URBAN HEALTH AND DEMOGRAPHIC SURVEILLANCE SYSTEM

Registration of Health and Demographic Events, 2020

icddr,b

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Slums in and around Dhaka City Corporations

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List of Abbreviations

ANC	Antenatal Care
CM	Currently Married
COPD	Chronic Obstructive Pulmonary Disease
COVID-19	Coronavirus 2019
C-section	Caesarean section
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
HDSS	Health and Demographic Surveillance System
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
IUD	Intra-Uterine Device
LGD	Local Government Division
MBBS	Bachelor of Medicine and Bachelor of Surgery
MICS	Multiple Indicators Cluster Survey
MOFHW	Ministry of Family Health and Welfare
NGO	Non-Government Organization
NIPORT	National Institute of Population Research and Training
PNC	Postnatal Care
SQL	Structured Query Language
Std.	Standardized
TBA	Traditional Birth Attendant
TTBA	Traditional Trained Birth Attendant
UHS	Urban Health Survey
UNICEF	United Nations Children's Fund
UPHCSDP	Urban Primary Health Care Service Delivery Project

SUMMARY

The Urban Health and Demographic Surveillance System (Urban HDSS) operates in the selected slums in and around Dhaka City Corporations covering nearly 127,000 population approximately living in 33,000 households. This report provides the Urban HDSS updates of vital events and migrations and selected maternal and neonatal health service indicators. The table below summarizes key demographic, social, and health service indicators for 2020 comparing with the Matlab HDSS 2020, Multiple Indicator Cluster Survey (MICS) 2019, and Urban Health Survey 2013.

Demographic indicators	Urban HDSS 2020	Matlab HDSS 2020*	MICS 2019	Urban Health Survey 2013
Demographic				
Crude birth rate [a]	21.4	21.9	19.4	19.8
Total fertility rate	1.9	2.7	2.3	2.0
General fertility rate [b]	68.0	81.9	76.6	79.0
Adolescent fertility rate [b]	97.9	79.5	83.0	84.0
Neonatal mortality [c]	27.2	21.8	26.0	31.0
Post neonatal mortality [c]	5.5	4.3	8.0	18.0
Infant mortality rate [c]	32.7	26.1	34.0	49.0
Child mortality rate (1-4 yrs.) [a]	1.0	1.3	6.0	9.0
Under-five mortality rate [c]	36.4	31.1	40.0	57.0
Crude death rate [a]	5.3	8.5	-	-
Standardized death rate [d]	8.6	-	-	-
Rate of natural increase	16.1	13.4	-	-
Life expectancy at birth for males	64.5	69.3**	-	-
Life expectancy at birth for females	67.8	73.5**	-	-
In-migration rate [a]	171.7	58.1**	-	-
Out-migration rate [a]	143.7	46.7**	-	-
Internal movement rate [a]	107.3	-	-	-
Net migration rate	28.0	11.4**	-	-
Population growth (%)	5.4	1.4**	1.1	-
Social				
Dependency ratio	47.0	62.0	-	-
Mean age at marriage for males	23.5	28.4**	-	-
Mean age at first marriage for males	22.5	27.1**	-	-
Early marriage for males (%)	33.4	7.7**	-	-
Mean age at marriage for females	18.3	19.8**	-	-
Mean age at first marriage for females	17.7	18.8**	-	-
Early marriage for females (%)	51.5	23.8**	-	-
Maternal and child health				
Stillbirth (%)	2.6	1.6	-	-
Facility-based delivery (%)	53.5	69.9	53.4	40.2
SBA assisted delivery (%)	71.7	82.0	59	78.1
Caesarean delivery (%)	32.9	54.1	36	16.3
Antenatal care (at least 1 visit) (%)	75.8	93.4	82.8	72.1
Antenatal care (at least 4 visits) (%)	29.7	24.8	36.9	28.5
Postnatal care for mother (at least 1 visit) (%)	46.3	-	65.3	41.6
Postnatal care for child (at least 1 visit) (%)	50.6	-	66.7	34.5
Contraceptive prevalence rate (%)	71.3	-	62.7	69.6

* Matlab HDSS government service area; ** Matlab HDSS all areas.
[a] Per 1,000 population; [b] Per 1,000 women; [c] Per 1,000 livebirths; [d] Standardized with Matlab HDSS government service areas.

Chapter 1 : Introduction

According to United Nations' estimates, the population of Bangladesh will increase from 158 million in 2014 to roughly 185 million by 2030, while the urban population will increase from 50 million to roughly 83 million. It is also estimated that Bangladesh will be more urban than rural by the middle of this century (United Nations, 2015).

The high growth of the urban population in Bangladesh has occurred in recent decades, mainly through mass migration of the rural poor. Such rapid urban growth has created a heavy demand on urban utilities and services, making it difficult for the government to provide basic services, employment, and social benefits to citizens. Although Bangladesh has witnessed a remarkable progress over the last few decades in health and population indicators, significant disparities exist within urban areas between slum and non-slum dwellers with respect to health, nutrition, housing, water, and sanitation (NIPORT 2015; Roy et al. 2014). In fact, the pluralistic health systems in urban areas are less coordinated and fragmented than those in rural areas.

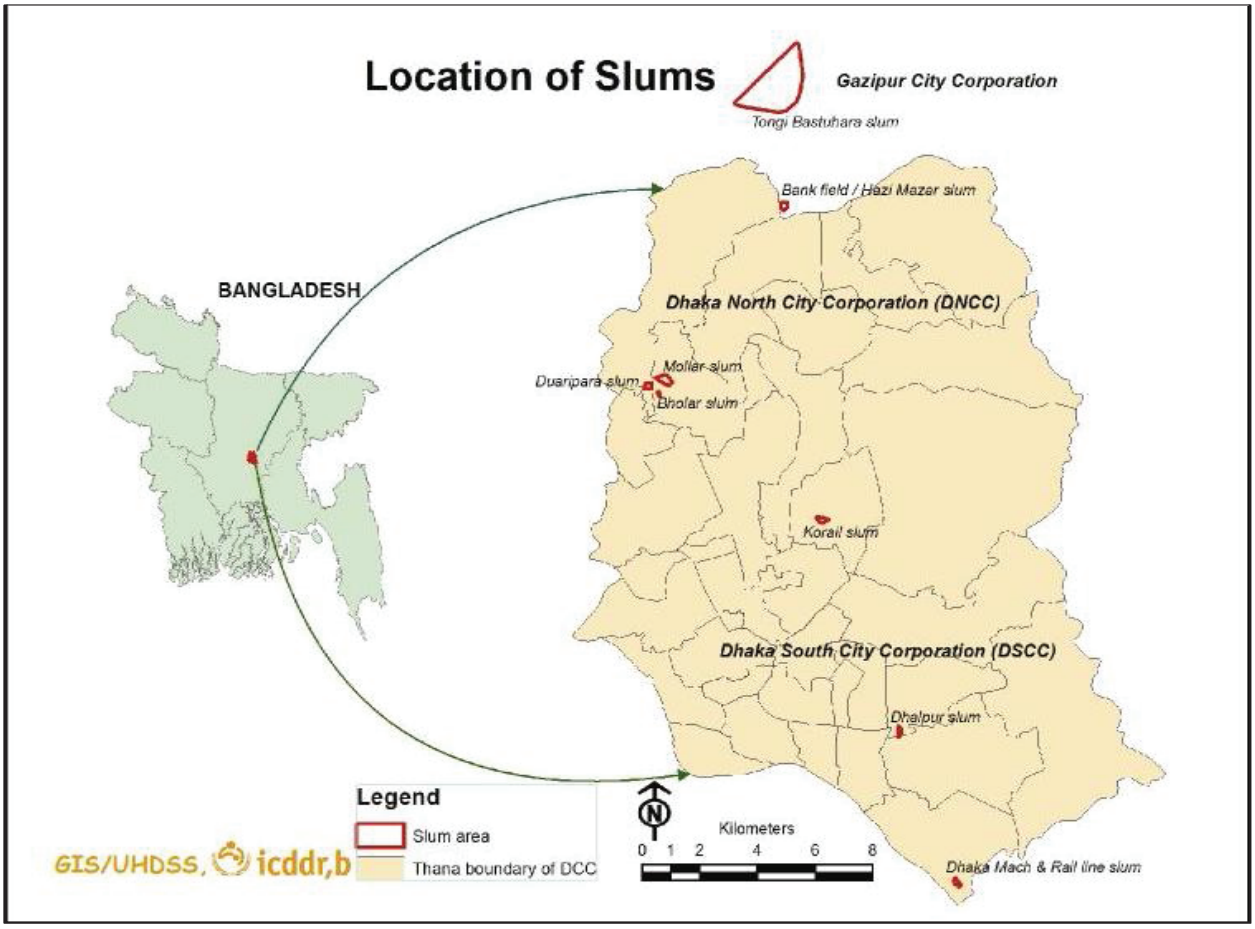
Regarding urban health, the Local Government Division (LGD) has been implementing the Urban Primary Health Care Service Delivery Project (UPHCSDP) to deliver primary health-care services through urban local bodies and NGOs since 1998 (https://uphcsdp.gov.bd/). Later in 2019, UNICEF decided to establish the Aalo Clinics (model clinics) to provide comprehensive primary health care services to the urban poor as well as to support the Health and Demographic Surveillance System in selected slums in and around the Dhaka City Corporations. Although, UNICEF has been supporting Urban HDSS since December 2019, the functioning of the Aalo Clinics has been delayed for COVID-19.

The clinics are planned to establish adjacent to the Urban HDSS areas so that community-level monitoring and the progress of the services provided by the clinics are maintained. Therefore, the objective of the Urban HDSS is to collect detailed data on demographic and health indicators of selected slum dwellers for monitoring and impact evaluation of the comprehensive Primary Health Care (PHC) services that are being provided by the Aalo Clinics.

At the time of funding the Urban HDSS by UNICEF, it was decided to increase the HDSS population from 120,000 to 160,000, along with adding more data related to maternity and child health care and introducing WHO VA data. However, these additional data collection was delayed until 2021 due to COVID-19.

The Urban HDSS operates in selected slums of Dhaka (North & South) and Gazipur City Corporations (Figure 1.1). In Dhaka North City Corporation, slums include from Korail are — Bowbazar, Beltola, Lake Par, TNT Ansar Camp, and Jhilpar; and from Mirpur are — Bhola, Molla, and Duaripara. In Dhaka South City Corporation, slums include from Dhalpur are — Pura Bosti, Driver, Nubur, City Palli, Power House, and Mannan slums; and from Shaympur are — Dhaka Mach Colony, Monsur Beel/Nama Para, and Rail Line slums. In Gazipur City Corporation slums include from Tongi are — Bank Field, Hazi Mazar, Nishad Nagar, and Kalabagan; and Ershad Nagar slums.

Figure 1.1. Location of Slums: Dhaka (North & South) and Gazipur City Corporations



Chapter 2 : Methods and Materials

In 2020, mid-year population of the Urban HDSS was 126,984, living in 32,949 households. In Dhaka North City Corporation, Korail slums had 48,690 populations, and Mirpur slums had 17,163 populations. In Dhaka South City Corporation, 16,307 populations were from Dhalpur, and Shaympur slums. In Gazipur City Corporation, 44,824 populations were from Tongi, and Ershad Nagar slums.

