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The Impact of Health Sector Reforms on Health Systems in Bangladesh: A Scoping Review

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LIST OF ACRONYMS

NGO	Non-governmental Organisation
MOHFW	Ministry of Health and Family Welfare
GDP	Gross Domestic Product
PCC	Population, Context, Concept
UHC	Universal Health Coverage
DP	Development Partner
SWAP	Sector-Wide Approach
SAP	Structural Adjustment Program
IMF	International Monetary Fund
WB	World Bank
HPSS	Health and Population Sector Strategy
NHP	National Health Policy
BMA	Bangladesh Medical Association
ESP	Essential Service Package
PHC	Primary Health Care
CC	Community Clinic
HNPSP	Health, Nutrition and Population Sector Program
HPNSDP	Health, Population, and Nutrition Sector Development Programme
BNC	Bangladesh Nursing Council
BNMC	Bangladesh Nursing and Midwifery Council
DNS	Directorate of Nursing Services
NES	Nursing Education and Services
HEU	Health Economics Unit
HRIS	Human Resource Information System
OP	Operation Plan
LD	Line Director

JFA	Joint Financing Agreement
LCG	Local Consultative Group
ADP	Annual Development Program
M&E	Monitoring and Evaluation
RFW	Results Framework
UHC	Upazila Health Complex
HRH	Human Resource Health
WHO	World Health Organisation
OOP	Out-of-Pocket Payment
MCH	Maternal and Child Health

ABSTRACT

Background

Climate-induced environmental changes, and their potential impact on population health, are among the most pressing challenges affecting health systems. These health impacts put additional strain on health systems, putting their resilience and capacity to deal with increased shocks and stresses to the test. Health systems are subject to a myriad of social and political changes often in the form of health sector reforms. We conducted a scoping review to explore the literature on health sector reforms in Bangladesh and understand their impact on health systems.

Methods

A scoping review was conducted by searching through academic (PubMed, SCOPUS, Web of Science and Google Scholar) and grey literature published in English and French between 1991 and 2021 that addressed health sector reforms or policies impacting health systems. Data on reforms and health systems was extracted from full texts.

Results

Our search yielded 2688 articles for screening and 22 were included in our scoping review. One of the major health sector reforms was the shift from a project-based approach of financing the health sector to SWAp. Studies found that implementing reform initiatives such as community clinics and a voucher scheme for pregnant women improved health care access and delivery of care especially for rural districts. Despite government efforts, there is a significant shortage of formally qualified health professionals especially nurses and technologists, low public financing, and relatively high percentage of out-of-pocket payments.

Conclusions

Evidence suggests that health sector reforms implemented within the last 30 years had a limited impact on health systems. More emphasis should be placed in the future on implementing reforms to address critical issues such as human resources for health and health financing, which may contribute to building their capacity to cope with emerging threats due to climate change and improving access to care.

Keywords

Health Sector Reforms, Health System

RÉSUMÉ

Contexte : Les changements environnementaux induits par le climat et leur impact potentiel sur la santé de la population sont parmi les défis les plus urgents affectant les systèmes de santé. Ces impacts sur la santé exercent une pression supplémentaire sur les systèmes de santé, mettant à l'épreuve leur résilience et leur capacité à faire face à des chocs et des contraintes accrus. Les systèmes de santé sont soumis à une myriade de changements sociaux et politiques, souvent sous la forme de réformes du secteur de la santé. Nous avons mené une étude de cadrage pour explorer la littérature sur les réformes du secteur de la santé au Bangladesh et comprendre leur impact sur les systèmes de santé.

Méthodes : Une étude de cadrage a été menée en recherchant dans la littérature académique (PubMed , SCOPUS, Web of Science et Google Scholar) et la littérature grise publiée en anglais et en français entre 1991 et 2021 qui traitait des réformes du secteur de la santé ou des politiques ayant un impact sur les systèmes de santé . Les données sur les réformes et les systèmes de santé ont été extraites de textes intégraux.

Résultats: Notre recherche a donné 2688 articles pour le dépistage et 22 ont été inclus dans notre revue de cadrage. L'une des principales réformes du secteur de la santé a été le passage d'une approche de financement du secteur de la santé basée sur des projets à une approche sectorielle. Des études ont démontré que la mise en œuvre la réforme des initiatives telles que co cliniques mmunity et av système oucher pour les femmes enceintes ont amélioré l' accès aux soins de santé et la prestation des soins en particulier pour les zones rurales . Malgré les efforts du gouvernement, il existe une pénurie importante de professionnels de la santé officiellement qualifiés, en particulier d'infirmières et de technologues, un faible financement public et un pourcentage relativement élevé de paiements directs.

Conclusion : Les preuves suggèrent que les réformes du secteur de la santé mises en œuvre au cours des 30 dernières années ont eu un impact limité sur les systèmes de santé. Il faudrait à l'avenir mettre davantage l'accent sur la mise en œuvre de réformes visant à résoudre des problèmes critiques tels que les ressources humaines pour la santé et le financement de la santé, qui peuvent contribuer à renforcer leur capacité à faire face aux menaces émergentes dues au changement climatique et à améliorer l'accès aux soins.

Mots clés

Réformes du secteur de la santé, système de santé

1. INTRODUCTION

1.1 Background

Globally, climate-induced environmental changes such as floods, droughts, and increased frequency and severity of climate-related disasters are influencing migration [1]. Climate change serves as a threat multiplier worsening existing socio-political and economic vulnerabilities, weakening livelihoods, and raising the likelihood of violence, making it impossible for people to stay where they are [1]. In this context, socioeconomic and demographic factors such as high population density, limited economic opportunities, unequal distribution of resources and services, and poor urban and land use planning coexist with climate risks and influence migration decisions for less developed countries [2].

The Sustainable Development Goal (SDG) 13 aims to “take urgent action to combat climate change and its impacts” [3]. Climate change and health are closely linked. Climate change has a direct or indirect impact on human health [1]. Malnutrition, allergies, cardiovascular diseases, infectious diseases, injuries, and respiratory diseases are consequences from the direct impacts of climate change such as heatwaves, floods and droughts or indirect impacts such as air pollution, poor water quality and ecosystem changes. These health impacts, especially for the most vulnerable, can increase the pressure on the health system [4]. Health systems play a vital role in providing accessible and quality healthcare for the population during and after climate-related disasters, actively engaging in community efforts to adapt and mitigate climate change[1] [5]. Adaptation meaning to increase the resilience of health systems to address the burden of disease from climate change and to strengthen public health and health services [6].

The term "resilience" has been used for many years in other fields, but the Ebola epidemic in West Africa and its influence on local health systems popularized the concept in global health [7]. The Ebola outbreak demonstrated how a crisis could rapidly spread and present tremendous challenges in the absence of a strong health care system that can react quickly and effectively. The capacity of the health system to function was limited in many of the countries affected by the outbreak such as Guinea, Liberia and Sierra Leone. Inadequate number of qualified health professionals and weak infrastructure, logistics, governance and drug supply were some of the observed health system challenges. Out-of-pocket payment was very high and government health expenditure was low [8]. Similar health system challenges were observed in countries affected by the Zika virus outbreak and the European financial crisis of 2008-2009 [7]. Initially focusing on acute shocks to the health system, such as the Ebola outbreak and natural

disasters, health system resilience has expanded to include health systems' dealing with chronic stresses that constantly threaten the system's performance or ability to adapt [7].

Hence, the Climate Change, Migration and Health Systems Resilience in Haiti and Bangladesh (ClimHB) project aspire to contribute, empirically, to the definition of health system resilience parameters, and evaluate the accessibility and resilience of local health systems in Haiti and Bangladesh [9]. Our working definition of health systems resilience based on the review of scientific literature is "the constituents' abilities of a health system facing destabilizing experiences, events or shocks (contingent or expected, sudden or insidious, internal or external) to adapt and transform in order to maintain and improve access (for all) to comprehensive, relevant and quality health care and services without pushing patients into poverty" [10]. A resilient health system is one that adequately protects human life during and after a crisis while delivering everyday health services for the population [11].

1.2 Country Context

Bangladesh is one of the most populous countries in the world, with a population of about 164.6 million and a life expectancy (at birth) of 72 [12]. Over the past decades, Bangladesh has made remarkable progress in key health indicators from the Millennium Development Goals (MDGs) era to the Sustainable Development Goals (SDGs). Under-five mortality ratio (per 1,000 births) has decreased from 125 in 1995 to 28 in 2019. The maternal mortality ratio (per 100,000 births) has dropped from 447 in 1995 to 165 in 2019, while the percentage of births attended by skilled health personnel has increased from 9.5% in 1994 to 59% in 2019 [13]. However, Bangladesh continues to face the challenge of providing full coverage of essential services for the population as a result of the disparities in access to these services across socioeconomic levels, as well as between rural and urban areas [13].

