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Designing a strategic purchasing framework for urban primary healthcare services in Bangladesh: a protocol for a mixed-method study with a discrete choice experiment

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ABSTRACT

Introduction Rapid urbanisation in Bangladesh has posed significant challenges to the urban health system, particularly in the delivery of primary healthcare (PHC). The country's PHC system is fragmented, involving public, non-government organization (NGO), private and informal providers, leading to inequitable access, high out-of-pocket expenditure and inefficiencies. Strategic purchasing, which links resource allocation to health priorities and outcomes, offers a potential pathway to strengthening urban PHC systems. This study aims to assess the current urban PHC system, examine stakeholders' perspectives on the feasibility of strategic purchasing, understand community health needs and preferences and develop a policy framework for strategically purchasing PHC services in urban settings.

Method and analysis This study will follow a sequential mixed-methods approach, integrating qualitative and quantitative data. A scoping review will be conducted to assess the characteristics and funding modalities of the existing urban PHC purchasing mechanisms. Key informant interviews with stakeholders, including policy makers and health experts, will explore the strengths and challenges of the current urban PHC system and the feasibility of implementing strategic purchasing. Community healthcare needs and preferences will be examined through in-depth interviews (IDIs), focus group discussions (FGDs) and a discrete choice experiment (DCE) survey in urban informal settlements. Insights from IDIs and FGDs will inform the DCE survey, which will present hypothetical scenarios to participants to identify the most important attributes for improving PHC services. Qualitative data will be coded deductively and inductively, and DCE data will be analysed using latent class models, with sensitivity analyses conducted using the multinomial logit model. Findings will contribute to the development of a strategic purchasing framework, validated through consultation workshops with health system stakeholders.

Ethics and dissemination Ethical approval has been obtained from the ethics committees in both Bangladesh and the UK. Findings will be disseminated through workshops, peer-reviewed publications, policy briefs and conference presentations.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This study employs a strong mixed-methods design, capturing the insights of both supply-side stakeholders (policy makers, urban health experts, programme implementers) and demand-side stakeholders (community members), ensuring a comprehensive view of the current urban primary healthcare (PHC) system.
⇒ This is the first study, of which we are aware, in Bangladesh to systematically investigate the feasibility of implementing strategic purchasing for PHC services in the urban context.
⇒ This study uses a discrete choice experiment approach to understand the healthcare needs, preferences and expectations of urban residents, capturing the voices of both PHC users and community members who do not routinely access PHC services. This approach, developed based on qualitative data, is crucial for informing and improving the PHC system in Bangladesh.
⇒ A potential limitation is that the study focuses on Dhaka, which may limit the generalisability of the findings to rural areas or other urban settings with different healthcare infrastructures and systems.

INTRODUCTION

Urbanisation has become a distinctive feature of the 21st century, with more than 55% of the world's population living in urban areas and predictions that this will rise to 68% by 2050.[1] While urbanisation often brings economic growth and improvements in healthcare access, for the urban poor, rapid and largely unplanned urban expansion means poor living conditions and frequently, unhealthier diets, less physical activity and greater mental

stress.[2 3] This combination of risk factors has led to not only increased prevalence of communicable diseases but also a rising burden of non-communicable diseases (NCDs) and injury risks.[1 2] These issues severely impact the quality of life for urban residents, particularly among low-income populations, and place a substantial burden on health systems struggling to address complex and varied health needs in urban contexts.[2]

In Bangladesh, the urbanisation rate is high, with an annual growth rate of 3.3% in urban areas compared with the national population growth of 1.03%.[4] This rapid shift poses challenges for health service delivery, particularly in primary healthcare (PHC), which is essential for promoting health equity and meeting the everyday health needs of urban residents.[4 5] However, the delivery and financing of PHC differ considerably between rural and urban settings, largely due to variations in governance structures, institutional responsibilities and funding modalities. In rural areas, the Ministry of Health and Family Welfare (MOHFW) is the primary authority responsible for financing and delivering PHC. Primary care services in rural areas are delivered largely through government-run facilities, such as community clinics, Union Health and Family Welfare Centres and upazila health complexes.[4 6] These facilities are publicly funded, and health workers are government employees receiving fixed salaries under the national payroll system. Budget allocations for rural health facilities are embedded within the national revenue and development budgets, allowing for relatively stable, recurrent funding for staffing, essential drugs, infrastructure and operations.[6]

