FINAL REPORT

URBAN SANITATION PROGRAMME

Feasibility of Introducing Health Insurance for the Emptiers in Bangladesh

SNV

INSTITUTE OF HEALTH ECONOMICS
UNIVERSITY OF DHAKA

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Cite this document as: 2020 SNV. Feasibility of Health Insurance for Emptiers in Bangladesh. SNV, Bangladesh.

Acknowledgements: This report was submitted by Institute of Health Economics, University of Dhaka, Bangladesh, under the supervision of Tanvir Chowdhury, Business Sanitation Advisor for SNV.

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Cover photo: An Emptier cleans the pit manually using no personal protective equipment.

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Acknowledgements

We are grateful to SNV Netherlands Development Organisation for granting fund to conduct the study. We are thankful to Marc Perez Casas, WASH Sector Leader, SNV; MD. Tanvir Ahamed Chowdhury, Sanitation Business Advisor of Urban Sanitation Programme, SNV; and Runa Akter, Project Administrator of CWISE project for their kind support, valuable comments, and suggestions for successful completion of the study. We offer our gratitude to the city coordinators of SNV for their continuous support. We are highly indebted to the Mayor and executives of different city corporations and municipalities for providing us their important opinions and suggestions as well as the opportunity to interview their workers. Without their cooperation, the study would not be possible. We are thankful to OHS trainers for providing us with valuable information. We are also thankful to the Islami Bank Community Hospital, Jhenaidah, and Ad-din Foundation for their kind cooperation. We are grateful to insurance companies, especially, Chartered Life Insurance Ltd., Alpha Islami Life Insurance Ltd. and Pragati Life Insurance Ltd. for their valuable time and information. We are really grateful to the emptiers and sweepers who spent their valuable time for providing necessary information.

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Abbreviations

CBHI	Community Based Health Insurance
CHE	Catastrophic Health Expenditure
CGHS	Centre Government Health Scheme
CWISE	City Wide Inclusive Sanitation Engagement
EMO	Emergency Medical Officers
ESIS	Employee State Insurance Scheme
FGD	Focus-Group Discussion
FSM	Faecal Sludge Management
IDI	In-depth Interview
LIC	Low-income Countries
LMIC	Low-and-Middle Income Countries
MO	Medical Officers
MoLGRD&C	Ministry of Local Government, Rural Development and Co-operatives
NVD	Normal Vaginal Delivery
OHS	Occupational Health and Safety
OOP	Out-of-pocket payments
PPT	Professional Protection Tools
TOT	Training of trainer
UHC	Universal Health Coverage
UHI	Universal Health Insurance Scheme

Executive summary

Introduction:

Bangladesh uses a combination of different healthcare financing methods, namely general revenue taxation (23%), out-of-pocket payments (OOP, 67%), development partners' (DPs) contribution (7%) and others including insurance (3%). Due to such high OOP payments, approximately 16% of the households face catastrophic health expenditure and almost 5 million people collapse into poverty every year. The consequences become worsen especially for socially excluded/vulnerable group like emptiers, who are mainly involved with faecal sludge management. Importance has been given in addressing the health issues of marginalized population in national and international documents. In recent years, health insurance scheme has been promoted within health financing reforms in many developing countries including Bangladesh. Particularly, such scheme is necessary for the vulnerable groups like emptiers as accessibility and utilization of healthcare can be ensured for workers and could be protected against ill health and from financial concerns associated with obtaining medical care.

The objective of this study was to assess the feasibility of introducing health insurances for the emptiers to protect them from devastating financial losses due to health hazards.

Methodology:

The study was conducted in the catchment area of the Urban Sanitation Programme by SNV, being implemented in four Southern cities (Khulna, Jhenaidah, Kushtia, and Jashore) and Gazipur. Focus Group Discussions (FGDs) with emptiers, IDI with city coordinators of SNV, the mayors, secretaries, chief conservancy officer, OHS trainers, and medical officers of city corporations/municipalities were conducted. IDIs were also conducted with health care providers in the respective areas and insurance companies. Data were analysed under different themes like health care seeking behaviour, perception towards health insurance, willingness to join health insurance, willingness of the insurance companies to offer health insurance for the emptiers, health care providers' willingness to join etc.

Findings:

Jhenaidah Municipality: About 134 emptiers or cleaners work as muster roll at the municipality. Their monthly income ranges from BDT 1,600 to BDT 10,000 where the average income is BDT 6,080. They do not have any formal association among themselves. About 50% of emptiers reported that they suffered from diseases and had exposure of accidents when working during one-year recall period. They had mainly cold and cough, fever, allergy, back pain, typhoid and appendicitis. They usually go to Islami Bank Hospital, District Hospital, Pharmacies, and private clinics for seeking treatment. Average cost for outpatient care was BDT 1,900 while the average cost for inpatient care was BDT 13,500. Though the emptiers have low levels of income, they showed their interests to join health insurance schemes. According to the Mayor, there are 350 households (HHs) in the municipality sweepers' colony. The Mayor appreciated the concept of health insurance for emptiers. He emphasized to add an endowment based life insurance component. As he added, this would encourage them to come under such health insurance scheme. It is very inspiring that he wanted to contribute to the premium for making the scheme viable, as emptiers are not cable of paying full premium.

In this municipality, emptiers have strong preference for joining a health insurance scheme in spite of their low level of income. Mayor is convinced in providing subsidies for insurance and administering the scheme.

Jashore Municipality: Jashore Municipality holds around 445 emptiers and cleaners. We found their average monthly income as BDT 8,910. During one-year recall period 45% of the emptiers had some sort of illness. The common diseases were cold and cough, fever, allergy, back pain, asthma and leg injuries. They usually go to pharmacies, Ad-din Hospital, Doratana (private) clinics for seeking treatment. Average cost for outpatient care was BDT 3,722 while the average cost for inpatient care was BDT 15,000. Respondents' health care expenditure ranges from BDT 500 to BDT 15,000 depending on the severity of accidents or diseases. In the FGD, all emptiers expressed their interest in joining in health insurance scheme by paying premium. Four sweeper colonies are provided with land by the municipality. There is no formal association among the emptiers. The secretary of Jashore Municipality mentioned the addiction of emptiers to drugs and liquors as the main challenges for introducing health insurance. He also mentioned that approval from LGD is required in providing any subsidy for insurance.

Although the emptiers in Jashore had keen interest in joining in health insurance, the municipality authority did not show any interest.

Kushtia Municipality: A total of 365 emptiers and cleaners work in this municipality. The average monthly income of those who participated in the FGD was BDT 7,622. About 44% of the FGD participants were sick in the during one year period. The common diseases were cold and cough, fever, allergy, back pain, typhoid, appendicitis. They usually go to pharmacies, private hospitals e.g. Ad-din hospital, Sono Tower hospital and private clinics in seeking treatment. Average cost for outpatient care was BDT 1,775 while the average cost for inpatient care was BDT 7,000. Respondents' health care expenditure ranges from BDT 400 to BDT 10,000 depending on the severity of accidents or diseases. There are about 365 households in the sweepers' colony of the municipality. There is no formal association among the emptiers. The Mayor was interested in introducing health insurance scheme for emptiers and providing some subsidies.

Khulna City Corporation: Total number of sweepers who get their salary from City Corporation is around 600. Almost all of them work in City Corporation in muster roll with BDT 450 per day. There are around 10 sweepers' colonies in Khulna City. Greenland Sweepers' colony has 250 households. A few of them work under KCC. They mentioned that they went to private hospitals, govt. hospitals, pharmacies, traditional health care providers for seeking health care. Those who suffered from major disease had to spend either their savings for their treatment or had to borrow. They have an association named 'Khulna Harijan Oikkko Porishod'. All the emptiers who took part in FGD agreed to pay the premium and they are interested in joining health insurance scheme. Another FGD was conducted at Sonadanga Moilapota sweepers' colony. This colony has 152 households. Their income level ranges between BDT 1,200 to BDT 22,000. They have also an association named 'Bangladesh Horizon Oikko Porishod' and all of the household are the member of this association. All the emptiers (who were in the FGD) agreed to pay the premium and they were interested in joining the insurance scheme. The city corporation authority showed their interest in introducing health insurance scheme for emptiers.

The main challenge of introducing health insurance is that most of the emptiers are not employee of the City Corporation. However, community size of the emptiers is large, they have 2 associations among them. The City Corporation authority is also interested in introducing health insurance for the emptiers.

Gazipur City Corporation: This city corporation employs 380 emptiers or cleaners, and most of them work in muster roll. Their average monthly income is BDT 9,000. About 57 % of the participants (in FGD) were sick in the previous few months. The common diseases were cold and cough, fever, allergy, back pain and skin diseases. They usually go to pharmacies,

government hospitals or clinics depending on better treatment and distance from their community. Average cost for outpatient care was BDT 500 while the average cost for inpatient care was BDT 40,000. Respondents' health care expenditure ranges from BDT 500 to BDT 70,000 depending on the severity of accidents or diseases. There is no formal association among the emptiers and they do not live in any particular community.

Though they have higher average income and willingness to join in the health insurance, the city corporation authority did not show interest in involving in such scheme.

Health care providers: Islami Bank Hospital showed their interest in providing health care services to the emptiers under health insurance scheme in Jhenaidah. Ad-Din hospital in Jashore, Kushtia and Khulna also showed interest to serve the patients under such insurance scheme. The advisor of Ad-Din Foundation agreed to provide services to the emptiers at a 50 percent discount on the existing price.

Insurance companies: The insurance companies were asked to propose group health insurance models for the emptiers. Alpha Islami Life Insurance Ltd. (AILIL) offered a premium of BDT 2,275 for a group of around 300 emptiers against IPD benefit of BDT 35,000 (an individual family member can be avail maximum 50% of this limit) including maternity benefits (BDT 7,500 for C-Section, BDT 4,000 for NVD and BDT 2,500 for miscarriage). AILIL also offered 10-year long endowment based life insurance coverage of BDT 80,000 against a monthly premium of BDT 200. Pragati Life Insurance Company Ltd. offered two types of models. The first model is only for the emptiers, where the yearly premium is BDT 600 and, the coverage is BDT 15000 (inpatient coverage: BDT12000 and outpatient coverage: BDT 3000) for the emptier and life coverage BDT 10000. In another model, they proposed yearly premium of BDT 1200 per household and the total coverage is BDT 20000 (BDT 16000 for inpatient care and BDT 4000 for outpatient care). The life insurance coverage is BDT 20000. Chartered Insurance Company Ltd. proposed a group health insurance model for the emptiers with a premium of BDT 2000 and the benefits include hospitalization benefit of BDT 50000 and life insurance coverage BDT 50000.

Challenges

There are number of challenges of introducing health insurance for the emptiers, such as small size of the community, muster roll status of employment, low income and uncertainty of income, addicted to drugs and liquor, which make them more susceptible to various diseases and accidents, and lack of formal association among the emptiers.

