Bi weekly Knowledge Sharing
Virtual Seminar Session

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Urban Health and Nutrition in Bangladesh

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What makes a city healthy?

Components of a Healthy City

Source: Bai et al. (2022), The Lancet Regional Health - Western Pacific;27: 100539

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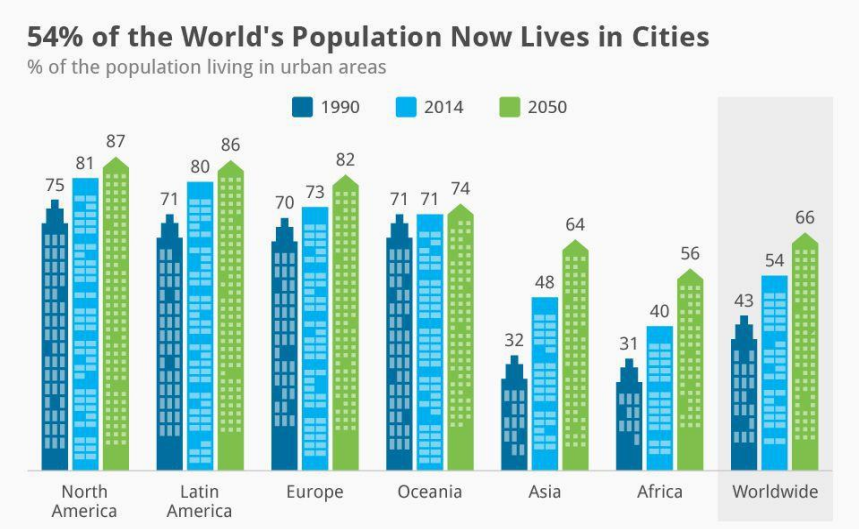
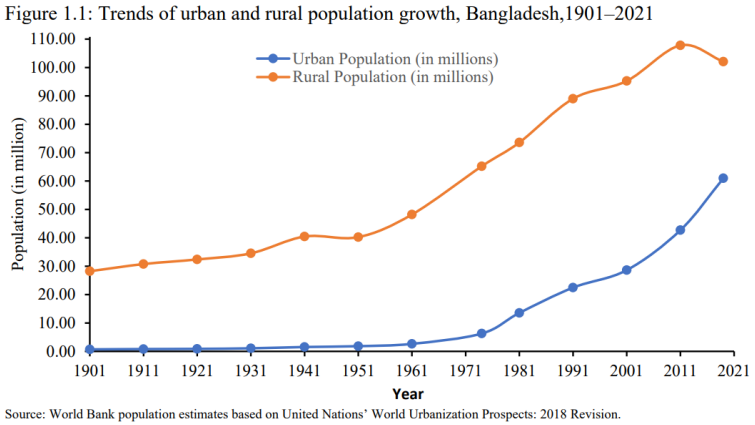
Rapid growth of urbanization: global and national trends

Global trends



National trends



- **Bangladesh is urbanizing very rapidly:**
- **Rate of urbanization: approximately 3% per year**
- **By 2040, over 50% of the population will live in urban areas**

Source: UNFPA 2014; UNDP 2016

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Highest growth in Urban informal settlements

Lack of essential health and nutrition infrastructure

limited access to healthcare are

Lack of nutrition food

Unhealthy Environment

Higher growth rates (7% per year)

Impact of Rapid Urbanization on Health and Nutrition

- **Rapid and unplanned** urbanization results in overcrowding, **inadequate healthcare access and poor nutrition**, particularly among low-income and vulnerable populations.

- **Urbanization is associated with unhealthy lifestyles and environmental changes**

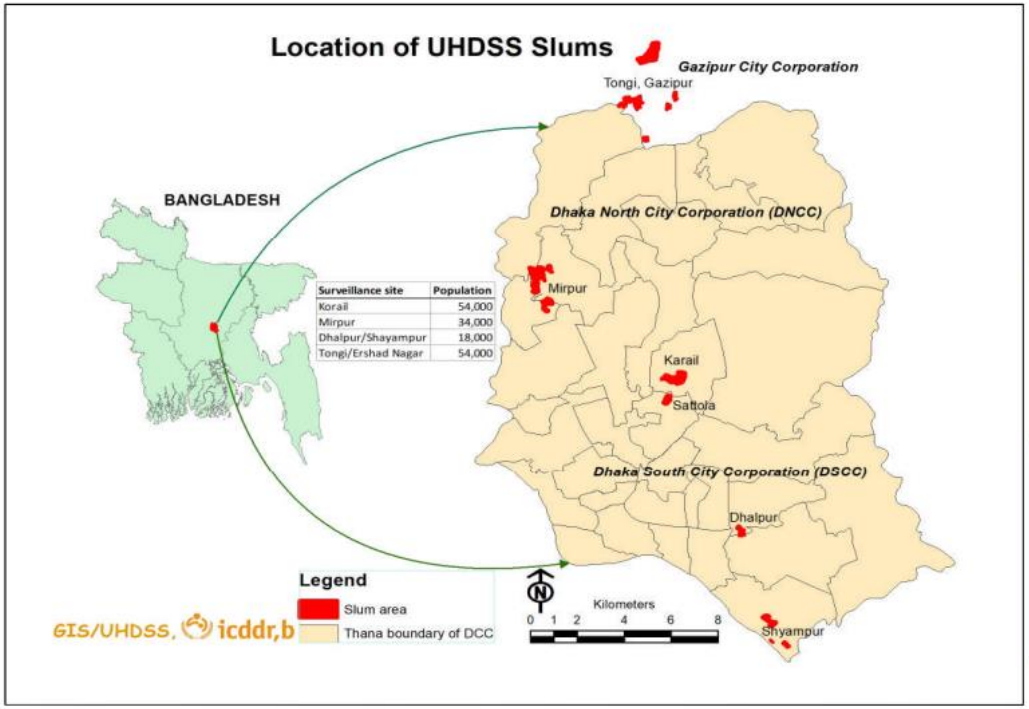
- **Historically, there is high burden of communicable diseases in slum areas and prevalence of non-communicable diseases (NCDs) are rapidly increasing as well →**

Double burden of diseases

Trends in Urban Health

icddr,b's Urban Health and Demographic Surveillance system (UHDSS):

Data from Slums in Dhaka and Gazipur City Corporations



*Total population is about 160,000 of 40,000 households

Since 2016

Birth, death, migrations, marriage/divorce, and other socio-economic variables

ANC, PNC, pregnancy/delivery complication and violence, and family planning.

Since 2021

ARI/pneumonia, diarrhoea; breastfeeding, and IYCF indicators, childhood immunization. Causes of deaths; GIS information: Household, health facility, pharmacy.