Geographically, Bangladesh is a low-lying river delta characterized by a subtropical monsoon climate, a wide range of ecosystems and high exposure to natural disasters[14]. From 1970 to 2010, there was a significant temperature warming with a mean rate annual temperature increase by 0.02°C per year, which was much higher than the global average [15]. There was also a decrease in the number of cool nights and increase in warm nights over this period for both hot and cold seasons [16]. These climate variations are one of the cited reasons for ranking sixth on the Global Climate Risk Index 1996–2015 prepared by the German Watch [17].

Bangladesh has a pluralistic health system which consists of the Government, the private sector, NGOs and International donor organisations [18]. The Government, the private sector and NGOs are engaged in service delivery, financing and employing health staff while donors play a key role in financing and planning health programmes [18]. The Government provides public healthcare through the Directorate General of Health Services (DGHS) and Directorate General of Family Planning (DGFP) under the Ministry of Health and Family Welfare (MOHFW) at the central level. There are six tiers of healthcare infrastructure under the DGHS: national, divisional, district, upazila (sub-district), union, and ward levels [12]. At the rural level, the Ministry of Local Government, Rural Development and Cooperatives are tasked with providing rural primary care services. However, the provisions of these services are faced with challenges such as insufficient resources, institutional limitations and absenteeism or negligence of providers. The private sector (formal and informal) and NGOs fill the gap in service delivery through its network of facilities [18].

Bangladesh is a unitary state and parliamentary democracy. The President is the head of state but real power is held by the Prime Minister, who is the head of government [18]. The Central Government is in charge of running the health system, with planning undertaken by the Ministry of Health and Family Welfare and little authority delegated to the local level. Public healthcare is highly subsidized by the government, with nominal payments required from patients, especially for the outpatient care. Health insurance, both national and private, is practically non-existent [19]. Health financing is underfunded; only 2.34% of gross domestic product (GDP) is spent on health, which is the lowest in the south Asia region [20].

1.3 Health Sector Reforms and Health System Resilience

Health systems are subject to a myriad of social and political changes often in the form of health sector reforms. Health sector reform is a concept that does not require a single universal definition. However, health sector reforms can be defined as 'sustained, purposeful changes to improve the efficiency, equity, and effectiveness of the health sector' [21]. Health sector reforms focus on setting policy objectives covering core functions of the health system, revising policies, and reforming the institutions that implement these policies [22]. Many health sector reforms have failed to reach their policy objectives as they primarily focus on the content of the reform, ignoring the process of implementation, the context surrounding the development of the reform, and actors involved in implementing the reform [23].

Reforms of modes of governance, funding structures, health human resource or delivery of care are all types of health system disturbances or shocks that can have both positive and unintended effects. Yet, these shocks or disturbances caused by the intentional action of actors at the International, national or local level are widely overlooked in the health system resilience literature [24]. Kagwanja *et al* [25] describes the shocks and significant changes in the health system processes as a result of rapid devolution of power and policy changes in Kenya. These politically and socially driven changes are ignored as 'disturbances' perhaps due to their less sudden, more structured, and political nature that differs from the default definition of the term 'shock' [24]. The growing attention to health system resilience must take account these health systems disturbances, not just the sudden shocks such as epidemics and natural disasters.

2. OBJECTIVES AND RESEARCH QUESTIONS

2.1 Objectives

The objective of this thesis was to explore the literature on health sector reforms in Bangladesh, and understand their impact on the health system.

2.2 Research Questions

A scoping review is a review methodology that allows for an exploration of the nature and extent of literature evidence available on a subject area. For this scoping review, our research question was: "What are the impacts of health reforms in Bangladesh on health systems?"

To be able to answer this question, the following sub-questions were explored:

1. What are the health sector reforms implemented in Bangladesh within the last 30 years?
2. What are the impacts on the health system as a result of these health sector reforms?
3. How has the health sector reforms improved or limited access to care?

3. CONCEPTUAL FRAMEWORK

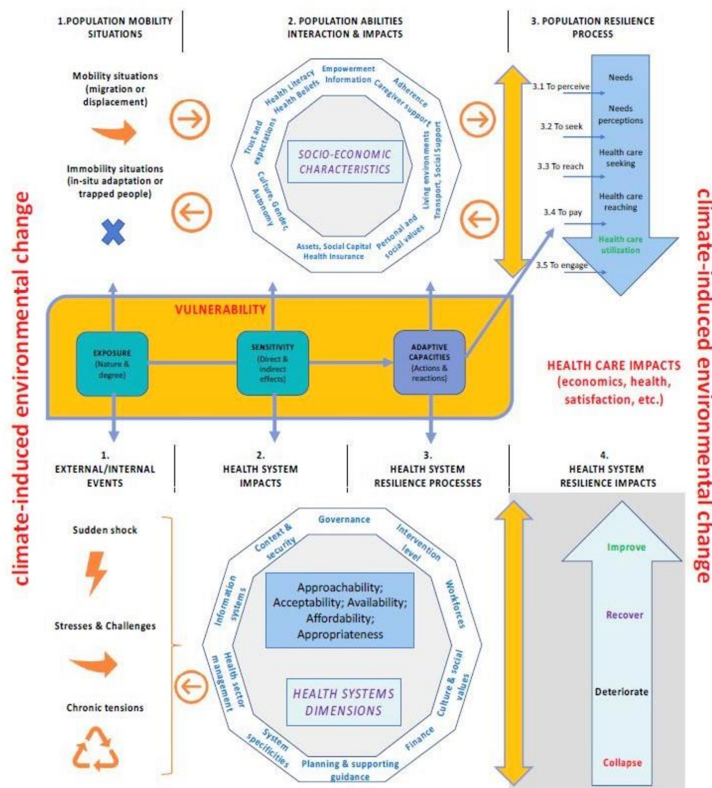
For this review, we are using the CLIMHB conceptual framework and the Health Policy Triangle framework to our work.

- *CLIMHB Conceptual Framework*

The conceptual framework [26] (fig. 1) is an innovative and integrated framework that attempts to make interactions between population and health systems intelligible in the context of climate change and (im)mobility, and with regard to their vulnerability and resilience. Reducing vulnerability (of systems and populations) and strengthening the resilience of health systems go hand in hand to protect people's health from climate-related health consequences. This framework is grounded in three main conceptual stances:

- DFID (Department for International Development – UK) [27] framework for integrating resilience into their work on climate change and conflict prevention;
- World Health Organisation (WHO) [28] and Institute of Tropical Medicine (ITM) [29] building blocks to facilitate the organization and construction of health systems;
- Levesque et al.[30] framework to examine the interactions between the health system and the population in achieving access to care;
- Kruk et al [10], resilience approach whose particularity is to attribute to health systems intrinsic qualities usually used for living organisms (consciousness, qualities of adaptation, transformation, self-regulation, etc.).

Figure 1. Conceptual Framework

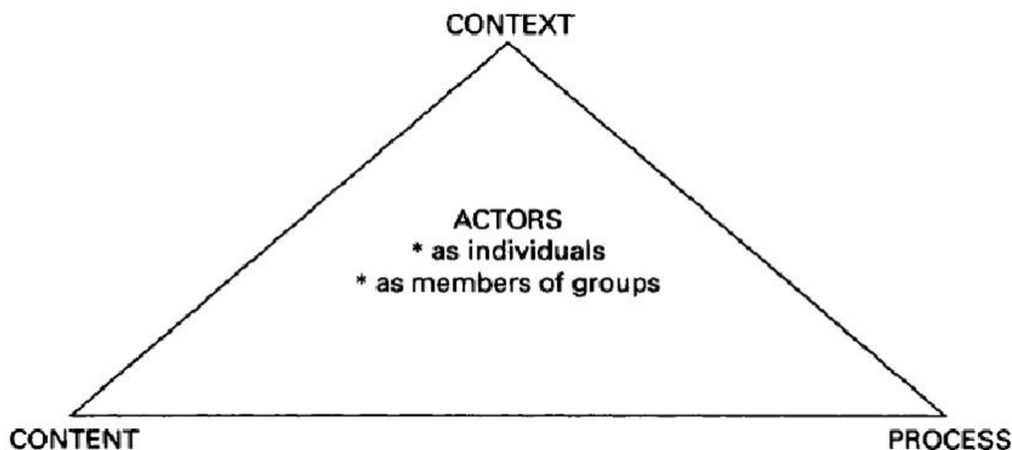


For this thesis, we adopted this conceptual framework focusing on the bottom section of the framework which revolves around health systems functioning. First, the bottom left section shows the different types of external or internal events— in this context health sector reforms — that disrupt the functioning of health systems. Second, it shows how these disturbances' impact the health systems, more specifically the health system dimensions, through the 10 categories and the 5 abilities, i.e. the dimensions of access to care defined by Levesque et al [30] of a health system to secure access to care for populations. The health system dimensions are Governance, Intervention level, workforce, cultural and social values, finance, planning and supporting guidance, systems specificities, health sector management, information systems, and context and security. The 5 abilities are Approachability, Acceptability, Availability, Affordability, and Appropriateness. The arrow at the bottom left also shows the possible interaction between the health system and some of the events to hypothesize that the former may also have an influence on the latter possible only for events related to the health system (chronic tensions; challenges).