In contrast, PHC in urban areas falls under the jurisdiction of the Ministry of Local Government, Rural Development and Cooperatives (MOLGRDC), which lacks the institutional and technical capacity to independently manage and finance health services.[4 5 7] As a result, urban PHC services have historically been delivered through donor-funded, project-based initiatives, such as the Urban Primary Health Care Services Delivery Project supported by the Asian Development Bank (ADB), Aalo Clinics funded by United Nations Children's Fund (UNICEF) and Smiling Sun Clinics supported by United States Agency for International Development (USAID). These projects are implemented through contracts with NGOs. While they provide PHC services, particularly to underserved populations in informal settlements, their financing is fragmented and not fully integrated into the national health financing framework, leading to issues of sustainability and coordination.[4] In addition, there are 38 Government Outdoor Dispensaries (GoDs) managed by the Directorate General of Health Services under MOHFW in various urban areas. Tertiary public hospitals in cities also deliver PHC services to the urban residents through outpatient departments. However, these facilities are often overcrowded and under-resourced, limiting their ability to provide effective and quality primary care to meet the needs of the rapidly growing urban population.[5 8]

Within this context, the private sector, which includes many private clinics, pharmacies and doctors' chambers, has stepped in to fill the gaps and meet the growing demand. Additionally, pharmacies, as another significant source of health services in urban areas, are commonly used by residents for both PHC needs and as a first point of contact.[9] However, city corporations struggle to regulate or monitor this growing sector.[4] Currently, the majority of urban residents, over 80%, seek care from private providers, such as private clinics and pharmacies.[10] This growing reliance on the private sector has led to substantial out-of-pocket (OOP) payments, contributing to a heavy financial burden for households. Currently, OOP spending accounts for approximately 69% of the country's total health expenditure, reflecting a health financing system that is heavily dependent on individual payments rather than public investment or risk pooling.[11] While public funding contributes around 23% of national health expenditure, its share in financing urban PHC is likely even lower due to limited coverage by public facilities and the predominance of privately delivered services in urban areas.[6 11] This high level of OOP spending raises serious concerns about equity, financial protection and the risk of health-related impoverishment, particularly among the urban poor. Despite policy commitments towards achieving Universal Health Coverage, the urban health system continues to face challenges due to constrained public budgets, inefficiencies in fund allocation and a passive purchasing approach. Funds are typically allocated without aligning with population health needs or service performance, which limits the reach, quality and impact of urban PHC services.[4 6]

Given these challenges, strategic purchasing represents a promising approach to strengthen PHC services in urban areas. Strategic purchasing aims to improve resource utilisation by linking funding to specific health needs and performance outcomes, ensuring that funds are allocated in a way that maximises health benefits and efficiency.[12 13] By actively selecting services, providers and payment methods that best address public health priorities, strategic purchasing can contribute to higher service quality, improved accountability and enhanced health system responsiveness to the unique health needs of urban populations.[13] To support this transition, the Strategic Health Purchasing Progress Tracking Framework, developed by the Strategic Purchasing Africa Resource Centre (SPARC), provides a structured and evidence-based tool tailored to low- and middle-income country (LMIC) contexts.[14 15] This framework helps explain the essential components of strategic purchasing, focusing on four core functions: benefits specification, contracting arrangements, provider payment and performance monitoring.[14 15] By addressing these functions, the framework guides countries in determining what health services should be purchased, from whom and how these services should be delivered and monitored, with the aim of achieving better health outcomes and greater system efficiency.[16 17]

