



AdSEARCH by icddr,b

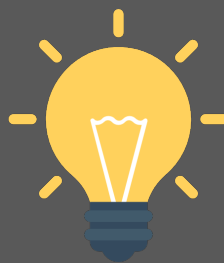
Access to medicine: current status and gaps in urban settings of Bangladesh

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Technical Coordinator, AdSEARCH and Scientist,
Maternal and Child Health Division (MCHD), icddr,b



Context of urban settings in Bangladesh



Concept of access to medicine

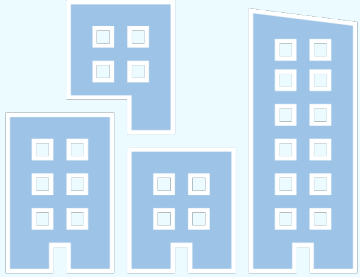


Current status and gaps evidence and insights



Context of urban settings in Bangladesh

Definition of Urban Area

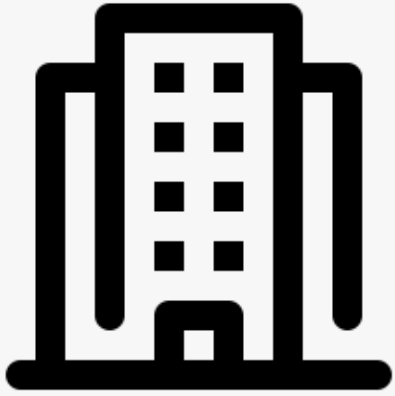


Bangladesh Bureau of Statistics defined an Urban area

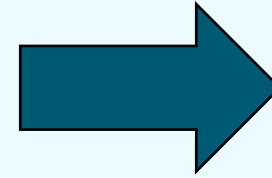
“An urban area is defined as a region characterized by high population density, a majority of the population engaged in non-agricultural occupations, and the availability of amenities such as paved roads, electricity, gas, water supply, and sanitation.”