*Supported by Sida through UNICEF

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UHDSS: Demographic and health indicators

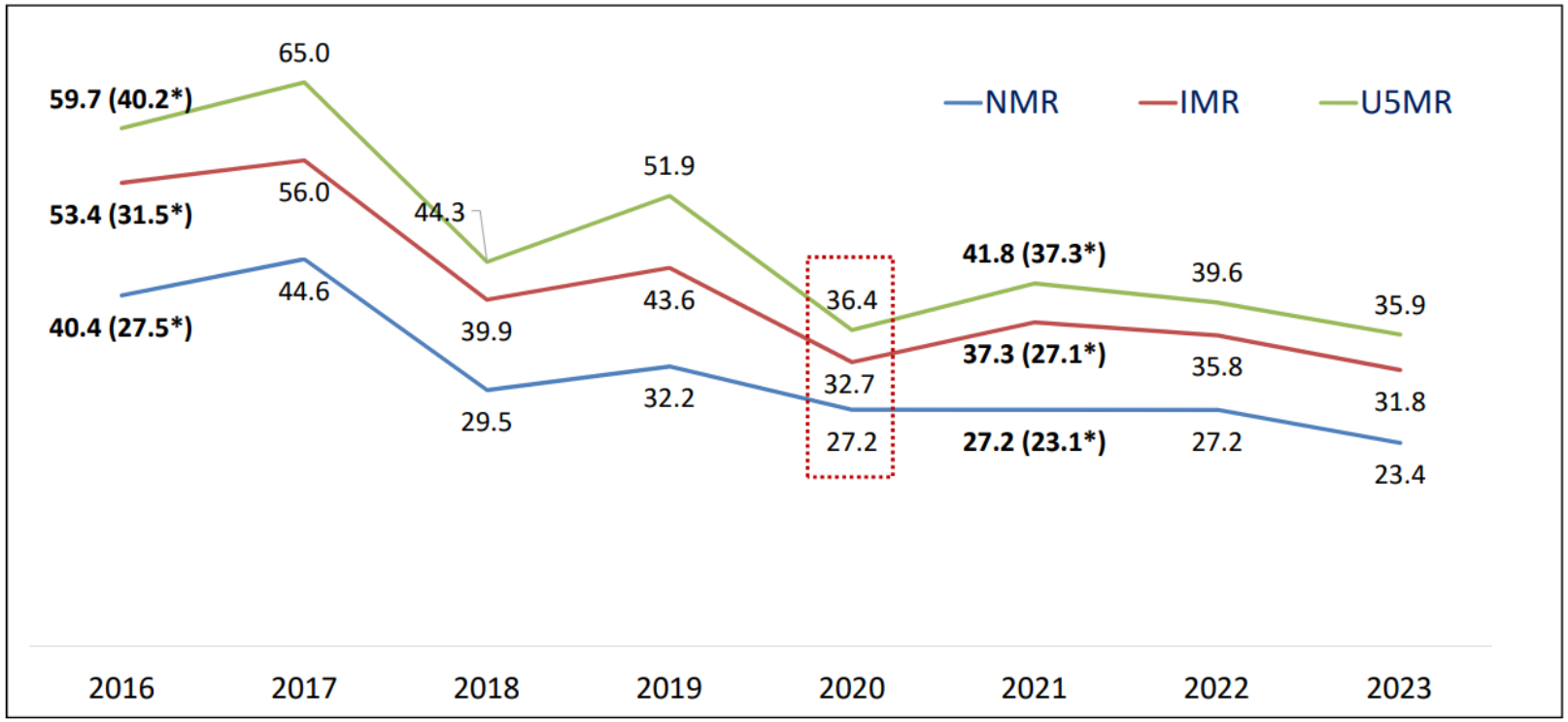
Demographic and Health Indicators Collected in URBAN HDSS

Indicators	2016	2022	National
Total fertility rate	1.5	2.1	2.3
Neonatal mortality rate	40	26	20
Infant mortality rate	53	33	25
Under-five mortality rate	60	40	31
Expectancy of life at birth- male	68	69	71
Expectancy of life at birth- female	71	73	74
Facility-based delivery	50	60	78
Caesarean delivery	27	38	45
Antenatal care coverage (at least 4 visits)	35	36	41
Contraceptive prevalence rate	72	76	64

*Bangladesh Demographic and Health Survey 2022

(Razzaque et al., 2024; UHDSS)

Trends in early childhood mortality in urban Bangladesh: UHDSS, 2016-2023



* In parenthesis estimates from Matlab HDSS Govt service area

(Razzaque et al., 2024; UHDSS)

**Supported by Sida through UNICEF*

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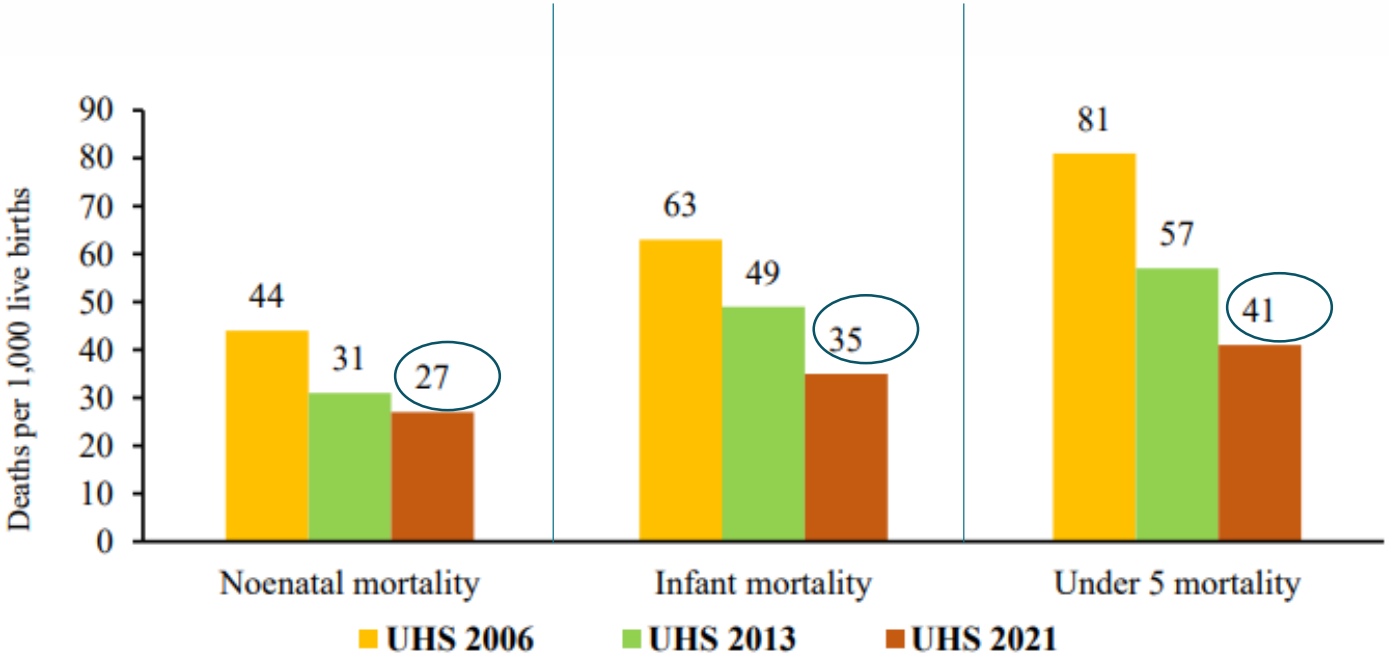
Trends in early childhood mortality in urban Bangladesh: 2006, 2013 and 2021