Despite its potential, strategic purchasing has only recently gained attention in Bangladesh's health policy discussions, and evidence on its feasibility, as well as guidelines for its implementation in this context, remains limited. To address this gap, we are conducting a study under the Community-led Responsive and Effective Urban Health Systems (CHORUS) Research Programme Consortium, which aims to strengthen urban health systems in Bangladesh, Nepal, Ghana and Nigeria. This study builds on prior groundwork, including consultation workshops with a diverse range of health system stakeholders, conducted as part of a broader needs assessment within CHORUS. These workshops highlighted that while Bangladesh has the potential to adopt strategic purchasing, there is a critical need to assess the existing urban PHC system's funding, management and purchasing arrangements, as well as the feasibility of implementing strategic purchasing in the urban context to address the existing challenges. Additionally, community insights are essential for designing appropriate service packages within such a mechanism. Therefore, we will systematically examine these aspects to develop a feasible, context-sensitive strategic purchasing policy framework, codesigned with relevant stakeholders, to support the delivery of quality, efficient and equitable urban PHC in Bangladesh.

Aims and objectives

This study aims to assess current urban PHC purchasing arrangements in Bangladesh, examine community healthcare needs and preferences, explore stakeholders' perspectives on the feasibility of strategic purchasing and develop a policy framework to improve PHC services in the urban areas. The specific objectives are:

1. To assess the characteristics and funding modalities of existing urban PHC purchasing arrangements in Bangladesh.
2. To develop an understanding of the strengths and challenges of the current urban PHC system.
3. To explore the feasibility of implementing strategic purchasing for PHC in urban Bangladesh.
4. To understand the needs, preferences and expectations of urban residents regarding PHC services.
5. To develop and recommend a policy framework for strategically purchasing PHC services in urban areas.

METHODS

Study design

This study will follow a sequential mixed-methods approach, where qualitative data will inform quantitative methods to explore urban PHC purchasing arrangements in Bangladesh.[18] Key activities will include a scoping review of existing literature and policies, key informant interviews (KIIs) with stakeholders, in-depth interviews (IDIs), focus group discussions (FGDs) and discrete choice experiment (DCE) with urban residents to explore community healthcare needs and preferences and consultation workshops to validate findings and develop policy framework (table 1).

Table 1 Study overview—activities, methods and participants

#	Activities	Methods	Source/participants
1	Assessing the characteristics and funding modalities of existing urban PHC purchasing arrangements in Bangladesh	Scoping review	Databases of peer-reviewed publications, ministry & donor websites
2	Understanding the strengths and challenges of the current urban PHC system	Key informant interviews	15–20 respondents
3	Exploring the feasibility of implementing strategic purchasing for PHC in urban Bangladesh	Key informant interviews	15–20 respondents
4	Understanding the needs, preferences and expectations of urban residents regarding PHC services	In-depth interviews	20–25 respondents
		Focus group discussions (FGDs)	4 FGDs
		Community Advisory Panel (CAP) workshops	2 workshops
		Discrete choice experiment	300 participants
5	Developing a policy framework for strategically purchasing PHC services in urban areas	Consultation workshop	2 workshops

PHC, primary healthcare.

Study setting

The study will be conducted in Dhaka, the capital city of Bangladesh, which provides a critical context for exploring the complexities of urban PHC. It will include both Dhaka North and Dhaka South City Corporations. Dhaka's high population density, diverse socioeconomic demographics as well as the increasing burden of NCDs reflect the pressing challenges faced by other urban centres of Bangladesh, where similar PHC arrangements

are in place. By focusing on Dhaka, this study aims to generate valuable insights for strengthening the PHC system that can be applicable in other urban areas across the country and provide insights for other LMICs with comparable high rates of urbanisation, a mix of public, NGO and private primary care providers and a changing pattern of disease, including the growing prevalence of NCDs.

Detailed methods to address the study objectives

This section provides comprehensive details on the methods employed in accordance with each specific objective outlined in table 1.