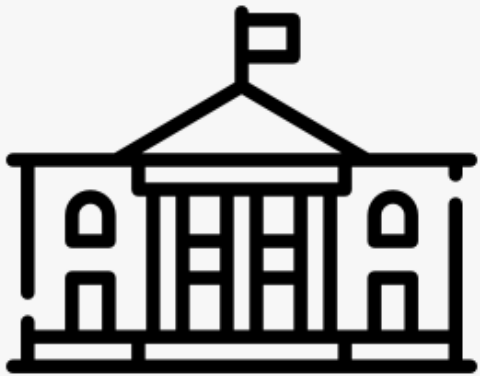
Types of Urban Area



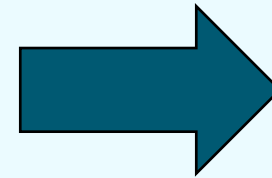
City corporation



13



Municipality



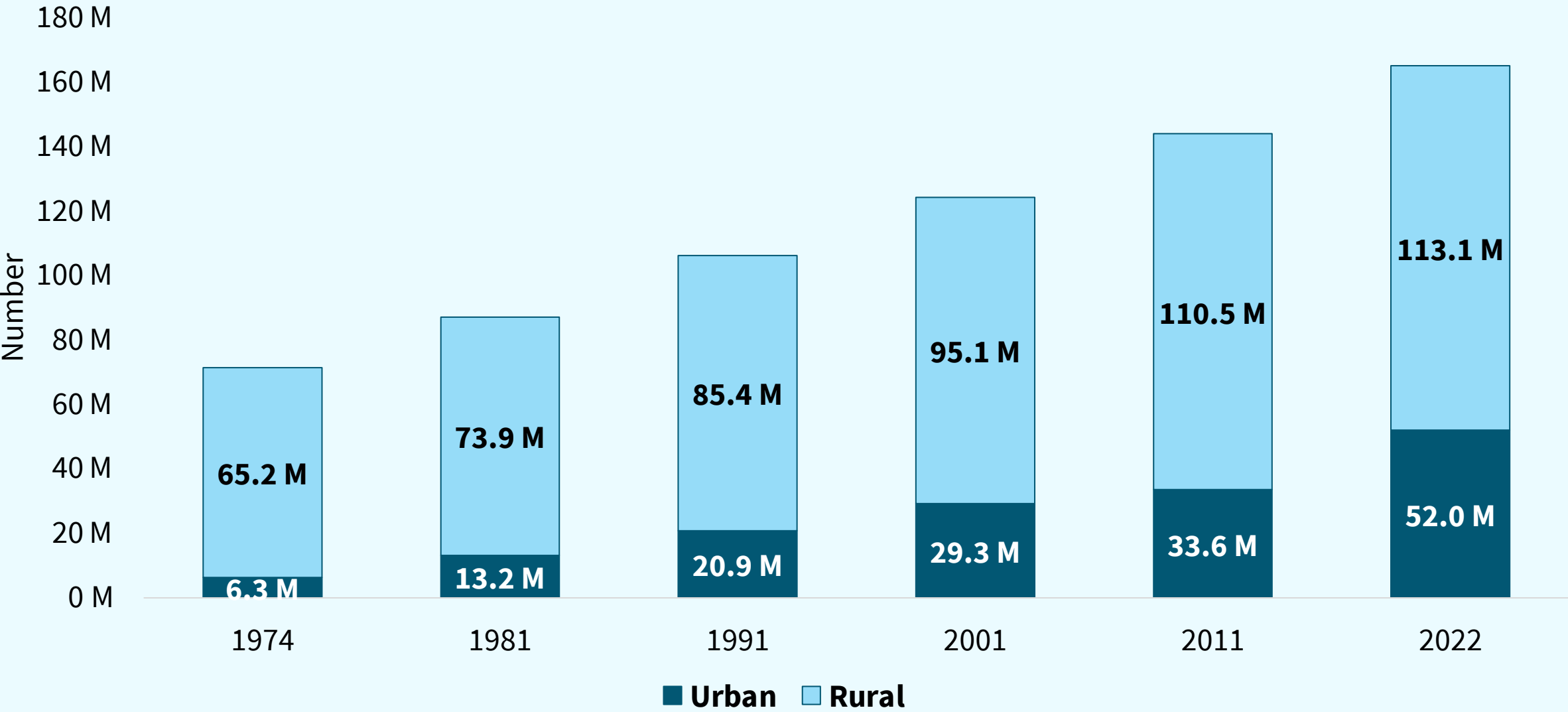
330





Population over time by place of residence