Proposed Health Insurance Model:

After reviewing the insurance models proposed by different insurance companies, it seems that the model proposed by Chartered Life Insurance Ltd. (BDT 50,000 as inpatient coverage and BDT 50, 000 as life insurance coverage at an annual premium of BDT 2,000) is the most attractive one in terms of both benefit and premium. We proposed an insurance model where interest earning from pool fund will pay for the 100% of the premium. The contribution of the City Corporation/ Municipality to the pool fund will be optional.

Conclusions:

The concurrence of four major stakeholders (i.e., emptiers, city corporation/municipality, health care providers and insurance company) is critical for introducing health insurance for the emptiers. Despite the aforementioned challenges, Jhenaidah Municipality has some advantageous position for introducing health insurance for the emptiers as all the stakeholders have their concurrence with the provision of granting some subsidy from the municipality.

Khulna has also some advantages as the city corporation authority showed their eagerness to take the responsibility of administering the scheme. The providers are also readily available in Khulna. Kushtia has similar advantages. Given all the conditions it seems that the scheme can be introduced first in Jhenaidah or Khulna. Thus, we recommend introducing health insurance for the emptiers with inpatient coverage. However, life coverage can be added, as this will not increase the premium.

Given the socioeconomic background and nature of job of the emptiers, and financial condition of the City Corporation/Municipality, we recommend the model where the whole premium will be derived from the return of investment of the pool fund accumulated through the contribution of development partners, respective city corporation/municipality, government and local elites.

1 Introduction

1.1 Background of the Study

Despite improvement in many health indicators in last few decades globally, providing access to affordable health care remains a considerable challenge in many low and middle-income countries including Bangladesh [1–3]. Bangladesh uses a combination of different health care financing methods, namely general revenue taxation (23%), out-of-pocket payments (OOP, 67%), development partners' (DPs) contribution (7%) and others including insurance (3%) [4]. A major concern of Universal Health Coverage (UHC) in Bangladesh is the high OOP outlays. Due to such high OOP payments, approximately 16% of the households face catastrophic health expenditure and almost 5 million people fall into poverty every year [5–8].

According to the Constitution of the People's Republic of Bangladesh: Section 15a, 1972, the Government of Bangladesh (GOB) is obligated to provide the basic necessities of life, including food, clothing, shelter, education and medical care to its citizens However, factors like availability (e.g., staff absenteeism, opening hours, waiting time, lack of referral system) geographical accessibility (e.g., service location, transport cost), affordability (low income, high costs and price of the services, informal payments, opportunity costs) and acceptability (lack of health awareness, inability to know the price beforehand, staff inter personal skill, stigma) affect many people accessing quality health care services [9-10]. The scenario become worsens especially for socially excluded, vulnerable and marginalized group like emptiers, although the services rendered by them are crucial for the whole society.

The emptiers (locally known as *Methor*) belong to the low caste Harijan community who are traditionally involved in emptying the septic tanks and pit latrines over the generation. A number of emptiers now-a-days are involved in faecal sludge management using modern equipment with Vacutug in some city corporations and municipalities. However, most of the emptiers are either involved in faecal sludge management using the traditional methods or cleaning and sweeping related activities. The emptiers are often exposed to various health hazards including infections, skin problems, back pain, neck pain and asthma, spillage and contamination, Tuberculosis and respiratory system problems etc. [11-12]. Importance has been given in addressing the health issues of marginalized population like emptiers in national and international documents. Through the pledge to **'Leave No One Behind'**, SDGs were adopted by all United Nations member states in 2015. The vision of Health Care Financing Strategy (HCFS) 2012-2032 of Bangladesh is to attain sustainable, equitable, effective and efficient health care financing to ensure equal access to quality health services to the whole population of Bangladesh [13]. Strategic Objective 2 of this strategy focuses on improving equity and increasing access to health care, especially for the poor, vulnerable and marginalized population. The strategy pledged to provide health protection to the below poverty line (BPL) population like emptiers through social health protection scheme [13]. There is no such progress of implementing HCFS apart from introduction of a pilot scheme, named as Shasthyo Suroksha Karmasuchi (SSK) for the rural BPL households in three upazilas of Tangail District. There is still no plan for introducing such scheme for the BPL in the urban areas. This calls for exploring alternative health care financing mechanism for the emptiers.

In recent years, health insurance scheme has been promoted within health financing reforms in many developing countries including Bangladesh. Particularly, such scheme is necessary for the vulnerable communities like emptiers for improving accessibility and utilization of health care. Although a body of literature focused on health insurance targeted for various workers (both formal and informal) in low and middle-income countries (LMICs), the health insurance for emptiers has received little attention. The aim of this study is to assess the feasibility of health insurances for the emptiers to protect them from catastrophic health expenditure.

1.2 Objectives

The overall objective of this study was to assess the feasibility of introducing health scheme for emptiers which will help them to overcome social and psychological barriers in accessing health care, reduce OOP for health care and prevent impoverishment due to catastrophic health expenditure. The specific objectives were:

1) To document the existing different health insurance models for LICs in urban context of Bangladesh
2) To identifying the challenges, gaps/ barriers of implementing the health insurance for the emptiers
3) To recommend the possible potential interventions to overcome the barriers
4) To develop innovative financing solutions/ mechanism as well as the viability of providing health insurance scheme/model for the emptiers
5) To organize a national level consultation workshop for exploring future health insurance schemes for emptiers in light of the study findings.

This report contains the review of existing health insurance models in LICs in neighbouring countries as well as in Bangladesh. The organization of the report is as follows. Section 2 explains the methods of the study. Section 3 presents the findings from existing literatures, section 4 describes the findings from the FGDs and IDIs. Section 5 discusses the challenges/ barriers of introducing health insurance model for the emptiers and section 6 provides the recommendations and future action plans to overcome such barriers.

2 Methodology

The study uses mainly primary data collected through qualitative techniques, such as Focus Group Discussion (FGD), in-depth-interview (IDI) and consultation meeting with various stakeholders using a cross-sectional design. The study sites were selected based on consultation with SNV Urban Sanitation Team. These include the catchment area of the City Wide Inclusive Sanitation Engagement (CWISE) program, which is being implemented in five (5) cities (Khulna, Jhenaidah, Kushtia, and Jashore and Gazipur) in Bangladesh. SNV aims to support Local Authorities in Khulna (Khulna City Corporation and Khulna Water Supply and Sewerage Authority) along with Gazipur City Corporation, Jhenaidah, Kushtia, Jashore to address service delivery challenges in Faecal Sludge Management (FSM) and advance the development of the sector as a whole through strategic engagement with Government Agencies and partnering with other experienced civil society and private sector organizations working in the sector.

We conducted 6 FGDs with emptiers (2 in Khulna City Corporation and 1 in each of the other City Corporation and municipalities included in the study). Each FGD included 7 to11 emptiers. IDIs were conducted with Mayor of the municipalities, Chief Executive Officer, Secretary of the municipalities, Executive Engineer, Conservancy Engineer/Officer, Urban Planner, Chief Health Officer of city corporation, City Coordinator of SNV, OHS trainer of the city corporation and municipalities, CEO and technical persons of the insurance companies (Pragati Life Insurance Ltd., Chartered Life Insurance Ltd., Alpha Life Insurance Ltd), focal person of the different private/NGO hospitals (see Table 1 for the detailed list of the IDIs interviewees). We attempted to interview the Mayor of each City Corporation and municipality at the study site. However, we were able to interview the Mayor of Jhenaidah and Kushtia municipalities. The CEO of the Khulna City Corporation and Gazipur City Corporation, and the Secretary of Jashore Municipality were interviewed due to unavailability of the Mayor.

Table 1: List of stakeholders interviewed through In-depth Interviews (IDIs)

Type of Stakeholders	Name of Organization/ Designation
Mayor of Municipality	Jhenaidah Municipality
Secretary	Jhenaidah Municipality
Civil Surgeon	Jhenaidah District
Medical Officer of Civil Surgeon	Jhenaidah District
Conservancy Officer	Jhenaidah Municipality
City Coordinator	SNV Bangladesh, Jhenaidah
OHS Trainer	SNV Bangladesh, Jhenaidah
Hospital In-charge	Islami Bank Community Hospital, Jhenaidah
Mayor of Municipality	Kushtia Municipality
Chief Engineer	Kushtia Municipality
Civil Surgeon	Kushtia District
Conservancy Officer	Kushtia Municipality
Conservancy Inspector	Kushtia Municipality
City Coordinator	SNV Bangladesh, Kushtia
OHS Trainer	SNV Bangladesh, Kushtia
Secretary	Jashore Municipality
Civil Surgeon	Jashore District
Conservancy Inspector	Jashore Municipality
City Coordinator	SNV Bangladesh, Jashore
OHS Trainer	SNV Bangladesh, Jashore
Secretary (Additional Secretary)	Gazipur City Corporation
Zonal Executive Officer and Executive Magistrate	Gazipur City Corporation
Urban Planner	Gazipur City Corporation
Assistant Engineer (Water Supply and Sanitation)	Gazipur City Corporation
Program Officer	Urban Primary Health Care Services Delivery Project (LGRD&C)
Conservancy Inspector	Gazipur City Corporation

Chief Executive Officer (CEO)	Khulna City Corporation
Health Officer	Khulna City Corporation
Conservancy Officer	Khulna City Corporation
Health Officer	Khulna Nogor Sasthya Bhabon
Focal person of Urban Health center	Urban Health center, Khulna
Focal person of Surjer Hashi Network	Surjer Hashi Network, Khulna
Focal person of Lal Hospital	Lal Hospital, Khulna
City Coordinator	SNV Bangladesh, Khulna
OHS Trainer	SNV Bangladesh, Khulna
Special Advisor	Ad-din Foundation
Chief Executive Officer (CEO)	Chartered Life Insurance Company Ltd.
AGM & Head of Product, Innovation & ADC	Chartered Life Insurance Company Ltd.
Executive Vice President & Head of Group Insurance Department	Alpha Islami Life Insurance Ltd.
Managing Director (MD) & Chief Executive Officer (CEO)	Pragati Life Insurance Limited
Focal Person of Technical and Product Design	Pragati Life Insurance Limited
Focal Person of Operation and ADC	Pragati Life Insurance Limited

Data collections instruments (DCIs) including FGD guideline and IDI checklist for different stakeholders as listed in Table 1 were prepared. The DCIs were finalized by incorporating the feedbacks received from SNV. Three trained Research Associates and the core research team including the Team Leader conducted the FGDs and IDIs during 30 June to 17 September 2019. Further information was collected from some insurance companies after national dissemination workshop. Informed consent was sought to the respondents of FGDs and IDIs before interviewing.