Though rates are declining, still very high rates of Neonatal, Infant and Under-5 Mortality



(Bangladesh Urban Health Survey, 2021)

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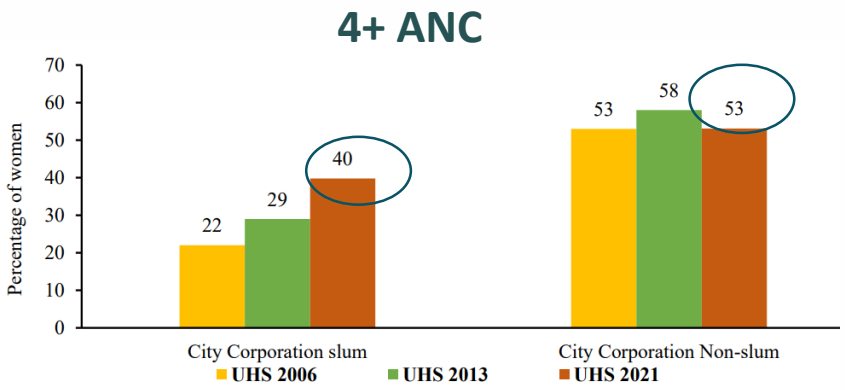
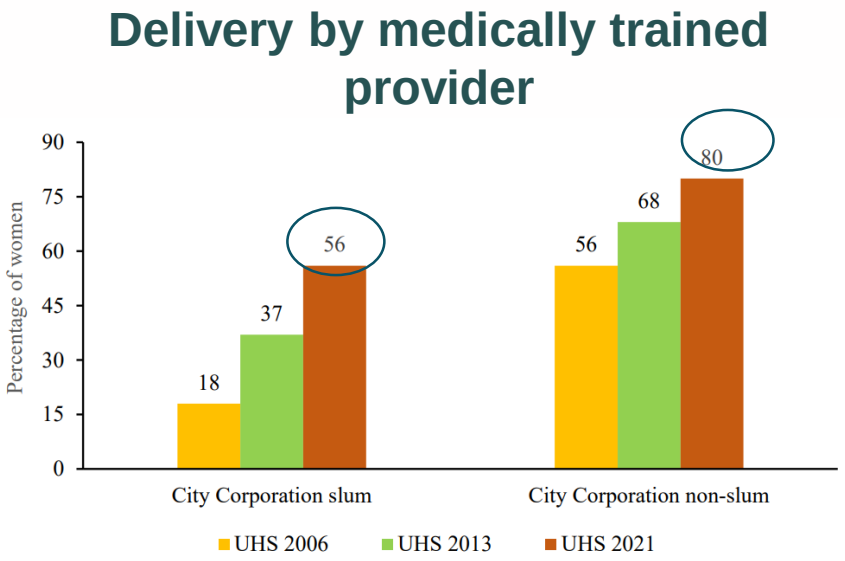
Trends in the Number of 4+ Antenatal Care (ANC) and Delivery by Medically trained Provider: 2006, 2013 and 2021





(Bangladesh Urban Health Survey, 2021)

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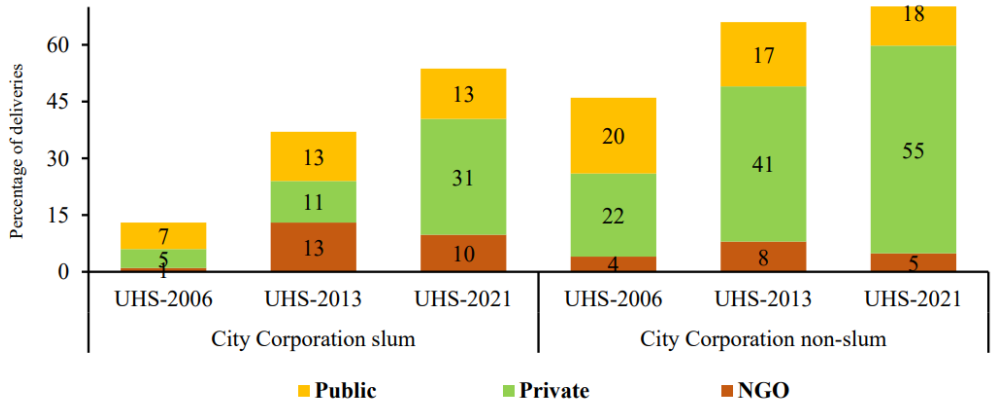
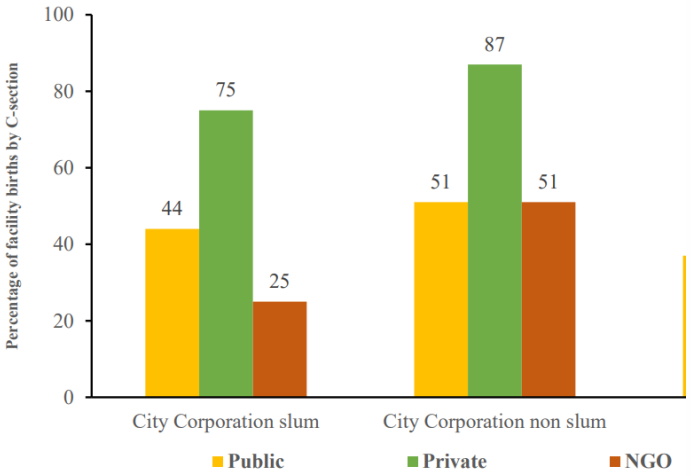
Trends in Facility Delivery and C-Section during child birth in 2006, 2013 and 2021