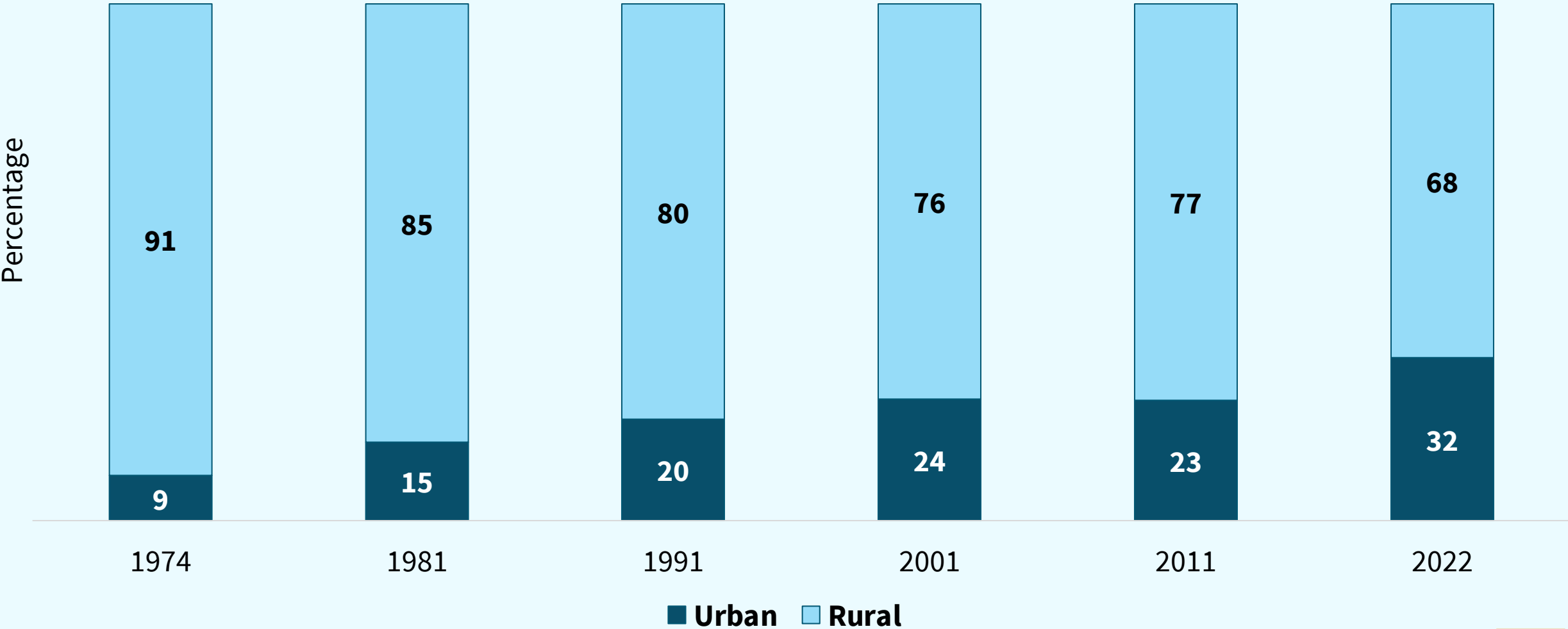
Source
Population and
Housing Census





Percentage of population over time by place of residence

Source
Population and
Housing Census



What is the health status of urban populations?