At the FGDs we asked the information like occupation, lifestyle, socioeconomic and demographic conditions, disease profile, health care seeking, and willingness to join health insurance. At the IDIs with the relevant personnel of city corporations and municipalities, we asked about the number, employment status, and salary or wage of the emptiers, any provision for providing financial support to the emptiers for health care, willingness to manage and contribute to the health insurance scheme, potential health care providers, and scopes and challenges including the legal framework of introducing health insurance for the emptiers. We asked the executives of some chain hospitals offering quality health care at low price about their willingness to be included as a health care provider and permit any discount on the existing price if any health insurance scheme is introduced for the emptiers. The CEO and the technical persons of the insurance companies were asked about willingness to be included as an insurer if the city corporations and municipalities initiate to introduce health insurance for the emptiers. They were also asked about the claim settlement process and to set the premium for the benefit package designed by the research team.

The information received from the FGDs and IDIs was mainly analysed focusing on different themes as described above. We also attempted to draw some quantitative figure on incidence and prevalence of disease, income, spending on health, and source of financing treatment costs.

3 Assessment of Existing Health Insurance Models for Low Income Countries

Although various literatures focused on health insurance targeted for different workers (both formal and informal) in low and middle-income countries (LMICs), the health insurance for emptiers has received little attention. The aim of this section is to generate some evidence on health insurances for low income people so that in future large-scale insurance scheme could be initiated to protect the vulnerable groups from devastating financial losses due to health hazards.

3.1 Health Insurance Schemes in India for low-income people

Employees' State Insurance Scheme (ESIS): The ESIS is both mandatory and contributory health insurance scheme for workers of the factories, which employs ten or more employees [14]. The ESIS covers around 30% of the organized workforce in India. The contribution is through a payroll tax of 4.75% and 1.75% levied on the employer and the employee respectively. The state governments also make a contribution of 12.5 percent of the medical costs. The scheme includes employees who have a salary of Rs. 7,500 or less per month. The benefits of this scheme are medical benefits and cash benefits in case of sickness, disability, maternity, and funeral expenses. The ESIS has its own network of hospitals and dispensaries which are managed by the state governments.

Central Government Health Scheme (CGHS): Under the CGHS scheme, there are about one million cardholders and a total of 4.3 million beneficiaries. This scheme offers various services through allopathic dispensaries and also with the units of alternative medicine like Homoeopathy. Health care services like outpatient care, inpatient care, free medicines, laboratory and radiological investigation, etc. are being also provided. When the beneficiaries get sick and if the services are not available at the dispensary level, they are referred to the designated hospitals, and the expenses are reimbursed accordingly. There are about 500 such hospitals across 17 cities. The scheme also uses the facilities of private and government hospitals to provide inpatient care where the bills are reimbursed later. The contribution of employee ranges from Rs 15 to Rs 150 per month based on the salary. The ministry of health and family welfare of India determine this [14].

However, both ESIS and CGHS are grappled with inferior quality of care. There are issues of poor quality of infrastructure, shortages and low quality of medicines and drugs, negligence and corruption in the system. There are also issues like long waiting time, high out-of-pocket expenditures for treatment, and inadequate supplies of equipment and staff. For the reimbursement case, the administrative formalities are troublesome.

Universal Health Insurance Scheme (UHI): The Government of India launched the Universal Health Insurance (UHI) scheme in July 2003. It was designed to provide health insurance schemes for the poor in their respective states. The scheme was proposed as a group insurance scheme with a membership of at least 100 families. The premium for the scheme varies with family size: US$8.1 for an individual, US$12.2 for a family of up to five members, and US$16.2 for a family of up to seven members. The benefit includes medical expenses of up to US$ 667 per family in case of inpatient care, compensation for loss of wages

at the rate of US$ 1.1 per day (maximum of 15 days) in the case of illness, and US$556 in the case of death of the main earning family member due to accident. The scheme is offered by the four non-life public insurance companies, and managed with the help of third party administrators (TPAs). TPAs are independent agencies that make arrangements for cashless hospitalization by coordinating among insurance companies, customers, and healthcare providers [14].

The main drawbacks of UHIS are inequitable distribution in different states and lack of coordination between central and state ministries, pre-existing diseases and maternity are excluded, and access confined to only government hospitals.

Rashtriya Swasthya Bima Yojana: Ministry of Labour and Employment (MoLE) in Inida introduced RSBY, a health insurance scheme, in 2008 for below the poverty line (BPL) population. RSBY involves a multitude of stakeholders by contractual agreements from the public and private sectors. The premium is shared by the Central Government and State Governments. The insurance companies contracted public/private hospitals to provide inpatient care to the enrolled beneficiaries. The insurance company reimburses a fixed amount to the hospital on per service type. Some of the problems identified in the scheme are poor enrolment practices, problems in distribution of roles and responsibilities, fixed package rates, weak monitoring and supervision and out of pocket expenditure [15].

Ayushman Bharat: Ayushman Bharat health insurance Scheme was launched on 23rd September 2018 in Ranchi, the capital of Jharkhand and it became operational on 25th September. Since its launch, the scheme has been renamed as PM Jan Arogya Yojana (PMJAY). It offers insurance coverage of Rs. 500000 per family annually. About 500 million citizens (i.e. 100 million households) stand to benefit, and it covers only the poor and economically backward segment. The scheme is aimed at providing insurance coverage to economically backward people in rural and urban areas who will be identified on the basis of data from the Socio-Economic Caste Census (SECC) 2011. It follows a public-private mix method with two main segments, Health and Wellness Centers (HWC) which likely to be largely publicly run and Pradhan Mantri Jan Arogya Yojana (PMJAY) is expected to be largely based on private service provision. The entire process is paperless and cashless in public hospitals and empanelled private hospitals. Also, to include more women and children in the scheme, there's no limit on the age and size of the families. The eligibility criteria for this scheme are different for rural and urban areas [16].

For rural areas: Families living in only one room with *kachcha* walls and *kachcha* roof, Families with no adult members aged between 16 and 59, Female-headed family with no adult male member in the 16-59 age group, Families having at least one disabled member and no able-bodied adult member, SC/ST households, Landless households deriving a major part of their income from manual casual labour, destitute and those surviving on alms, Manual scavenger families, Tribal groups, Legally-released bonded labourers.

For urban areas: Eleven occupational categories of workers are included in the list by the government-Ragpicker, Beggar, Domestic worker, Street vendor/cobbler/hawker/ other service providers working on the streets, Construction worker/ plumber/ mason/ labour/ painter/ welder/ security guard/ coolie and other head-load workers, **Sweeper/ sanitation worker**/ gardener, Home-based worker/ artisan/ handicrafts worker / tailor, Transport worker/ driver/ conductor/ helper to drivers and conductors/ cart-puller/ rickshaw puller, Shop worker/ assistant/ peon in small establishment/ helper/ delivery assistant / attendant/ waiter, Electrician/ mechanic/ assembler/ repair worker, Washerman/ chowkidar. The expenditure incurred in premium payment will be shared between Central and State Governments in specified ratio as per Ministry of Finance guidelines in vogue. The total expenditure will depend

on actual market determined premium paid in States/ UTs where AB-PMJAY will be implemented through insurance companies. In States/ UTs where the scheme will be implemented in Trust/ Society mode, the central share of funds will be provided based on actual expenditure or premium ceiling (whichever is lower) in the pre-determined ratio. The scheme covers medical expenses for secondary care and most tertiary care procedures. No premium needs to be paid by the beneficiaries for the insurance cover. The insurance includes pre- and post-hospitalisation expenses.

The study on developing health insurance model for emptiers are partially related to this PMJAY scheme as both PMJAY and our sample insurance model is targeted to low income population including sweepers and sanitation workers. PMJAY does not cover outpatient care whose expenses will have to be borne by patients. Risk pooling and avoidance of adverse selection is also difficult for PMJAY as this scheme is targeted to BPL population only.

The scheme aims at addressing the shortcomings of RSBY. Hence, it also includes the beneficiaries of the RSBY scheme in all the states where it is active.

These schemes are expected to increase access to quality health and medication. In addition, the unmet needs of the population including marginal and vulnerable groups such as emptiers, which remained hidden due to lack of financial resources. It is also expected that the schemes lead to timely treatments, improvements in health outcomes, patient satisfaction, improvement in productivity and efficiency, job creation thus leading to improvement in quality of life.

3.2 Health Insurance Schemes for low-income people in Bangladesh

The existing health insurance schemes in Bangladesh, based on the target population, can be classified broadly into three groups: informal sector, semi-formal sector and formal sector. A description of the major schemes of each group is summarized in the following Table 2.

Table 2: Summary of the major health insurance schemes in Bangladesh

Groups	Name of the scheme	Target population and coverage	Salient features
Informal	SSK [16]	• Target population: below poverty line households • Current beneficiaries: 82,000 households or about 0.4 million population • Current geographical coverage: three subdistricts of Tangail district • Scaling up plan: 12 more sub-districts in Tangail by 2021	• Premium: BDT 1000 per household (paid by GoB) • Annual benefit per household: BDT 50,000 • Nature of benefit: cashless • Type of services covered: IPD of 78 Cases (DRGs) • Provider: Upazila Health Complexes and District Hospital • Scheme operator: Green Delta Insurance Co. Ltd • Insurer: Government • Enrolment: Eligibility based listed households
	Urban poor Insurance plan (BRAC and Concern Worldwide)	• Target population: urban poor • Current beneficiaries: 4,000 households • Current geographical coverage: Dhaka	• Premium: BDT 1100 per household (initially shared by both donor and household: phasing out of donor's part gradually)

		• Type of services covered: Life benefits, hospitalization and OPD and maternity benefits • Annual benefit limit per household: BDT 20,000 • Nature of Benefit: cashless • Provider: empaneled hospital • Insurer: Pragati Life Insurance Co. Ltd • Enrolment: Voluntary
Health Microinsura nce for rural community (CARE and Pragati Life Insurance Co. Ltd.) [17]	• Target population: rural poor • Current beneficiaries: 2477 households • Current geographical coverage: 23 unions from 7 sub-districts in 4 districts (Rangpur, Nilphamari, Lalmonirhaat and Gaibandha)	• Annual premium per household: BDT1000 per household • Premium contributor: CARE BD (80%) and insured household (20%) • Service providers: Smiling Sun Network Clinics, Marie Stopes Clinics and Rabeya Clinic • Annual benefit coverage: BDT 20000 • Nature of Benefit: cashless • Insurer: Pragati Life Insurance Co. Ltd • Enrolment: Voluntary
Nirapotta by Sajida Foundation [18-19]	• Target population: Sajida's microcredit members • Current beneficiaries: 315,663 member households of Sajida • Ggeographical coverage: Keranigonj (Dhaka), Narayanganj and some other areas	• Health insurance policy must be purchased by all SAJIDA foundation's microcredit borrowers • Annual premium per household: BDT 150 to BDT 450 (varies based on the term of the loan) • Types of services covered: Health (OPD and IPD) • The annual benefit ceiling for healthcare per household: BDT 6000 • The life benefit ceiling: BDT 4000 (per policy holder or spouse) • Nature of benefit: both cashless and reimbursement • Service provider: Sajida Foundation and other providers • Insurer: Sajida Foundation • Enrolment: Mandatory
Social class based micro health insurance scheme (Gonoshasth aya Kendra) [17], [20-21]	• Target population: All social classes, giving emphasis to the poor	• Annual premium per household: BDT 5-BDT 100 depending upon social class of the beneficiary • Types of benefit covered: IPD, maternity benefits and subsidized drugs • Insurer and the health care provider: Gonoshasthaya Kendra through its own clinics and hospitals • Enrolment: Voluntary
Grameen Kalyan Health Programme [22]	• Target population: Grameen Bank's microfinance members and poor • Current beneficiaries: 2.2 million people • Current geographical coverage: 50 sub-districts	• Annual premium per household: BDT 200-BDT 300 • Types of benefits covered: OPD, diagnostic services, and subsidized drugs • Insurer and health service provider: Grameen Kalyan though its own health centers • Enrolment: Voluntary