Objective 1: exploring the characteristics and funding modalities of existing urban PHC purchasing arrangements in Bangladesh

We will conduct a scoping review to explore the current purchasing arrangements related to PHC in urban Bangladesh. Here, current purchasing arrangements refer to the existing models of supply-side financing and NGO contractual service delivery in urban PHC. This review aims to assess the current landscape of existing purchasing mechanisms, focusing on various characteristics such as the types of contracts, service delivery system and funding modalities used in urban settings. The scoping review will provide a foundation for understanding how these arrangements operate within the broader context of the urban health system. For this purpose, we will search relevant academic articles on PubMed, Google Scholar and Google, with a key term combining themes such as 'Primary health care', 'Urban', 'purchasing arrangements', 'contractual arrangement' and 'Bangladesh'. Additionally, we will manually search institutional websites, including those of MOHFW, MOLGRDC and international donors, including ADB, World Bank, USAID and UNICEF, to identify relevant grey literature. The key guiding questions for the scoping review are detailed in online supplemental file 1. Two reviewers will independently screen the titles and abstracts of all search results to identify studies that meet the inclusion criteria. Any discrepancies during this phase will be resolved through discussion with a third reviewer. The same process will then be applied to the full-text screening of the selected articles. Data extraction will be carried out using a structured data extraction matrix including themes on characteristics of contractual agreements, funding modalities, service delivery mechanisms and any challenges or enabling factors within the PHC purchasing arrangements.

Objectives 2 and 3: exploring the strengths and challenges of the current urban PHC systems and the feasibility of implementing strategic purchasing

To meet both objectives 2 and 3, we will conduct qualitative interviews to gather insights from key stakeholders with extensive knowledge and expertise related to the health system of Bangladesh. We will conduct approximately 30–40 KIIs with a diverse group of participants. Around 15–20 KIIs will be conducted with mid-level policy makers from the MOHFW and the MOLGRDC, representatives from donor organisations (such as ADB, UNICEF, WHO, USAID and the World Bank), local government bodies (eg, Dhaka North and South city corporations) and implementers from various NGOs. These interviews will aim to explore the strengths and challenges of the current urban PHC system. Probing questions will delve into current purchasing arrangements, including contractual arrangements, cost and risk-sharing mechanisms, funding allocation, monitoring systems and the role of local government in urban PHC. We will conduct another set of 15–20 interviews with senior policy makers from the aforementioned ministries and departments, including the Ministry of Finance, as well as urban health experts and urban PHC programme administrators. These interviews will focus on gathering stakeholders' perspectives on the feasibility of implementing strategic purchasing to improve PHC in the urban areas of Bangladesh.

The sample size for both sets of interviews (15–20) was determined based on qualitative research principles emphasising data saturation—the point at which no new themes emerge from additional interviews. Literature suggests that 15–30 interviews are typically sufficient to reach saturation and ensure credible, in-depth understanding.[19] Both sets of interviews will be guided by semi-structured topic guides. The second set of KIIs exploring the feasibility of implementing strategic purchasing will align with the SPARC framework for strategic purchasing and its core dimensions: governance arrangements, benefits specification, contracting arrangements, provider payment and performance monitoring.[15] Given that strategic purchasing is a complex concept, and respondents may have varying levels of familiarity with the concept as well as the SPARC framework, the interview guide will be carefully designed to introduce key aspects of strategic purchasing and the framework while avoiding leading questions. If necessary, preliminary discussions or brief explanations will be included to ensure respondents can meaningfully engage with the topic. Additionally, the feasibility assessment will go beyond a binary response, exploring the underlying reasons behind respondents' views, the conditions necessary for the implementation of strategic purchasing and potential barriers or enabling factors. The interview guide will be tailored to different stakeholder groups to align with their specific expertise and institutional roles, ensuring a comprehensive understanding of the applicability of strategic purchasing in the urban context of Bangladesh. The detailed topic guide for both sets of KIIs is available in online supplemental files 2,3 respectively.

Informed written consent will be taken from all the respondents before starting the interviews. Interviews will primarily be conducted in Bengali to ensure participants' comfort and understanding. However, if someone does not speak Bengali or is more comfortable with English, they will be interviewed in English. The KIIs will be audio-recorded for accuracy.