Health impact



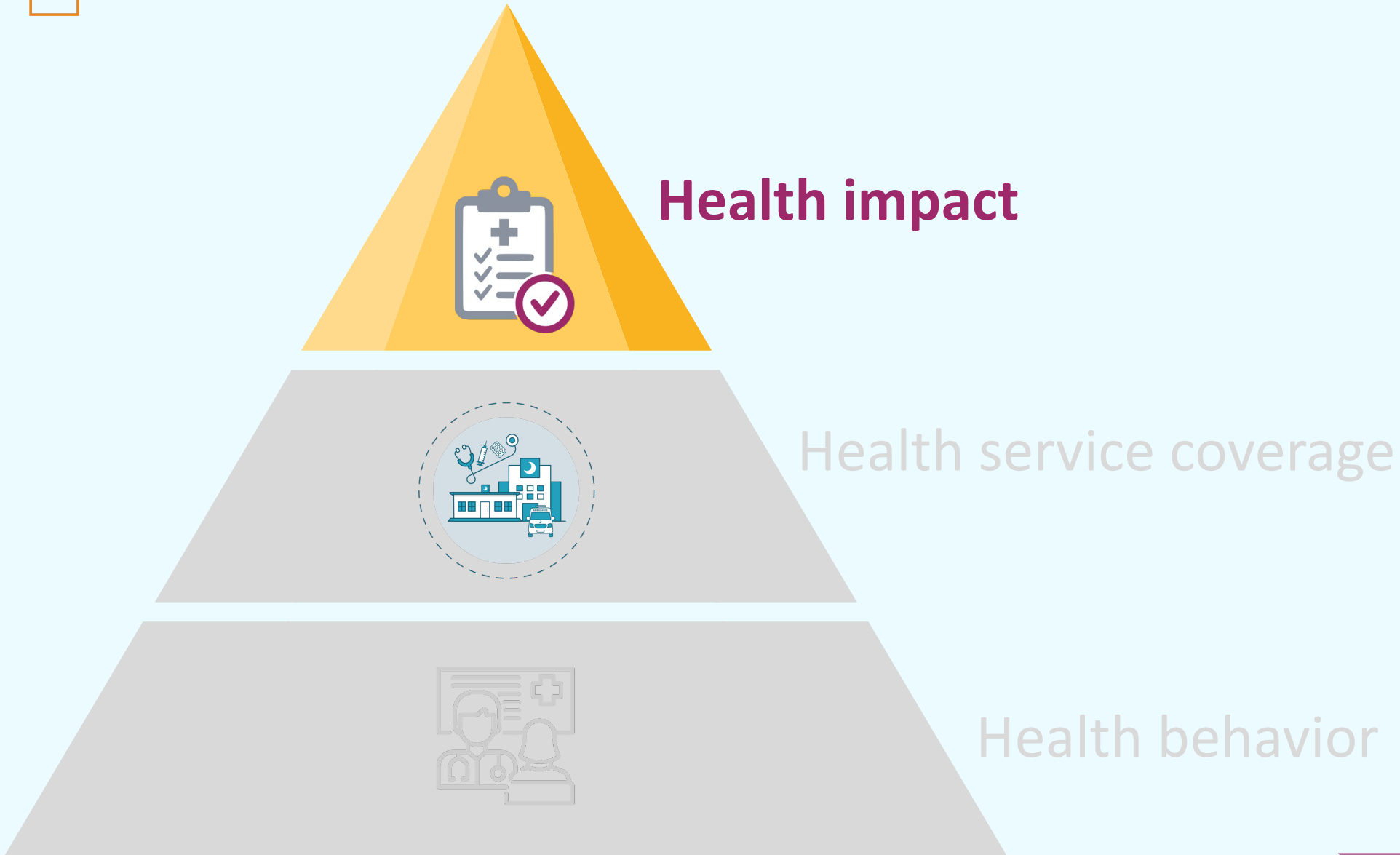
Health service coverage



Health behavior



What is the health status of urban populations?





Health impact



Life

Life expectancy
at birth
(in years) SVRS 2023



Rural

71.9



Urban

74.6



Slum

N/A



Non-slum

N/A

Source

BDHS 2022 &
Urban health
survey 2021





Health impact

Source

BDHS 2022 &
Urban health
survey 2021



Non-slum



Slum



Urban



Rural



Life

**Life expectancy
at birth**
(in years) SVRS 2023



71.9

74.6

N/A

N/A



Death

Maternal Mortality Ratio
(per 100,000 live births), BMMS 2016



217

138

N/A

N/A

Under-5 Mortality Rate
(per 1,000 live births), BDHS 2022



33

31

41

35

Neonatal Mortality Rate
(per 1,000 live births), BDHS 2022



22

22

27

20





Health impact

Source

BDHS 2022 &
Urban health
survey 2021



Non-slum



Slum



Urban



Rural



Life

**Life expectancy
at birth**
(in years) SVRS 2023



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31

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35

Neonatal Mortality Rate
(per 1,000 live births), BDHS 2022



22

22

27

20



Nutritional
status

Stunting
(percentage), BDHS 2022



24

22

34

27



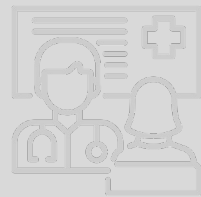
What is the health status of urban populations?



Health impact



Health service coverage



Health behavior



Health service coverage

Source
BDHS 2022 &
Urban health
survey 2021



ANC (4 or more)
(percentage)



Rural

35



Urban

57



Slum

40



Non-slum

53



Quality ANC
(percentage)