- *Policy Analysis Framework*

Policy analysis is central to health sector reforms and best based on an existing framework [31]. We examine the health sector reforms using the policy analysis framework [23] as this is useful for understanding an existing policy [32]. Most policy analysis focus on policy processes but the policy analysis model focuses on the policy process, content of the policy, actors involved in formulating and implementing the policy and the context within which policies are developed (fig. 2). This framework offers a broader understanding of health reforms.

Figure 2 Policy Analysis Framework



Context refers to the political, social, and cultural factors that might influence the policies. Content refers to aims or objectives of the policies. Process refers to the implementation of the policies. Actors refer to the individuals or organisations that influence the implementation of the policies.

4. METHODOLOGY

We used a scoping review method to synthesize all relevant studies on health sector reforms and health systems in Bangladesh. Compared to other review methodologies, a scoping review is an ideal tool because it allows us to identify the types and volume of literature available in a specific field and an overview of its focus [33]. We conducted our review using the Arksey and O'Malley [34] methodological framework and further refined by the Joanna Briggs Institute [35]. We used the Joanna Briggs Institute Preferred Reporting Items for Scoping Reviews (PRISMA-ScR) guideline [36] for reporting of the scoping review.

4.1 Protocol and Registration

Our protocol was developed following the Joanna Briggs Institute (JBI) on conducting scoping reviews and published on protocols.io.

4.2 Eligibility Criteria

We included the following types of papers:

- Articles published between 1991 and 2021 to identify reforms implemented in the last 30 years;
- Articles published in English or in French;
- Articles focused on health sector reforms impacting health system dimensions;
- Articles are peer-reviewed articles, literature reviews, book chapters, grey literature, reports;

We excluded articles published before 1991, focused on health sector reforms implemented above the last 30 years, not focused on health sector reforms impacting health system dimensions and are not accessible or available in full PDF version.

4.3 Information Sources and Search Strategy

The literature search was conducted in PubMed, Web of Science, SCOPUS and Google Scholar database for the relevant published papers with the broad search terms 'reforms' AND 'health systems' AND "Bangladesh", and controlled vocabulary terms such as 'healthcare

system', 'health policy' and 'healthcare sector' from March, 2021 to April, 2021. Terms which were similar were combined using the Boolean operator "OR" and sets were combined with the Boolean operator "AND". Only studies published in English and French were considered. The search strategy was developed using the PCC (Population (or participants)/Concept/Context) framework recommended by the Joanna Briggs Institute [37]. Unlike systematic literature studies or clinical studies, outcomes or comparator or interventions in the PICO (Population, Intervention, Comparator and Outcome) framework are not the focus in a scoping review. We engaged the support of a research librarian and information specialist to review the search strategy and make suggestions. The final search strategy is provided in Appendix 1-4.

4.4 Selection Process

Search results were imported into an online systematic review software called Rayyan [38]. Rayyan is a free web-tool designed to help researchers working on systematic reviews, scoping reviews and other knowledge synthesis projects, by speeding up the process of screening and selecting studies. Studies were selected by one reviewer (TU) and a second reviewer (VR) was consulted whenever difficulty or questions arise during any stage of the title screening, abstract screening and full article review. The screening process consisted of the evaluation of titles and abstracts of the retrieved studies according to the inclusion criteria followed by the assessment of the full-text articles. The full text of remaining articles and disagreements were resolved by discussion and consensus.

4.5 Data Extraction

A data extraction matrix using Excel was used to extract all relevant data such as author(s), title, year of publication, journal name, nature of authorship, methodology, objectives, key findings, reforms, and impact on health system dimensions and access to care. For included articles reporting on reforms, we extracted the data based on the policy analysis framework [23]. For our extraction, under Context, we analysed the political, social, and cultural factors that might have influence on the reforms. Under Content, we outlined the aim, design and planned activities of the reforms. Under Process, we discussed the limiting and supportive factors to the implementation of the reforms. Under Actors, we identified persons or organisations and their roles in the reform process. For included articles reporting on health systems, we extracted the data based on the health systems dimensions in our conceptual framework. The extraction of the data was conducted by two reviewers (TU and LC) independently and a second reviewer (VR) verified the extraction. Differences in extraction between the two reviewers were resolved by discussion and consensus. The data extraction form is provided in Appendix 5.

4.6 Synthesis of results

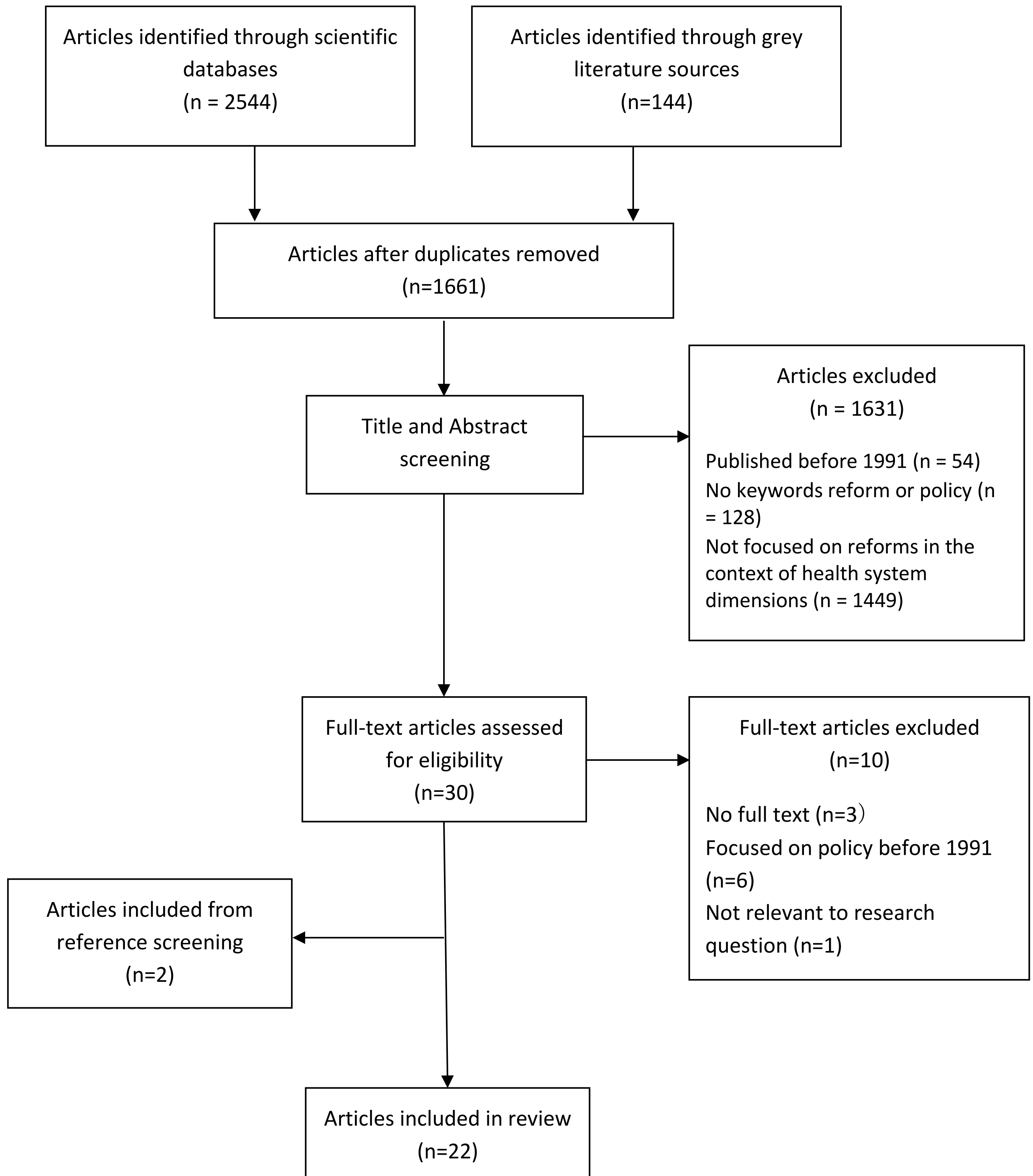
A narrative synthesis [39] was conducted by TU. No statistical analysis is planned or executed, given the focus on presenting an overview of the evidence on a specific topic. All the extracted data was tabulated to summarise the characteristics and enable comparison and analysis across studies. The key findings of all included studies are reported in Appendix 6.

5. RESULTS

5.1 Search findings

Our literature search resulted in a total of 2688 studies (2544 from scientific databases and 144 from grey literature database). After excluding 1027 duplicates, 1661 studies remained for title and abstract screening. After title and abstract screening, 1631 studies were excluded. Reasons for exclusion were: (i) published before 1991 (ii) no keywords (reform or policy) (iii) not focused on reforms in the context of health system. The remaining 30 potentially acceptable studies were reviewed through full-text screening, 3 studies were immediately excluded for non-availability of full text and 6 studies that focused on policy prior to 1991 and had findings not relevant to our research question were excluded. An additional 2 studies were included after screening references. A final list of 22 studies met all the eligibility criteria. Figure 2 shows PRISMA flow diagram of the study selection process.