Objective 4: understanding the needs, preferences and expectations of urban residents regarding PHC services

To better understand the preferences, needs and expectations of urban residents regarding PHC services, objective 4 will include several phases. In this study, 'needs' refer to the essential PHC services and facilities that community members will identify as necessary based on their lived experiences, including barriers and gaps in accessing care. On the other hand, 'preferences' signify choices and priorities among various attributes of PHC services, reflecting how they value different service features and combinations.

The process will begin with a preparatory community advisory panel (CAP) workshop, followed by IDIs and FGDs with a purposive sample of community members from informal settlements. The qualitative analysis will identify key attributes within the WHO's Availability, Accessibility, Acceptability, Quality (AAAQ) framework.[20] This framework comprehensively covers critical dimensions of health service delivery that directly impact health outcomes, equity, responsiveness and efficiency - as per the health system building block framework.[21] The findings from the qualitative work will be validated through a follow-up CAP workshop. These validated findings will shape the development of a DCE survey, which will provide robust and detailed insights into the health needs of urban residents and inform the development of a suitable PHC service package tailored to urban contexts.

Preparatory CAP workshop

The first phase of this objective will involve conducting a preparatory workshop with community members to collaboratively develop a topic guide for the subsequent interviews and focus groups (activities 4.2 and 4.3). This workshop will also facilitate agreeing on a purposive sampling strategy to ensure a wider range of perspectives, taking into account factors such as gender, age, occupation, ethnicity and other relevant social intersections. For the CAP workshop, we will select neighbourhoods showcasing diverse types of the urban population, having different kinds of urban PHC facilities and where CHORUS Project 1 is operating (one of the projects of CHORUS being implemented in Bangladesh aiming to strengthen the Urban PHC system for delivering NCD services). We will recruit participants from the community interested in the study by consulting with community leaders and using snowball sampling.

The preparatory workshop will aim to ensure that the questions and themes covered in the IDIs and FGDs reflect the community's actual healthcare experiences and concerns. During the workshop, participants will be engaged in interactive activities, such as group discussions and mind mapping, to explore the existing gaps in the PHC system, barriers to access and the key components needed for effective PHC service. This session will help finalise the content of the topic guide and ensure that the subsequent data collection reflects the priorities of the community.

IDIs with patients and community members

Following the preparatory workshop, 20–25 IDIs will be conducted to capture individual perspectives on PHC services. The participants for these IDIs will be patients from four different urban PHC facilities (ie, NGO clinics, GODs, Smiling Sun clinics and Aalo clinics) along with residents from urban informal settlements. We will purposively sample community members from various areas of the Dhaka North and South City Corporations, ensuring a diverse mix of ages and genders, including representation from the third gender (Hijra) community. Participants will be selected through a combination of different sampling methods. The PHC facilities will be selected by purposive sampling, while the patients from the facilities will be chosen randomly. In the case of selecting community members from informal settlements who are not patients of any specific urban PHC facilities, we will use the convenience sampling method. The planned sample size (20–25) was determined based on evidence suggesting that 20–30 interviews are generally sufficient to achieve thematic saturation, particularly when aiming to capture diverse perspectives across different user and non-user groups.[19]

The interviews will explore community members' perceptions, preferences and lived experiences of accessing primary care services, including their usual health-seeking behaviour, quality of care, accessibility and affordability. Additionally, we will explore their expectations for the PHC system, particularly in terms of the benefits and coverage provided under a comprehensive PHC package tailored for urban areas. Consideration will be given to sociocultural norms and gender dynamics that may influence health-seeking behaviour. The data will be collected using a semistructured topic guide, and informed consent will be obtained from all participants.