17

33

N/A

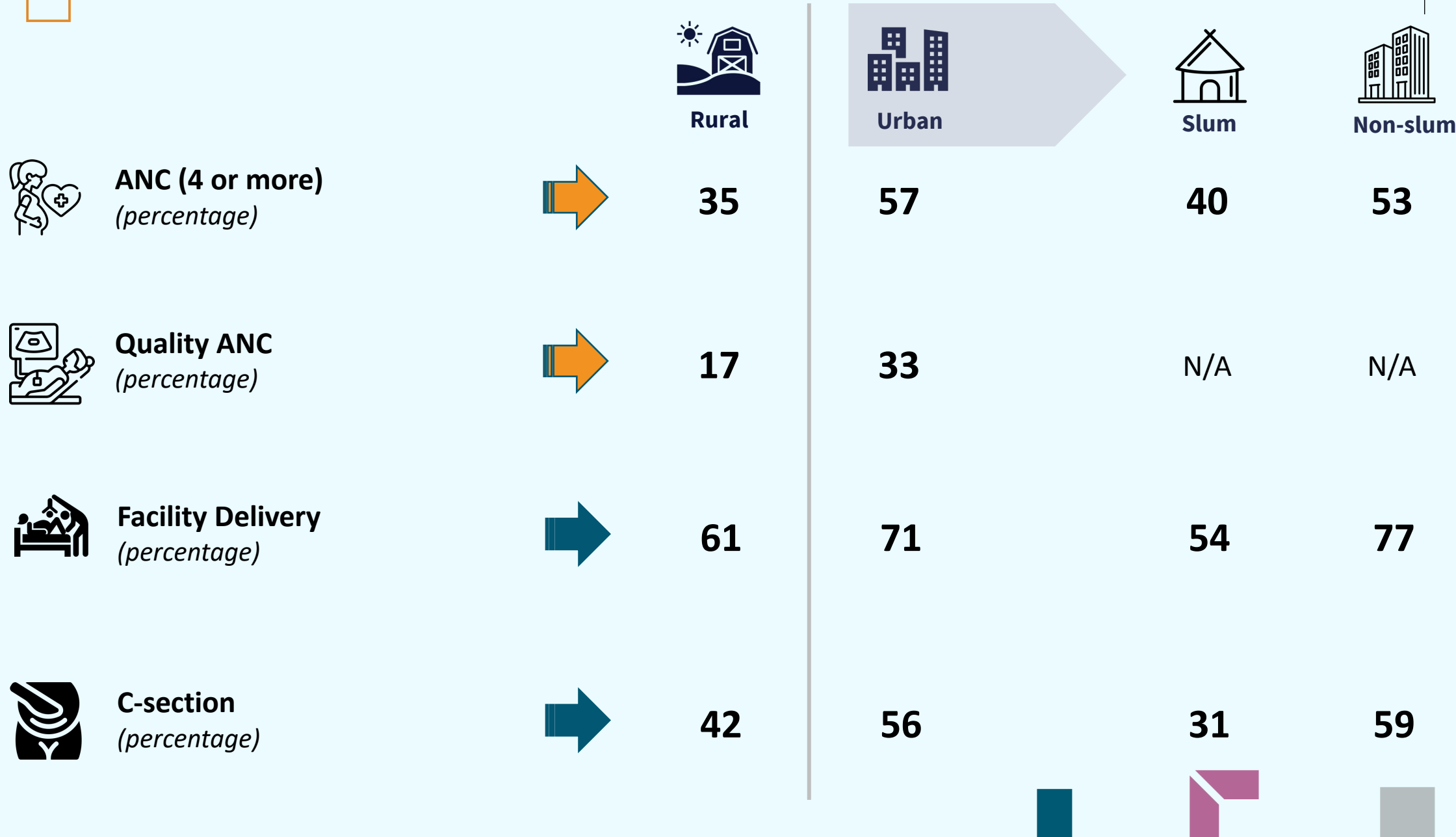
N/A





Health service coverage

Source
BDHS 2022 &
Urban health
survey 2021



What is the health status of urban populations?



Health impact



Health service coverage

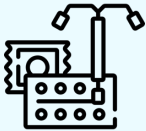


Health behavior



Health behavior

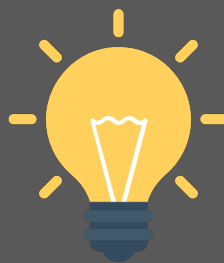
Source
BDHS 2022 &
Urban health
survey 2021

		 Rural	 Urban	 Slum	 Non-slum
 Care seeking for ARI (percentage)		84	85	82	87
 Care seeking for diarrhoea (percentage)		65	68	N/A	N/A
 Care seeking for fever (percentage)		76	73	N/A	N/A
 CPR (any method) (percentage)		55	56	N/A	N/A