	Tonic [23]	• Target population: Grameen phone subscribers • Current policy holders: 3.7 million (out of 70.7 million Grameen Phone subscribers) • Geographical coverage: Across the country	• Annual premium per subscriber: BDT 47 to BDT 296 depending upon the health insurance package • Annual coverage: BDT 4000 to 250,000 • Type of services covered: IPD, OPD and diagnostic services • Insurer: Pragati Life Insurance Co. Ltd • Service providers: All registered hospitals across the country • Nature of benefit: reimbursement • Enrolment: Voluntary
Semiformal	RMG workers' insurance scheme (by SNV) [24]	• Target population: RMG workers • Current beneficiaries: 20,000 workers (Out of 4 million)	• Annual premium per worker: BDT 575 • Premium contributor SNV (65%), factory owner and /or insured worker (35%) • Annual benefit coverage per worker: BDT 15000 • Type of services covered: IPD and OPD • Insurer: Pragati Life Insurance Co. Ltd and Alpha Islami Life Insurance Co. Ltd • Service providers: Selected hospitals • Nature of benefit: Cashless • Enrolment: group health insurance
	Leather good and footwear manufacturing workers' scheme [25]	• Target population: Leather good and footwear workers • Current beneficiaries: 26,000 workers (out of 40,000)	• Annual premium per worker: BDT 750 • Annual benefit coverage: BDT 125,000 for disability, BDT 100,000 for life and BDT 20,000 for IPD, and up to BDT 7500 for maternity services • Insurer: Guardian Life Insurance LTD • Enrolment: group health insurance
	Group health and life insurance scheme for university students [26]	• Target population: University students • Current beneficiaries: 2,000 students from Institute of Health Economics, Economics, History, Development Studies • 30,000 students (out of 452,000)	• Annual premium per student is BDT 400 • Annual coverage: up to BDT 30,000 for IPD, BDT 5000 for OPD and BDT 50,000 for life benefit • Type of services covered: IPD, OPD, diagnostic services and life • Insurer: Pragati Life Insurance Co. Ltd • Premium contributor: University authority (50%) and insured student (50%) • Nature of benefit: Reimbursement • Enrolment: group health insurance
Formal	Corporate (E.g. Group health insurance scheme for icddr,b/ BRAC/ Grameen phone employees, University of Dhaka faculties etc.) [27]	• Target population: Formal sector employees • Current coverage: 5,00,000 (out of 6 million)	• BRAC • Annual coverage per family: up to BDT 1,00,000 • Annual premium per family: BDT 150 • Premium contributor: BRAC (100%) • Types of services covered: IPD • Insurer: Guardian Life Insurance Ltd. • Nature of benefit: cashless • Enrolment: group health insurance Grameenphone 1 • Annual coverage per beneficiary: up to BDT 5,10,000 • Annual premium per family: BDT 150 • Premium contributor: Grameenphone (100%) • Types of services covered: IPD, OPD, maternity services, life • Insurer: Pragati Life Insurance Ltd • Nature of benefit: Cashless • Enrolment: group health insurance

For low-income groups, there are several health insurance schemes in Bangladesh. These are:

i. Shasthyo Suroksha Karmasuchi (SSK): Health Economics Unit (HEU), Ministry of Health and Family Welfare (MOHFW), Bangladesh launched SSK model at Kalihati upazilas in Tangail District in March 2016 to extending health care services to households below the poverty line in alignment with the Bangladesh Health Care Financing Strategy 2012-32. The scheme was recently expanded to two other upazilas (Modhupur and Ghatail) in the district. The Government of Bangladesh fully subsidizes the premium per household per year (BDT 1,000). This premium entitles each household to offer healthcare services worth BDT 50,000 per year for 50 different disease categories of in-patient services. SSK pays for drugs, diagnostics, supplies, and referral transport costs. Upazila Health Complex is the health service provider and the district hospital is the referral hospital [16].

ii. Social class based micro health insurance scheme (Gonoshasthaya Kendra): Under the provider-driven model, health care providers (i.e., hospitals, clinics, or groups of doctors) are responsible for designing, marketing, providing health services, and carrying the insurance risk. Gonoshasthaya Kendra is a prominent example of a provider-driven model in Bangladesh, it offers a voluntary social class-based health insurance where premium and benefits vary across the six social classes of the catchment population (i.e., destitute and ultra-poor, poor, lower middle class, middle class, upper-middle class and rich). The six social classes cover the whole population with progressive, premium, and high co-payment (70%) for upper tiers and an overall 35 percent cost recovery rate. The major challenges of this model include low enrolment of the rich, overall low renewal rates, limited scalability and non-explicability [17, 20-21].

Dhaka Community Hospital (DCH) operates a scheme to serve the ready-made garment workers. Under this scheme, DCH provides primary health care (both preventive and curative) through an MBBS doctor and an assistant offering weekly on-site visits as needed. The employer manages the patient's prescribed medicines and pays DCH an agreed monthly amount for services. Currently, the DCH scheme serves about 8,000 workers in 24 factories with 100 percent cost recovery. There is 10 percent discount (i.e., 90% co-payment) for the referral services to DCH. This model provides convenient primary care services and is replicable. Its major challenges include limited geographic reach, service availability (once a week), and weak protection at secondary level.

iii. Nirapotta by Sajida Foundation: SAJIDA's Nirapotta is the only example of mandatory MHI in Bangladesh. This scheme is mandatory for its microfinance and Small and Medium Enterprise (SME) members, and the premiums are paid by the borrowers as it is part of the loan payment. The premium ranges from BDT 250 to BDT 1,050, depending on the amount and tenure of the loan. There is an additional premium of BDT 100 for each supplementary loan. SAJIDA reimburses up to BDT 4,000 of health expenses and runs two hospitals. The insured in hospital catchment areas have the opportunity to seek health care from these hospitals up to BDT 4,000. However, given the price of health care in the market, the coverage is not adequate and the insured pays a large amount of the medical expenses. It is well recognized that the 'reimbursement system' is not a form of prepayment as the insured must pay first. To provide financial protection cashless or low co-payments are preferred to reimbursement scheme [18-19].

iv. Health Insurance for RMG Workers: RMG workers' insurance scheme by SNV Netherlands has currently 20,000 beneficiaries sharing annual premium per worker BDT 575. Premium contributors are SNV (65%), factory owner and/or insured worker (35%) and annual benefit coverage per worker is BDT 15000 to cover both IPD and OPD services. Selected

hospitals are providing cashless services and insurers include Pragati Life Insurance Co. Ltd and Alpha Islami Life Insurance Co. Ltd for this group health insurance [24].

The Diabetic Association of Bangladesh (BADAS) also piloted a health insurance scheme for the garment workers funded by Swiss Agency for Development and Cooperation. The scheme was operated by National Health Network (NHN), New Asia Group (NAG), and United Insurance Company (UIC). The hospitals under NHN were the health care providers.

v. Group Health Insurance for workers of Footwear and leather goods (FLG) factories: Six of the Footwear and leather goods (FLG) factories introduced group health insurance (GHI) in 2016 on request of Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB). Factories also added group term life and permanent disability insurance with GHI for their workers to comply with Labour (Amendment) Act 2013. Under this scheme, the employers mainly pay the premium; and the health insurance covers the hospitalization expenses of both natural and workplace related ailments. Annual premium per worker: BDT 750 (BDT 425 for health, BDT 250 for life and BDT 75 for disability), or USD 8.9. Permanent and total disability benefit (through accidental means) is BDT 125,000, hospital insurance benefit is up to BDT 20,000, maternity benefits (normal delivery: BDT 4,000, C-section/ectopic pregnancy: BDT 7,500, Legal abortion/miscarriage: BDT 2,000), Coverage for death is BDT 100,000. Some of the issues in this scheme are lack of awareness among workers and factory management, absence of outpatient coverage, absence of cashless benefits, absence of any grievance redress mechanism, life and disability coverage are not adequate [25].

vi. Urban poor insurance plan by BRAC and CONCERN: This is another insurance scheme for the urban poor people. Currently, the numbers of beneficiary families are 4000. Annual premium per household is BDT 1100 where life insurance coverage is BDT 20000, IPD benefit limit is BDT 15000 and OPD benefit limit is BDT 5000. This scheme also includes maternity benefits (NVD: BDT 3000 and LUCS: BDT 9500).

vii. Group Health Insurance for the University Students: In the beginning of 2018, Institute of Health Economics (IHE), University of Dhaka, took a pioneering step in bringing its students under a group health insurance scheme, which is first of its kind at any university in Bangladesh. With an aim to ensure the health care demand whenever needed as well as to provide financial risk protection against catastrophic health care expenditure, this insurance scheme is expected to bear an immense potential for the students to lead a healthy and productive life. Under this unique initiative, IHE is the policyholder and Pragati Life Insurance Limited (PLIL) is the insurer. This insurance scheme is compulsory in nature and yearly renewable where insurance coverage is active on the first day of enrolment. The eligible age group for the insurance is between 17-27 years at the time of enrolment with having a valid proof of studentship. Altogether 300 regular students of IHE are covered for health (both inpatient and outpatient) and life insurance under this insurance scheme. The annual premium per student is BDT 400, half of which was contributed by the student and the rest half is by the institute. Each student is covered annually up to BDT 30,000 for inpatient care, which includes room rent, hospital services, surgical expenses, consultation fees, diagnostic bills, medicine, etc. during hospitalization period. For outpatient care, the annual coverage is BDT 3,000, which covers physician consultancy fees and medical investigations. Moreover, the students can enjoy 25% discount on pathological and imaging services in more than 200 empanelled hospitals across the country. In addition, if any student dies for any cases except suicide, his or her family will get BDT 50,000 from the insurance company [26].

After reviewing these insurance schemes, RMG workers' insurance by SNV, urban poor insurance plan by BRAC and CONCERN and insurance for the workers of footwear and leather factories seems relevant to the introduction of health insurance for the emptiers in

Bangladesh. These insurance models are designed for low income and vulnerable population of Bangladesh. Similarly, emptiers belong to the low socio-economic status.