Use of Facility for Delivery



C-section by type of facility



Higher proportion of private sector → implications for out of pocket expenditure

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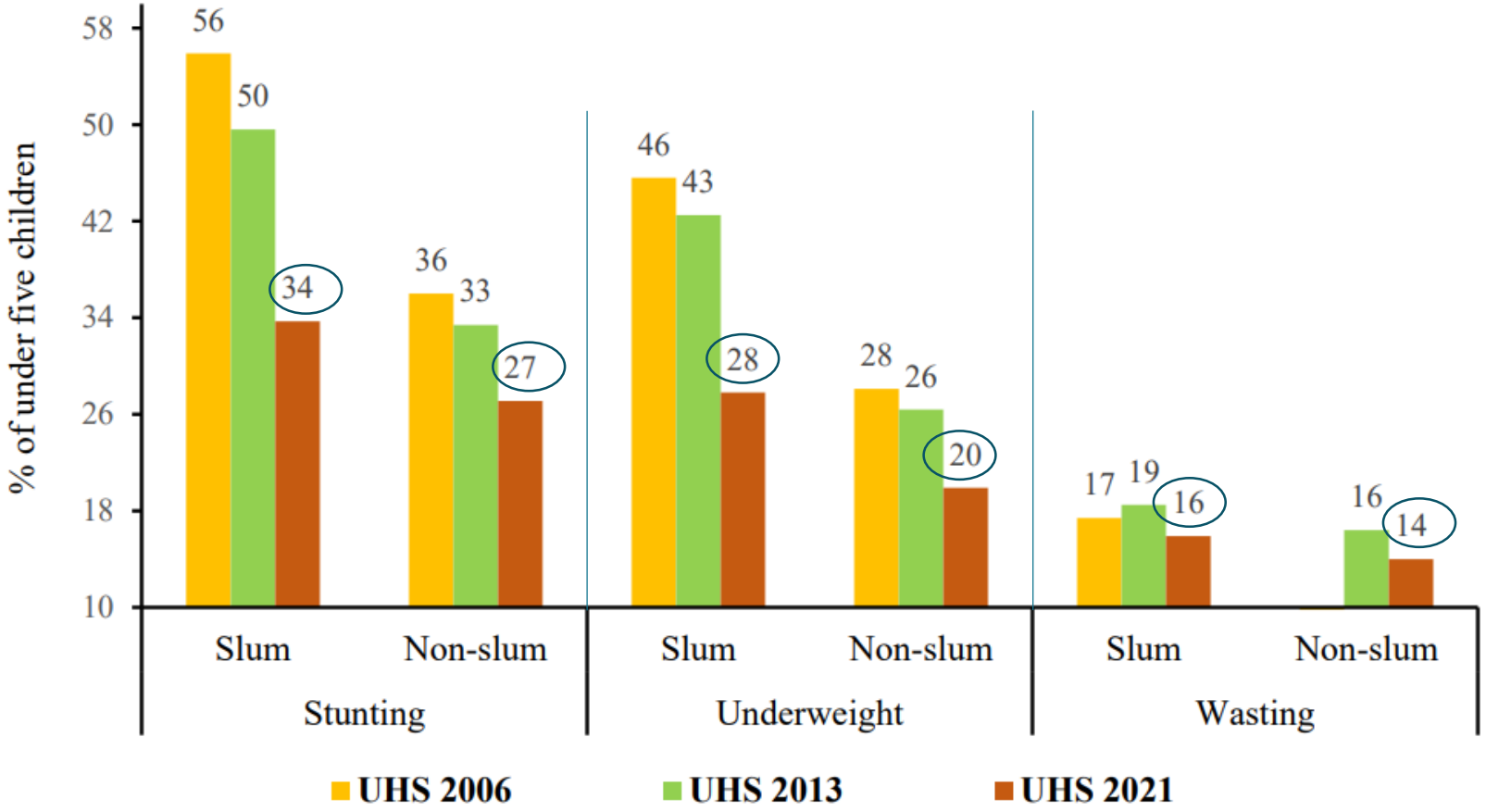
Trends in Nutritional Status

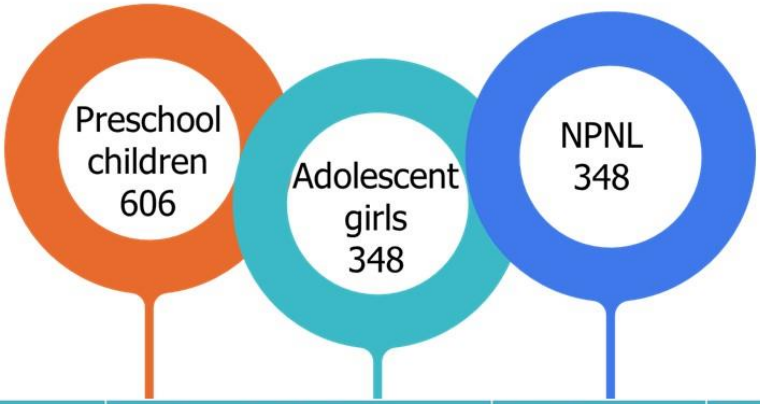
Trends in nutritional status among under-5 children in urban Bangladesh: 2006, 2013 and 2021



*higher than national average

Micronutrient Deficiencies in Urban Slums

Assessment of vitamin A, iron, and zinc deficiency status in urban slums



	Vitamin A Deficiency		Iron Deficiency	Zinc Deficiency
	Low Vitamin A (0.7-1.05 µmol/L) %	VAD (≤0.7 µmol/L) %	%	%
Preschool	-	8	30	30
Adolescent	26	1	20	30
NPNL	11	1	21	42

VAD Preschool (%)	NMS 2019-20	Baseline Survey 2021
Normal	49	43
Mild	44	50
Moderate	7	6.6
Severe	0	0.3

VAD NPNL (%)	NMS 2019-20	Baseline Survey 2021
Normal	93	87
Mild	6.9	12
Moderate	0.6	0.6
Severe	0.0	0.0

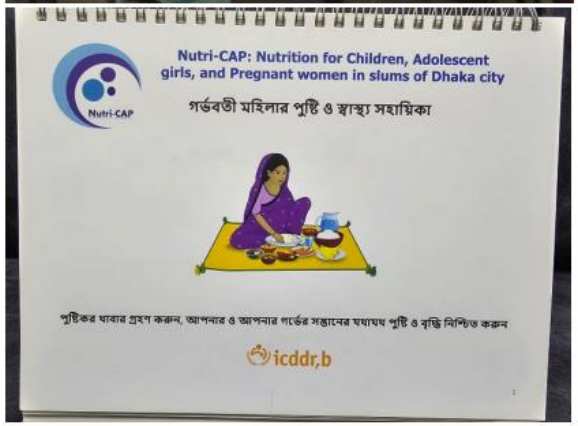
Iron def (%)	NMS 2019-20	Baseline Survey 2021
Preschool	15	21
NPNL	14	15