Figure 2: PRISMA Flowchart



5.2 Study Characteristics

Among the 22 articles included, 1 was published in 1994, 1 in 1995, 1 in 2000, 2 in 2003, 3 in 2007, 2 in 2008, 3 in 2011, 1 in 2012, 1 in 2013, 3 in 2015, 1 in 2017, 2 in 2018, 1 in 2019, 1 in 2020, and 1 in 2021 so far. First authors in 10 studies were affiliated with institutions in Bangladesh (local) [40-49], 8 studies were affiliated with institutions in Bangladesh and outside Bangladesh (collaborative) [50-57] and 4 studies were affiliated with foreign institutions (foreign) [58-60]. We identified 4 articles that adopted a conceptual framework to guide their work; 2 articles used the health Policy Triangle framework [46, 48], 1 article used the Universal Health Coverage (UHC) Cube [43] framework and the last article developed a Conceptual framework for their study [50].

5.3 Reforms in Bangladesh

5.3.1 Context

Since gaining its Independence in 1971, development partners have played a crucial role in financing a series of family planning and health projects in Bangladesh [55, 60]. The Government of Bangladesh was rebuilding from a brutal liberation war in which around 3 million people died and most of the country's infrastructure was destroyed. Worse still, the country had high mortality rates, poor female literacy and vulnerability to natural disasters, especially floods and starvation [50]. During this period, health sector operations were primarily focused on population control and providing basic healthcare for the population especially the poor and disadvantaged [40]. However, the family planning and health projects were not effective or sustainable [60].

Around the 1990s, a new concept – Sector Wide Approach (SWAp) – to provide aid to developing countries via a single channel was adopted by significant bilateral and multilateral donor institutions, such as the World Bank and the aid-consortium member organizations[40, 55]. At this time, Structural Adjustment Programs (SAPs) had been adopted by Bangladesh as a condition for funding from the International Monetary Fund (IMF) and the World Bank (WB). It began with ‘structural and sectoral adjustment loans’ from the WB in 1980 [56]. Processes such as economic liberalization and privatisation had resulted in reductions of government funding for health services, impacted the nature of health service delivery and increased the influence of donors on public health policy. One third of the overall international development aid commitments to Bangladesh between 1980 and 1996 were Structural Adjustment lending that amounted to US$5.97 billion, involving 93 projects, among which US$4.65billion was disbursed [56].

Bangladesh being a developing country that depends on foreign financing to implement public policy was obliged to adhere to the agenda of the International donor community [40]. The consensus developed by the Government of Bangladesh (GoB), development partners and other stakeholders was that health sector reform programmes would be crucial to sustaining progress toward improving population health and slowing population growth. In 1996, the Government of Bangladesh was required to work towards a comprehensive sector-wide strategy that included structural and organizational reform agenda by the Ministry of Health and Family Welfare (MoHFW) to further obtain loans from its development partners [56, 61]. The Health and Population Sector Strategy (HPSS) implemented in 1997 was an outcome of this work [60, 61, 56]. The HPSS supported several institutional and governance reforms that gave the health sector a new path towards efficiency and cost-effectiveness [40].

In the middle of 1990, Bangladesh's then military dictator, Mr Hussain Muhammad Ershad, wanted to implement the first National Health Policy (NHP) strongly influenced by the HPSS [40]. The National Drug Policy 1982 successfully adopted about 8 years earlier in the same regime was one of the key drivers for the planned 1990 National Health Policy [42]. The National Health Policy was the result of commendations by the Health Care System Improvement Committee. This committee was formed in 1987 by the Government of Bangladesh with key members such Dr. Zafrullah Chowdhury; a public health activist [42]. The primary aim of the NHP, which came into being in 2000, was to provide sector-wide services, rather than project oriented services [61]. However, the National Health Policy brought unanticipated political conflicts that might have influenced the subsequent resignation of the military leader [42].

5.3.2 Content

- *Aims/Objectives of the reforms*

The Ministry of Health and Family Welfare (MoHFW) acknowledged the lack of an integrated, cost-effective health care in the existing health system. The Ministry of health and Family Welfare envisaged that SWAp would address the challenges identified in three ways: (1) better coverage of essential health and family planning services would be guaranteed through technical assistance and coordinated financing; (2) cost-effectiveness of service delivery through leveraged sectors reforms and (3) participation by NGOs and the private sector in service delivery. The MoHFW had this objective for the development programs across the sector [60]. The Health and Population Sector Programme (HPSP) was the inaugural SWAp, which ran from 1998 to 2003 [60, 40, 51, 54]. It was led by the government and funded by pooled and

bilateral funding from the government and development partners. The HPSP's major goal was to use a "one-stop" service model to decentralize the delivery of the essential service package (ESP) of Primary Healthcare (PHC) to rural communities from community-based Community Clinics (CC) [60, 54].

In 2003, the second SWAp programme was created and implemented from 2003-2011 and was entitled the Bangladesh Health, Nutrition and Population Sector Programme (HNPSP). HNPSP's overall aim was to improve the availability and use of user-oriented, efficient, fair, affordable and accessible Health, Nutrition and Population (HNP) quality services [60, 40, 53]. The Health, Population, and Nutrition Sector Development Programme (HPNSDP) 2011–2016 was the third SWAp programme to be implemented in 2011. The HPNSDP's primary goal was to strengthen health systems and improve health and family planning services. The overarching goal of all three HNP SWAps had been to improve access to and utilization of an essential package of health, population, and nutrition services, particularly among vulnerable populations such as poor women and children [60].

The National Health Policy approved in 2000 aim was to reach people at all levels, especially the poorest, with basic health services, to make primary healthcare available at the union and upazila levels, to improve maternal and child, and reproductive health services, and to strengthen family planning services [40]. In 2011, the Government of Bangladesh implemented a new and comprehensive health policy based on the first National Heath Policy. The highest priority was accorded to PHC in the document. The policy paper contained 19 objectives some of which were aligned with the Millennium Development Goals such as reducing maternal and infant mortality rates [42], 17 fundamental principles and 39 operational strategies [45]. The Bangladesh national health policy 2011 objectives were to ensure accessibility of PHC and emergency services for all; to provide quality, equity-based services for all and to extend coverage of quality health services; and to increase community demand for healthcare while respecting rights and dignity [42].

Under the Health, Population, and Nutrition Sector Development Programme, a key policy document addressing Universal Health Coverage (UHC) in Bangladesh titled ‘Health Care Financing Strategy 2012-2032: Expanding Social Protection for Health towards Universal Coverage’, was produced by MoHFW's Health Economics Unit (HEU). This document, which was designed for the next 20 years to address health funding issues, also proposed ways to combine funds from tax-based budgets with proposed social health protection schemes

(including for the poor and the formal sector), existing community-based and additional advance payments schemes and donor funding for financial health protection for all segments of the population, starting with the poorest [43].

- *Planned Reform Initiatives*

During 1998–2016, several reform initiatives were planned under the health sector reform programmes to improve the health system and service delivery. A list of selected reform initiatives includes:

a. A change in management from a project-based approach to a sector-wide approach [40, 54]
b. Decentralization in the delivery of the essential service package utilizing the concept of a 'one-stop' service model in order to provide basic health and family planning services to rural communities from static Community clinics [40, 51, 53, 54].
c. Diversification of services through the involvement of stakeholders, including non-governmental organizations (NGOs), and the implementation of diverse policies and initiatives (e.g. gender strategy; drug policy; etc.) [60].
d. Unification of the Ministry of Health and Family Welfare's health and family planning wings to reduce service delivery duplication and overlap for improved healthcare [60, 40, 61, 51, 59, 52].
e. Improving financial management (FM) and procurement processes, outsourcing services, and establishing an NGO contracting system [60].
f. Developing a national health care financing framework, and expanding the Demand Side Financing program based on its evaluation [58].
g. Creating a Monitoring and Evaluation strategy and implementing an online procurement tracking system [58].
h. Developing cadres of health assistants and family welfare assistants, as well as training personnel and health personnel [45].
i. Creating a Human Resource (HR) plan, establishing a functional HR Information System (HRIS), and implementing incentive packages to deploy and retain a critical health workforce in remote and rural areas [58].
j. Addressing the challenge of skilled-birth attendance by training community-based skilled birth attendants and/or nurse-midwives, midwives, and family welfare visitors, and streamlining the recruitment and promotion of nurses [58].
k. Construction of a large number of community clinics [51].

5.3.3 Process

The Health and Population Sector Strategy of 1997, developed collaboratively by the Government of Bangladesh and development partners beginning in late 1995, signalled the decision to shift from a project-based modality to a SWAp. The Government of Bangladesh agreed to carry out the health sector programmes through operational plans (OP), each of which would be supervised by a Line Director (LD). Each OP contained a set of SWAp tasks, as well as funds and periodic performance and resource reviews headed by the Ministry of Health and Family Welfare. The Bangladesh government pledged to conduct an annual program review at the end of each year. The MoHFW and development partners agreed on the program performance indicators, which are reviewed each year following the publishing of the GOB's final report [60].