4 Findings

The feasibility of introducing a health insurance for the emptiers primarily depends on various demand side factors like size of the group, nature of employment, compulsory nature, awareness about health, morbidity rate, occupational health hazard, ability to pay, and willingness to join. The views and attitude of the other stakeholders including insurance company, health care providers and City Corporation/ municipality also play vital role. Attention was given on these issues for presenting the results.

4.1 Demand side factors

We have considered a number of demand side factors, such as number and employment status, income and asset, disease profile, health seeking behaviour, willingness to join health insurance scheme of the emptiers.

4.1.1 Findings from FGDs

Number of emptiers and employment nature: In Jhenaidah, around 350 families live in the houses provided by the municipality. Among them, 134 emptiers and cleaners work in this municipality. In Kushtia, there are around 365 and 445 emptiers and cleaners working in the municipality of Kushtia and Jashore respectively. In Gazipur and Khulna City Corporation, there are about 380 and 600 emptiers and cleaners. Most of the emptiers reside in houses or land provided by City Corporation/Municipality, except in Gazipur City Corporation. Household size of the emptiers ranges from 2 to 10, where the average size is 4.5. Almost all of the workers are master roll employee. They do not receive any wage in case they miss any day of work even due to sickness. It is also found that there is no association among the emptiers in 4 cities. In Khulna, there are 2 associations among the emptiers. There are 250 households in Greenland Sweeper colony and 152 households Sonadanga Moinaputa sweepers colony in Khulna City Corporation. Though the City Corporation is the owner of the land of the colonies, a few of them are employee of the City Corporation.

Income & assets: In Jhenaidah, monthly income of emptiers ranges from BDT 1600 to BDT 10,000 where the average income is BDT 6080. In Kushtia, the monthly income varies from BDT 8300 to BDT 18,500 and the average income is BDT 7622. The average monthly income of Emptiers' in Jashore municipality was BDT 8909, with minimum income BDT 6,000 and maximum income BDT 15,000. In Khulna, the income of emptiers ranges from BDT 1200 to BDT 22000 with an average income of BDT 9080. From the FGD with emptiers from Gazipur City Corporation, we found their average income as BDT 9000. All the emptiers confessed that it is hard to save something for future with this limited income. They do not have any asset as well.

Disease profile and health care seeking behaviour: All the emptiers believed that their works are hazardous and even injurious to health as they have to deal with toxic gases and chemical almost every day. Besides, emptiers usually have a habit of drugs and alcohol intakes. In Jhenaidah, fifty percent of emptiers (5 out of 10) reported that they suffered from diseases and had exposure of accidents during the last couple of months. The common diseases they suffered from were cold and cough, fever, allergy, back pain, typhoid and appendicitis. They usually go to Islami Bank Hospital, District Hospital, Pharmacies, and private clinics for seeking treatment. Average cost for outpatient care was BDT 1900 while it was BDT 13500 for inpatient care. Their health care expenditure ranges from BDT 300 to BDT 14,000

depending on the severity of accidents or diseases. Most of the emptiers preferred Islami Bank Hospital for health care.

In Kushtia, 55 percent of the emptiers got sick in the last one month. The diseases they suffered from were fever, asthma, and skin disease. Informal providers (mostly pharmacies) are the main source of seeking primary healthcare. In the episodes of (perceived) major illnesses, they go to the District general hospital and private entities. In last one month, the family expenditure for health ranged from BDT 500 to BDT 3500.

In Jashore Municipality, it was found that emptiers usually suffer from various common diseases and accidents including cold and cough, fever, allergy, back pain and leg injuries. Their health expenditure ranges from BDT 400-BDT 11,000 depending on the severity of accidents or disease. 55 percent of the respondents received outpatient care in the previous one month while 9 percent received inpatient care. The average cost of outpatient was BDT 3102 and the average cost of inpatient care was BDT 15000. Though government hospitals are less costly, they usually prefer Ad-din Hospital and Doyatana Clinic in terms of better treatment and distance from their community.

It was found from Khulna City Corporation that almost all of the sweepers or their family members fall in sick during the last year. They mentioned that they went to private hospital, govt. hospital, pharmacy, traditional health care provider for seeking health care. Average cost for outpatient care was BDT 2022 and for inpatient care was BDT 187500. Those who suffered from major diseases they had to spend either from their savings for their treatment or had to borrow.

In Gazipur City Corporation, two of these seven respondents suffered from disease and accidents during the last couple of months. Diseases include: Cold and Cough, Fever, Allergy, Back Pain and skin diseases. Respondents' average health expenditure was around BDT 15,000 depending on the severity of accidents or disease. However, they do not have any preferred hospital, they are concerned about better treatment and distance from both of their community in Gazipur and Tongi. Sometimes they face impolite behaviour from health facilities because of their vulnerable conditions and workplace.

It was found from all the cities that most of the emptiers manage their health expenditure by borrowing. If a person is injured during his duty, the city corporation sometimes provide financial support. But the process of applying for financial support is problematic according to the respondents. Often, they do not even apply for such support. In cases of workplace death, limited financial support is also given.

Demand for Health Insurance: The concept of health insurance and an idea of sample insurance model were presented to the emptiers. Most of the emptiers showed their interest to join in health insurance by giving a premium of BDT 2400 annually and get the mentioned benefits of inpatient (BDT 15000) and outpatient (BDT 5000) services along with a life insurance coverage of (BDT 50000), except in Gazipur where the emptiers were willing to pay a premium of BDT 50 only. They were willing to pay the premium from their salary.

Table 3: Summary of the findings from FGDs

Factors	Jhenaidah	Kushtia	Jashore	Khulna	Gazipur
Size of the group of emptiers	350	365	445	765	380

No. of individuals in the community	1575	1642	2002	3442	1710
Nature of employment	Most of them are working at master roll	Most of them are working at master roll	Most of them are working at master roll	Most of them are working at master roll	Most of them are working at master roll
Compulsory nature	Compulsion can be made from municipality	Compulsion can be made from municipality	Compulsion can be made from municipality	Compulsion can be made by the association	Compulsion can be made from municipality
Residential areas	Houses provided by municipality	Houses provided by municipality and some of them reside privately	Land provided by the municipality	Most of them live on the land of City Corporation	No particular residential area provided by the City Corporation
Life style	Most of them are addicted to drugs and liquors	Most of them are addicted to drugs and liquors	Most of them are addicted to drugs and liquors	Most of them are addicted to drugs and liquors	Most of them are addicted to drugs and liquors
Morbidity rate	11.1	14.8	15.56	10.0	12.7
Occupational health hazards	Back pain, breathing problem, accident occurred due to gas, insects and animal biting, and other physical accidents				
Existing financial support for health care	No	No	No	No	No
Average monthly Income (BDT)	6080	7622	8910	9080	9000
Willingness to join	Yes	Yes	Yes	Yes	Willing but want to pay a premium of BDT 50 per month

4.1.2 Views and attitude of City Corporation/ Municipality Authority:

The Municipality authority of Jhenaidah appreciated the concept of health insurance for emptiers. They are interested in taking necessary steps for the introduction of health insurance for this community and agreed to provide subsidy. They also emphasized to improve the living conditions of emptiers to indulge them in health insurance.

The mayor was affirmative towards the insurance mechanism provided that the insurance company will not fraud. He also opined insurance-related awareness should be built before implementing the mechanism. The mayor agreed on contributing a portion of the premium

from the revenue the city corporation earns. He also considers the proposal of providing the safety equipment on a regular basis.

Though the authority of Jashore Municipality appreciated the concept of health insurance for emptiers, they mentioned some difficulties regarding this such as uncertainty about their incomes. They also emphasized to improve the living conditions of emptiers first to indulge them in health insurance. They opined that rather than introducing such schemes, introduction of rehabilitation programs are more required for them since they are psychologically distressed community and are addicted with drugs and liquors.

Khulna City Corporation authority was interested in the introduction of health insurance for this vulnerable community. Section-27 of City Corporation Act-2009 permits them to organize them to bring them under such type of social health protection scheme. However, they mentioned that there is no scope to provide any financial support for introducing health insurance for them with the existing city corporation law. Since most of the emptiers live on the lands of City Corporation, the authority can have good control over them. Therefore, introduction of health insurance seems feasible to them.

Zonal Executive Officer of Gazipur City Corporation stated that health insurance may not be good initiative for them as they work under master rule with vulnerable conditions of income. Also they do spend their incomes on drugs, liquor and addictions which impede to include them in health insurance. Nevertheless, if the decision to involve them in health insurance comes from top authority, it will be a more feasible step towards it. For that case, all the stakeholders, including City Corporation and Ministry of Finance should work together for effective implementation of health insurance for emptiers.

Table 4: Attitude of City Corporation/ Municipality Authority

City Corporation/ Municipality	Existing financial support for health care	Willingness to involve in administering the scheme	Willingness to contribute to premium	Comments
Jhenaidah	No formal financial support from the municipality	Very much interested	Yes	Monthly each emptier will pay BDT 200 as premium and the municipality will contribute BDT 200 as premium
Jashore	No formal financial support from the municipality	Did not show so much interest to involve with the scheme	Willing but need provision from LGED	Rehabilitation program is needed to for them
Kushtia	No formal financial support from the municipality	Yes	As there is no provision from LGED, they can no contribute	Trust issue in case of insurance
Khulna	No formal financial support from the municipality	Yes	As there is no provision from LGED, they cannot contribute	Section 27, City Corporation Act 2019 inspired them to administer such type of activities
Gazipur	No financial support from the City Corporation	There must have an legal order from LGED	As there is no provision from	

			LGED, they can not contribute	
Jhenaidah	No formal financial support from the municipality	Very much interested	Yes	Monthly each emptier will pay BDT 200 as premium and the municipality will contribute BDT 200 as premium

4.2 Supply Side Factors

4.2.1 Availability of appropriate Health care Providers:

Ad-Din Hospital: The branches of Ad-Din hospital located in Khulna, Kushtia and Jashore. The advisor of Ad-Din hospital said that there is fixed price list for each service in Ad-Din hospital. Since the emptiers are vulnerable group and they have very limited income, he agreed to provide services at a 50 percent discount on the existing price under the insurance scheme.

Islami Bank Community Hospital, Jhenaidah: Hospital-in-charge of Islami Bank Hospital stated that they have willingness in terms of serving a particular community like emptiers and have experience in working with various health insurance providers like Delta, Alico and Brac's Gurdian Life Insurance. They maintained these services based on software in order to up to date the whole mechanism. They can provide a referral system if required under the health insurance service. He mentioned that the hospital has well-equipped indoor and outdoor facilities with sufficient Medical officers (MOs) and Emergency Medical Officers (EMOs). The only barrier mentioned by the Hospital In-charge about this particular community was that, the emptiers are psychologically upset regarding their profession and living conditions, hence are addicted to drugs and liquor. These situations may create troubles in handling them and maintain a suitable hospital environment throughout the time.