FGDs with community members

In addition to the IDIs, four FGDs will be conducted in different informal settlements to gain a broader understanding of community perspectives, particularly from individuals who may not currently access primary care. Literature suggests that 4–8 FGDs are typically adequate to generate rich and reliable data.[19] The FGDs will involve participants from diverse socioeconomic backgrounds from informal settlements, with two FGDs conducted with female groups and two with male groups. The FGD topic guide will be designed to capture community members' expectations for improving the PHC system across various components, such as availability, accessibility, acceptability and quality of services. Participants will also be encouraged to share their views on what the government should prioritise to make PHC services more responsive to their needs. These discussions will help identify common themes and preferences related to healthcare services and contribute to determining the attributes and associated levels for the DCE.

CAP workshop to validate findings

After completing the IDIs and FGDs, a validation workshop will be conducted to verify the findings with the community. This workshop will engage a different group of community members from other informal settlements to check experiences across different urban neighbourhoods. This workshop will provide an opportunity for participants to review and provide feedback on the preliminary results, ensuring that the identified strengths, challenges and expectations align with their lived experiences. The community feedback will be helpful to bridge any gaps in data that have not been sufficiently reflected in the IDIs and FGDs. In addition to the CAP workshop, we will implement a member-checking process with participants from the IDIs. This will involve sharing key findings and interpretations directly with those interviewed to ensure their perspectives are accurately represented. Participants will have the chance to confirm or clarify their responses, allowing us to address any gaps or misinterpretations that may have arisen during data collection.

DCE survey

The final phase of objective 4 will involve conducting a DCE survey to elicit the preferences of residents in urban informal settlements regarding PHC services. The purpose of the DCE is to identify the most important attributes for improving PHC services from the perspective of the community, which will inform the design of a comprehensive service package for urban PHC system. The DCE component will follow the Good Research Practice for Conjoint Analysis checklist.[22] To ensure the rigour and relevance of the attributes and levels included in the DCE, the study will adopt a systematic four-stage process by Helter and Boehler that consists of raw data collection, data reduction, removing inappropriate attributes and wording of attributes.[23] In the first two stages, qualitative research through IDIs and FGDs (as described in sections 4.2 and 4.3) will inform the selection of attributes.

In the third stage, a panel consisting of team members and urban health specialists will work to streamline the long list of attributes and levels by grouping them into thematic categories—availability, accessibility, acceptability and quality of services (WHO AAAQ framework).[20 21] This framework will guide both the categorisation and selection of attributes. Specifically, 'availability' will be assessed through indicators such as availability of essential services, operating hours and adequacy of healthcare providers; 'accessibility' through distance to facility, waiting time and cost of services; 'acceptability' by exploring user preferences for provider characteristics, confidentiality and cultural appropriateness and 'quality' via perceived responsiveness and comprehensiveness of care as well as facility environment. These domains will be assessed through both qualitative data from FGDs and IDIs and quantitatively through attribute-level trade-offs in the DCE.

Expert panels will assess the feasibility and relevance of the identified attributes. Concurrently, prioritising exercise will be conducted with community members during the CAP workshop, as described in section 4.4, to ensure that these attributes align with local needs. This collaborative and iterative approach guarantees that the final set of attributes is both evidence-based and reflective of the community's preferences. In the fourth stage, the study team will deliberate and agree on an interim list of attributes and levels. This interim list will be tested in a pilot study conducted in one selected informal settlement to evaluate its clarity and relevance. Researchers will then review the pilot results and finalise the list of attributes and levels based on findings from the pilot study.

The DCE survey will target male and female residents aged 18 years and above, residing in two purposively selected informal settlements in Dhaka. The sample size for the DCE was estimated using the widely applied rule of thumb proposed by Orme, which provides guidance for determining the minimum number of respondents required to estimate main effects reliably in conjoint analysis.[24] The formula is defined as: $n>500\ c/(t\times a)$, where c is the number of levels in the largest attribute, t is the number of choice tasks and a is the number of alternatives per task.[24 25] In this study, we considered six attributes relevant to PHC service preferences, with the highest number of levels being four (for the 'consultation fee' attribute). Each respondent will complete eight choice tasks (t=8), with two alternatives per task (a=2). Substituting these values into the formula yields $N>(500\times4)/(8\times2)=125$. Thus, the minimum required sample size is 125 respondents. However, to ensure more precise estimates, allow for subgroup analyses (eg, by gender or socioeconomic status) and support latent class analysis, we plan to recruit approximately 300 respondents.[26 27] Participants will be selected from households using a systematic random sampling technique, with fixed intervals between selected households. If a household has more than one eligible participant, one will be randomly selected to participate in the survey. In cases where a selected household does not meet the inclusion criteria or declines to participate, the next eligible household will be approached.