There were changes, however, to the implementation process during the Health, Population, and Nutrition Sector Development Programme (2011-2016) based on learnings from the previous SWAp programmes. The partnership agreement between the Government of Bangladesh and its development partners for the programme was strengthened further through a Joint Financing Agreement (JFA). The consultation process between the Ministry of Health and Family Welfare and Development Partners was also further improved by replacing the Health, Nutrition and Population Forum with the Local Consultative Group (LCGHealth), which is part of the GoB-DP overarching coordination mechanism [58].

The Ministry of Health and Family Welfare shared the Annual Development Program (ADP) budget with the development partners to ensure that priority interventions were sufficiently resourced. The Annual Progress Report (APR) was synced with the preparation of the OPs and ADP by the Ministry of Health and Family Welfare and development partners to ensure that the APR recommended actions were included and implemented. The Health, Population, and Nutrition Sector Development programme had a coherent multi-year integrated and consolidated technical assistance strategy, which was prepared, to assist implementation and enhance the Ministry of Health and Family Welfare institutional capacity at various levels, as well as improve focus on achieving outcomes and carrying out the agreed-upon reforms [58].

- *Limiting and Supporting factors*

In the early years of SWAp, the Ministry of Health and Family Welfare’s ownership and leadership was relatively weak, as evidenced by the management of the SWAp's Annual Program Review by the development partner supported and World Bank-run Programme

Support Office (PSO), and development partners' reluctance to give up control over aid management and coordination due to 'weak government capacity, inadequate accountability and compromised integrity'. Despite high tenacity by DPs, a number of reform projects failed during the first two SWAp programmes, owing mostly to poor adaptation of planned activities to changing policy environments [60]. The military dictatorship attempted to draft a National Health Policy (NHP) but failed due to heavy internal stakeholder lobbying (political parties and other groups) and external (multinational corporations, international NGOs) pressures. The next government, led by the Bangladesh Nationalist Party (BNP), halted the integration of the Health and Family Planning wings inside the Ministry of Health, apparently due to the strategy's "substantial failure" to reduce the overall fertility rate (TFR) [61].

A quarter of the pooled funding administered by the World Bank were allocated under HNPSP for performance-based financing (PBF) based on the Ministry of Health and Family Welfare and development partners' annual fulfilment of agreed-upon indicators in order to leverage changes/reforms that were deemed to contribute to SWAp objectives and promote achievement of key health outputs. This modality was initially not very successful in terms of meeting the targets set, and the amount set aside for PBF in the first few years was not disbursed, owing to insufficient incentives for results and weak links between the agency responsible for meeting the targets and the recipient of the PBF funds. Moreover, some development partners exited the Health, Nutrition and Population sector (e.g. AusAID, EU, The Netherlands, GIZ) [60].

The HPSP was not fully implemented as intended. The World Bank Implementation, Completion and Results report rated the HPSP as 'unsatisfactory'. One of the main issues reported was the unification of health and family planning services. The unification was resisted at the district levels and above but supported at the local level [40, 51]. In 2001, there was a change in government which halted the unification, later reversed in 2003.The construction of community clinics was also halted by the new government after 2001 [51]. Findings show that the unification of health and family planning wings, withdrawal of domiciliary services and inefficient management including insufficient supply of drugs, poor supervision, were the main barriers to achieving the expected results during HPSP [40]. Reform planners ignored the role of context in their reform objective planning and expected that the workforce would be a passive element in reform implementation [52].

Despite several limiting factors, the Government of Bangladesh has remained committed to health improvements. Bangladesh has a favourable political climate that supports health sector

reforms aided by institutional continuity of civil servants and partnerships between government and non-governmental sector even with political transitions from military to civilian rule [50, 40].

5.3.4 Actors

Under SWAp in Bangladesh, the Government of Bangladesh plays a major role alongside the World Bank, International Monetary Fund, Development partners, and other stakeholders such as health professionals, traditional practitioners, non-profit health workers [55, 50, 56, 51, 53, 54, 45, 59, 52, 44]. Over the past 15 years, the Government of Bangladesh's financial contribution to health SWAp programmes have increased and the share from development partners has gradually reduced. The Government of Bangladesh contributed US$ 2.2 billion (62%) to the Health and Population Sector Programme, US$ 5.4 billion (67%) to the Health, Nutrition and Population Sector Programme, and US$ 7.7 billion (76%) to the Health, Population and Nutrition Sector Development Programme. The remaining percentage share were co-financed by the World Bank, Canada, Germany, Netherlands, Sweden, United Kingdom, European Union, UNFPA, Australia and United States were co-financiers and development partners for all three health SWAp programmes from 1998 to 2016 [60].

The World Bank, in particular, assumes a more significant position in Bangladesh's health sector. The Bank's duty is not limited to financing healthcare programmes; it also establishes priorities for where and how the money for programmes should be spent [56]. The Ministry of Health and Family Welfare is the primary policy-making body in Bangladesh and in charge of capacity building [48]. The change in political power in 2009 influenced the MoHFW to revise the existing National Health Policy and adopt a new one [61]. The Health Care Financing Strategy 2012-2032 developed by the HEU was actively supported by donor partners [43].

5.4 Impact on Health System Dimensions

5.4.1 Health Sector Management

Three studies identified decentralization of the administrative systems following introduction of health sector reforms [42, 44, 49]. The centralized administrative system in Bangladesh caused significant problems to health service delivery such as inadequate allocation of resources for activities at the local level, centralized decision making on local issues, poor monitoring and evaluation system [56]. Decentralization in Bangladesh happened in the form of power deconcentration, with some authority and responsibility transferred from the central level to

senior program managers, often known as Line Directors, who have complete autonomy on administrative and financial affairs.

The administration in the health sector was also decentralized at the sub-district and lower levels to increase the public health sector's capacity to deliver high-quality services. However, actual decentralization under the health sector reform programmes had not been achieved as the healthcare system never undertook a devolution process. The operations and power had been decentralized to senior program managers who were placed at the national level, rather than to lower tiers of administration such as district, sub-district, and union level [42, 44, 49]. This impacted the allocation of health resources at the local levels, and restricted the local authorities from addressing local issues [44, 49].

One of the reform initiative planned under the health sector reform programmes was diversification of services through the involvement of other stakeholders. One study reported that under the HNPSP, diversification of services was achieved through official collaborations between the private and public sector known as Public Private Partnerships (PPP). This partnership resulted in a shift of government's role from 'provider' of health services to that of a 'purchaser' [40]. Another study reports that the unification of the MoHFW health and family planning wings introduced by the health sector reform programmes resulted in conflicts as National and district family planning directors and their subordinates lost authority to lower-level personnel [52] . The MoHFW health and family planning wings subsequently returned to the divided old system, as well as the restoration of domiciliary services [40].

5.4.2 Workforce

Four studies reported the improvements in the availability of qualified health professionals, as well as shortages with the introduction of the health sector reforms [60, 55, 41, 47]. Under the health sector reform programmes, the density (per 10,000 populations) of physicians and nurses has increased over the last decade (from 1.9 physicians and 1.1 nurses in 1998 to 5.4 physicians and 2.1 nurses in 2007) probably owing to the government's reform initiative to train more health personnel . The density of dentists also increased but still quite low (from 0.01 in 1998 to 0.3 in 2007) [41]. This increase in qualified health professionals explains the significant growth in outpatient consultations and admissions in government health institutions [60].

Despite these improvements, physician retention in rural areas, and skewed health workforce toward physicians remains a serious problem [60, 55]. The density of formally qualified healthcare professionals (physicians, nurses and dentists) is relatively low at 7.7 compared to other South

Asia countries. The present nurse-to-doctor ratio of 0.4 (2.5 times more doctors than nurses) falls significantly short of the international standard of three nurses per doctor [41]. Based on the existing doctor-to-population ratio in low-income countries, an estimated shortfall of about 60,000 doctors, 280,000 nurses, and 483,000 health technologists exists in Bangladesh. The overwhelming urban bias in the distribution of qualified healthcare professionals observed over a decade ago still remains a persistent problem. Many of these health providers are disproportionately concentrated in Dhaka and Chittagong [41, 47]. This shortage and maldistribution of health care professionals, support and technical workers hampers the commitment to attain health reform objectives [55].

5.4.3 Finance

Five studies cited increase in health finance for health services with the introduction of health sector reforms. It also reports on the poor financial management, low public funding and high out-of-pocket payments as significant problems of the Bangladesh Health Care System [60, 40, 42, 49, 47]. Under the HPNSDP, development partners financing grew from around USD 800 million to USD 1.8 billion, enabling the MoHFW to plan and implement key health reform initiatives. Development partners financing also explains the increase in the MoHFW budget execution capacity from spending 76% of its annual allotment in 2004–2005 to 89% in 2011–2014 [60]. The introduction of ESP during the HPSP period led to more spending on primary healthcare (between 60% and 70% of public expenditure), focused attention on maternal and child care, and shifted the attention from hospitals to primary healthcare (PHC) services used by the lower class [40]. This meant improved access to basic essential services for the lower class located mostly in rural areas.