The Urban HDSS started with an initial population and socioeconomic census of the residents living in a defined geographical area, followed by regular household visits by female Field Workers to update information on births, deaths, migrations, marriage/divorce, health services, and socioeconomic data. Each female Field Worker was assigned to visit 40–45 households every day and to cover her assigned area within three months. The data were collected using portable devices (tablets) programmed in SQL, and the database was relational and managed by the MySQL server.

Each working day, the female Field Workers visited their assigned households, guided by the database previously loaded onto the portable devices. A written consent was obtained during the baseline population census for every household, which included consent for subsequent visits for HDSS data collection. After obtaining consent, the Field Worker first performed a roll call using the database to identify any HDSS events. If any event had occurred in the household (except for newly in-migrants), the interviewer entered the identification number into their data collection device to retrieve the basic information from the database. For newly in-migrants or births, a new identification number was assigned under the household, and additional data were collected.

The HDSS data include:

a) conception and pregnancy outcomes (livebirths, stillbirths, induced and spontaneous miscarriages);
b) death and its causes;
c) migration (out-, in-, and internal-);
d) marriage/divorce;
e) head change/household split;
f) safe motherhood practices; and
g) fertility regulation.

The data on causes of death were collected from an informed household member or caregiver and recorded as a brief description (verbatim); however, the respondent was asked whether the cause had been ascertained by a medical professional or a family member.

Chapter 3 : Population Composition

- Overall, 56.6% of the population were aged 15-44 years, 29.9% were <15 years, 9.8% were 45-59 years, and 3.8% were 60+ years.
- The total dependency ratio was 47.0, including 43.9 for the young dependents and 3.1 were the old dependents.
- Among the total population, more males were never married (42.6% vs. 33.2%) than females, lower in currently married (55.8% vs. 57.2%), and previously married (1.6% vs. 9.6%).

The mid-year population's age-sex-specific distribution, dependency ratio, and marital status by age and sex are provided in this chapter. Detailed population distributions by slums and sex are also provided (see Appendix A: Appendix Table 1 and 2). The population characteristics of the slum areas are not the same as those of rural areas; therefore, the findings are compared with those of the Matlab HDSS areas (government service areas).

The distribution of the Urban HDSS population by age differed from that of the Matlab HDSS (Table 3.1). In the Urban HDSS areas, there were more young adults (15–44 years) than in the Matlab HDSS areas (56.6% vs. 40.9%), but almost similar populations of under 15 years (29.9% vs. 30.5%). There were appreciably fewer older adults (45–59 years) (9.8% vs. 16.4%) and elderly (60+ years) (3.8% vs. 12.2%). Both the young (43.9% vs. 49.4%) and old (3.1% vs. 12.6%) dependency ratios were lower for Urban HDSS than for the Matlab HDSS.

The age pyramid reflects a rapid decline in fertility, with more young people than elderly people (Figure 3.1). There were slightly more males than females (30.6% vs. 29.2%) for ages below 15, but appreciably more females than males for age groups 15–19 (11.9% vs. 10.4%), 20–24 (13.0% vs. 10.1%), and 25–29 (11.4% vs. 10.5%), while for subsequent higher age groups, there were slightly more males than females (Appendix Table 1).

Among males, 42.6% were never married, 55.8% were currently married, and the rest were either widowed, divorced, or separated (1.6%), compared to 33.2%, 57.2%, and 9.6%, respectively, for females (Table 3.2).

Table 3.1. Distribution of Population by Broad Age Group and Sex (per cent), Urban HDSS 2020

Age in years	Urban HDSS						Matlab HDSS-2020*
	Number			Percent			Percent
	Both	Male	Female	Both	Male	Female	Both
<15	37,922	19,157	18,766	29.9	30.6	29.2	30.5
15–44	71,910	34,488	37,422	56.6	55.0	58.2	40.9
45–59	12,386	6,548	5,838	9.8	10.5	9.1	16.4
60–64	2,125	1,061	1,064	1.7	1.7	1.7	4.4
65+	2,641	1,433	1,208	2.1	2.3	1.9	7.8
Total	**126,984**	**62,686**	**64,298**	**100.00**	**100.0**	**100.0**	**100.0**
Dependency ratio							
Total				47.0			62.0
Young				43.9			49.4
Old				3.1			12.6

Note: Population as of June 30, 2020
* Matlab HDSS government service areas.

Figure 3.1. Age Pyramid of the Mid-year Population, Urban HDSS 2020

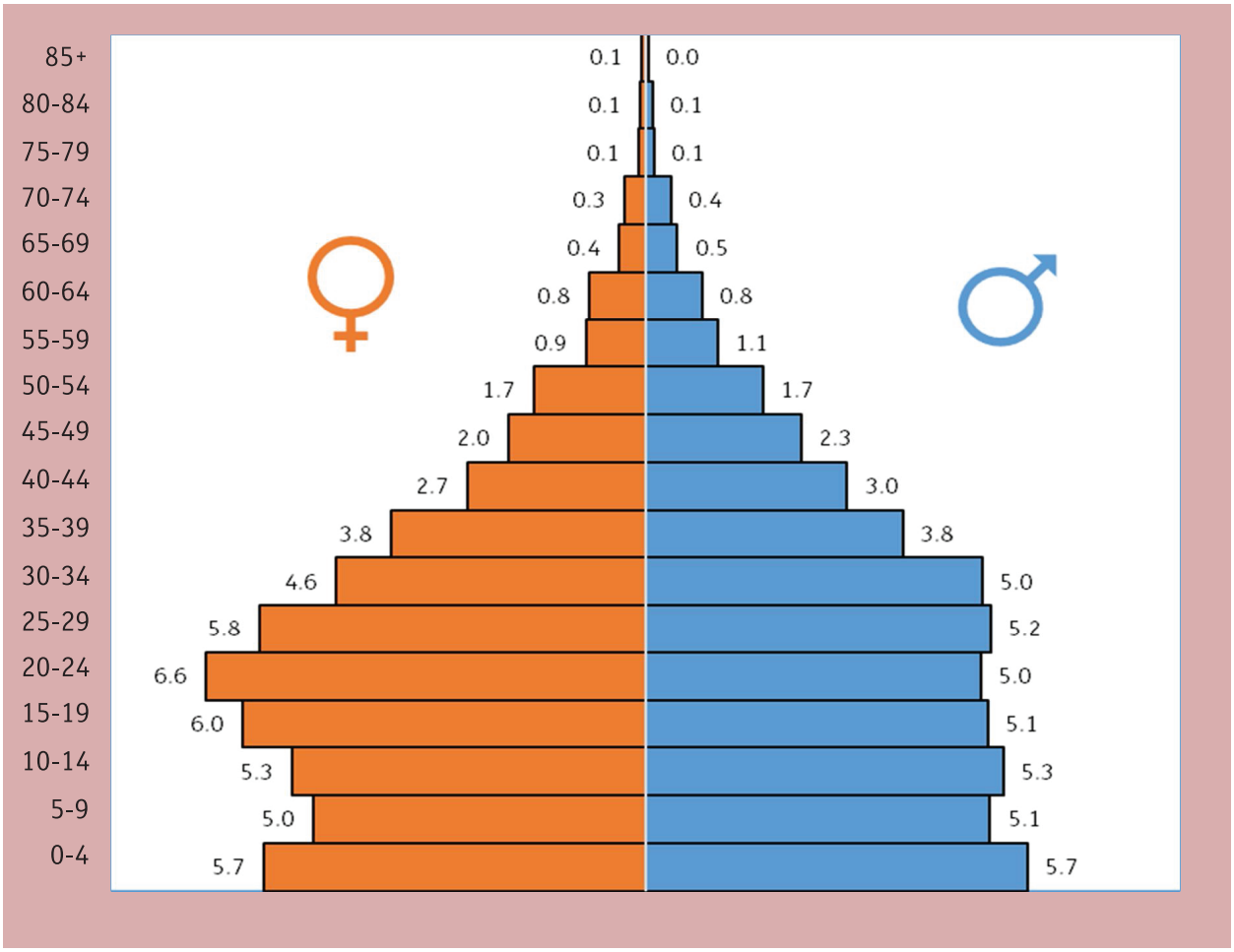


Table 3.2. Distribution of Current Marital Status by Age and Sex (per cent), Urban HDSS 2020

Age in years	Male						Female					
	NM	CM	WID	DIV	SEP	Total	NM	CM	WID	DIV	SEP	Total
0–4	100.0	0.0	0.0	0.0	0.0	5,831	100.0	0.0	0.0	0.0	0.0	5,760
5–9	100.0	0.0	0.0	0.0	0.0	6,533	100.0	0.0	0.0	0.0	0.0	6,297
10–14	97.3	2.6	0.0	0.0	0.0	6,793	82.1	17.6	0.0	0.3	0.0	6,709
15–19	74.9	24.4	0.1	0.6	0.1	6,489	36.0	61.8	0.1	1.9	0.2	7,652
20–24	34.1	64.2	0.1	1.5	0.2	6,348	10.0	86.2	0.4	2.2	1.2	8,348
25–29	7.5	89.9	0.2	2.0	0.4	6,555	2.0	92.7	1.0	2.2	2.2	7,318
30–34	1.8	96.1	0.3	1.4	0.5	6,392	0.6	92.9	2.1	1.9	2.5	5,886
35–39	0.8	97.4	0.4	1.0	0.4	4,882	0.2	88.9	5.0	1.6	4.3	4,826
40–44	0.3	98.1	0.7	0.7	0.2	3,822	0.1	82.8	10.7	1.2	5.2	3,392
45–49	0.4	97.5	0.9	0.7	0.5	2,956	0.1	74.6	18.9	1.0	5.4	2,589
50–54	0.2	96.9	2.0	0.7	0.2	2,218	0.1	61.3	32.8	0.8	4.9	2,117
55–59	0.4	96.1	2.5	0.6	0.5	1,374	0.2	48.7	46.0	1.2	3.9	1,132
60–64	0.2	94.2	5.0	0.4	0.3	1,061	0.2	32.0	62.8	0.9	4.2	1,064
65–69	0.3	93.0	6.3	0.3	0.0	602	0.0	22.2	74.2	0.2	3.4	496
70–74	0.6	89.4	9.4	0.6	0.0	490	0.3	13.5	82.1	0.8	3.3	392
75–79	0.6	85.9	12.2	0.0	1.3	156	0.7	7.4	88.2	0.7	3.0	135
80–84	0.8	81.9	17.3	0.0	0.0	127	1.7	9.5	86.2	0.9	1.7	116
85+	1.7	84.5	13.8	0.0	0.0	58	1.5	5.8	92.8	0.0	0.0	69
Total	**42.6**	**55.8**	**0.6**	**0.8**	**0.2**	**62,687**	**33.2**	**57.2**	**6.5**	**1.3**	**1.8**	**64,298**

Note: NM is never married, CM is currently married, WID is widow/widower, DIV is divorced, SEP is separated.

Chapter 4 : Mortality

- The crude death rate was 5.3 per 1,000 population.
- Overall, the under-5 mortality rate was 36.4, the neonatal mortality rate was 27.2, and the infant mortality rate was 32.7 (per 1,000 livebirths).
- The life expectancy at birth was higher for females (67.8) than males (64.5).
- Among the deaths, 56.6% were due to non-communicable and 14.1% were due to communicable.