DCE survey data collection will use visually engaging Q-cards to present hypothetical scenarios, enhancing respondent engagement and reducing survey completion time. These Q-cards are laminated A4 sheets that graphically depict various choice sets, each representing different combinations of attributes to facilitate easy and clear decision-making by the participants. The survey instrument will be designed to include the DCE choice sets along with variables capturing the socioeconomic characteristics of respondents and their households. This tool will be refined through pilot testing to ensure clarity and alignment with participants' understanding and preferences. Field data collectors will be recruited, and training sessions will be conducted covering theoretical and practical aspects of survey administration.

Objective 5: developing a policy framework for strategically purchasing PHC services

Based on the findings from the activities undertaken in objectives 1 through 4, we will develop a policy framework for the strategic purchasing of PHC services in urban areas of Bangladesh. For this purpose, we will develop a draft policy framework that synthesises insights obtained from the review, stakeholder interviews and community engagement efforts. To refine this draft framework, we will organise two consultation workshops by bringing together a diverse group of stakeholders, including representatives from relevant ministries, policy makers, urban health experts, healthcare providers and donor organisations. During these workshops, we will present the findings from our research activities. Later, participants will be engaged in interactive discussions to critically assess and prioritise the proposed policy recommendations, ensuring that they are both feasible and aligned with the needs of the urban population. Following the workshops, the final policy framework will be developed and disseminated to relevant stakeholders, especially to the policy makers for improving the urban PHC system of Bangladesh through strategic purchasing.

Data analysis

Qualitative analysis

The qualitative analysis will involve data from the scoping review under objective 1 and qualitative data collected through KIIs, FGDs and IDIs with key health system stakeholders, addressing objectives 2, 3 and 4. For the scoping review, extracted information from selected studies will be charted and categorised according to predefined themes aligned with the review objectives, including service delivery mechanism, contractual agreements, funding modalities and challenges or enabling factors of existing urban PHC purchasing arrangements. Patterns, gaps and emerging insights from the data will be identified and will be summarised narratively. An overview of study characteristics will be presented, and charts or tables will be used to highlight the key findings. Reporting will follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews checklist.[28]

The analysis of qualitative data from KIIs, IDIs and FGDs will employ the Framework Approach as characterised by Ritchie *et al*.[29] This structured methodology enables the systematic identification, organisation and synthesis of themes. The process will begin with the transcription of audio recordings from the interviews in a verbatim manner, followed by their translation into English. Next, study team members will independently review the transcripts, familiarising themselves with the content and context. This familiarisation phase will involve multiple readings of the transcripts and contextual notes to develop a deeper understanding of the data. The coding process will incorporate both deductive and inductive approaches.[30 31] Initially, deductive coding will be applied based on the predefined themes outlined in the topic guides used during data collection. Subsequently, an inductive approach will be used to identify emerging subthemes based on the patterns observed during the analysis. Any disagreements during the coding process will be resolved through team discussion or consensus. Finally, the findings will be presented under several key themes derived from both the deductive and inductive coding processes. Qualitative data analysis software (eg, NVivo) will be used for the data analysis.

Quantitative analysis

The DCE survey data will be analysed using advanced statistical techniques to ensure precise and actionable insights. A fractional factorial design, facilitated by Ngene software, will optimise the choice sets to maintain statistical efficiency while presenting respondents with 4–5 manageable scenarios. A D-efficient design will be used to optimise the choice sets, ensuring that each set provides the maximum amount of information for estimating respondent preferences. The analysis will primarily use the latent class model using Stata V.17 to reveal distinct preference profiles within the population, capturing the heterogeneity in preferences across different demographic groups.[26] Interaction terms will be included to explore the combined effects of various attributes on choice probabilities. To enhance the robustness of our findings, sensitivity analyses will be conducted using alternative econometric models, including the multinomial logit model.

