be useful for establishing effective referral chain in the public hospitals.

There are also some challenges in the private hospitals as depicted in the consultation meeting with the executives of the hospitals. There is wide variation in prices of health care among different private hospitals. Note that public hospitals follow a common fee structure and hence negotiation of prices is not a challenge there. It is easy to negotiate the prices of health care of the *accredited* hospitals. As currently hospitals are not accredited the proper negotiation of prices of the services including diagnostic tests and medicine may be quite difficult. Introducing appropriate provider reimbursement mechanism for reducing potential supply side moral hazard (e.g., inclination to provide excess care) is another crucial challenge. As mentioned earlier a mixture of DRG (for reimbursing medical services including physician fees, OT charges, diagnostic costs, medicine) and fee-for-services (for high costs medicine, room and board, instruments and organs) may be a useful reimbursement mechanism. While we talked about the merits and demerits of various reimbursement mechanisms in the consultation meeting with the executives of private and public hospitals, some of them liked the idea and argued for introducing DRG for reimbursing the hospitals.

Accreditation of hospitals: Only accredited hospitals (irrespective of public and private) should be empanelled as health care providers in order to ensure patient safety, satisfaction and to negotiate the prices. However, there is currently no accreditation policy in Bangladesh.

Government may constitute an Accreditation Committee, consisting of some institutions (e.g., the Health Insurance Fund Management Authority, the Directorate General of Health Services, selected insurance companies and TPA), for empanelment of accredited hospitals and to monitor the quality of treatment. However, for the time being the scheme may be run with non-accredited, but quality hospitals.

8.2. Risk Carriers and Third Party Administrator (TPA)

Although some private insurance companies (most of them are life insurance companies) have experience of offering group hospitalization insurance to the various corporate houses, currently there is hardly any single insurance company, as depicted from consultation meeting with the executives of insurance companies (both public and private), to serve alone such a big pool of population. The entire pool of insured population (1 million* 4 = 4 million) can be randomly divided between top 8-10 insurance companies (both public and private) those who have experience of offering hospitalization insurance. To ensure better service, end-of-the year the gains or losses of these companies may be divided equally among them. Dropping out of insurance companies, in case of loss incurred, is another challenge. In this case, provision of government subsidy or cross-subsidy from life component may be required.

Third Party Administrator (TPA) plays a vital role (e.g., regularly updating the data-base for inclusion and exclusion of members, issuing of ID card, facilitating claim settlement process) for implementing any large scale health insurance scheme. For ease of implementation of the proposed scheme TPA also needs to play vital role in facilitating the provision of smart card, which will function as a credit card, contained the all the necessary information including demographic attributes and coverage limit. However, currently there is absolute lack of TPA in Bangladesh.

In the case of life insurance there is a question of sustainability of private insurance companies in the long run. It is better to sort out some mechanisms for alternative fund management; a powerful autonomous body (eg., ‘Insurance Fund Management Authority’ or IFMA) or commission may be formed, for example. Insurance companies may be allowed to keep their service cost and profit margin from the premiums collected and entrust the rest of the fund to the body aforementioned for investment. The same strategy may be useful for health component as well. In this case, the IFMA may carry the risk and empanelled insurance companies may facilitate the claim settlement procedures, issuing of smart card, etc. with the

help of Third Party Administrators. In addition, IFMA may monitor and supervise the quality of health care to be provided under the scheme.

8.3 . Regulations and Disputes Settlement

The consultation meeting with the chairman of Insurance Development and Regulatory Authority (IDRA) suggests that there is no regulatory barrier for introducing a health insurance scheme for a block period of 5 years. There is also no barrier of introducing the endowment policy of life insurance for the whole service tenure of the employees. IDRA will play the regulatory role. However, the proposed 'Insurance Fund Management Authority' may play supervisory and monitoring role. The same dispute settlement route may be used as depicted in the 'Insurance Policy' recently approved by government.

9. Conclusions and Way Forward

This study attempts to assess the feasibility of introducing a compulsory as well as contributory health, life and accident related disability insurance for the government employees, especially for the lower grade ones, and health insurance for their eligible family members aiming at ensuring comprehensive hospitalized care in the timely manner and providing sizable death and accident related disability benefits. The study sketches out the benefit package which varies with the level of premium to be charged. For example, a package of TK 500 premium per month (TK 400 per month for health insurance and TK 100 per month for life and accident related disability insurance; the former is for a block period of 5 years and the latter for whole service tenure) offers a benefit of 5 lakh Taka for hospitalization care for a block period of 5 years, 5 lakh Taka for death and a sizable disability benefit (till the retirement age) which will vary with the intensity of disability. There is also a scope of giving back the whole amount of premium paid for life insurance (with profit as appropriate) to the respective employee at the end of service tenure subject to proper investment of accumulated fund.