A total of 675 deaths were registered from January to December 2020, and the causes of deaths were coded by a non-medical person under the guidance of a trained physician. The age-sex distribution of deaths and death rates are shown in this chapter. As the distribution of the Urban HDSS population by age differed from that of the Matlab HDSS population, the Urban HDSS death rates were standardized with the Matlab HDSS (government service areas).

Out of 675 deaths, 13.3% were infants, 1.5% were children aged 1–4 years, 48.3% were aged 5–59 years, and 37.0% were aged 60 years or older. Comparable figures from the Matlab HDSS areas were 6.7%, 1.3%, 19.2%, and 72.8%, respectively (Table 4.1).

Table 4.1. Distribution of Deaths by Age and Sex (per cent), Urban HDSS 2020

All ages	Urban HDSS						Matlab HDSS-2020*
	Both		Male		Female		
	Number	Percent	Number	Percent	Number	Percent	Both
<1 year	90	13.3	52	13.5	38	12.9	6.7
<7 days	*62*	*9.2*	*35*	*9.1*	*27*	*9.4*	*4.8*
7–29 days	*12*	*1.8*	*8*	*2.1*	*4*	*1.4*	*0.8*
1–5 months	*13*	*1.8*	*7*	*1.8*	*6*	*1.7*	*0.6*
6–11 months	*3*	*0.5*	*2*	*0.5*	*1*	*0.4*	*0.5*
1–4	10	1.5	6	1.6	4	1.4	1.3
5–9	13	1.9	6	1.6	7	2.4	0.7
10–14	14	2.1	9	2.3	5	1.7	1.2
15–19	19	2.8	10	2.6	9	3.1	1.2
20–24	13	1.9	6	1.6	7	2.4	0.6
25–29	20	3.0	9	2.3	11	3.8	0.6
30–34	16	2.4	10	2.6	6	2.1	1.0
35–39	29	4.3	15	3.9	14	4.9	0.8
40–44	38	5.6	27	7.0	11	3.8	1.0
45–49	58	8.6	37	9.6	21	7.3	2.0
50–54	58	8.6	30	7.8	28	9.7	3.5
55–59	48	7.1	24	6.2	24	8.3	6.6
60–64	57	8.5	34	8.8	23	8.0	9.3
65–69	63	9.4	39	10.1	24	8.3	11.1
70–74	54	8.0	32	8.3	22	7.6	10.3
75–79	19	2.8	14	3.6	5	1.7	19.5
80–84	29	4.3	17	4.4	12	4.2	11.1
85+	27	4.0	9	2.3	18	6.3	11.5
Total	**675**	**100.0**	**386**	**100.0**	**289**	**100.0**	**100.0**

* Matlab HDSS government service areas.

The crude death rate (per 1,000 population) in Urban HDSS areas was 5.3, compared to 8.5 in Matlab HDSS areas (Table 4.2). The crude death rate in Urban HDSS areas became 8.6 after standardization, while the age-standardized mortality rates were 1.7 for young people, 2.1 for adults, and 4.7 for the elderly (per 1,000 population) compared to Matlab government service areas.

The infant mortality rate (per 1,000 livebirths) in Urban HDSS areas was 32.7, and the under-five mortality rate was 36.4, while comparable figures in Matlab HDSS areas were 26.1 and 31.1, respectively.

Table 4.2. Age Specific Death Rates (per 1,000 population), Urban HDSS 2020

All ages	Urban HDSS			Matlab HDSS-2020¥
	Male	Female	Both	Both
<1 year*	37.8	27.6	32.7	26.1
Neonatal*	31.3	23.1	27.2	21.8
Post neonatal*	6.5	4.5	5.5	4.3
1–4	1.2	0.8	1.0	1.3
Under 5*	42.2	30.5	36.4	31.1
5–9	0.9	1.1	1.0	0.6
10–14	1.3	0.7	1.0	1.1
15–19	1.5	1.2	1.3	1.1
20–24	0.9	0.8	0.9	0.7
25–29	1.4	1.5	1.4	0.9
30–34	1.6	1.0	1.3	1.3
35–39	3.1	2.9	3.0	1.1
40–44	7.1	3.2	5.3	1.5
45–49	12.5	8.1	10.5	3.2
50–54	13.5	13.2	13.4	5.4
55–59	17.5	21.2	19.2	10.0
60–64	32.0	21.6	26.8	18.1
65–69	64.8	48.4	57.4	33.6
70–74	65.3	56.1	61.2	41.4
75–79	89.7	37.0	65.3	105.7
80–84	133.9	103.4	119.3	116.6
85 +	155.2	260.9	212.6	200.0
Crude death rate	**6.2**	**4.5**	**5.3**	**8.5**
Std. mortality ratio†	**9.8**	**7.3**	**8.6**	
Young	2.1	1.4	1.7	
Adult	2.3	1.9	2.1	
Elderly	5.4	4.0	4.7	

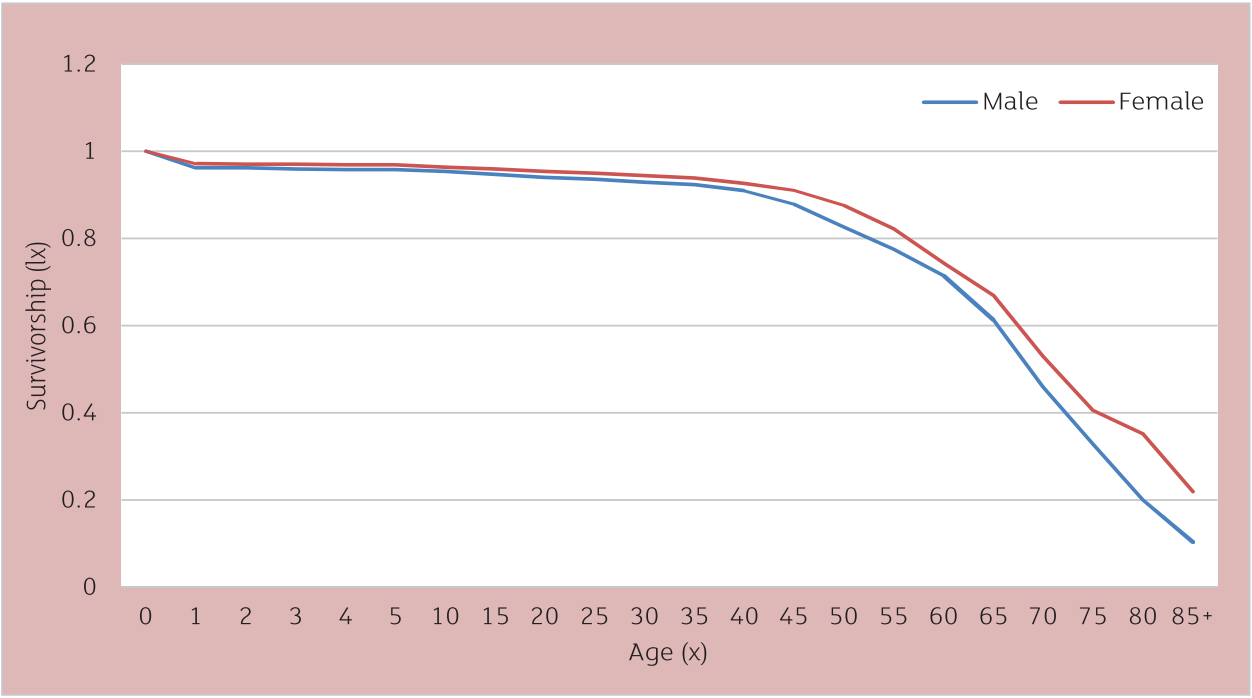
*Per 1,000 livebirths.
†Direct standardized mortality ratio standardized by the Matlab government service areas data.
¥Matlab HDSS government service areas.

The abridged life table (Table 4.3) derived from the age-sex specific death rates shows that life expectancy at birth was higher for females than males (64.5 vs. 67.8). However, life expectancy in most age groups were usually higher for females than that of males (see Appendix B: Life Table Equations). The survival (lx) times are plotted in Figure 4.1. The probability of survival was parallel and similar for both sexes up to age 40, and then survival was higher for females than males.

Table 4.3. Life Table by Male and Female, Urban HDSS 2020

Age in years	Male				Female			
	^nq_x	l_x	L_x	e^0_x	^nq_x	l_x	L_x	e^0_x
0	37.8	100,000	96,788	64.5	28.3	100,000	97,595	67.8
1	1.5	96,221	96,134	66.0	1.5	97,171	97,085	68.8
2	0.0	96,074	96,074	65.1	0.0	97,025	97,025	67.9
3	0.9	96,074	96,033	64.1	0.9	97,025	96,983	66.9
4	0.8	95,992	95,952	63.1	0.8	96,942	96,902	66.0
5	4.6	95,913	478,553	62.2	5.5	96,862	483,071	65.0
10	6.6	95,474	475,914	57.5	3.7	96,325	480,798	60.4
15	7.7	94,843	472,536	52.8	5.9	95,966	478,535	55.6
20	4.7	94,115	469,551	48.2	4.2	95,404	476,098	50.9
25	6.8	93,671	466,877	43.4	7.5	95,004	473,381	46.1
30	7.8	93,030	463,478	38.7	5.1	94,293	470,359	41.4
35	15.3	92,305	458,273	34.0	14.4	93,813	465,947	36.6
40	34.8	90,897	447,165	29.5	16.1	92,462	458,872	32.1
45	60.8	87,738	426,267	25.4	39.8	90,974	446,470	27.6
50	65.6	82,402	399,422	21.9	64.2	87,352	423,705	23.6
55	83.9	77,000	369,890	18.3	101.0	81,748	389,371	20.1
60	148.9	70,539	327,810	14.7	102.9	73,493	349,721	17.0
65	279.8	60,034	259,241	11.8	216.7	65,933	295,328	13.7
70	281.7	43,239	186,501	10.4	247.1	51,643	227,350	11.8
75	366.8	31,060	126,943	8.5	170.2	38,884	178,673	9.8
80	497.4	19,667	73,087	7.0	410.4	32,266	127,995	6.2
85+	1000.0	9,884	63,698	6.4	1000.0	19,025	72,930	3.8

Figure 4.1. Probability of Survival from Birth to Age (x) by Sex, Urban HDSS 2020



Non-communicable diseases were the leading cause of death (56.6%), followed by communicable diseases (14.1%), miscellaneous causes (8.5%), accident/injury/murder (7.4%), maternal and neonatal conditions (6.4%), and old age (4.6%); the rest were due to unspecified causes (Table 4.4).

Among non-communicable disease deaths, the most prevalent were cerebrovascular stroke (22.8%), followed by cancer/brain tumour/neoplasm/tumour (8.3%), cardiovascular heart diseases (8.0%), and kidney problems (6.1%) (Table 4.4). Over all, non-communicable disease deaths were almost equal for both males (56.5%) and females (56.7%). Deaths due to cerebrovascular stroke and cardiovascular heart disease were higher for males than females, while cancer/brain tumour/neoplasm/tumour, asthma/bronchitis/COPD, kidney problems, paralysis, and diabetes were higher for females than males. Of communicable disease deaths, the most prevalent were pneumonia/respiratory infection (7.6%), followed by liver problems (3.4%) and tuberculosis (1.9%); pneumonia/respiratory infection, jaundice, and tuberculosis were higher for males than females. For deaths due to maternal and neonatal conditions, the most prevalent were unspecified neonatal causes of death (2.7%), followed by other neonatal causes (1.5%) and pre-mature babies (1.2%), while 0.3% of deaths were maternal. Among death related to accident/injury/murder, the most prevalent were accident (3.7%), followed by suicide (1.5%) and drowning (1.0%); accident was higher for males than females, while suicide and drowning were higher for females than males.