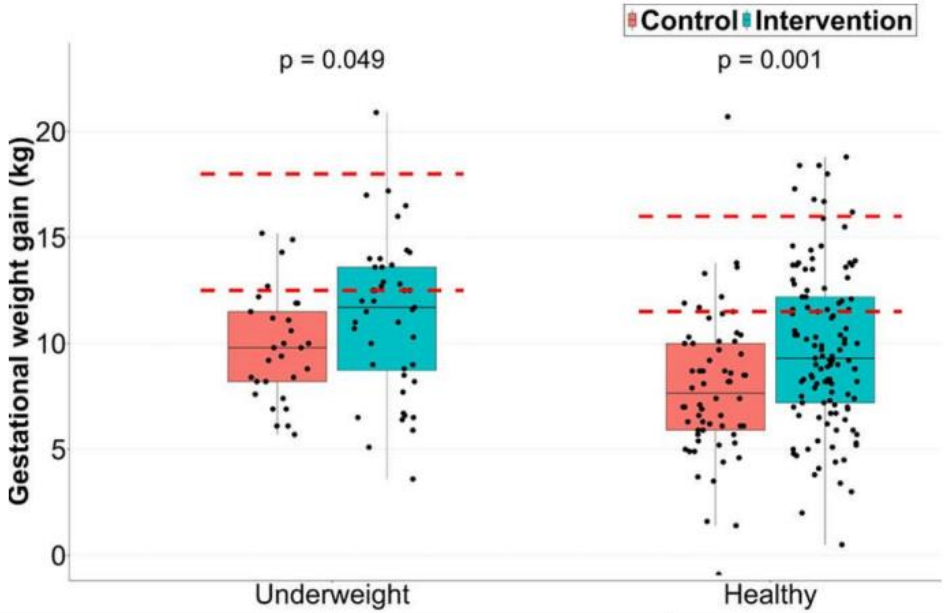
Zinc Def (%)	NMS 2019-20	Baseline Survey 2021
Preschool	31	30
NPNL	43	48

(Hasan T, 2023, icddr,b; NMS 2019-20)

Capacity building of women to improve nutrition

Nutri-CAP: Pregnancy weight gain among slum-dwelling pregnant women





Characteristic	Underweight		Healthy	
	aOR (95% CI)	p-value	aOR (95% CI)	p-value
Women received intervention	4.0 (1.1, 18)	0.049	3.3 (1.2, 11)	0.028

(Source: Mahfuz, , 2024, icddr,b)

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Understanding water, sanitation, and hygiene situation through a participatory appraisal in an urban slum of Dhaka city

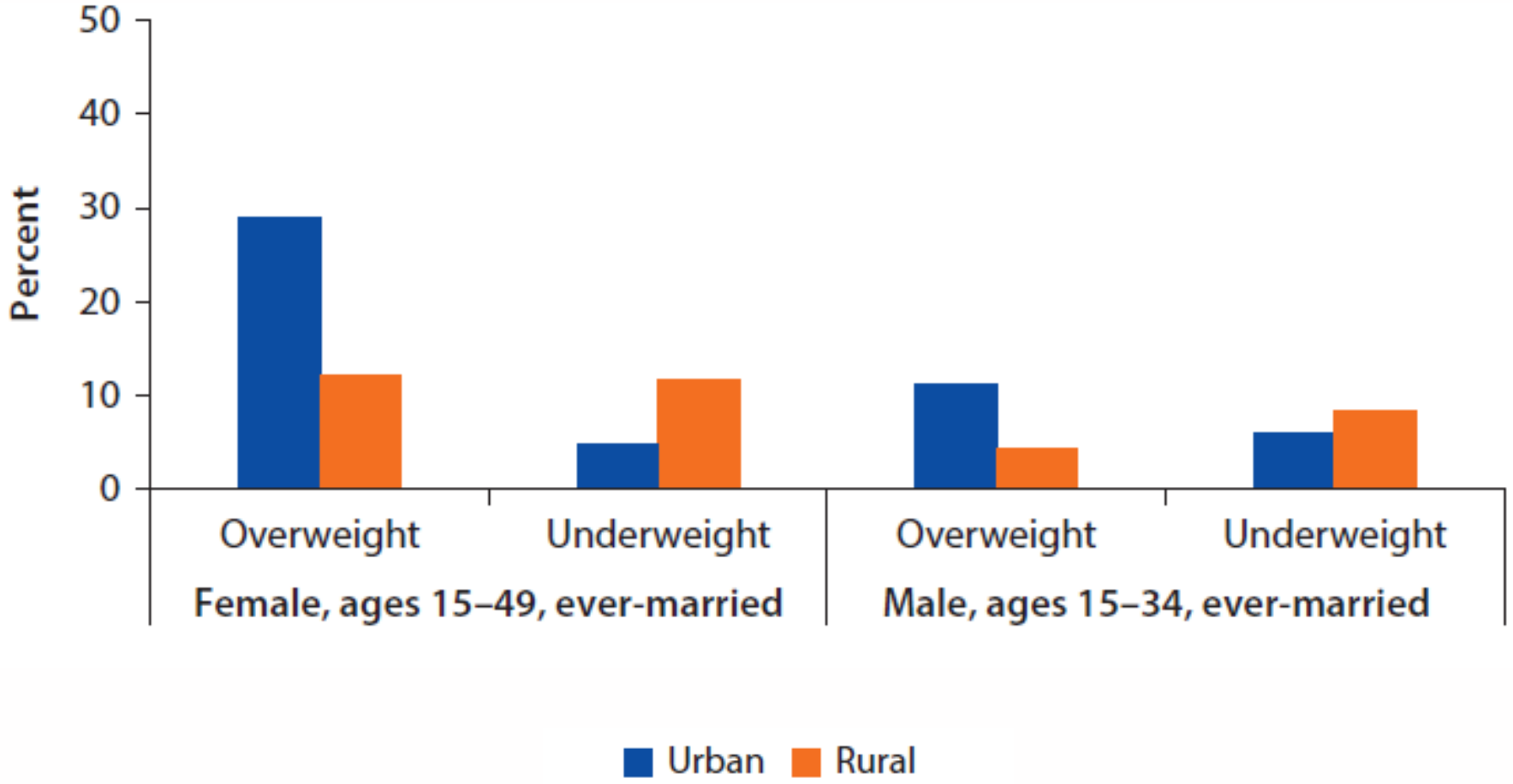
February-March 2022 and June-July 2023
Social mapping: resources available related to WASH
Transect walk: cleanliness, waste disposal, and drainage system
Informal discussion: to understand challenges usually faced in availing safe drinking water and in maintaining proper sanitation and hygiene

- Most HH fetched water from two supply stations
- Some families did not treat drinking water
- Gas flow poor to boil drinking water
- Most did not clean water reservoirs regularly
- >10000 HHs no regular garbage removal system
- HHs near ponds used hanging latrines and disposed of feces in the pond
- Many drains clogged and fecal materials were visible
- Chicken and ducks drink water from drains

(Mahfuz M et al., 2023, icddr,b)

Emerging urban health issues

Overweight and underweight among adults by gender



(Govindaraj R et al., 2018)