4.2.2 Willingness of the Insurance Companies:

IDIs were conducted with some prominent insurance companies of Bangladesh such as Chartered Life Insurance Ltd., Alpha Islami Life Insurance Ltd., Pragati Life Insurance Ltd. All the insurance companies were anxious about the size of the group of emptiers. However, they mentioned that insurance model could be easier to implement if the local government does the advocacy. They suggested that, if the enrolment, advocacy, awareness, promotion and regulation are taken care by an authority, it will be easier to provide insurance for emptiers. For the enrolment of the emptiers it is also necessary to form formal associations among the emptiers. They also mentioned that they will not cover drug addiction related health hazards.

Insurance Model Proposed by Alpha Islami Life Insurance Ltd.: The plan included health insurance coverage as well as endowment life insurance coverage. Alpha life insurance proposed IPD coverage of BDT 35,000 per family (individual family member can avail Max. 50% of total limit i.e. BDT 17,500), maternity coverage of BDT 7,500 for LUCS, for NVD this will be BDT 4,000, for Miscarriage BDT 2,500. This maternity benefit shall be deducted from the total family coverage of BDT 35,000. For IPD insurance per family premium is BDT 1,950 and for Maternity insurance per family premium is BDT 325.

Table 5: Hospitalization Benefits Schedule by Alpha Islami Life Insurance Ltd.

Description of the Benefits	Plan-A
Max Hospitalization Benefit per Family per Year	35,000

Max Hospitalization Benefit per Member per Year		17,500
(A)	Room & Board Maximum Limit per Year	14,000
	Room & Board Daily Limit	800
	No. of Days Limit in ICU/CCU/NICU per Year	15 DAYS
(B)	Other Hospitalization Expenses / Services Total Limit per Year (includes Surgeries, Medicine, Anaesthesia, Doctor Visit etc. during Hospitalization)	21,000
(C)	Maternity Benefit:	
	LUCS	7,500
	Normal Delivery	4,000
	Miscarriage	2,500

Premium for life insurance coverage is BDT 200 per month (BDT 2,400 per year).

Table 6: Life insurance proposed by Alpha Islami Life Insurance Ltd.

Year	Deposit	Return (%)	Maturity Amount
1	2,400	79.4	1,905.60
2	4,800	87.3	4,190.40
3	7,200	92.93	6,690.96
4	9,600	97.63	9,372.48
5	12,000	102.07	12,248.40
6	14,400	106.45	15,328.80
7	16,800	110.89	18,629.52
8	19,200	115.42	22,160.64
9	21,600	120.09	25,939.44
10	24,000	124.92	29,980.80

The death coverage is BDT 80000 (eighty thousand) only. Emptiers will get this benefit at the age of 60 years or completion of ten years. Before maturity surrender value shall be as per abovementioned table. The number of enrolments has to be at least 300 emptiers.

Insurance Model Proposed by Chartered Life Insurance Ltd.: Chartered Life Insurance Ltd. Proposed a health insurance model for the emptiers. At a premium of BDT 2000 (per family), hospitalization benefit is BDT 50,000 and Life insurance coverage BDT 50,000 (death due to any reason of the emptier).

Table 7: Group Health Insurance for the emptiers (proposed by Chartered Life Insurance Ltd)

Benefit Schedule: Insurance Coverage	Sum Assured (BDT)

Death due to any reason of the Primary Insured	50,000.00
Hospitalization Benefit (per family)	
Coverage per year	50,000.00
Daily Hospital Room Rent (Actual or Max.)	1,000.00
ICU/CCU Limit per confinement	Actual up to 14 days
Total Hospital Room Rent (Actual or Max.) including ICU/CCU	20,000
All other In-Patient treatment expenses inclusive of surgical charges, consultation fees, medicines, medical appliances and relevant medical investigations related to the ailment and other ancillary services (excluding Room & ICU/CCU charges) maximum per Disability.	30,000

Emptiers and their family members can avail Cashless Hospitalization Insurance coverage (up to limit) from the designated/mentioned network hospitals by showing their valid Health card. Any active emptier age between 18 to 65 years can avail this Group Insurance Coverage. Age limit for spouse of the emptier is also 18 to 65 and children age is 0 months to 18 years.

Insurance Model Proposed by Pragati Life Insurance Ltd.: Pragati proposed two types of models for the emptiers. The first model is only for the emptier, where the yearly premium is BDT 600 and, the coverage is BDT 15000 (inpatient coverage: BDT12000 and outpatient coverage: BDT 3000) for the emptier and life coverage BDT 10000.

Table 8: Group Health Insurance Coverage for the emptiers for a Yearly Premium of BDT 600 (proposed by Pragati Life Insurance Ltd.)

Type of Coverage		Amount
Yearly coverage per emptier		BDT 15000
1. Hospitalization and maternal care coverage		BDT 12000
Maternal care coverage	Normal delivery	BDT 3000
	Caesarean delivery	BDT 9500
2. Outpatient care		BDT 3000
	2.1 Consultation fee	BDT 800
	2.2 Medicine	BDT 1000
	2.3 Diagnostic Test	BDT 1200
3. Life insurance coverage		BDT 10000

The second model proposed by Pragati is for emptiers and their HH members (as shown in Table 9). The yearly premium is BDT 1200 per household and the total coverage is BDT 20000 (BDT 16000 for inpatient care and BDT 4000 for outpatient care).

Table 9: Group Health Insurance Coverage for the emptiers for a Yearly Premium of BDT 1200 (proposed by Pragati Life Insurance Ltd.)

Type of Coverage		Amount
Yearly coverage per emptier		BDT 20000
1. Hospitalization and maternal care coverage		BDT 16000
Maternal care coverage	Normal delivery	BDT 3000
	Caesarean delivery	BDT 9500
2. Outpatient care		BDT 4000
	2.1 Consultation fee	BDT 1000
	2.2 Medicine	BDT 1200
	2.3 Diagnostic Test	BDT 1800
3. Life insurance coverage		BDT 20000

5 Challenges/ Barriers of Introducing Health Insurance for Emptiers

- **Small group:** The main challenge of introducing health insurance for the emptiers is the small size of the group of emptiers. In each city corporation/ municipality, the total number of emptiers is small as the Vacutug requires only 3-4 emptiers which was a constraints for run a health insurance program. However, many of those who work as sweepers/ cleaners also work as private emptiers. Still the entire emptiers community is small. Alpha Life insurance company mentioned the minimum number of emptiers should be 300 in each city whereas Chartered Life Insurance Ltd. Mentioned the minimum number should be around 500.
- **Employment nature:** Most of the emptiers are not the employees of city corporations/ municipality, especially in Khulna. As a result, it is difficult for this city corporation to have control over this group. In other cities, most of the emptiers are master roll employees as cleaners in city corporation/ Municipalities and do emptying privately. Therefore, it is difficult to collect the premium as a payroll tax which would have make the introduction of health insurance feasible. Therefore, the recommended model can solve this problem.
- **Casual worker:** Many emptiers use to work as casual worker in city corporation/ municipalities which makes the introduction of health insurance challenging. For introducing group health insurance for emptiers, a group of regular workers is needed.
- **Low income and uncertainty:** Though the emptiers who participated in the FGDs were willing to join health insurance, their income level is very low. There is also uncertainty about their salary. Therefore, it is difficult for them to pay any premium which is crucial for run a health insurance scheme. The recommended model can solve this issue.
- **Occupational hazards and illnesses:** Emptiers are more susceptible to different hazards and common illnesses. Therefore, many insurance companies may not be interested in introducing any insurance for them.
- **Addiction to drugs and liquor:** Most of the emptiers are psychologically upset regarding their profession and living conditions, hence are addicted to drugs and liquor. This habit makes them more susceptible to various diseases and accidents. As a result, insurance companies are less interested in operating as insurer in any insurance scheme for them. These habits may also create troubles in handling them and maintain a suitable hospital environment throughout the time, discouraging private hospitals to come as health care providers. These habits may also create troubles in handling them and maintain a suitable hospital environment throughout the time, discouraging private hospitals to come as health care providers.
- **Lack of formal association among the emptiers:** Introduction of group health insurance in these five cities would be easier if there were formal associations among the emptiers in each city. Only in Khulna, there are two associations among them.

6 Proposed Models

Despite the aforementioned challenges and barriers there is scope of introducing health insurance for the emptiers, especially in Jhenaidah, Kushtia and Khulna. At Jhenaidah, emptiers have demand for health insurance in spite of their low level of income and the municipality authority are also interested in providing subsidies for insurance and administering the scheme. Emptiers and administrative authority from Kushtia municipality and Khulna City Corporation also have demand for health insurance.

We have described, based on national and international experience and the package offered by the different insurance companies, a number of potential health insurance models for the emptiers. The insurance model proposed by Chartered Life Insurance Ltd. (BDT 50,000 as inpatient coverage and BDT 50, 000 as life insurance coverage at an annual premium of BDT 2000) is the most attractive one in terms of both benefit and premium. Therefore, we have considered BDT 2000 as annual premium for proposing different insurance models as depicted below.

Model 1:

This model proposes, in the Phase1, 50% of the premium will be contributed from pool fund (i.e., contribution of SNV, local elites and others); City Corporation/Municipality will contribute 40% of the premium; and emptiers will contribute 10% of the premium. In phase 2, contribution from the pool fund will be reduced to 25%, while the share of City Corporation/Municipality and emptiers will be increased to 75% (37.5% each). In phase 3, funding from external sources (pool fund) will be nil and the 100% premium will be shared equally between the City Corporation/ Municipality (50%) and emptiers (50%). Figures 1-3 provide a schematic presentation of different phases of this model.