However, some infrastructural constraints, as depicted below, need to address while introducing the scheme. These, for example, are capacity constraints of 100-bed District Hospitals; lack of provision of local fund in the public hospitals for regular maintenance of both surgical and non-surgical equipment and continuous supply of reagents and kids for diagnostic tests to smoothen the services and increasing quality of care; procurement of sufficient amount of all necessary drugs; establishing effective referral system; introducing

DRG based reimbursement; capacity constraints of the existing insurance companies; lack of third party administrator (TPA) and establishing the 'Insurance Fund Management Authority'.

The present study could not touch or go into depth in many issues due to severe resource constraints. Further studies are, thus, needed (preferably by forming a team consists of Health Economists, Actuaries, Statisticians, Medical Professionals and representatives from each concerned ministry) to address the issue more precisely. To set an exact benefit package one needs to have *a series* of hospitalization, accident and mortality data of this segment of population. However, these data are currently not available even for a single point of time. Although this is not sufficient, a representative survey is needed for collecting at least one year data on these issues. Note that a simple and self-administrable questionnaire containing some basic questions including demographic factors, hospitalization, accident and mortality may be designed and administered every year. The time series database to be built following this mechanism may be helpful for designing an exact benefit package for this section of population or similar group of population working in the formal private sector. Although the insurance will be compulsory one, it is better to know the opinion of the large group of potential beneficiaries (i.e., different classes of government employees) whether they would like to join the scheme. The present study finds that 100-beded District Hospitals currently do not have cabin capacity to provide exclusive care to the insured patients. Thus it is important to identify the district-wise need of the cabin services in the public hospitals for this particular section of the population and to suggest the number of cabins to be required. A health care facility survey is also needed for the empanelment of the potential government and private hospitals.

Thus, we suggest addressing the following issues to make one step forward for starting the implementation of the scheme: (i) to empanel the public hospitals and to explore what renovations and extensions are needed to provide health care for the insured patients; to make a list of private hospitals to be empanelled; to make a list of insurance companies (both life & non-life and both public & private) to be empanelled as *facilitator* for functioning the scheme; to take necessary measures to form the 'Insurance Fund Management Authority'; establishing strong inter-ministerial coordination and support system; to take necessary steps to form accreditation board and to formulate accreditation policy; encouraging private firms to form TPA.

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Appendix

Table A1: Number of existing employees in the government ministries/directorates departments and institutions in different salary scales

Serial No.	Grade (Salary Scale in Taka) as in 2009	Number of employees	
		Number	%
1	40,000	116	0.01
2	33,500	279	0.03
3	29,000	1355	0.15
4	25,750	2271	0.25
5	22,250	6029	0.68
6	18,500	15550	1.74
7	15,000	3488	0.39
8	12,000	27122	3.04
9	11,000	45121	5.06
10	8,000	69415	7.78
11	6,400	55136	6.18
12	5,900	38427	4.31
13	5,550	79705	8.93
14	5,200	116649	13.07
15	4,900	100271	11.23
16	4,700	89187	9.99
17	4,500	121570	13.62
18	4,400	55885	6.26
19	4,250	26310	2.95
20	4,100	38621	4.33
Total		892507	100.00

Source: 8th Pay and Services Commission, Ministry of Finance, Government of Bangladesh.

TableA2: Hospitalization rate of Dhaka University employees under the Health Insurance Scheme offered by Pragati Life Insurance Company Ltd.

Year	Type of employees	Number of insured	Number of claim	Claim rate	Claim rate (both groups)
2013-14	Teachers & officers	3426	321	0.09	
2013-14	Third & fourth class employees	1699	68	0.04	0.08
2012-13	Teachers & officers	3206	292	0.09	
2012-13	Third & fourth class employees	1428	95	0.07	0.08
2011-12	Teachers & officers	3106	307	0.10	
2011-12	Third & fourth class employees	1350	116	0.09	0.09
2010-11	Teachers & officers	2740	287	0.10	
2010-11	Third & fourth class employees	1395	87	0.06	0.09
2009-10	Teachers & officers	2420	300	0.12	
2009-10	Third & fourth class employees	1292	84	0.07	0.10
2008-09	Teachers & officers	2190	346	0.16	-
Average claim rate of teachers and officers for all years				0.10	
Average claim rate of third and fourth class employees for all years				0.06	
Average claim rate of both groups					0.09

Source: MIS data of Pargati Life Insurance Company Ltd.