Patient and public involvement

Patients or the public were not involved in the design, conduct, reporting or dissemination plans of our study.

DISCUSSION

This study employs a strong mixed-methods design to ensure that the perspectives of patients who currently use a range of PHC providers and those who may currently bypass primary care to seek services at hospitals, pharmacies or informal providers are included. Building a DCE from these perspectives and then gathering quantitative data to identify the key attributes that poor urban residents value and require from primary care is key to inform and improve the PHC system in Bangladesh. Globally, there is growing interest in strategic purchasing as a mechanism to enhance the efficiency and effectiveness of health systems, particularly in urban contexts where health needs are diverse and complex.[17 32 33] To the best of our knowledge, there has been no systematic effort to investigate the feasibility of implementing strategic purchasing for PHC services in the urban context of Bangladesh. The data gathered through this study will represent the perspectives of key health system stakeholders, including policy makers, experts and community members, providing valuable insights into the current landscape of urban PHC service delivery system and the potential for strategic purchasing to strengthen the system. Furthermore, the study will link these insights with best practices

in strategic purchasing from various global contexts and frameworks, facilitating a comprehensive understanding of potential pathways for improvement.

This study will add to the current knowledge by providing empirical evidence on stakeholder perspectives, community needs and the feasibility of strategic purchasing in urban settings in the Bangladesh context. The main strengths of this study include its mixed-methods and multifaceted approach, which includes a literature review, qualitative interviews with patients, community members and decision makers and community engagement activities, including DCE. By involving a diverse range of stakeholders and employing robust methodologies, the study aims to produce a policy framework and recommendations tailored to the unique urban health challenges of Bangladesh. A key aspect of the study is its emphasis on community involvement throughout the research process. This ensures that the developed policy framework aligns with the needs and expectations of urban residents, placing their perspectives at the heart of the strategic purchasing model. Additionally, active engagement with policy makers and other decision makers throughout the study will help facilitate their buy-in, enhancing the feasibility and sustainability of the proposed policy framework.

However, the proposed protocol has some limitations. Since the study focuses on Dhaka, it may limit the generalisability of the findings to the other large and smaller cities with distinctly different characteristics. Besides, the study results will not be generalisable in rural contexts of Bangladesh since the rural health system and infrastructure vary from urban areas.

In conclusion, we describe an effort to systematically explore the potential of strategic purchasing for improving the PHC service delivery system in urban Bangladesh. By addressing the current gaps in knowledge and practice along with expert views and suggestions and community perception and preferences, this study aims to contribute to the development of an effective policy framework and improve the overall quality of urban healthcare delivery in the country.

Ethics and dissemination

The study has received ethical approval from both the University of Leeds Ethics Committee, UK, and BRAC James P Grant School of Public Health, BRAC University's review board. The reference numbers for these approvals are: School of Medicine Research Ethics Committee, University of Leeds, MREC 22–015 and Institutional Review Board, BRAC James P Grant School of Public Health, BRAC University: IRB-17 October'21–031, respectively. Informed consent will be obtained from all study participants during qualitative and quantitative data collection. All ethical guidelines set by the approving ethics committees will be strictly followed throughout the research process. Any sensitive issues raised during the study will be handled according to the ethical standards established by the institutions involved. Confidentiality and anonymity of study participants will be ensured at all stages. Collected data will be securely stored within the research organisations' designated systems. Access to data will be restricted to the core study team. Participants' identifiers such as names and designations will be removed from the main database and will not be included in the data analysis process. The study's findings will be disseminated through workshops, peer-reviewed publications, policy briefs, conference presentations and dissemination through the websites of the CHORUS programme and the institutions involved in this study.

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