Deaths due to communicable diseases (34.7%), and maternal and neonatal conditions (28.3%) were higher for under 15 years (Table 4.5). 71.6% deaths due to non-communicable diseases occurred for those aged 50 and older. Deaths due to accident/injury/murder were higher for those aged 15–49 (13.5%).

Table 4.4. Death by Detail Cause and Sex (per cent), Urban HDSS 2020

Cause of deaths	Male	Female	Both
Communicable diseases	**15.8 (61)**	**11.8 (34)**	**14.1 (95)**
Pneumonia/respiratory infection	8.5 (33)	6.3 (18)	7.6 (51)
Diarrhoeal	0.5 (2)	0.7 (2)	0.6 (4)
Jaundice	0.8 (3)	0.3 (1)	0.6 (4)
Tuberculosis (TB)	2.9 (11)	0.7 (2)	1.9 (13)
Liver problem	3.1 (12)	3.8 (11)	3.4 (23)
Maternal and neonatal conditions	**5.4 (21)**	**7.6 (22)**	**6.4 (43)**
Unspecified neonatal causes of death	2.1 (8)	3.5 (10)	2.7 (18)
Maternal death (mother)	0.0 (0)	0.7 (2)	0.3 (2)
Eclampsia	0.0 (0)	0.7 (2)	0.3 (2)
Delivery complication	0.0 (0)	0.3 (1)	0.1 (1)
Pre-matured baby	1.6 (6)	0.7 (2)	1.2 (8)
Anaemia	0.0 (0)	0.7 (2)	0.3 (2)
Other neonatal	1.8 (7)	1.0 (3)	1.5 (10)
Non-communicable	**56.5 (218)**	**56.7 (164)**	**56.6 (382)**
Paralyses	1.3 (5)	2.8 (8)	1.9 (13)
Cancer/brain tumour/neoplasm/tumour	7.5 (29)	9.3 (27)	8.3 (56)
Stroke (cerebrovascular)	26.9 (104)	17.3 (50)	22.8 (154)
Asthma/bronchitis/COPD	4.9 (19)	5.5 (16)	5.2 (35)
Kidney problem	4.9 (19)	7.6 (22)	6.1 (41)
Diabetes	2.1 (8)	6.9 (20)	4.2 (28)
Heart disease (cardiovascular)	8.6 (33)	7.3 (21)	8.0 (54)
Drug addiction	0.3 (1)	0.0 (0)	0.2 (1)
Accidental/injury/murder	**7.8 (30)**	**6.9 (20)**	**7.4 (50)**
Poison	0.5 (2)	0.0 (0)	0.3 (2)
Burn	0.0 (0)	0.7 (2)	0.3 (2)
Accident	4.9 (19)	2.1 (6)	3.7 (25)
Suicide	1.0 (4)	2.1 (6)	1.5 (10)
Drowning	0.5 (2)	1.7 (5)	1.0 (7)
Murder	0.8 (3)	0.3 (1)	0.6 (4)
Miscellaneous causes	**8.6 (33)**	**8.4 (24)**	**8.5 (57)**
Fever/cold	2.1 (8)	2.8 (8)	2.4 (16)
Other	6.5 (25)	5.6 (16)	6.1 (41)
Unspecified/unknown	**2.6 (10)**	**2.4 (7)**	**2.5 (17)**
Illness/unspecified causes	2.6 (10)	2.4 (7)	2.5 (17)
Senile	**3.4 (13)**	**6.3 (18)**	**4.6 (31)**
Old Age	3.4 (13)	6.3 (18)	4.6 (31)
Total	**100.0 (386)**	**100.0 (289)**	**100.0 (675)**

Table 4.5. Death by Major Cause and Age (per cent), Urban HDSS 2020

Broad causes of death	<15 years	15-49 years	50+ years	Total
Communicable/infectious diseases	34.7 (44)	11.9 (23)	7.9 (28)	14.2 (95)
Maternal and neonatal conditions	28.3 (36)	3.6 (7)	0.0 (0)	6.4 (43)
Non-communicable	9.4 (12)	60.1 (116)	71.6 (254)	56.6 (382)
Accidental/injury/murder	11.8 (15)	13.5 (26)	2.5 (9)	7.4 (50)
Miscellaneous causes	12.6 (16)	8.8 (17)	6.8 (24)	8.4 (57)
Unspecified/unknown	3.2 (4)	2.1 (4)	2.5 (9)	2.5 (17)
Senile/old age	0.0 (0)	0.0 (0)	8.7 (31)	4.6 (31)
Total	**100.0 (127)**	**100.0 (193)**	**100.0 (355)**	**100.0 (675)**

Chapter 5 : Fertility

- Among 3,116 pregnancies, 86.7% were livebirths, 3.0% were induced miscarriages, 7.7% were spontaneous miscarriages and 2.6% were stillbirths.
- The crude birth rate was 21.4, the total fertility rate was 1.9, and the general fertility rate was 68.0.
- The age-specific fertility rate was the highest at ages 20–24 (107.1).
- The overall sex ratio at birth was 102 males per 100 females.

This chapter provides the types of pregnancy outcomes, distribution of birth by mother's age, age-specific fertility rates, and pregnancy outcomes by month.

Out of 3,116 pregnancies, 86.7% were livebirths, 3.0% were induced miscarriages, 7.7% were spontaneous miscarriages, and 2.6% were stillbirths, while the comparable figures from the Matlab HDSS areas were 89.7%, 1.8%, 6.9%, and 1.6%, respectively (Table 5.1). There were 19 multiple pregnancies in Urban HDSS areas, and 15 of these were twin livebirths, and one of these was turned into one livebirth and one stillbirth and one triple livebirths. The distribution of livebirth pregnancies by slums and months is also reported (see Appendix A: Appendix Tables 5 and 6).

Table 5.1. Distribution of Pregnancy Outcomes (per cent), Urban HDSS 2020

Pregnancy outcome	Urban HDSS		Matlab HDSS-2020*
	Number	Percent	Percent
Total pregnancies	**3,116**	**100.0**	**100.0**
Livebirth pregnancies	2,702	86.7	89.7
Miscarriage			
Induced	92	3.0	1.8
Spontaneous	240	7.7	6.9
Stillbirth pregnancies	82	2.6	1.6
Multiple pregnancy	19	0.5	
Multiple livebirth pregnancy			
Two	15		
One livebirth and one stillbirth	1		
Triple pregnancy	1		

*Matlab HDSS government service areas.

Table 5.2 shows the distribution of births by mother's age. 27.6% of births were to mothers aged under 20 years (9.2% of births were to mothers under 18), 32.9% were to mothers aged 20–24 years, 24.7% were to mothers aged 25–29 years, and 14.9% were to mothers aged 30 or older. Comparable figures for Matlab HDSS were 18.0%, 32.5%, 23.7%, and 25.8%, respectively.

Table 5.2. Distribution of Birth by Mother's Age (per cent), Urban HDSS 2020

Mother's age at birth	Urban HDSS		Matlab HDSS-2020*
	Number	Percent	Percent
15–17	*249*	*9.2*	-
18–19	*500*	*18.4*	-
15–19	749	27.6	18.0
20–24	894	32.9	32.5
25–29	671	24.7	23.7
30–34	279	10.3	16.9
35+	126	4.6	8.9
Total	**2,719**	**100.0**	**100.0**

*Matlab HDSS government service areas.

Table 5.3 shows the age-specific fertility rates (per 1,000 women) and fertility indices. The total fertility rate (per woman) in Urban HDSS areas was 1.9, compared to 2.6 in Matlab HDSS areas, and 2.0 in the Urban Health Survey. The age-specific fertility rate (per 1,000 women) was the highest at age groups 20–24 (107.1), followed by 15–19 (97.9) and 25–29 (91.7). The crude birth rate in Urban HDSS areas was 21.4, compared to 21.9 in Matlab HDSS areas, and 19.8 in the Urban Health Survey. Additionally, the general fertility rate was lower in Urban HDSS areas (68.0) than in Matlab HDSS areas (81.9), and in the Urban Health Survey (79.0).

Table 5.3. Age-specific Fertility Rates (per 1,000 women) and Indices, Urban HDSS 2020

Age in years	No. of women	No. of births	Urban HDSS	UHS-2013+++	Matlab HDSS-2020¥
All ages	**40,011**	**2,719**			
≤19	7,652	749	97.9	84.0	79.5
20–24	8,348	894	107.1	127.0	166.9
25–29	7,318	671	91.7	92.0	135.7
30–34	5,886	279	47.4	56.0	92.3
35–39	4,826	100	20.7	31.0	42.5
40–44	3,392	20	5.9	12.0	12.4
45+	2,589	6	2.3	1.0	1.5
Total fertility rate+			1.9	2.0	2.6
General fertility rate++			68.0	79.0	81.9
Crude birth rate			21.4	19.8	21.9

¥Matlab HDSS government service areas.
+The average number of children that would be borne by a woman if she goes through life having children at the current age-specific rates.
++ Total number of livebirths per 1,000 women of reproductive age (ages 15 to 49 years) in a population per year.
+++ City Corporation slums.

Table 5.4 shows the distribution of pregnancy outcomes by month of occurrence and sex. Data shows that livebirths were highest in October, followed by November, December, and August. The overall sex ratio at birth was 102 males per 100 females, with no definite trend by month; the lowest sex ratio was in December (0.89), and the highest in June (1.46).

Table 5.4. Pregnancy Outcomes by Month (per cent), Urban HDSS 2020

Months	Pregnancy outcome					No. of live born children			
	All	Miscarriage		Still birth	Live birth	Both	Male	Female	Ratio
		Induced	Spon.						
January	223	7	12	2	202	202	105	97	1.08
February	204	8	19	6	171	175	94	81	1.16
March	211	8	20	10	173	173	87	86	1.01
April	180	6	13	4	157	157	83	74	1.12
May	241	8	20	2	211	212	102	110	0.93
June	232	5	24	6	197	197	117	80	1.46
July	285	7	28	13	237	241	122	119	1.03
August	297	6	17	8	266	269	140	129	1.09
September	269	9	21	8	231	231	112	119	0.94
October	338	8	28	9	293	295	143	152	0.94
November	323	9	19	8	287	287	139	148	0.94
December	313	11	19	6	277	280	132	148	0.89
Total	**3,116**	**92**	**240**	**82**	**2,702**	**2,719**	**1,376**	**1,343**	**1.02**

Chapter 6 : Marriage and Divorce

- For females, the mean age at marriage was 18.3, while 17.7 for the first marriage and 24.3 for remarriage.
- For males, the mean age at marriage was 23.5, while 22.5 for the first marriage and 30.3 for remarriage.

This chapter provides the percentages of age-specific marriage and divorce for brides and grooms, mean age by their previous marital status, and the distribution of marriages and divorces by month.