Phase 1:

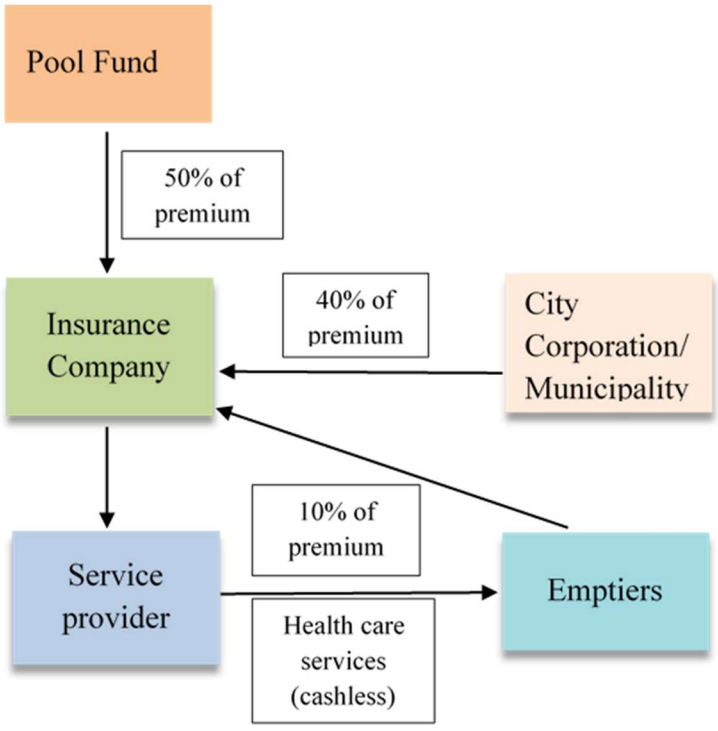

Figure 1: Premium sharing by pool fund (50%), City Corporation/Municipality (40%) and emptiers (10%)

Phase 2:

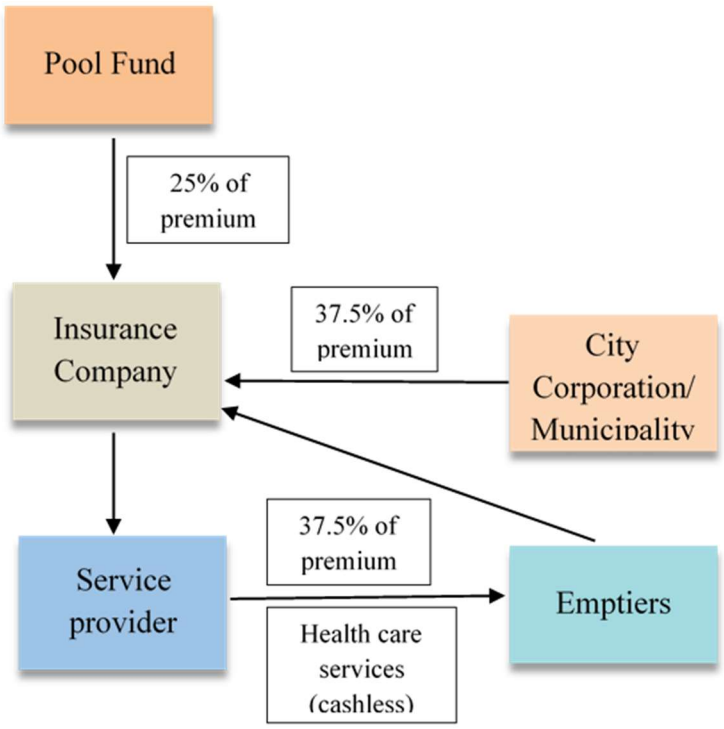

Figure 2: Premium sharing by pool fund (25%), City Corporation/Municipality (37.5%) and Emptiers (37.5%)

Phase 3:

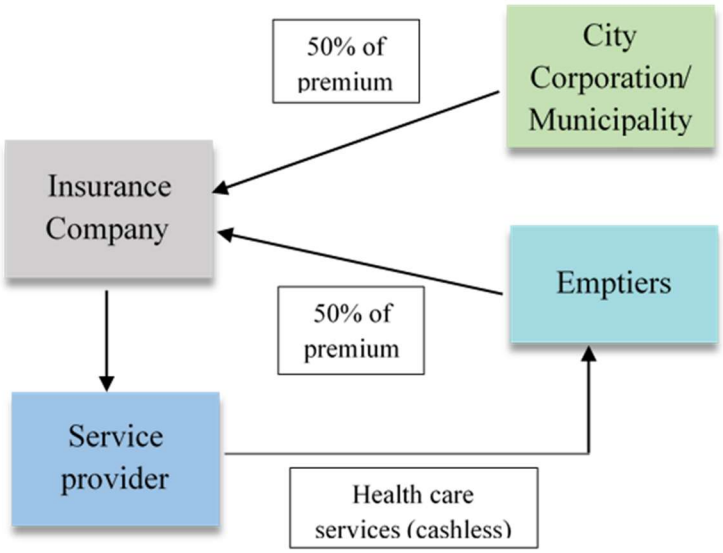

Figure 3: Premium sharing by City Corporation/Municipality (50%) and emptiers (50%)

The following table shows the premium contribution of various stakeholders at the phase out approach. At each phase, premium has been calculated considering different number of emptiers. At Phase1, if the number of emptiers of a certain City Corporation/Municipality is 300, the annual contribution in premium from pool fund will be BDT 300,000, contribution from City Corporation/Municipality will be BDT 240,000 and contribution by the 300 emptiers will be BDT 60,000 (BDT 200 each). At Phase 2, the premium contribution from pool fund will be reduced to BDT 150,000, contribution from City Corporation/Municipality will be BDT 225,000 and contribution by the 300 emptiers will be BDT 225,000 (BDT 750 each). At Phase 3, the

premium contribution of City Corporation/Municipality will be BDT 300,000 and contribution by the 300 emptiers will be BDT 300,000 (BDT 1000 each). There will be no contribution from the pool fund.

Table 10: Model 1 (Three phases health insurance model for the emptiers)

No of Emptiers	Premium (BDT per year)	Total (BDT)	Pool Fund (%)	Pool Fund (Total BDT)	City Corporation (%)	City Corporation (Total BDT)	Emptier (%)	Emptier (Total BDT)
Year 1								
300	2,000	600,000	50%	300,000	40%	240,000	10%	60,000
500	2,000	1,000,000	50%	500,000	40%	400,000	10%	100,000
1,000	2,000	2,000,000	50%	1,000,000	40%	800,000	10%	200,000
5,000	2,000	10,000,000	50%	5,000,000	40%	4,000,000	10%	1,000,000
7,000	2,000	14,000,000	50%	7,000,000	40%	5,600,000	10%	1,400,000
10,000	2,000	20,000,000	50%	10,000,000	40%	8,000,000	10%	2,000,000
Year 2								
300	2,000	600,000	25%	150,000	37.5%	225,000	37.5%	225,000
500	2,000	1,000,000	25%	250,000	37.5%	375,000	37.5%	375,000
1,000	2,000	2,000,000	25%	500,000	37.5%	750,000	37.5%	750,000
5,000	2,000	10,000,000	25%	2,500,000	37.5%	3,750,000	37.5%	3,750,000
7,000	2,000	14,000,000	25%	3,500,000	37.5%	5,250,000	37.5%	5,250,000
10,000	2,000	20,000,000	25%	5,000,000	37.5%	7,500,000	37.5%	7,500,000
Year 3								
300	2,000	600,000	0%	-	50%	300,000	50%	300,000
500	2,000	1,000,000	0%	-	50%	500,000	50%	500,000
1,000	2,000	2,000,000	0%	-	50%	1,000,000	50%	1,000,000
5,000	2,000	10,000,000	0%	-	50%	5,000,000	50%	5,000,000
7,000	2,000	14,000,000	0%	-	50%	7,000,000	50%	7,000,000
10,000	2,000	20,000,000	0%	-	50%	10,000,000	50%	10,000,000

This model seems to be ideal in the sense that the beneficiaries will ultimately contribute 50% of the premium. However, experience from garments and informal sector show that this type of model is not financially sustainable. When Phase1 ends, it would be difficult to increase the premium contribution by the emptiers. It may happen that those who received benefit of health insurance in the previous phase will be likely to increase their contribution. However, those who were not sick and/or did not receive the benefit, they are very less likely to contribute to the premium. In addition, most of the emptiers work as master roll basis and therefore, it is not possible to deduct their premium from the salaries paid by the City Corporations/ Municipalities. Premium collection will be a big challenge for the insurance companies.

Model 2:

In this model, 50% of the premium will be contributed from pool fund where respective City Corporation/Municipality will contribute 10%, and emptiers will contribute 40% (see Figure 4). However, this model is not free from flaws. Ensuring continuous inflows of fund is a big challenge to contribute annually 50% of the premium from pool fund. Deduction of premium from the wages of the emptiers is also not feasible as most of them are not in the payroll of the City Corporation/Municipality. In addition, due to a low-income level of the emptiers, it is unlikely that they will continue paying for 40% of the premium (BDT 800) each year.

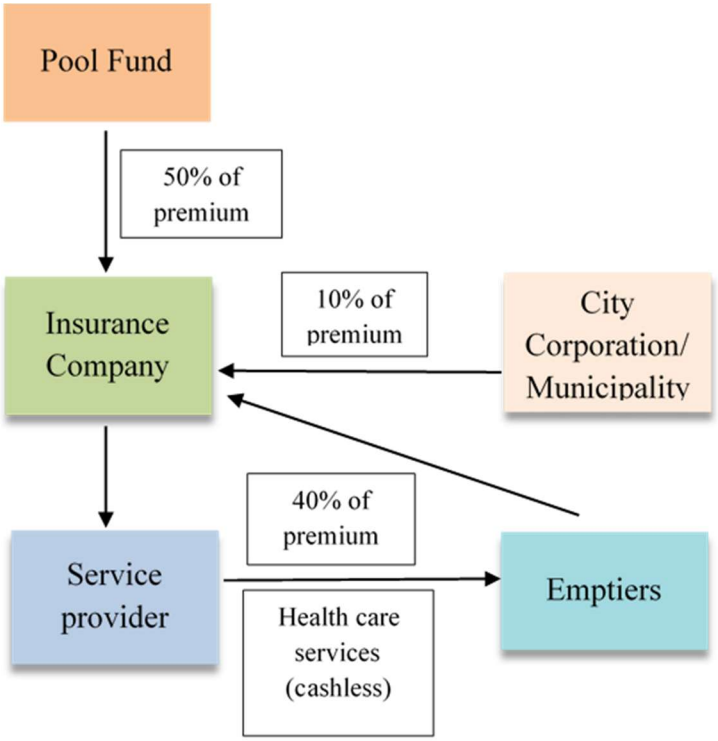

Figure 4: Premium sharing by pool fund (50%), City Corporation/Municipality (10%) and emptiers (40%)

The premium contribution by different stakeholders for different number of emptiers has been provided in the following table.

Table 11: Model 2 (50% Premium contribution from pool fund)

No of Emptiers	Premium (BDT per year)	Total (BDT)	Pool Fund (%)	Pool Fund (Total BDT)	City Corporation (%)	City Corporation (Total BDT)	Emptier (%)	Emptier (Total BDT)
300	2,000	600,000	50%	300,000	10%	60,000	40%	240,000
500	2,000	1,000,000	50%	500,000	10%	100,000	40%	400,000
1,000	2,000	2,000,000	50%	1,000,000	10%	200,000	40%	800,000
5,000	2,000	10,000,000	50%	5,000,000	10%	1,000,000	40%	4,000,000
7,000	2,000	14,000,000	50%	7,000,000	10%	1,400,000	40%	5,600,000
10,000	2,000	20,000,000	50%	10,000,000	10%	2,000,000	40%	8,000,000

Model 3:

In this model, a pool fund will be invested as fixed deposit preferably in the contracted insurance company at a competitive interest rate. This is proposed to pay at 60% of the total premium from the interest earning of the pool fund. The emptiers will pay the rest 40% of the premium. This model, compared to earlier ones, is better in sustainability context because the major share of the premium will come from the investment earning of the pool fund. However, the size of the pool fund needs to be adequate enough to ensure the required amount of premium contribution from its investment return. Development partners (e.g., SNV), the City Corporation/Municipality and local elites may contribute in the pool fund. However, collection of any amount of premium from the emptiers is burdensome for the insurance companies as the emptiers are not working at payroll in the City Corporation/ Municipality.