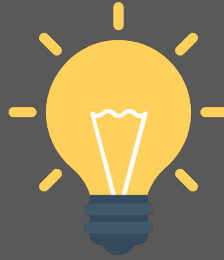
Context of urban settings in Bangladesh



Concept of access to medicine

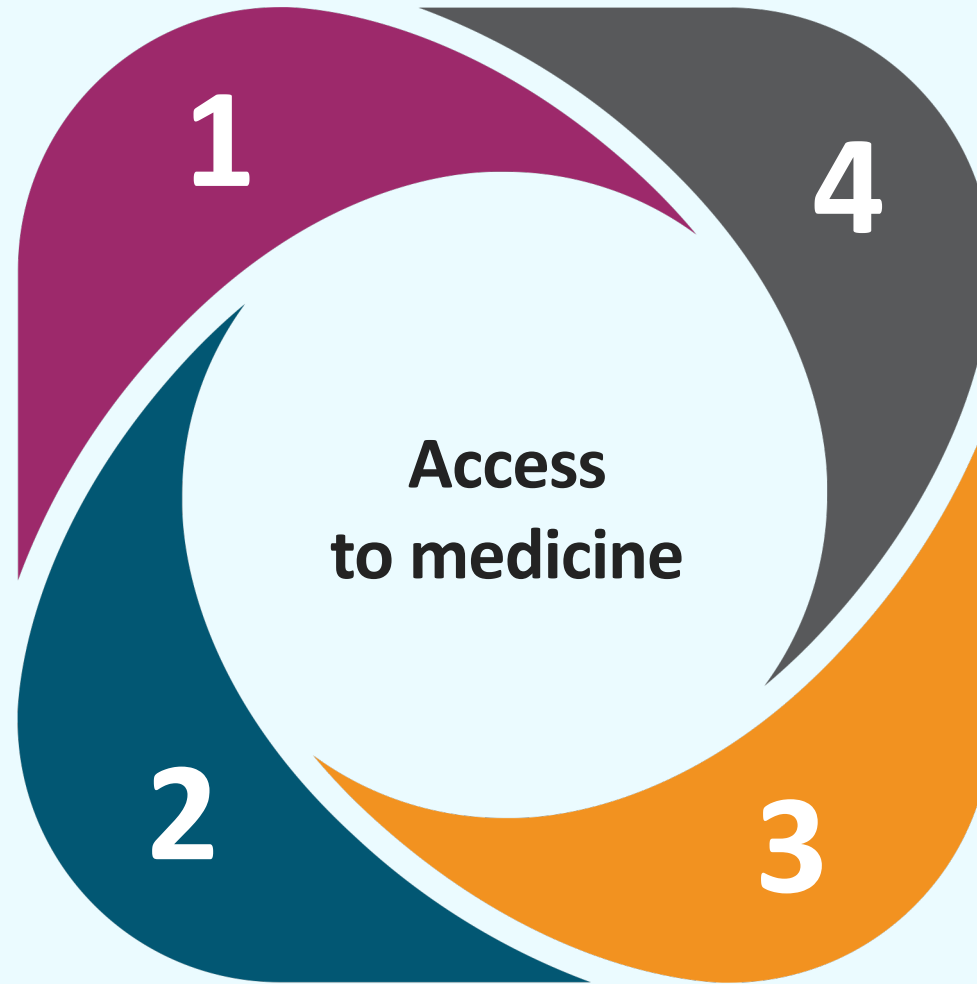


Current status and gaps evidence and insights



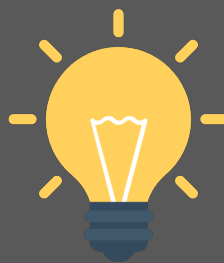
Concept of access to medicine

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Context of urban settings in Bangladesh