The mean age at marriage for females was 18.3, which was lower than the mean age at marriage in the Matlab HDSS areas (19.8) (Table 6.1). However, the mean age at first marriage (previously single) was 17.7, and the mean age at remarriage was 24.3 years. In the Urban HDSS areas, 51.5% of girls' first marriages took place before the age of 18. The mean age at divorce for brides was 23.9 (Table 6.2); while 12.6% of divorces took place before the age of 18.

Table 6.1. Bride's Age at Marriage (per cent), Urban HDSS 2020

Age in years	All bride	Previous marital status	
		Single	Ever married
<15	9.7 (179)	10.4 (176)	1.9 (3)
15–17	39.1 (724)	41.1 (695)	18.0 (29)
18–19	26.9 (500)	28.1 (476)	14.9 (24)
20–24	18.2 (337)	17.7 (299)	23.6 (38)
25+	6.1 (113)	2.7 (46)	41.6 (67)
Total	**100.0 (1,853)**	**100.0 (1,692)**	**100.0 (161)**
Mean age at marriage	18.3(19.8*)	17.7 (18.8*)	24.3 (30.2*)

* Mean age at marriage of Matlab HDSS 2020.

Table 6.2. Bride's Age at Divorce (per cent), Urban HDSS 2020

Age in years	Number	Percent
<15	1	0.6
15–17	20	12.0
18–19	32	19.3
20–22	40	24.1
23–24	13	7.8
25–29	32	19.3
30+	28	16.9
Total	**166**	**100.0**
Mean age at divorce		23.9

For boys, the mean age at marriage was 23.5, which was lower than the mean age at marriage in the Matlab HDSS areas (28.4) (Table 6.3). However, the mean age at first marriage (previously single) was 22.5, and the mean age at remarriage was 30.3 years. In the Urban HDSS areas, 33.4% of first marriages took place before the age of 21. The mean age at divorce for grooms was 28.9 (Table 6.4); while 16.3% of divorces took place before the age of 21.

Table 6.3. Groom's Age at Marriage (per cent), Urban HDSS 2020

Age in years	All groom	Previous marital status	
		Single	Ever married
<18	6.4 (118)	6.8 (111)	3.3 (7)
18–20	24.8 (460)	26.6 (437)	10.9 (23)
21–22	20.2 (3375)	21.8 (358)	8.1 (17)
23–24	15.8 (292)	16.6 (272)	9.5 (20)
25–29	23.1 (428)	23.2 (381)	22.3 (47)
30+	9.7 (180)	5.0 (83)	45.9 (97)
Total	**100.0 (1,853)**	**100.0 (1,642)**	**100.0 (211)**
Mean age at marriage	23.5 (28.4*)	22.5 (27.1*)	30.3 (39.5*)

* Mean age at marriage of Matlab HDSS 2020.

Table 6.4. Groom's Age at Divorce (per cent), Urban HDSS 2020

Age in years	Number	Percent
<18	6	3.6
18–20	21	12.7
21–22	10	6.0
23–24	18	10.8
25–29	46	27.7
30+	65	39.2
Total	**166**	**100.0**
Mean age at divorce		28.9

Marriages were highest in August, while lowest in May; however, divorces were highest in July and lowest in April (Table 6.5).

Table 6.5. Number of Marriage and Divorces by Months (per cent), Urban HDSS 2020

Months	Number		Percent	
	Marriage	Divorce	Marriage	Divorce
January	193	12	10.4	7.2
February	125	17	6.8	10.2
March	128	11	6.9	6.7
April	96	9	5.2	5.4
May	93	10	5.0	6.0
June	131	12	7.1	7.2
July	134	22	7.2	13.3
August	219	15	11.8	9.1
September	183	20	9.9	12.1
October	196	13	10.6	7.8
November	176	11	9.5	6.6
December	179	14	9.7	8.4
Total	**1,853**	**166**	**100.0**	**100.0**

Chapter 7 : Migration

- Overall, the in-migration rate was 171.7, the out-migration rate was 143.7, and the internal-movement rate was 107.3 per 1,000 population.
- The main reasons for such movements were due to join family and/or to look for work.

This chapter presents the age-sex specific distribution of migrants (in-, out-, and internal-), their rates and causes of migration.

During 2020, a total of 21,797 persons migrated-in to the HDSS areas, 18,251 persons migrated-out from the HDSS areas, and 13,620 persons moved internally within the HDSS areas (Table 7.1). The highest incidence of in-migration (13.5%) occurred at age 15–19, and out-migration (13.8%) occurred at age 20–24, while the highest incidence of internal-movement (12.7%) occurred at age 20–24. In fact, incidences of in-migration, out-migration, and internal-movement below age 30 usually varied between 9% and 14%; however, such incidences at ages 45 or more were very low (0.9%–3.7%). Moreover, slum- and month-wise migration are also reported (in Appendix A: Appendix Tables 11-20).

Table 7.1. Distribution of Migrants by Age, Sex and Direction (per cent), Urban HDSS 2020

Age in years	Both			Male			Female		
	In-	Out-	Internal-	In-	Out-	Internal-	In-	Out-	Internal-
0–4	9.3	9.8	11.3	9.8	10.8	11.4	8.7	8.8	11.3
5–9	9.5	9.4	10.7	9.7	10.0	11.2	9.4	8.8	10.1
10–14	9.6	9.8	10.6	9.9	9.7	9.8	9.3	9.8	11.4
15–19	13.5	11.9	12.2	9.8	8.6	10.1	17.1	14.9	14.1
20–24	13.0	13.8	12.7	10.7	10.8	11.0	15.2	16.7	14.2
25–29	13.0	12.9	11.0	14.3	13.0	11.4	11.7	12.7	10.6
30–34	9.0	10.0	9.9	9.8	11.8	10.4	8.1	8.5	9.4
35–39	7.7	7.2	7.1	8.3	7.6	7.7	7.0	7.0	6.6
40–44	5.1	5.0	5.2	6.2	5.8	6.0	4.2	4.3	4.5
45–49	3.6	3.7	3.6	3.9	4.3	4.5	3.3	3.1	2.7
50–54	2.2	2.7	2.4	2.5	3.1	2.9	2.0	2.4	2.0
55–59	1.7	1.5	1.3	2.0	1.7	1.5	1.4	1.2	1.1
60–64	1.2	1.1	0.9	1.4	1.4	0.9	1.1	0.8	0.9
65+	1.6	1.2	1.1	1.7	1.4	1.2	1.5	1.0	1.1
Total	**21,797**	**18,251**	**13,620**	**10,583**	**8,737**	**6,522**	**11,214**	**9,514**	**7,098**

In 2020, the estimated in-migration rate was 171.7, the out-migration rate was 143.7, and the internal-movement rate was 107.3 per 1,000 population (Table 7.2). The highest in-migration rate (208.4) occurred at ages 15–19, while for males, it was highest at ages 25–29 (231.1), and for females, it was highest at ages 15–19 (250.0). For out-migration, highest rate occurred at ages 20–24 (172.0), while for males, it was highest at ages 25–29 (173.5), and for females, it was highest at ages 20–24 (190.1). The highest rate of internal-movement occurred at ages 0–4 (133.3), while for both males (127.6) and females (139.1), the rates were also highest at ages 0–4.

Table 7.2. Migration Rate by Age, Sex and Direction (per 1,000 population), Urban HDSS 2020

Age in years	Both			Male			Female		
	In-	Out-	Internal-	In-	Out-	Internal-	In-	Out-	Internal-
0–4	174.8	153.7	133.3	178.7	161.6	127.6	170.8	145.7	139.1
5–9	162.1	133.2	113.1	157.0	133.8	111.9	167.4	132.6	114.3
10–14	154.9	132.0	107.0	154.6	124.5	93.8	155.2	139.5	120.4
15–19	208.4	153.2	117.4	159.3	116.2	101.6	250.0	184.7	130.8
20–24	193.1	172.0	117.3	178.5	148.2	112.9	204.2	190.1	120.6
25–29	203.9	169.3	107.9	231.1	173.5	113.5	179.6	165.6	102.9
30–34	158.8	149.7	109.9	162.9	160.5	106.9	154.4	138.0	113.1
35–39	171.9	136.2	100.1	180.5	135.2	102.6	163.3	137.2	97.6
40–44	155.3	127.3	98.4	170.3	133.2	102.6	138.3	120.6	93.8
45–49	139.8	120.8	87.8	138.7	127.5	98.4	141.0	113.2	75.7
50–54	112.6	115.6	76.4	119.5	123.5	86.1	105.3	107.2	66.1
55–59	145.3	105.3	69.4	152.1	109.9	69.1	136.9	99.8	69.8
60–64	125.6	93.6	57.9	138.5	115.0	57.5	112.8	72.4	58.3
65+	133.7	84.4	57.6	124.9	86.5	53.0	144.0	82.0	62.9
Total	**171.7**	**143.7**	**107.3**	**168.8**	**139.4**	**104.0**	**174.4**	**148.0**	**110.4**

50.1% of in-migration occurred due to looking for work, followed by to join family (34.7%) (Table 7.3). 55.7% of out-migration occurred due to joining family, followed by others (13.0) (Table 7.4). 66.7% of internal-movements occurred due to marriage and/or joining family, followed by merging family (17.1%) (Table 7.5).

Table 7.3. In-migration by Cause and Sex (per cent), Urban HDSS 2020

Cause of in-migration	Number			Percent		
	Both	Male	Female	Both	Male	Female
Looking for work	10,915	6,095	4,820	50.1	57.6	43
To earn more money	1,949	1,194	755	8.9	11.3	6.7
River erosion	536	279	257	2.5	2.6	2.3
To join family	7,567	2,845	4,722	34.7	26.9	42.1
For children education	21	9	12	0.1	0.1	0.1
For own education	45	20	25	0.2	0.2	0.2
Marriage	671	82	589	3.1	0.8	5.3
Other	92	58	34	0.4	0.5	0.3
NA (since birth)	-	-	-	-	-	-
Total	**21,797**	**10,583**	**11,214**	**100.0**	**100.0**	**100.0**

Table 7.4. Out-migration by Cause and Sex (per cent), Urban HDSS 2020

Cause of out-migration	Number			Percent		
	Both	Male	Female	Both	Male	Female
Looking for work	1,207	984	223	6.6	11.3	2.4
To earn more money	653	411	242	3.5	4.7	2.5
To join family	10,165	4,187	5,978	55.7	47.9	62.8
For own education	59	37	22	0.3	0.4	0.2
Marriage	485	23	462	2.7	0.3	4.9
Divorce	84	19	65	0.5	0.2	0.7
Earning not sufficient	1,460	805	655	8.0	9.2	6.9
Fire incidences	12	8	4	0.1	0.1	0.0
Do not know	1,743	1,007	736	9.6	11.5	7.7
Others	2,383	1,256	1,127	13.0	14.4	11.9
Total	**18,251**	**8,737**	**9,514**	**100.0**	**100.0**	**100.0**

Table 7.5. Internal-movement by Cause and Sex (per cent), Urban HDSS 2020

Cause of internal-movement	Number			Percent		
	Both	Male	Female	Both	Male	Female
Work/economic	535	439	96	3.9	6.7	1.3
Marriage/join family	9,087	3,491	5,596	66.7	53.5	78.8
For better facilities	604	383	221	4.4	5.9	3.1
Due to split	204	86	118	1.5	1.3	1.7
Merging family	2,321	1,536	785	17.1	23.6	11.1
Other	869	587	282	6.4	9.0	4.0
Total	**13,620**	**6,522**	**7,098**	**100.0**	**100.0**	**100.0**

Chapter 8 : Safe Motherhood Practices

- Among livebirths, 75.8% of women received at least one ANC visits, 29.7% received at least four ANC visits; of them mostly received from NGOs (61.5%).
- 53.5% of deliveries took place at facilities, where 32.6% were delivered at private facilities.
- 32.9% of livebirths were delivered by C-section, and 37.7% by MBBS doctors.
- Among livebirths, 46.3% of women received PNC visits for themselves, and 50.6% for their children, of them mostly received from private facilities (62.4% for mothers and 59.4% for children).
- Services uptake for lowest and highest asset quintiles were as follows: received at least one ANC (64.8% vs. 84.3%); facility delivery (44.5% vs. 60.7%); birth attended by MBBS doctors (28.5% vs. 46.2%); C-section (23.8% vs. 41.4%); received any PNC for mothers (34.2% vs. 57.8%) and for children (39.9% vs. 62.9%).