Unfortunately, the health sector reforms have not had much impact on increasing public health expenditure and providing financial protection. Two studies reported that Bangladesh spent approximately 3.4% of its GDP on health in 2014, with the government contributing approximately 1.1% which was lower than Island countries such as Maldives (10.611% of GDP) [42, 49]. The total health expenditure in dollars was approximately US$12 per capita per annum, of which only US$4 was spent on public health. There was a significant difference in the MOHFW health expenditure at different levels with the highest healthcare allocation (27%) going to the richest quintile compared to 21% to the poorest quintile [49]. Currently, only 2.8% of the country's GDP is spent on health and over two-thirds of overall health expenditure is paid for privately, through out-of-pocket expenditures including cost for drug purchases and medicines [49, 47].

Health Insurance in Bangladesh practically does not exist, though there had been efforts by NGOs to pilot health insurance schemes [49].

5.4.4 Planning and Supporting Guidance

Two studies report the improvement in procurement and supply chain processes, and monitoring and evaluation capacity during the health sector reform programmes [60, 58]. One study reports that the SWAp era introduced a centralized procurement method for economy of scale in bulk purchase. This led to a decrease in procurement process lead time for important medical equipment from 46 months to 26 months, and decrease in the percentage of procured equipment lying idle at health facilities from 57% to 46% [60]. The results framework (RFW) for monitoring progress during the SWAp period improved substantially from 2007 to 2012. The health sector reforms introduced two new institutions, the Programme Management and Monitoring Unit (PMMU) and the Procurement and Logistics Monitoring Cell (PLMC), established to reinforce essential program features such as management and monitoring, and procurement. The PMMU supports the MoHFW in the management of health sector reform programmes and offering consulting services to the ministry [60].

5.5 Access to Care

5.5.1 Availability/Accommodation

Six studies report on the improvement in the availability of health services for the population and the major barriers to access [60, 40, 42, 52, 43, 49]. One study that compared selected health facility statistics from 1997 to 2011 showed an improvement in the provision of services both in primary (viz.Upazila Health Complexes) and secondary (viz. District Hospital) level facilities. From 1997 to 2010, hospital beds were up by 51% in public hospitals, from 29,106 to 43,996, which is more than double the growth rate of the total population over the time (22%). In 1981, there were 5350 people for every public hospital bed, which fell to 4293 in 1997 and 3435 in 2010. These improvements were also observed in maternal health services utilization during the health sector reform programmes as they ensured better availability of health professionals, drugs and equipment [60]. Reform initiatives such as revitalisation of community clinics led to an increase in the number of service recipients (mainly women and children) over time, from 12 people per CC per day in 2009 to 38 people per CC per day in 2013 [60, 42, 52]. Bangladesh has a total of 18,000 community clinics [42, 43].

However, the unavailability of drugs, medical supplies and family planning products is a constant challenge in many health facilities. One study reports that about 65% of ambulances in

the health facilities and other equipment such as x-ray machines and incubators are non-functional either due to poor maintenance or lack of funds for repair or replacement. Essential medications and family planning materials meant for patients are often hoarded and sold to private sector vendors. The author explains that these challenges are mostly a result of ineffective supply chain management and insufficient funds (or timely release of available funds) for maintenance or to purchase supplies [49]. Another study reports that issues such as maldistribution of available human resources in both the private and public sectors, and between rural and urbans areas (with only 16% of physicians in rural areas), vacant positions (41% of rural-based physician positions left vacant), absenteeism, and geographical location of health facilities impact on access to care [40].

5.5.2 Affordability

Three studies report on out-of-pocket spending on health services and impact of health sector reforms on health service affordability [42, 40, 60]. Out-of-pocket health-care spending currently accounts for 67% of total health-care expenditure. One of the key National Health Policy objectives is to ensure the availability and affordability of basic drugs through the price control system. Unfortunately, the cost of medications appears to be the largest component (about 65%) of out-of-pocket costs in Bangladesh. One study explains that the high out-of-pocket spending on medications indicates that Bangladesh's price-control mechanism for essential drugs is ineffective [42].

Another study also mentions the disparities in spending that either directly or indirectly limits access to health care. Contrary to the policy objective of ensuring that the poor and the disadvantaged have access to health services, public health expenses are favourable for the rich and urban populations. The Ministry of health and family welfare spending at and below the upazila level, the services largely used for the poor, decreased from 51% in 2003-2004 to 42% in 2005-2006, while the funding for tertiary hospitals and the administration of the Ministry increased. The rich and prominent have more access to these tertiary hospitals, both public and private [40].

Another study in our analysis reports how health sector reforms led the MoHFW to launch a voucher plan to stimulate demand for basic health services such as delivery that will allow poor pregnant women to purchase maternal health services under a demand-side financing (DSF) modality. Initially, DSF was piloted in 21 upazilas (out of a total of 488 upazilas) and then progressively enlarged to 53 during HNPSP. In the pilot locations, DSF was successful in

improving skilled delivery and greatly boosting safe motherhood practices, as well as notably increasing facility delivery compared to non-DSF locations [60].

5. DISCUSSION

- *Summary of Findings*

This scoping review aimed to explore the literature on key health sector reforms implemented over the past two decades and its impact on the health system in Bangladesh. In terms of health sector reforms, our review shows that one of the major health sector reforms was the shift from a project-based approach of financing the health sector to SWAp. Under SWAp, three programmes were implemented with planned reform initiatives. Many of these initiatives were implemented and a few faced setbacks. Another health policy reform found in our review was the National Health Policy 2000 which was later revised in 2011. Other evidence retrieved on health policy reforms was related to nursing education policies and rural retention policy for physicians. The policy climate in Bangladesh is largely influenced by International actors such as the World Bank, IMF and other DPs, with little or no objection by the National Government. The policy reform implementation process was also determined majorly by these actors in collaboration with key stakeholders in Bangladesh.

Substantial evidence was retrieved for certain health system dimensions highlighted in our conceptual framework such as health sector management, workforce, finance, and planning and supporting guidance. Our findings revealed that there is a significant shortage of formally qualified health professionals especially nurses and technologists. There are more vacant positions for nurses especially positions requiring nurses with higher qualifications. Many of the qualified health professionals are concentrated in the urban areas, leaving the rural areas neglected. These findings are similar to health workforce challenges previously reported by the MOHFW[52] and WHO[53]. Evidence gathered in our review also highlights low public financing as another significant issue in the health sector. There is a relatively high percentage of OOP payment with no clear insurance system. This result is similar to another study discussing this challenge[9].

In terms of access to care, there was sparse evidence retrieved owing to the fact that it was not a major concept for this review but an expected distal outcome of the health policy reform impact on health systems. Our results show that reform initiatives such as revitalization of existing community clinics and voucher scheme for pregnant women has improved service utilization at the local levels especially among the rural populations. There has been an increase in hospital facilities and beds but still inadequate to cater for the whole population. Health system issues such as public financing and health workforce was noted in our findings as barriers to access to care. Lack of health professionals

in the rural areas, insufficient funds to purchase supplies and maintain medical equipment, and decreased public financing for health facilities located in rural areas compared to increased financing for those in urban areas are all reported as health system issues limiting patients access to care.

- *Thematic Discussion*

The strong dependence of Bangladesh Government on aid from International donors such as the World Bank forced them to oblige to the agenda of these donors. It is evident with the implementation of the SWAp reform supported by the World Bank, IMF and other aid organisations, and a further push for the adoption of a National Health Policy. The continuous influence of DPs in developing countries has been viewed through different lenses. Though many of their proposed policy reforms are geared at improving health systems and health care in the target countries, it can also lead to unintended shocks. One of such shocks was the change from military rule to civilian rule after the resignation of the then Military President due to conflicts arising from his attempt to implement a National Health Policy. As mentioned in health policy literature, decision makers focus on the content of reforms while neglecting other key elements such as context, process and actors. In the case of Bangladesh, DPs failed to recognise these elements in its push for policy reforms. In the context of health system resilience, we can also see how policy reforms can result in shocks or disturbances that impact the health system. Hence, a key question to ask could be; should DPs continue proposing policy reforms for their partner countries even though they neglect key stakeholders and other social or political factors at various levels in the country?

It is well known that the adequate availability and distribution of qualified health professionals is important to building health system resilience. However, Bangladesh's health workforce shortage and mal-distribution shows the vulnerability of its health system. Many of these shortages are for nursing professionals. Why? Although having several medical and nursing institutes, there might be a monopoly in the workforce. Doctors could a higher 'market power' and substantive power to regulate entry to the profession compared to other health professionals. The educational choices of the citizens could also explain these shortages. One of the studies [46] in our review reports that there is prejudice in how the nursing profession is viewed. The capacity of nurses to carry out clinical activities independently without a doctor's supervision is questioned. Such prejudice can influence ones choice to study nursing. There is also a low retention of health professionals in rural areas. This could be due to poor facilities and funding in rural areas necessitating these professionals to remain in urban areas.