NCD risk factors among urban poor

UHDSS

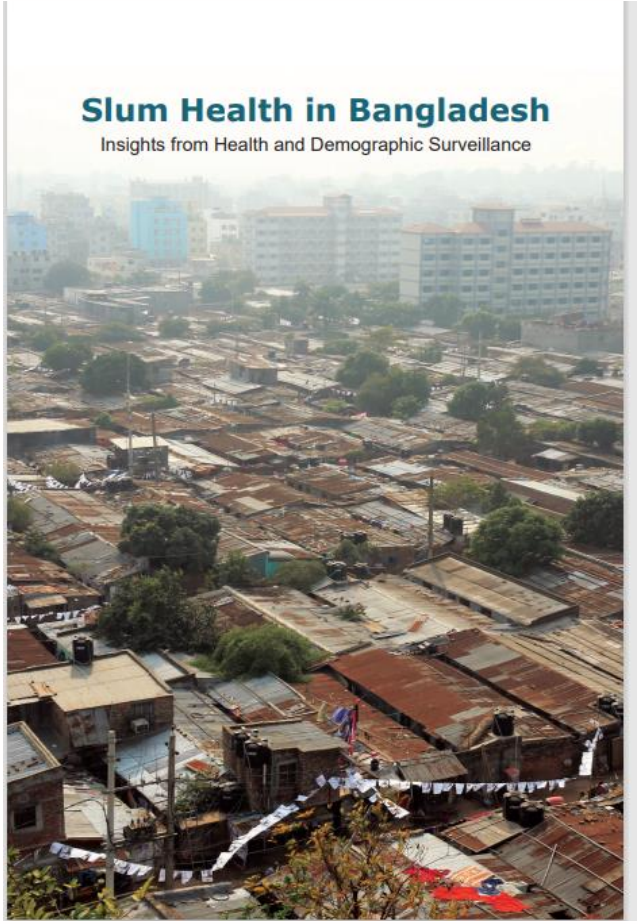


Table 6.2: Selected Non-communicable Disease Risk Factors (per cent) by Sex and Perceived Harmfulness/Familiarity/Importance, Use and source of Medication

Risk factors	NCD Risk Levels			Harmfulness/ Familiarity/ Importance		Under medication		Medi-cine from phar-macy
	M	F	All	M	F	M	F	
Currently smoking	65.3	1.9	30.1	97.2*	97.8*	-	-	-
Smokeless tobacco use	37.1	41.8	39.7	95.4*	97.5*	-	-	-
Either smoke/Smokeless tobacco	76.2	42.6	52.8	-	-	-	-	-
Drink alcohol	4.0	0.5	2.2	98.5*	98.9*	-	-	-
Exercise	4.4	4.4	4.4	-	-	-	-	-
Vegetable***	6.5	6.6	6.6	72.7**	69.8**	-	-	-
Fruit***	2.3	2.3	2.3	50.3**	50.9**	-	-	-
Vigorous physical activity (work)	51.7	21.2	34.7	-	-	-	-	-
Moderate physical activity (work)	79.8	79.3	77.7	-	-	-	-	-
High blood pressure (reported)	10.7	20.2	16.0	38.6+	47.6+	68.1	72.8	92.7
Diabetes (reported)	5.0	7.5	6.4	40.8+	44.4+	74.4	67.9	92.5

Note: *Harmful to health; +Very familiar; **Very important to eat fruit/ vegetable ***Consume (mean) number of days in a week;

Table 6.3 shows selected NCDs risk factors (per cent) by socio-demographic characteristics for males and females. For males, the prevalence of smoking varied significantly by education and household wealth quintile, while smoking varied significantly by occupation for both males and females.

Pandemic preparedness in urban informal settlements using gender transformative approaches

Women RISE Intervention Delivery in Community – in progress

Community Mobilization Dhaka and Gazipur slums

local government representatives and leaders

Intervention delivery with NGO partner (Naari Maitree)

Training Sessions on respiratory hygiene, nutrition, women's health and wellbeing, gender, decent work, social safety net programmes

(Being conducted in UHDSS platforms; supported by IDRC, Canada)

(Shafique et al., 2024)

Working women and men living in urban informal settlements experienced various challenges during COVID-19 and its recovery in Dhaka and Gazipur*

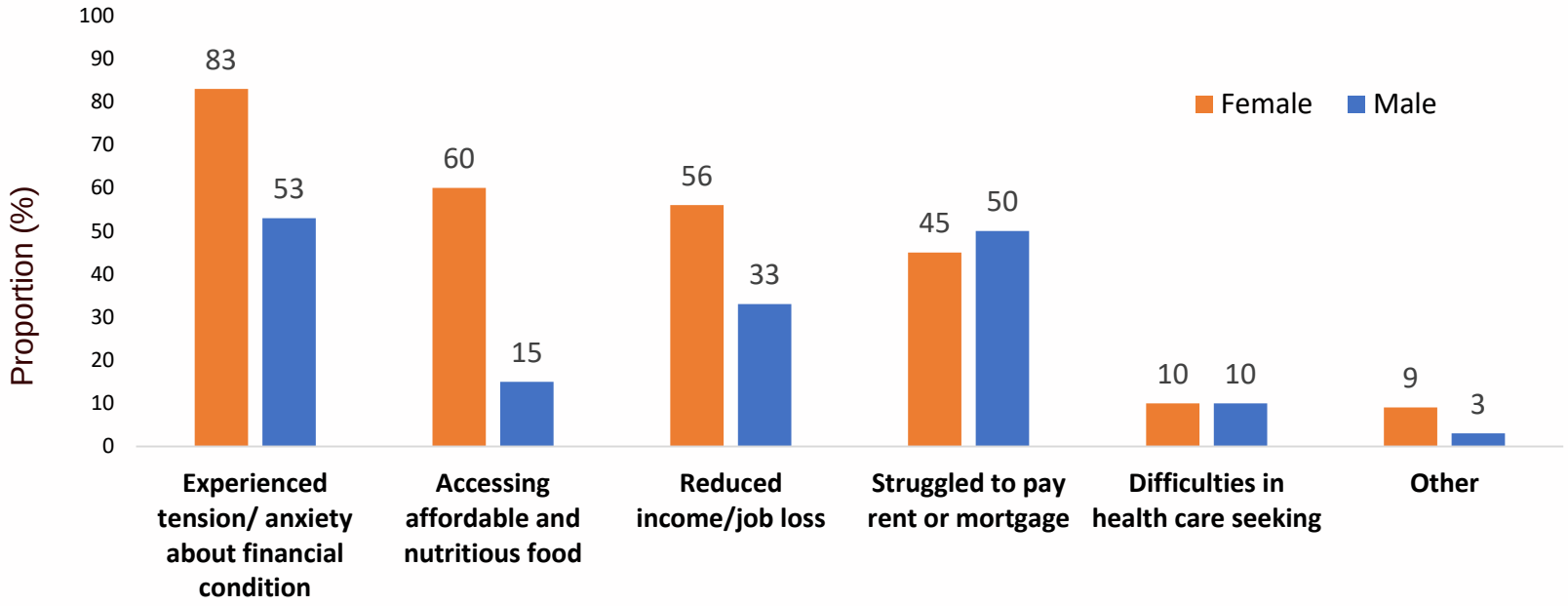


Figure: Proportion of working women and men facing different challenges during COVID19 and recovery

**Multiple answers*

(Shafique et al., 2024, unpublished data)