The health care a woman receives during pregnancy, delivery, and shortly after delivery is crucial for the survival and well-being of both the mother and the child. The Government of Bangladesh is committed to achieving the targets for Sustainable Development Goals (SDGs) 3 and 5. The Urban HDSS recorded antenatal and postnatal care (for both mother and child). In this chapter, the percentage distribution of the antenatal, delivery, and postnatal services is provided from a universal health coverage perspective.

Antenatal Care Services

Out of 2,702 livebirth pregnancies, 24.2% of women did not attend any antenatal check-ups, while only 29.7% had four or more antenatal check-ups (Table 8.1). Among women who received antenatal care, 32.5% women had antenatal check-ups between 3 and 4 months, followed by 27.5% between 5 and 6 months (Table 8.2). Of them, 61.5% of women reported that they had antenatal check-ups at NGO facilities, followed by private facilities (19.6%), while only 2.6% had antenatal check-ups at public facilities (Table 8.3).

Table 8.1. Number of Antenatal Visits (per cent), Urban HDSS 2020

No. of visits	Urban HDSS		UHS-2013*
	Number	Percent	Percent
0	655	24.2	27.9
1	286	10.6	7.2
2	439	16.3	14.8
3	520	19.3	21.6
4+	802	29.7	28.5
Total	**2,702**	**100.0**	**100.0**

*City Corporation slums of Urban Health Survey 2013.

Table 8.2. Antenatal Care by Duration of Pregnancy (per cent), Urban HDSS 2020

First visit by duration (months)	Urban HDSS	
	Number	Percent
<3	533	26.0
3-4	666	32.5
5-6	563	27.5
7+	285	13.9
Total	**2,047**	**100.0**

Table 8.3. Place of Antenatal Care (per cent), Urban HDSS 2020

Place of care	Urban HDSS		UHS-2013*
	Number	Percent	Percent
Home	288	14.1	14.2
Public facility	53	2.6	23.9
NGO facility	1,118	54.6	42.4
NGO (UPHCSDP)	141	6.9	-
Private facility	401	19.6	29.5
Qualified doctor chamber	42	2.1	-
Unqualified doctor chamber	4	0.2	-
Other	-	-	0.2
Total	**2,047**	**100.0**	**100.0**

*City Corporation slums of Urban Health Survey 2013 and multiple responses were reported.

The use of at least one antenatal care varied by asset quintile; 64.8% of women in the lowest quintile used ANC, compared to 84.3% in the highest quintile (Table 8.4). Those who used antenatal care from sNGOs and those from private sources also varied. Among women in the highest quintile, 52.4% received ANC from NGOs, whereas it was 37.7% of women in the lowest quintile. Similarly, 19.1% of women in the highest quintile received ANC from private healthcare facilities, whereas 8.9% of women received in the lowest quintile.

Table 8.4. Antenatal Care by Facilities and Asset Quintile (per cent), Urban HDSS 2020

Asset quintile	Received any ANC (%)	Home (%)	Public (%)	NGOs (%)	Private (%)	Others (%)	None (%)	No. of women
Lowest	64.8	13.2	3.2	37.7	8.9	1.8	35.2	281
Lower	70.7	14.2	2.0	42.0	10.7	1.8	29.3	457
Middle	65.1	9.3	1.4	39.4	14.0	1.0	34.9	292
Higher	74.7	10.0	2.0	47.4	13.6	1.7	25.3	601
Highest	84.3	9.2	1.8	52.4	19.1	1.9	15.7	1,071
Total	**75.8**	**10.7**	**2.0**	**46.6**	**14.8**	**1.7**	**24.2**	**2,702**

Asset quintile developed by the 15 battery of household possessions and belongings using principal component analysis.

Delivery Care Services

Among livebirth pregnancies, 46.5% of deliveries took place at home, followed by private facilities (32.6%), NGO facilities (15.1%), and public facilities (5.7%) (Table 8.5). The place of delivery varied by asset quintile (Table 8.6); 44.5% of women in the lowest quintile delivered at the facility, compared to 60.7% of women in the highest quintile; the opposite pattern was observed for home delivery.

Table 8.5. Livebirth Pregnancies by Place of Delivery (per cent), Urban HDSS 2020

Place of delivery	Urban HDSS		UHS-2013*
	Number	Percent	Percent
Home	1,257	46.5	59.7
Public facility	154	5.7	12.8
NGO facility	306	11.3	16.1
NGO (UPHCSDP)	103	3.8	-
Private facility	881	32.6	11.4
Other	1	0.0	0.1
Total	**2,702**	**100.0**	**100.0**

*City Corporation slums of Urban Health Survey 2013.

Table 8.6. Place of Delivery by Asset Quintile (per cent), Urban HDSS 2020

Asset quintile	Home (%)	Facility (%)	No. of women
Lowest	55.5	44.5	281
Lower	51.0	49.0	457
Middle	57.5	42.5	292
Higher	46.4	53.6	601
Highest	39.3	60.7	1,071
Total	**46.5**	**53.5**	**2,702**

Asset quintile developed by the 15 battery of household possessions and belongings using principal component analysis.

Deliveries attended by MBBS doctors were the highest (37.7%), followed by TBA (25.5), TTBA (23.6%), and Nurse (10.4%) (Table 8.7). The type of birth attendant during delivery varied by asset quintile (Table 8.8); those deliveries attended by TBA (37.4% vs. 16.2%) were highest for the lowest quintile, and lowest for the highest quintile. The patterns were opposite for those attended by Nurses (6.8% vs. 12.2%), and those attended by MBBS doctors (28.5% vs. 46.2%).

Table 8.7. Livebirth Pregnancies by Birth Attendant (per cent), Urban HDSS 2020

Birth attendant	Urban HDSS		UHS-2013*
	Number	Percent	Percent
TBA	690	25.5	35.2
TTBA	638	23.6	15.1
Nurse	281	10.4	12.2
MBBS	1,018	37.7	25.1
Other TBA	1	0.0	5.8
Others	74	2.7	6.7
Total	**2,702**	**100.0**	**100.0**

*City Corporation slums of Urban Health Survey 2013.
Other TBA includes FWV 'CSBA 'HA/FWA 'and NGO workers.

Table 8.8. Birth Attendants by Asset Quintile (per cent), Urban HDSS 2020

Asset quintile	TBA (%)	TTBA (%)	Nurse (%)	MBBS (%)	Others (%)	No. of women
Lowest	37.4	22.4	6.8	28.5	5.0	281
Lower	30.4	24.3	10.9	31.7	2.6	457
Middle	38.7	23.3	7.5	28.4	2.1	292
Higher	26.6	26.1	9.8	35.8	1.7	601
Highest	16.2	22.3	12.2	46.2	3.1	1,071
Total	**25.5**	**23.6**	**10.4**	**37.7**	**2.8**	**2,702**

Asset quintile developed by the 15 battery of household possessions and belongings using principal component analysis.

Regarding the mode of delivery, 67.1% were normal deliveries, and the rest by C-section (32.9%) (Table 8.9). The mode of delivery varied by asset quintile (Table 8.10); C-section (23.8% vs. 41.4%) were the lowest for the lowest quintile and the highest for the highest quintile. The patterns were opposite for normal deliveries (76.2% vs. 58.6%).

Table 8.9. Livebirth Pregnancies by Mode of Delivery (per cent), Urban HDSS 2020

Mode of delivery	Urban HDSS		UHS-2013*
	Number	Percent	Percent
Normal	1,812	67.1	-
C-section	890	32.9	16.3
Total	**2,702**	**100.0**	**-**

*City Corporation slums of Urban Health Survey 2013.

Table 8.10. Mode of Delivery by Asset Quintile (per cent), Urban HDSS 2020

Asset quintile	Normal (%)	C-section (%)	No. of women
Lowest	76.2	23.8	281
Lower	72.7	27.4	457
Middle	75.7	24.3	292
Higher	69.4	30.6	601
Highest	58.6	41.4	1,071
Total	**67.1**	**32.9**	**2,702**

Asset quintile developed by the 15 battery of household possessions and belongings using principal component analysis.

Postnatal Care Services

For maternal postnatal care services, 53.7% mothers did not have any postnatal visits for themselves, while 16.1% had one postnatal visit and 30.3% had two or more postnatal visits (Table 8.11). Among them who received postnatal care, 62.4% of mothers had postnatal visits at private facilities, followed by NGO facilities (23.7%), while visits to public facilities were only 10.5% (Table 8.12).

Mothers who had at least one postnatal care visit varied by asset quintile (Table 8.13); 34.2% were in the lowest quintile, and 57.8% were in the highest quintile. The use of postnatal care from NGOs (13.2% vs. 9.6%), and from private facilities (38.1% vs. 17.1%) also varied, with higher use for the highest quintile and lowest use for the lowest quintile.

Table 8.11. Number of Postnatal Care Visits for Mother (per cent), Urban HDSS 2020

No. of visits	Urban HDSS		UHS-2013*
	Number	Percent	Percent
0	1,450	53.7	58.4
1	434	16.1	-
2	135	5.0	-
3	388	14.4	-
4+	295	10.9	-
Total	**2,702**	**100.0**	**-**

*City Corporation slums of Urban Health Survey 2013.

Table 8.12. Place of Postnatal Care Visits for Mother (per cent), Urban HDSS 2020

Place of care	Urban HDSS	
	Number	Percent
Home	33	2.6
Public facility	131	10.5
NGO facility	219	17.5
NGO (UPHCSDP)	78	6.2
Private facility	781	62.4
Qualified doctor chamber	4	0.3
Unqualified doctor chamber	3	0.2
Pharmacy	3	0.2
Total	**1,252**	**100.0**

Table 8.13. Postnatal Care Visits for Mother by Facilities and Asset Quintile (per cent), Urban HDSS 2020

Asset quintile	Received any PNC (%)	Home (%)	Public (%)	NGOs (%)	Private (%)	Others (%)	None (%)	No. of women
Lowest	34.2	1.1	5.7	9.6	17.1	0.7	65.8	281
Lower	39.6	0.9	6.6	9.4	22.1	0.7	60.4	457
Middle	34.6	0.7	3.1	7.5	23.0	0.3	65.4	292
Higher	42.4	1.3	4.0	10.7	26.1	0.3	57.6	601
Highest	57.8	1.5	4.9	13.2	38.1	0.2	42.2	1,071
Total	**46.3**	**1.2**	**4.9**	**11.0**	**28.9**	**0.4**	**53.7**	**2,702**

Asset quintile developed by the 15 battery of household possessions and belongings using principal component analysis.