From our results, it is evident the importance and role of finance in health care delivery and access to care. Though public health spending does not always equate to better health outcomes or service delivery, health systems still need a well-funded environment to operate in. In Bangladesh, low public funding is prevalent which leads to the high OOPs among the population. This low public financing could be explained by the adoption of Structural Adjustment Programs (SAP) in Bangladesh. There have been several controversies on the negative impact of SAP in the health sector as processes such as liberalisation of the economy and privatization of the private sector cause a reduction in public health financing[34]. The problem is governments remain reliant on funding from DPs and the private sector to drive health sector reform initiatives while spending more in other sectors. The population is forced to pay for services out-of-pocket forcing people into poverty. To build a resilient health system, the Government of Bangladesh would have to explore improved financing mechanisms to obtain value for money, and financial protection against high health expenditures. It is worthy to note that the Government of Bangladesh is working to achieve this through its Health Care Financing Strategy 2012-2032.

- *Limitations*

To the best of our knowledge, this is the first comprehensive scoping review of the literature on the impact of health sector reforms. Our aim was not to uncover new information, but rather to produce a first synthesis of what is available. This study looked more into academic articles and few reports due to language limitations in accessing country policy documents. The results of this review should be analysed with caution, given a methodological constraint. One reviewer conducted title and abstract screening rather than the recommended two reviewers which could lead to bias or excluding other relevant articles. Also, interviewing key informants in Bangladesh could have given better insight on health sector reforms and its impact on the health system. Scoping reviews do not evaluate the quality of evidence and that is the case in this study. Most of the articles did not use defined methods such as qualitative or quantitative methods but rather review of reports and policy documents. The quality of data retrieved might not be robust to fully answer the research questions. Lastly, the concept of access to care was not included in the search strategy as it produced lots of non-relevant results.

6. CONCLUSION

The results of this scoping review show that health sector reforms have impacted the health system. Reform initiatives implemented in the health system have improved health system functions and access to care although limited by health system constraints. This scoping review

has also identified vulnerabilities in the health system that needs to be addressed in order to building health system resilience.

APPENDIXES

Appendix 1 Search Strategy in Pubmed

Database	
Database	MEDLINE
Interface	PubMed
Research date	24 March 2021
Filters	Year: 1991 – 2021 Language: English, French

Syntax	
[MeSH Terms]	Medical Subject Heading
OR, AND	Boolean operators
*	Truncation

Search strategy

((((((reform*[Title/Abstract]) OR (polic*[Title/Abstract])) OR (health care reform[MeSH Terms])) OR (public policy[MeSH Terms])) OR (health policy[MeSH Terms])) AND ((((("health"[Title/Abstract]) OR ("healthcare"[Title/Abstract])) OR ("healthcare sector"[Title/Abstract])) OR (healthcare system[MeSH Terms])) OR (healthcare sector[MeSH Terms]))) AND ((Bangladesh[Title/Abstract]) OR (Bangladesh[MeSH Terms]))

Appendix 2 Search Strategy in SCOPUS

Database	
Database	SCOPUS
Interface	Elsevier
Research date	17 March 2021
Filters	Language: English, French

Syntax	
OR, AND	Boolean operators
*	Truncation
TITLE-ABS-KEY	Title, Abstract and Keywords

Search strategy

TITLE-ABS ("reform*") OR TITLE-ABS ("polic*") OR INDEXTERMS ("health care reform") OR INDEXTERMS ("public policy") OR INDEXTERMS ("health policy") AND TITLE-ABS ("health") OR TITLE-ABS ("healthcare") OR TITLE-ABS ("healthcare sector") OR INDEXTERMS ("healthcare system") OR INDEXTERMS ("healthcare sector") AND TITLE-ABS ("Bangladesh") OR INDEXTERMS ("Bangladesh") AND (LIMIT-TO (LANGUAGE , "English") OR LIMIT-TO (LANGUAGE , "French"))

Appendix 3 Search Strategy in Web of Science

Database	
Database	WEB OF SCIENCE
Interface	Clarivate
Research date	18 March 2021
Filters	Year: 1991 – 2021

Syntax	
OR, AND	Boolean operators
*	Truncation
TS	Title

Search strategy

TS=(reform* OR polic* OR health care reform OR health policy) AND TS=(healthcare sector OR healthcare system) AND TS=(Bangladesh)

Appendix 4 Search Strategy in Google Scholar

Database	
Database	GOOGLE SCHOLAR
Interface	Google
Research date	17 March 2021
Filters	Year: 1991 – 2021

Syntax

OR, AND	Boolean operators
*	Truncation

Search strategy

allintitle: bangladesh health reform OR reforms OR reforming OR policy OR policies

Appendix 5 Data extraction form

Authors	**Institutional Affiliation of Main Author** (Including country)	**Nature of authorship** (local, foreign)	**Year of Publication**	**Journal name**	**Type of Article** (Journal Article, Thesis/Dissertation)	**Title**	**Objective (s)**	**Key findings of the article**	**Methodology**	**Type of Study (MMAT)**						**Type of Data Analysis**	**Conceptual framework**		**Type of evaluation** (process, impact, contextual, economic …)
										Type	**Q 1**	**Q 2**	**Q 3**	**Q 4**	**Q 5**		A priori	A posteriori	

Appendix 6 Characteristics of selected articles

Authors	**Year of Publication**	**Title**	**Key findings of the article**
Karar Zunaid Ahsan, Peter Kim Streatfield, Rashida -E- Ijdi, Gabriela Maria Escudero, Abdul Waheed Khan and M M Reza	2015	Fifteen years of sector-wide approach (SWAp) in Bangladesh health sector: an assessment of progress	Results of the assessment indicate that the MOHFW made substantial progress in health outcomes and health systems strengthening. SWAps facilitated the alignment of

			funding and technical support around national priorities, and improved the government's role in program design as well as in implementation and development partner coordination. Notable systemic improvements have taken place in the country systems with regards to monitoring and evaluation, procurement and service provision, which have improved functionality of health facilities to provide essential care.
Ferdous Arfina Osman	2008	Health Policy, Programmes and System in Bangladesh: Achievements and Challenges	The findings show that the healthcare plans and policy have actually helped to expand services causing quantitative advances while

			managerial weaknesses and governance problems are the main factors inhibiting qualitative improvement. Finally, the article puts forward some suggestions to address these challenges.
Habib Zafarullaha and Bijoy Kumar Banik	2015	Muddling through: limitations and challenges of the health policyprocess in Bangladesh	A highly centralized top-down approach has been followed with the policy process conditioned by partisanism, bureaucratizati on and non-participation. The influence of internal and external forces in agenda setting has been apparent and prioritizing of policy options has happened without adequate research and analyses. The failure to effectively implement policies has been due to absence of

			sincere political will, resistance of different professional and pressure groups, mal-coordination among implementing agencies and inadequacy of policy evaluation and impact assessment. These factors create obstacles toward adopting an integrated holistic national health policy with proper strategies for implementation.
Syed Masud Ahmed, Md Awlad Hossain, Ahmed Mushtaque RajaChowdhury, Abbas Uddin Bhuiya	2011	The health workforce crisis in Bangladesh:shortage, inappropriate skill-mix andinequitable distribution	HCP density was measured per 10 000 population. There were approximately five physicians and two nurses per 10 000, the ratio of nurse to physician being only 0.4. Substantial variation among different divisions was found, with gross

			imbalance in distribution favouring the urban areas. There were around 12 unqualified village doctors and 11 sales people at drug retail outlets per 10 000, the latter being uniformly spread across the country. Also, there were twice as many community health workers (CHWs) from the non-governmental sector than the government sector and an overwhelming number of traditional birth attendants. The village doctors (predominantly males) and the CHWs (predominantly females) were mainly concentrated in the rural areas, while the paraprofessionals were concentrated in the urban

			areas. Other data revealed the number of faith/traditional healers, homeopaths (qualified and non-qualified) and basic care providers.
Taufique Joarder, Md. Aslam Parvage, Lal B. Rawal, and Syed Masud Ahmed	2021	A Policy Analysis Regarding Education,Career, and Governance of the Nursesin Bangladesh: A Qualitative Exploration	We found that nursing education faced severalbacklashes: resistance from diploma nurses while attempting to establish a graduate (bachelor) course in 1977, and the reluctance of politicians and entrepreneurs to establish nursing institutions. Many challenges with the implementation of nursing policies are attributable to social, cultural, religious, and historical factors. For example, Hindus considered touching the bodily excretions as the task of the