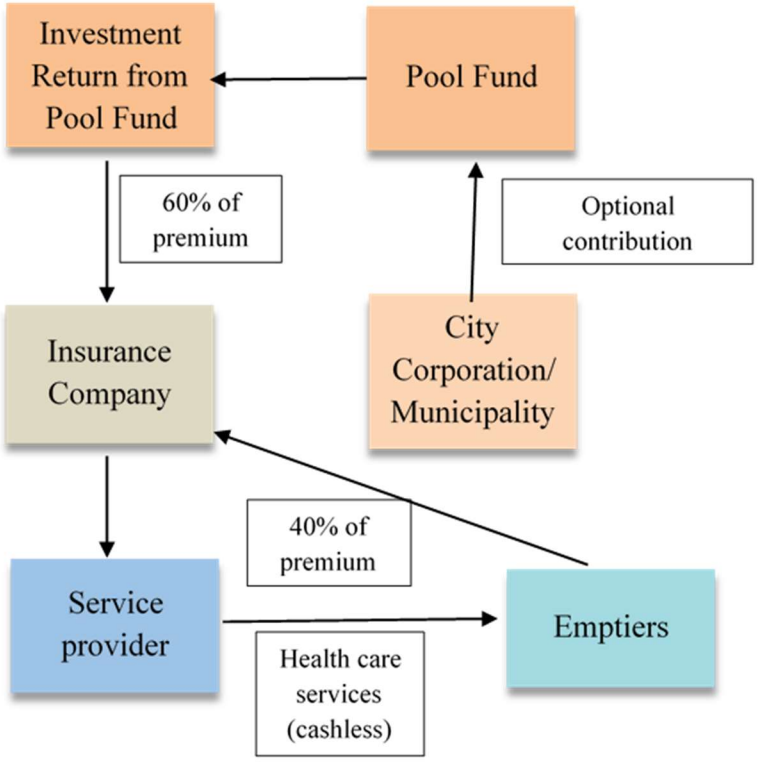

Figure 5: Premium sharing by investment return from pool fund (60%) and emptiers (40%)

If the number of emptier is 300, then for 60% of the premium (BDT 360,000) from the investment earning from pool fund, a total of BDT 6,000,000 pool fund is required (see the following table for details).

Table 12: Model 3 (60% Premium contribution from investment earning of pool fund)

No of Emptiers	Premium of Alpha (BDT per year)	Total (BDT)	Investment Earning from Pool Fund			City Corporation (%)	Emptier (%)	Emptier (BDT per HH)	Emptier (Total BDT)
			%	(BDT per HH)	(Total BDT)				
300	2,000	600,000	60%	1,200	360,000	0%	40%	800	240,000
500	2,000	1,000,000	60%	1,200	600,000	0%	40%	800	400,000
1,000	2,000	2,000,000	60%	1,200	1,200,000	0%	40%	800	800,000
5,000	2,000	10,000,000	60%	1,200	6,000,000	0%	40%	800	4,000,000
7,000	2,000	14,000,000	60%	1,200	8,400,000	0%	40%	800	5,600,000
10,000	2,000	20,000,000	60%	1,200	12,000,000	0%	40%	800	8,000,000

Model 4:

In model 3, 80% of the total premium will come from the investment return from the pool fund and the emptiers will pay the rest 20%. This model is more sustainable than the previous ones. However, the 20% contribution by the emptiers will be burdensome for them. As most of the emptiers are not in the payroll of the City Corporation/Municipality, the premium collection will be difficult.

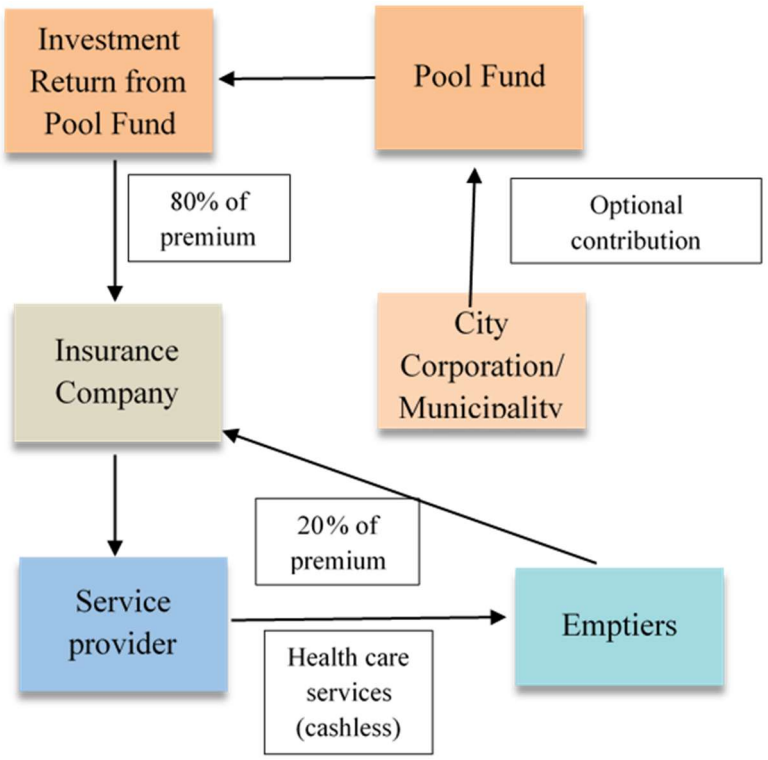

Figure 6: Premium sharing by investment return from pool fund (80%) and emptiers (20%)

If the number of emptier is 300, then for 80% of the premium (BDT 480,000) from the investment earning from pool fund, a total of BDT 8,000,000 pool fund is required (see the following table for details).

Table 13: Model 4 (80% Premium contribution from interest earning of pool fund)

No of Emptiers	Premium of Alpha (BDT per year)	Total (BDT)	Investment Earning from Pool Fund			City Corporation (%)	Emptier (%)	Emptier (BDT per HH)	Emptier (Total BDT)
			%	(BDT per HH)	(Total BDT)				
300	2,000	600,000	80%	1,600	480,000	0%	20%	400	120,000
500	2,000	1,000,000	80%	1,600	800,000	0%	20%	400	200,000
1,000	2,000	2,000,000	80%	1,600	1,600,000	0%	20%	400	400,000
5,000	2,000	10,000,000	80%	1,600	8,000,000	0%	20%	400	2,000,000
7,000	2,000	14,000,000	80%	1,600	11,200,000	0%	20%	400	2,800,000
10,000	2,000	20,000,000	80%	1,600	16,000,000	0%	20%	400	4,000,000

Model 5:

In this model, 100% of the premium will be derived from the investment earning from the pool fund. Though the emptiers will not pay anything for the premium, they need to pay BDT 200 as subscription fee each year. The City Corporation/Municipality will monitor and supervise the insurance scheme.

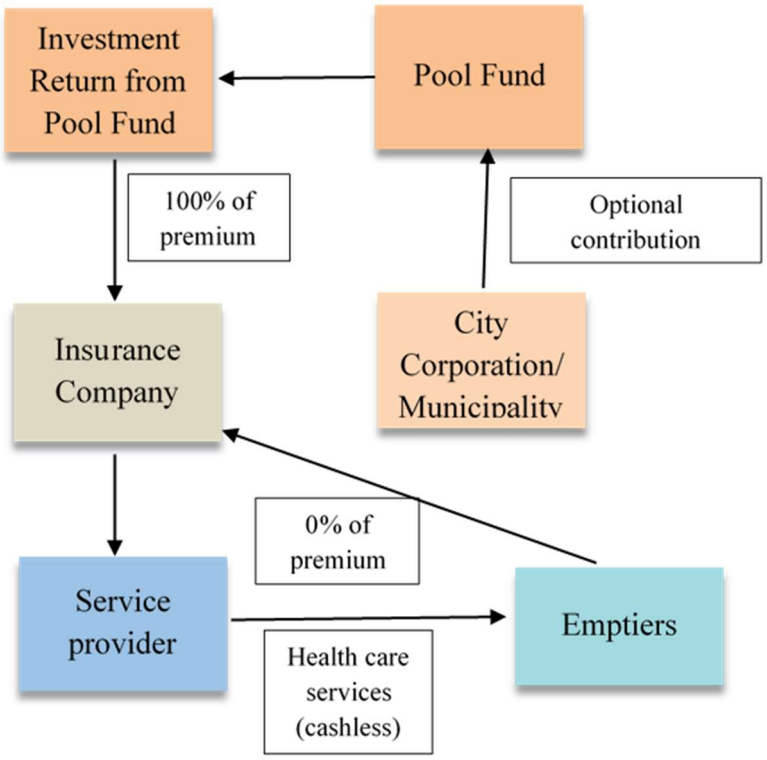

Figure 7: Deriving 100% of the premium from the investment earning of pool fund

If the number of emptier is 300, then for 100% of the premium (BDT 600,000) from the investment earning from pool fund, a total of BDT 10,000,000 pool fund is required (see the following table for details). There is no question regarding financial sustainability of this model if the size of the pool fund is adequately large to ensure the full premium from its return of investment.

Table 14: Model 5 (100% Premium contribution from interest earning of pool fund)

No of Emptiers	Premium of Alpha (BDT per year)	Total (BDT)	Investment Earning from Pool Fund			City Corporation (%)	Emptier (%)
			%	(BDT per HH)	(Total BDT)		
300	2,000	600,000	100%	2,000	600,000	0%	0%
500	2,000	1,000,000	100%	2,000	1,000,000	0%	0%
1,000	2,000	2,000,000	100%	2,000	2,000,000	0%	0%
5,000	2,000	10,000,000	100%	2,000	10,000,000	0%	0%
7,000	2,000	14,000,000	100%	2,000	14,000,000	0%	0%
10,000	2,000	20,000,000	100%	2,000	20,000,000	0%	0%

7 Conclusions and Recommendations

The concurrence of four major stakeholders (i.e., emptiers, city corporation/municipality, health care providers and insurance company) is critical for introducing health insurance for the emptiers. Despite the aforementioned challenges, Jhenaidah Municipality has some advantageous position for introducing health insurance for the emptiers as all the stakeholders have their concurrence with the provision of granting some subsidy from the municipality. Khulna has also some advantages as the city corporation authority showed their eagerness to take the responsibility of administering the scheme. The providers are also readily available in Khulna. Kusthia has similar advantages. Given all the conditions it seems that the proposed scheme can be introduced first in Jhenaidah or Khulna. However, the scheme should restrict the benefit package to Inpatient Department (IPD) only. The Urban Primary Health Care Services Delivery Project in Khulna can manage the outpatients care. In Jhenaidah, the primary care can be delivered through existing government facilities.

Given the socioeconomic background and nature of job of the emptiers, and financial condition of the City Corporation/Municipality, we recommend SNV to choose Model 5 where the whole premium will be derived from the return of investment of the pool fund accumulated through the contribution of SNV, respective city corporation/municipality, government and local elites.

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