For newborn postnatal care services, 49.4% children did not get any postnatal visits, while 20.0% had one postnatal visit and 30.6% had two or more postnatal visits (Table 8.14). Among those who received postnatal care, 59.4% of children had postnatal visits at private facilities, followed by NGO facilities (26.1%), while visits to public facilities were only 9.6% (Table 8.15).

Children who had at least one postnatal care varied by asset quintile (Table 8.16); 39.9% were in the lowest quintile, and 62.9% were in the highest quintile. The use of postnatal care from NGOs (15.0% vs. 12.7%), and from private facilities (40.5% vs. 18.4%) also varied, with higher use for the highest quintile and lower use for the lowest quintile.

Table 8.14. Number of Postnatal Care Visits for Child (per cent), Urban HDSS 2020

No. of visits	Urban HDSS		UHS-2013*
	Number	Percent	Percent
0	1,344	49.4	65.5
1	544	20.0	-
2	170	6.3	-
3	390	14.3	-
4+	271	10.0	-
Total	**2,719**	**100.0**	-

*City Corporation slums of Urban Health Survey 2013.

Table 8.15. Place of Postnatal Care Visits for Child (per cent), Urban HDSS 2020

Place of care	Urban HDSS	
	Number	Percent
Home	34	2.5
Public sector	132	9.6
NGO sector	275	20.0
NGO(UPHCSDPP)	84	6.1
Private sector	817	59.4
Qualified doctor chamber	10	0.7
Unqualified doctor chamber	7	0.5
Pharmacy	16	1.2
Total	**1,375**	**100.0**

Table 8.16. Postnatal Care Visits for Child by Facilities and Asset Quintile (per cent), Urban HDSS 2020

Asset quintile	Received any PNC (%)	Home (%)	Public (%)	NGOs (%)	Private (%)	Others (%)	None (%)	No. of births*
Lowest	39.9	1.1	5.7	12.7	18.4	2.1	60.1	283
Lower	44.3	1.1	6.7	11.3	24.1	1.1	55.8	461
Middle	38.2	1.0	3.4	10.9	21.8	1.0	61.8	293
Higher	44.5	1.3	4.1	12.7	25.5	0.8	55.5	605
Highest	62.9	1.4	4.6	15.0	40.5	1.3	37.1	1,077
Total	**50.6**	**1.3**	**4.9**	**13.2**	**30.1**	**1.2**	**49.4**	**2,719**

*Multiple responses from same woman recorded if she had multiple pregnancies in 2020.
Asset quintile developed by the 15 battery of household possessions and belongings using principal component analysis.

Chapter 9 : Family Planning

- 71.3% of women used any contraception methods, of them 88.7% used modern contraceptive methods.
- The most used modern contraceptive methods was pill (43.2%), followed by injectable (26.8%) and male condom (9.8%).
- The main source of these modern contraceptives was pharmacy (68.1%), followed by NGOs (13.3%).

In the Urban HDSS, the current use of contraception is defined as the proportion of currently married women who reported using a family planning method at the time of the survey. Information on contraceptive use and the sources of modern contraceptive methods were collected from 2,788 married women (aged 15–49) who were resided in the HDSS areas during August-September 2020.

Overall, 71.3% of currently married women aged 15–49 were using any form of contraceptive methods (Table 9.1). Contraceptive use did not vary much by age 20 to 39 (70–79%), but declined dramatically to 64.5% for women aged 40–44, and 36.3% for women aged 45–49 (Figure 9.1). Modern methods were used widely than traditional methods (90.5% vs. 9.5%) (Table 9.2). Among the contraceptive users, pill was the most widely used method (43.2%), followed by injectable (26.8%), condom (9.8%), female sterilization (tubectomy) (4.8%), and long-acting methods (IUD and implant-3.2%); and about 1% used either vasectomy or emergency contraception.

The most common source of contraception was pharmacy (68.1%), followed by NGO facilities (13.3%). However, the use of public facilities (4.1%) and private facilities (2.5%) as sources of contraception were very low (Table 9.3).

Table 9.1. Contraceptive Method (per cent), Urban HDSS 2020

Method	Urban HDSS		UHS-2013*
	Number	Percent	Percent
Pill	859	30.8	31.7
Injectable	534	19.2	17.8
Condom	195	7.0	5.5
Long-acting (implant, IUD)	64	2.3	2.2
Tubectomy	95	3.4	4.0
Vasectomy	15	0.5	1.0
Emergency contraception	2	0.1	-
Traditional	189	6.8	6.9
Other	36	1.3	0.4
No method	799	28.7	30.4
Total	**2,788**	**100.0**	**100.0**

*City Corporation slums of Urban Health Survey 2013.

Table 9.2. Contraceptive Method Mix (per cent), Urban HDSS 2020

Method	Urban HDSS	
	Number	Percent
Pill	859	43.2
Injectable	534	26.8
Condom	195	9.8
Long-acting (implant, IUD)	64	3.2
Tubectomy	95	4.8
Vasectomy	15	0.8
Emergency contraception	2	0.1
Traditional	189	9.5
Other	36	1.8
Total	**1,989**	**100.0**

Table 9.3. Source of Contraception (per cent), Urban HDSS 2020

Source	Urban HDSS		UHS-2013*
	Number	Percent	Percent
Public facility	82	4.1	16.4
Private facility	50	2.5	4.1
NGO facility	264	13.3	14.9
Pharmacy	1,355	68.1	57.2
Other	238	12.0	7.5
Total	**1,989**	**100.0**	**100.0**

*City Corporation slums of Urban Health Survey 2013.
Public facility (government medical college/hospitals, Maternal Child Welfare Centres, Upazila Health Complexes, Family Welfare Centers, Satellite clinic/EPI outreach centers, community clinics and government fieldworkers), NGO facility (static clinics, satellite clinics, depot holders, and NGO fieldworkers), private facility (private hospitals/clinics, qualified doctors, unqualified doctor), pharmacies (drug sellers) and others (shop and friends/relatives).

Figure 9.1. Contraceptive Prevalence Rates of Currently Married Women (per cent), Urban HDSS 2020

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Appendix A: Supplementary Tables

Appendix table 1. Distribution of Population by Age Group and Sex, Urban HDSS 2020

Age (year)	Urban HDSS						Matlab HDSS-2020
	Number			Percent			Percent
	Both	Male	Female	Both	Male	Female	Both
<1 year	1758	884	874	1.4	1.4	1.4	2.1
1	2645	1312	1333	2.1	2.1	2.1	2.1
2	2428	1253	1175	1.9	2.0	1.8	2.1
3	2328	1160	1168	1.8	1.9	1.8	2.2
4	2432	1222	1210	1.9	2.0	1.9	2.1
1-4	9833	4947	4886	7.7	7.9	7.6	8.5
5-9	12830	6533	6297	10.1	10.4	9.8	10.2
10-14	13501	6792	6709	10.6	10.8	10.4	9.6
15-19	14141	6489	7652	11.1	10.4	11.9	9.5
20-24	14696	6348	8348	11.6	10.1	13.0	7
25-29	13873	6555	7318	10.9	10.5	11.4	6
30-34	12278	6392	5886	9.7	10.2	9.2	6.7
35-39	9708	4882	4826	7.7	7.8	7.5	6.1
40-44	7214	3822	3392	5.7	6.1	5.3	5.7
45-49	5545	2956	2589	4.4	4.7	4.0	5.3
50-54	4335	2218	2117	3.4	3.5	3.3	5.6
55-59	2506	1374	1132	2.0	2.2	1.8	5.6
60-64	2125	1061	1064	1.7	1.7	1.7	4.4
65-69	1098	602	496	0.9	1.0	0.8	2.8
70-74	882	490	392	0.7	0.8	0.6	2.1
75-79	291	156	135	0.2	0.3	0.2	1.6
80-84	243	127	116	0.2	0.2	0.2	0.8
85+	127	58	69	0.1	0.1	0.1	0.5
Total	126984	62686	64298	100.0	100.0	100.0	100.0

Note: Population as of June 30, 2020, Transgendered people were excluded.

Appendix table 2. Mid-year Population by Age, Sex and Slum Location, Urban HDSS 2020

Age (year)	Korail		Mirpur		Dhalpur & Shaympur		Tongi		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
0	354	337	111	116	106	96	313	325	1758
1	552	532	171	186	159	151	430	464	2645
2	518	506	159	140	182	140	394	389	2428
3	489	477	170	166	145	147	356	378	2328
4	501	473	175	160	160	168	386	409	2432
1-4	2060	1988	675	652	646	606	1566	1640	9833
5-9	2664	2475	862	833	879	841	2128	2148	12830
10-14	2625	2661	930	912	901	948	2336	2188	13501
15-19	2544	2983	864	1098	826	958	2255	2613	14141
20-24	2644	3217	686	1140	865	1076	2153	2915	14696
25-29	2791	3042	887	1067	815	775	2062	2434	13873
30-34	2512	2200	845	784	779	749	2256	2153	12278
35-39	1793	1725	774	722	605	644	1710	1735	9708
40-44	1461	1264	545	457	480	446	1336	1225	7214
45-49	1065	881	474	350	372	338	1045	1020	5545

Age (year)	Korail		Mirpur		Dhalpur & Shaympur		Tongi		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
50-54	777	684	250	218	308	265	883	950	4335
55-59	441	316	231	169	172	171	530	476	2506
60-64	320	273	93	89	174	126	474	576	2125
65-69	163	101	93	83	98	67	248	245	1098
70-74	128	80	43	26	67	34	252	252	882
75-79	25	27	23	14	11	12	97	82	291
80-84	19	21	12	10	16	18	80	67	243
85 +	15	14	11	14	10	7	22	34	127
Total	24401	24289	8409	8754	8130	8177	21746	23078	126984

Appendix table 3. Death by Age and Slum Location, Urban HDSS 2020

Age (year)	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
<1 year	45	7	15	23	90
1	2	0	0	1	3
2	1	0	1	0	2
3	2	0	0	1	3
4	1	1	0	0	2
5-9	7	2	1	3	13
10-14	8	1	2	3	14
15-19	9	1	3	6	19
20-24	5	1	3	4	13
25-29	9	3	0	8	20
30-34	2	1	4	9	16
35-39	14	4	4	7	29
40-44	17	6	2	13	38
45-49	18	5	8	27	58
50-54	17	8	6	27	58
55-59	17	3	6	22	48
60-64	20	1	7	29	57
65-69	19	3	10	31	63
70-74	13	0	6	35	54
75-79	6	2	0	11	19
80-84	4	2	1	22	29
85+	3	4	0	20	27
Total	239	55	79	302	675

Appendix table 4. Death by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
January	17	2	6	27	52
February	24	6	5	39	74
March	17	4	13	28	62
April	21	5	6	20	52
May	33	4	7	39	83
June	19	2	1	29	51
July	16	3	3	18	40
August	17	5	13	19	54
September	14	6	7	21	48
October	19	6	8	21	54
November	15	3	5	18	41
December	27	9	5	23	64
Total	239	55	79	302	675

Appendix table 5. Livebirth Pregnancy by Mother's Age and Slum Location, Urban HDSS 2020