Climate change and health in urban settings

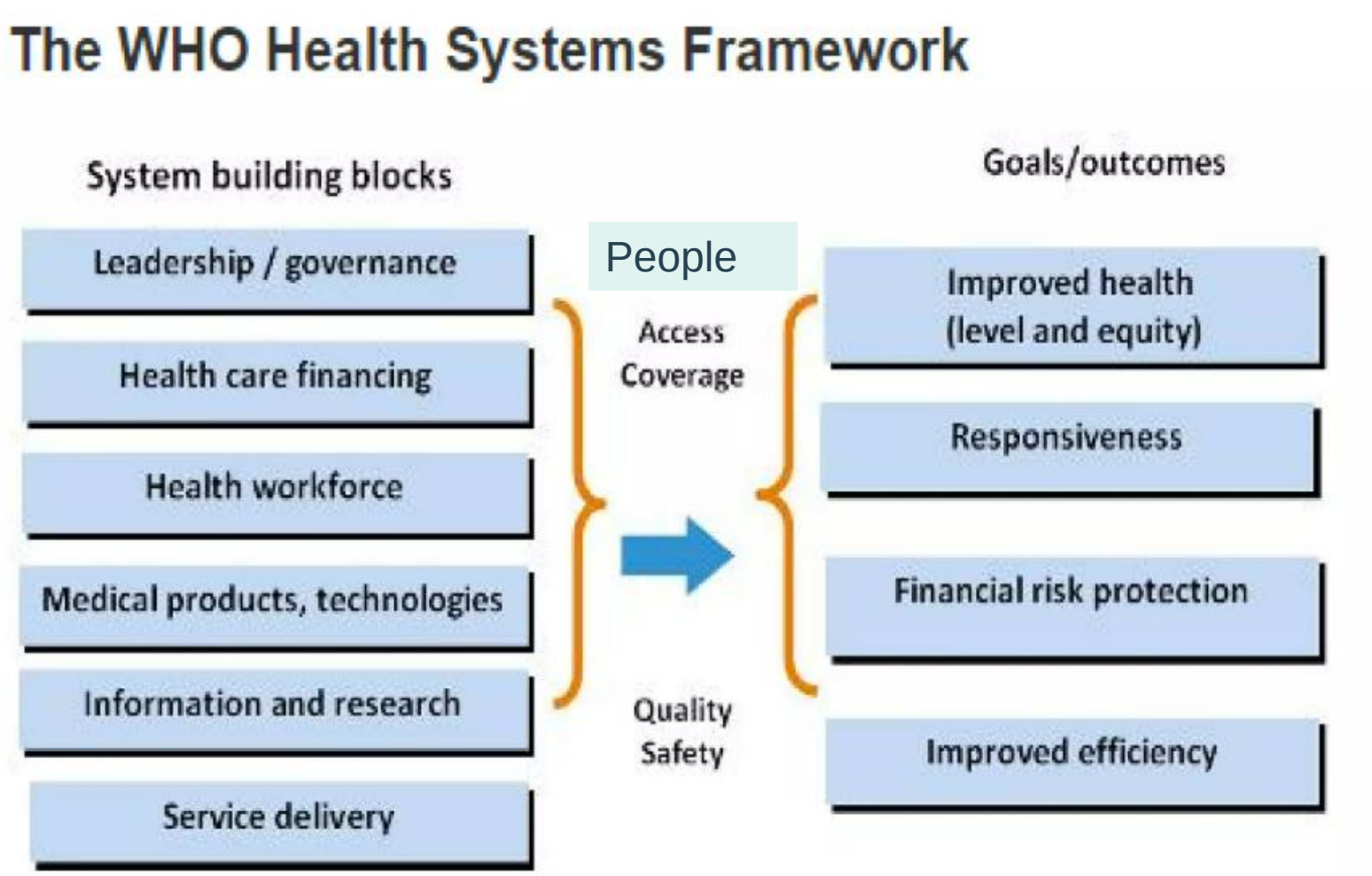
- **Direct impact:**
  - **Increased frequency and severity of weather events**, leading to deaths and injuries; and
  - **Illness, inability to work→** cause urban poor to fall deeper into poverty, further ill health
- **Indirect impact:**
  - **Changes to the epidemiology of infectious diseases→ vector and water borne disease**,
  - higher levels of **heat-related mortality and morbidity**

Source: UNICEF

Urban Health Systems:

Strengthening service delivery and stewardship

Better understanding of Urban Health Systems to foster integrated approaches



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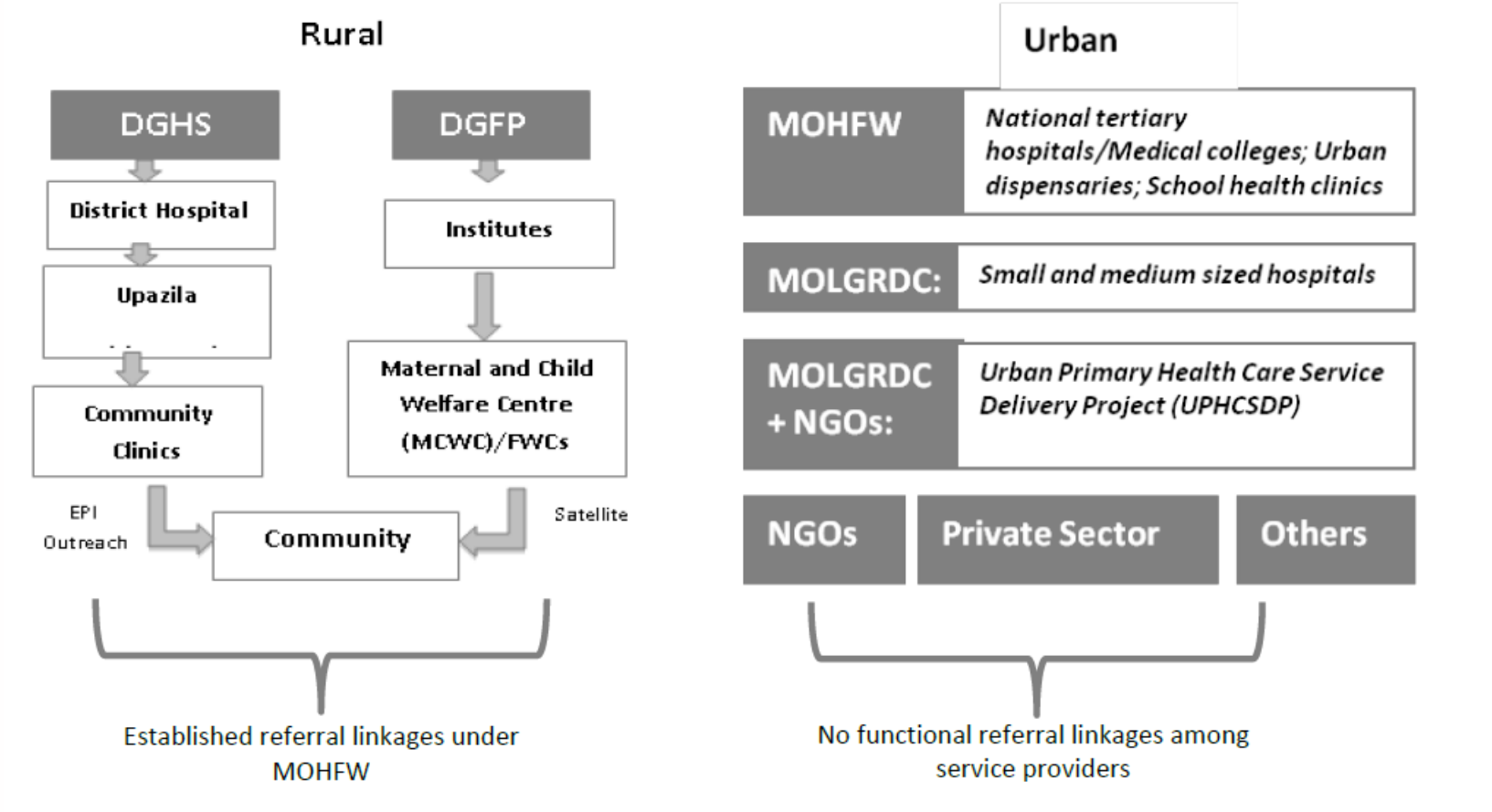
Urban Health service delivery in Bangladesh