			lower castes, while Muslims considered women touching the body of the menimmoral. Nurses also face governance challenges linked with their performance and reward. For example, nurses have little voice over the decisions related to their profession, and they are not allowed to perform clinical duties unsupervised.
Munzur-E- Murshid and Mainul Haque	2020	Hits and misses of bangladesh national health policy 2011	Bangladesh has minimal healthcare resource allocation, but its care system achievement is remarkable. The country need to keep up the threshold of improvement; for this, Bangladesh need effective and efficient utilization of resources. Bangladesh have very critical

			challenges. Healthcare out-of-pocket expenses of Bangladeshi citizens are one of the tops around the globe. It is an enormous crippling issue for almost all households. Another urgent health issue of the country is the gradual and steady increase of non-communicable diseases and its' burden. A comprehensive effort is needed, possibly emphasizing preventive medicine over therapeutic medicine to overcome these significant public health delinquents.
Taufique Joarder, Tahrim Z. Chaudhury, and Ishtiaq Mannan	2019	Universal Health Coverage in Bangladesh: Activities,Challenges, and Suggestions	We found that Bangladesh has a comprehensive set of policies for UHC, e.g., a health-financing strategy and staged recommendati

			ons for pooling of funds to create a national health insurance scheme and expand financial protection for health. Progress has been made in anumber of areas including the roll out of the essential package of health services for all, expansion of access to primary healthcare services (support by donors), and the piloting of health insurance which has been piloted in three subdistricts. Political commitment for these areas is strong. However, there are barriers pertaining to the larger policy level which includes a rigid public financing structure dating from

			the colonial era. While others pertain to the health sector's implementation shortfalls including issues of human resources, political interference, monitoring, and supervision, most key informants discussed demand-side barriers too, such as sociocultural disinclination, historical mistrust, and lack of empowerment.
Shah Mohammad Fahim, Tofayel Ahmed Bhuayan, Md. Zakiul Hassan, Abu Hena Abid Zafr, Farhana Begum, Md. Mizanur Rahman, and Shahinul Alam	2018	Financing health care in Bangladesh: Policy responses and challenges towards achievinguniversal health coverage	National health policy suggested a substantial increase in budgetary allocation for health care, although government health care expenditures in proportion to total public spending plummeted down from 6.2% to 4.04% in the past 8

			years. Overall,67% of the health care cost is being paid by people,whereas global standard is below 32%. Only one hospital bed is allocated per 1667 people, and 34% of total posts in health sector are vacant due to scarcity of funds. The country is experiencing demographic dividend with a concurrent rise of aged people, but there seems no financial protection schemes for the aged and working age populations. Such situation results in multiple obstacles in achieving financial risk protection as well as UHC.

Taufique Joarder, Lal B. Rawal, Syed Masud Ahmed, Aftab Uddin, and Timothy G. Evans	2018	Retaining Doctors in Rural Bangladesh: A Policy Analysis	In policy-1, we found, applicants with relevant expertise were not leveraged in recruitment, promotions were often late and contingent on post-graduation. Career tracks were porous and unplanned: people without necessary expertise or experience were deployed to high positions by lateral migration from unrelated career tracks or ministries, as opposed to vertical promotion. Promotions were often politically motivated. In policy-2, females were not ensured to stay with their spouse in rural areas, health bureaucrats working at district and sub-district levels relaxed their monitoring for

			personal gain or political pressure. Impractical rural posts were allegedly created to graft money from applicants in exchange for recruitment assurance. Compulsory service was often waived for political affiliates. In policy-3, we found an absence of clear policy documents obligating establishment of medical colleges in rural areas. These were established based on political consideration (public sector) or profit motives (private sector). Four cross-cutting themes were identified: lack of proper systems or policies, vested interest or corruption, undue political influence, and

			imbalanced power and position of some stakeholders.
Dina Balabanova, Anne Mills, Lesong Conteh, Baktygul Akkazieva, Hailom Banteyerga, Umakant Dash, Lucy Gilson, Andrew Harmer, Ainura Ibraimova, Ziaul Islam, Aklilu Kidanu, Tracey P Koehlmoos, Supon Limwattananon, V R Muraleedharan, Gulgun Murzalieva, Benjamin Palafox, Warisa Panichkriangkrai, Walaiporn Patcharanarumol, Loveday Penn-Kekana, Timothy Powell-Jackson, Viroj Tangcharoensathien, Martin McKee	2013	Good Health at Low Cost 25 years on: lessons for the future of health systems strengthening	Attributes of success: good governance, political commitment, effective bureacracies preserving institutional memory, ability to innovate, adaptability to resource limitations. Capacity to respond to population needs, building of resilience into health systems in the face of political unrest, economic crises and natural disasters.
Md. Abul Hossen and Anne Westhues	2012	The Medicine That Might Kill the Patient:Structural Adjustment and Its Impacts on Health Care in Bangladesh	In response to the need of economic reforms, the prescriptions by the IMF and WB have resulted in an emphasis on fiscal and monetary

			mechanisms, paying little heed to long-term develoment objectives. Most serious critic is that those policies ignored th ehuman element (consultation with Bangladeshis).
Anne Cockcroft, Deborah Milne, Marietjie Oelofsen, Enamul Karim, Neil Andersson	2011	Health services reform in Bangladesh: hearing the views of health workers and their professional bodies	Continuing dissatisfaction of health workers may habe undermined the effectiveness of Health and Population Sector Programme.
Anne Cockcroft, Neil Andersson, Deborah Milne, Md Zakir Hossain and Enamul Karim	2007	What did the public think of health services reform in Bangladesh? Three national community-based surveys 1999-2003	Retraction of services despite increased investment, public prefers unqualified practitioners over government services. Deterioration of the public opinion on government health services, reforms have not specifically helped the poorest

			people.
Freddie Ssengooba, Syed Azizur Rahman, Charles Hongoro, Elizeus Rutebemberwa, Ahmed Mustafa, Tara Kielmann and Barbara McPake	2007	Health sector reforms and human resources for health in Uganda and Bangladesh: mechanisms of effect	Effects of unification efforts provoked power struggle & general mistrust between family planning & health. Positive changes in payment schemes.
Md. Noorunnabi Talukder, Ubaidur Rob and Md. Mahabub-ul-Anwar	2007	Lessons learned from health sector reform: a four-country comparison	Decentralization works effectively while implementing primary and secondary health programs. Decentralization of power and authority to local authorities requires strengthening and supporting these units. Public sector, private sector, community participation all participate to improvment. No uniform health sector approach: context dependant to achieve equity, efficiency,

			sustainability.
Lisa M. Bates,Md. Khairul Islam,Ahmed Al-Kabirand Sidney RuthSchuler	2003	From Home to Clinic and from Family Planning to Family Health: Client and Community Responses to Health Sector Reforms in Bangladesh	Problems of implementation of the family planning program, but the reasons of this are not linked to inappropriateness and prematurity. Issues in 3 areas: integration of services and discontinuation of doorstep contraceptive distribution (1), access for the poorest (2), attitudes and practices tht evolved in a population-control framework (3).
J. Patrick Vaughan, Enamul Karim and Kent Buse	2000	Health care systems in transition III. Bangladesh, Part I. An overview of the health care system in Bangladesh	Modest progress of the programme for HPSP: continuing resource constraints (country is aid dependant). Development issues (household incomes, education, status of women) as main future

			challenge for the health sector and for the society as a whole in Bangladesh.
Mainul Haque and Patricia Robson	2003	Bangladesh and The Philippines: The Health Reform Process	Both countries share constraints: geography and still expanding young populaion. Both countries in a state of health transition: dealing with diseases of poverty and under-development and need to address degenerative conditions.
T.N.Sonia Azad and Bitan Khanam	2017	Policy Implementation in Primary Health Care at Grassroots: A Study on Health Policy in Bangladesh	Gap between policy and practice on account of both institutional and operational shortcomings
Lal B Rawal, Taufique Joarder, Sheikh Md. Shariful Islam, Aftab Uddin, and Syed Masud Ahmed	2015	Developing effective policy strategies to retainhealth workers in rural Bangladesh: a policy analysis	Over the past four decades, Bangladesh has developed and implemented a number of health-relatedpolicies and provisions concerning retention of HRH. The

			district quota system in admissions is in practice toimprove geographical representation of the students. Students of special background including children of freedomfighters and tribal population have allocated quotas. In private medical and nursing schools, at least 5% of seatsare allocated for scholarships. Medical education has a provision for clinical rotation in rural health facilities. Further,in the public sector, every newly recruited medical doctor must serve at least 2 years at the upazila level.
Anwar Islam and Tuhin Biswas	2014	Health system in Bangladesh: Challenges and opportunities	The findings suggest that although the health system faces multifaceted

			challenges such as lack of public health facilities, scarcity of skilled workforce, inadequate financial resource allocation and political instability; Bangladesh has demonstrated much progress in achieving the health-related Millennium Development Goals (MDGs) especially MDG 4 and MDG 5.
World Bank	2011	Project Appraisal Document on a Proposed Credit in the Amount of SDR 226.40 (US$ 338.90 million equivalent) to the People's Republic of Bangladesh for a Health Sector Development Program.	

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