Mother's age (year)	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
15-19	337	96	108	208	749
20-24	377	113	124	280	894
25-29	287	82	63	239	671
30-34	108	37	34	100	279
35-39	42	16	7	35	100
40-44	13	3	2	2	20
45+	3	0	0	3	6
Total	1167	347	338	867	2719

Appendix table 6. Livebirth Pregnancy by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
January	72	16	30	84	202
February	64	14	25	72	175
March	71	27	21	54	173
April	70	21	19	47	157
May	106	19	25	62	212
June	96	22	13	66	197
July	106	30	31	74	241
August	110	26	40	93	269
September	90	39	32	70	231
October	125	43	38	89	295
November	124	47	39	77	287
December	133	43	25	79	280
Total	1167	347	338	867	2719

Appendix table 7. Antenatal Care by Mother's Age and Slum Location, Urban HDSS 2020

Mother's age (year)	Korail	Mirpur	Dhalpur & Shyampur	Tongi	Total
11-17	62	28	45	56	191
18-19	169	56	53	115	393
20-24	240	96	104	215	655
25-29	198	67	50	195	510
30-34	74	27	28	81	210
35-39	26	13	5	28	72
40-44	6	3	0	2	11
45+	3	0	0	2	5
Total	778	290	285	694	2047

Appendix table 8. Antenatal Care by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shyampur	Tongi	Total
January	41	15	20	69	145
February	39	9	21	47	116
March	39	24	16	38	117
April	39	19	16	36	110
May	73	17	23	47	160
June	67	16	9	49	141
July	60	23	27	61	171
August	79	21	33	76	209
September	62	35	32	62	191
October	93	33	34	78	238

Months	Korail	Mirpur	Dhalpur & Shyampur	Tongi	Total
November	93	42	34	67	236
December	93	36	20	64	213
Total	778	290	285	694	2047

Appendix table 9. Postnatal Care by Mother's Age and Slum Location, Urban HDSS 2020

Mother's age (year)	Korail	Mirpur	Dhalpur & Shyampur	Tongi	Total
11-17	27	9	32	46	114
18-19	86	24	46	84	240
20-24	114	43	82	158	397
25-29	103	20	42	150	315
30-34	39	10	22	65	136
35-39	12	8	2	20	42
40-44	2	2	1	1	6
45+	1	0	0	1	2
Total	384	116	227	525	1252

Appendix table 10. Postnatal Care by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shyampur	Tongi	Total
January	27	8	12	56	103
February	23	6	13	42	84
March	17	14	15	24	70
April	23	5	14	18	60
May	35	9	17	32	93
June	25	4	8	38	75
July	31	8	22	42	103
August	38	7	27	60	132
September	28	17	22	55	122
October	41	12	31	57	141
November	50	15	27	48	140
December	46	11	19	53	129
Total	384	116	227	525	1252

Appendix table 11. Number of In-, Out-, and Internal-migration by Month and Sex, Urban HDSS 2020

Months	In-migration			Out-migration			Internal		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
January	3508	1717	1791	2573	1245	1328	1441	699	742
February	2287	1109	1178	1793	872	921	1055	484	571
March	2528	1221	1307	1525	737	788	687	338	349
April	850	414	436	1201	565	636	630	306	324
May	843	418	425	1316	640	676	595	279	316
June	1197	581	616	1199	573	626	1137	552	585
July	1822	890	932	1243	602	641	1402	676	726
August	2036	973	1063	1454	678	776	1307	660	647
September	2227	1082	1145	1647	788	859	1382	659	723
October	1893	930	963	1496	705	791	1540	712	828
November	1334	634	700	1453	683	770	1248	581	667
December	1272	614	658	1351	649	702	1196	576	620
Total	21797	10583	11214	18251	8737	9514	13620	6522	7098

Appendix table 12. In-migration by Age and Slum Location, Urban HDSS 2020

Age (year)	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
0-4	723	774	207	322	2026
5-9	829	768	213	270	2080
10-14	769	833	222	267	2091
15-19	1167	953	305	522	2947
20-24	1196	910	236	496	2838
25-29	1242	956	220	411	2829
30-34	761	734	155	300	1950
35-39	590	695	131	253	1669
40-44	407	426	94	193	1120
45-49	286	320	74	95	775
50-54	167	203	49	69	488
55-59	106	174	35	49	364
60-64	89	95	19	64	267
65+	93	159	33	68	353
Total	8425	8000	1993	3379	21797

Appendix table 13. In-migration by Cause and Slum Location, Urban HDSS 2020

Cause	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
Looking for work	5489	3628	615	1183	10915
To earn more money	193	665	859	233	1950
River erosion	11	514	0	11	536
For familial	2400	3072	447	1648	7567
For children education	9	10	0	2	21
For own education	1	29	3	12	45
Marriage	296	67	68	240	671
Other	26	15	1	50	92
NA(since birth)	0	0	0	0	0
Total	8425	8000	1993	3379	21797

Appendix table 14. In-migration by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
January	1522	1186	325	475	3508
February	891	901	175	320	2287
March	674	1581	156	117	2528
April	388	319	59	84	850
May	260	417	70	96	843
June	346	548	128	175	1197
July	715	649	214	244	1822
August	862	438	336	400	2036
September	924	628	211	464	2227
October	800	566	119	408	1893
November	576	329	129	300	1334
December	467	438	71	296	1272
Total	8425	8000	1993	3379	21797

Appendix table 15. Out-migration by Age and Slum Location, Urban HDSS 2020

Age (year)	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
0-4	808	292	196	485	1781
5-9	819	253	176	461	1709
10-14	877	257	194	454	1782
15-19	934	359	259	615	2167
20-24	1187	385	238	718	2528
25-29	1196	381	198	574	2349
30-34	854	290	150	544	1838
35-39	549	249	150	374	1322
40-44	406	183	92	237	918
45-49	298	120	68	184	670
50-54	225	80	55	141	501
55-59	98	59	32	75	264
60-64	95	17	27	60	199
65+	76	33	29	85	223
Total	8422	2958	1864	5007	18251

Appendix table 16. Out-migration by Cause and Slum Location, Urban HDSS 2020

Cause	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
Looking for work	892	103	11	201	1207
To earn more money	293	188	103	66	650
Familial	4105	1496	1128	3436	10165
For own education	13	23	19	4	59
Marriage	159	78	41	207	485
Divorce	34	3	4	43	84
Fire/slum eviction	311	742	184	223	1460
Could not earn sufficient money	0	12	0	0	12
Do not know	1827	156	100	300	2383
Other	788	154	274	527	1743
Total	8422	2958	1864	5007	18251

Appendix table 17. Out-migration by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
January	968	645	414	546	2573
February	907	281	191	414	1793
March	803	162	131	429	1525
April	483	213	69	436	1201
May	855	191	44	226	1316
June	556	205	102	336	1199
July	625	107	160	351	1243
August	724	124	167	439	1454
September	777	246	79	545	1647
October	592	255	142	507	1496
November	631	268	158	396	1453
December	501	261	207	382	1351
Total	8422	2958	1864	5007	18251

Appendix table 18. Internal-movement by Age and Slum Location, Urban HDSS 2020

Age (year)	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
0-4	769	189	194	393	1545
5-9	752	156	182	361	1451
10-14	716	194	186	349	1445
15-19	794	220	211	435	1660
20-24	822	195	219	488	1724
25-29	749	191	149	408	1497
30-34	651	187	138	373	1349
35-39	461	133	129	249	972
40-44	334	118	80	178	710
45-49	230	70	58	129	487
50-54	130	56	50	95	331
55-59	73	34	26	41	174
60-64	52	13	17	41	123
65+	54	17	35	46	152
Total	6587	1773	1674	3586	13620

Appendix table 19. Internal-movement by Cause and Slum Location, Urban HDSS 2020

Cause	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
Work/economic	479	55	1	0	535
Marriage/familial	4595	1517	755	2220	9087
For better facility	195	50	139	220	604
Due to split	26	50	85	43	204
Due to Merge	1082	31	678	530	2321
Other	210	70	16	573	869
Total	6587	1773	1674	3586	13620

Appendix table 20. Internal-movement by Month and Slum Location, Urban HDSS 2020

Months	Korail	Mirpur	Dhalpur & Shaympur	Tongi	Total
January	626	211	215	389	1441
February	405	207	164	279	1055
March	316	100	97	174	687
April	430	39	50	111	630
May	320	94	61	120	595
June	557	145	168	267	1137
July	754	124	236	288	1402
August	652	122	222	311	1307
September	591	109	121	561	1382
October	864	142	118	416	1540
November	582	232	103	331	1248
December	490	248	119	339	1196
Total	6587	1773	1674	3586	13620

Appendix B: List of Equations

Dependency ratio

Dependency ratio is calculated with the formula= $\frac{Px}{P15-64} \times 100$; where P_x is the Population in age group x.

$$DR = Young\ dependency\ ratio + Old\ dependency\ ratio$$

$$= \frac{Number\ of\ person\ age < 15\ years}{Number\ of\ persons\ age\ 15-64\ years} + \frac{Number\ of\ persons\ age\ 65+}{Number\ of\ persons\ age\ 15-64\ years} \times 1000$$

$$= \frac{Number\ of\ person\ age < 15\ years + Number\ of\ persons\ age\ 65+}{Number\ of\ persons\ age\ 15-64\ years}$$

Mortality

Crude death rate: $CDR = \frac{Number\ of\ deaths}{Mid\ year\ population} \times 1000$

Life table equations

Probability of dying at age x : $q_x^n = \frac{m_x^n}{\frac{1}{n} + m_x^n[\frac{1}{2} + \frac{n}{12} + (m_x^n - lnC)}, if\ x > 0$

$$q_0 = infant\ death\ rate\ per\ 1000\ live\ births$$

Cohort : $l_0 = 100{,}000$

Proportion alive at age interval x: $l_x = (1 - q_{x-n}^n) \times l_{x-n}$

$$L_0 = 0.15 \times l_0 + 0.85 \times l_1$$

$$L_1 = 0.15 \times l_1 + 0.85 \times l_2$$

$$L_i = \frac{1}{2}(l_i + l_{i+1}), for\ i = 2, 3, and\ 4$$

$$L_i^n = \frac{d_i^n}{m_i^n}, for\ 5 \le i \le 80$$

$$L_i^n = \frac{l_{85}}{l_{85}^{\infty}}, for\ last\ age\ group\ 85+\ years$$

Life expectancy at age x: $e_x = \frac{T_x}{l_x}, where\ T_x = \sum_{i=x}^{\infty} L_i$

NOTE: Computed using Greville's method, as suggested in: Shryock HS, Seigel JS, et al. (1975).

NOTE: lnC assumed to be 0.095; separation factors in equation 3 correspond to an infant mortality rate of 50 per 1000 livebirths.

Fertility

Crude birth rate $CBR = \frac{Number\ of\ births}{Mid\ year\ population} \times 1000$

Age specific fertility rate $ASFR_i = \frac{Number\ of\ births\ at\ women's\ age\ i}{Number\ of\ womens\ at\ age\ i} \times 1000$

Total fertility rate $TFR = \sum_{i=1}^{\infty} ASFR_i$

General fertility rate $GFR = \frac{Number\ of\ \text{total}\ births}{Number\ of\ women\ at\ the\ age\ of\ 15-49\ years} \times 1000$

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