Challenges in Urban Health Service Delivery

- **Fragmented service delivery**: multiple actors/vertical programmes
- **Lack of planning: gaps and duplication of services**
- **Lack of well-defined catchment population**
- **Dysfunctional referral system – lack of linkages to pvt. sector**
- **Poor 'Quality of care' at facilities serving them**

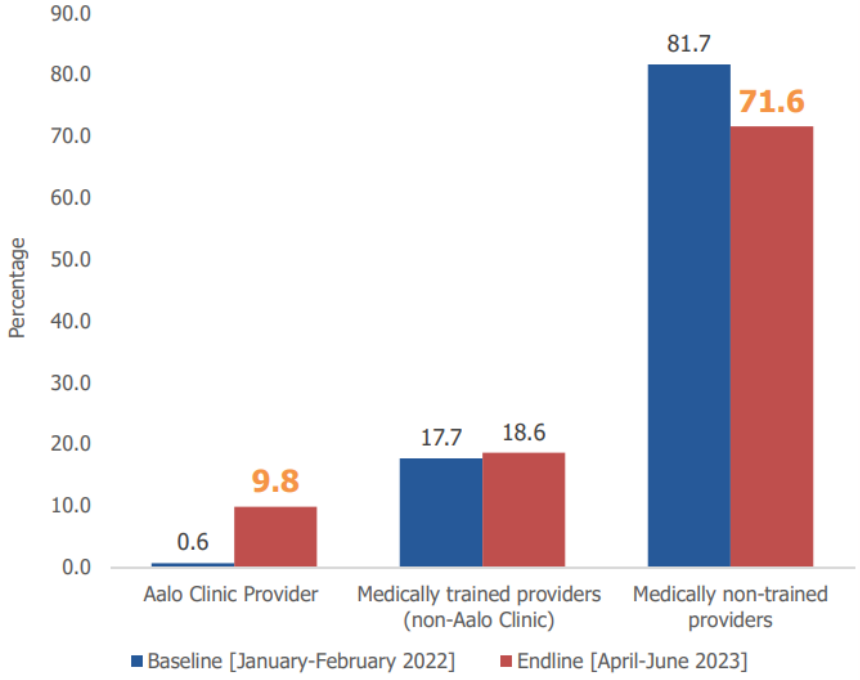
(Shafique et al., 2018; Adams et al., 2015)

Strengthening Urban Primary Health Care: Findings from Implementation Research

Aalo Clinic increased the utilization of healthcare from medically trained providers among the slum population in Bangladesh

Key Findings:

- ✓ Significant increase in use of medically trained providers with implementation of Aalo clinic (from 18.3% in baseline to 28.4% in endline)
- ✓ Significant reduction in use of non-trained providers from pharmacies after implementation of Aalo clinic (81.7% in baseline vs. **71.6**% in end-line).
- ✓ Multivariate logistic regression analysis demonstrated that the low-income study population was **13.96** times more likely to utilize healthcare from Aalo Clinic in the end-line.



Source: Mahmood SS et al. Implementation Research for Monitoring, Evaluation and Learning of Aalo Clinic. Donor: The Government of Sweden, 2023-2024; PI: Shehrin Shaila Mahmood, Associate Scientist, HSPSD

(conducted in UHDSS platforms; supported by UNICEF and Sida)

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Local Health Systems Strengthening in urban settings

Factors associated with Human Resources (HR) optimization and Primary Health Care (PHC) Planning in Local Health Systems Strengthening (LHSS) project

Facilitating factors for HR optimization

- **Availability** of community-based health workers in RCC
- **Better understanding** of PHC/ESP of the Health Assistants in RCC
- **Guidance of senior leadership and supportive supervision** for community-based health workers

Barriers For HR optimization

- **Financial constraints** of city corporation and municipalities
- **Limited scope** of the councilors to use evidence in decision making
- **Undefined organogram** and **roles and responsibilities** of health workforce
- **Inadequate support** from DGHS & DGFP for PHC/ESP

Facilitating factors for PHC planning

- **Increased in knowledge** and awareness of the LGI officials
- **Positive leadership** role of LGIs to LHSS intervention
- **Stakeholders engagement** for **resources mobilization**
- **Cooperation and supportive** role of Civil Surgeon

Barriers for PHC planning

- **Inadequate budget** to implement the PHC plan of the municipalities.
  - Medicines and supplies
  - Infrastructures
- **Human resources shortage** in the municipalities
- Lack of proper **knowledge and skills of the community-based health workers**

(Shafique et al., 2024)

What can be done to improve Urban Health in Bangladesh?

- Strengthen **institutional capacity** for **coordination among institutions**
- Engagement with **private health care providers and actors** in urban areas; **build capacity and provide support**

- Strengthen **community-based health service provision** in low-income neighborhoods; slum dwellers and pavement dwellers

- **Prioritize access to public healthcare in urban areas** and **diversifying the range of health conditions** covered by public healthcare services

- **Preparedness for emergency and poly crisis→**
  swiftly **implement interventions on a large scale while ensuring that control measures** are tailored to the specific context

- **Address Social and Political Determinants of Health**

Recommendations

- **Strengthen Urban Health governance and stewardship**

- **Use system thinking approach** – by adopting a **holistic urban health and nutrition framework—leveraging global best practices**, by
  - ensuring cross-sectoral partnerships by **engaging with actors beyond health sectors**

- **Citizen engagement** is key to strengthen health systems, **improve nutrition, and foster sustainable and inclusive urban growth**

→ to achieve **Universal Health Coverage in Bangladesh**

Thank you

Questions:
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icddr,b thanks its core donors
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