Concept of access to medicine



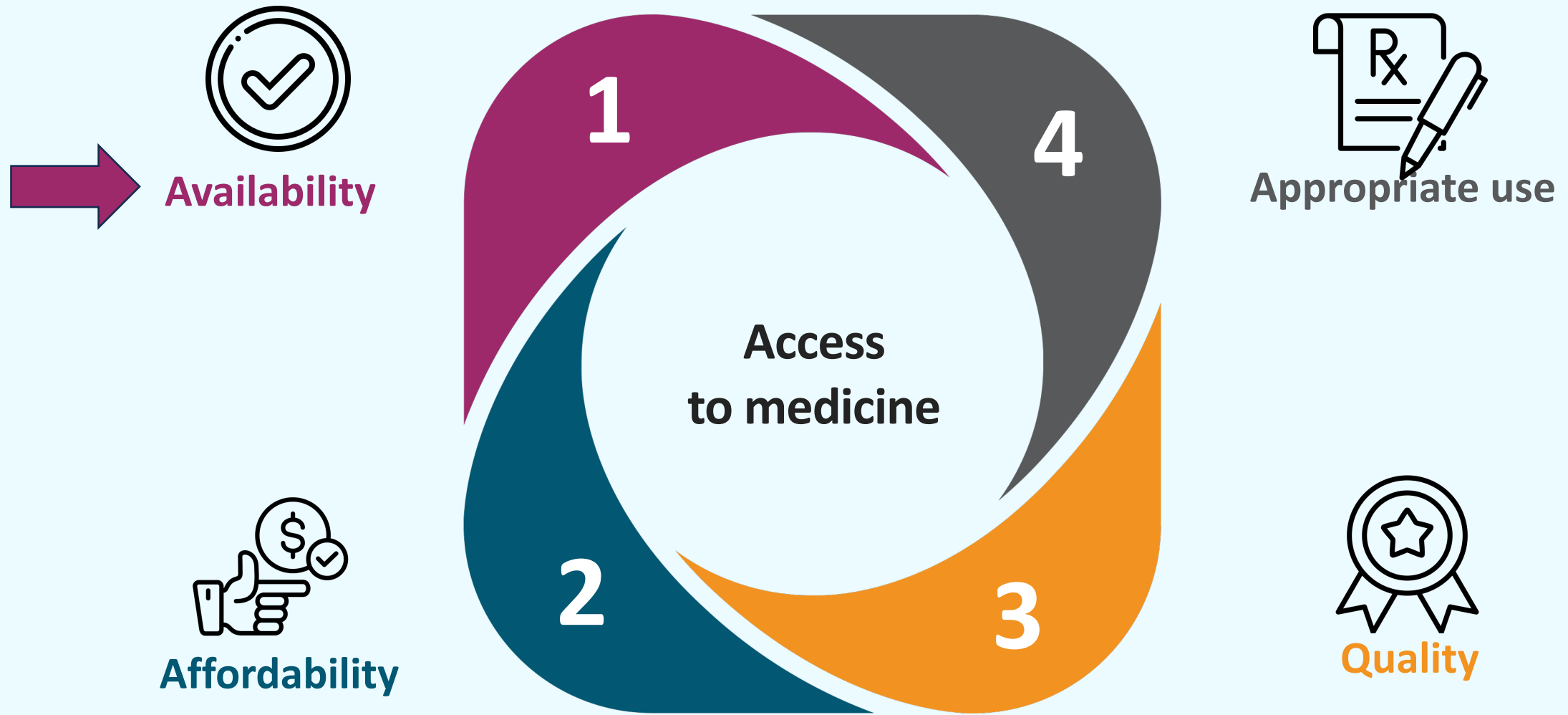
Current status and gaps evidence and insights



Current status and gaps

evidence and insights

Concept of access to medicine

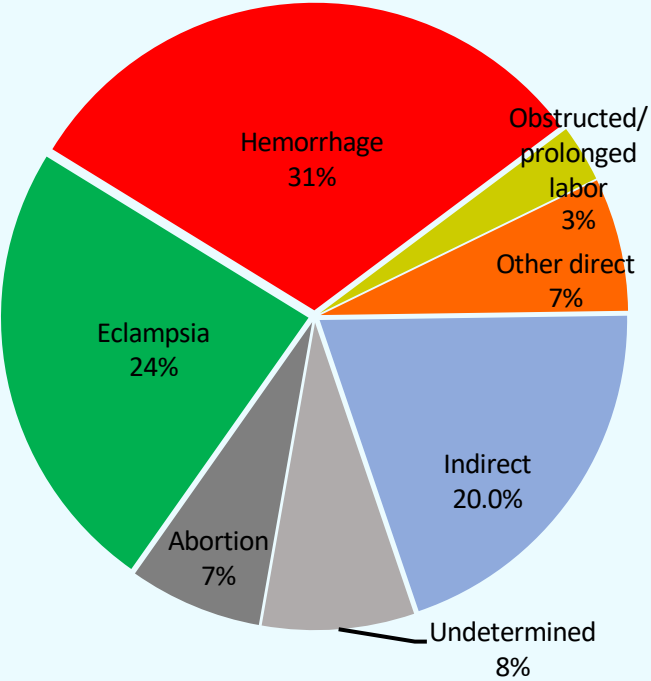




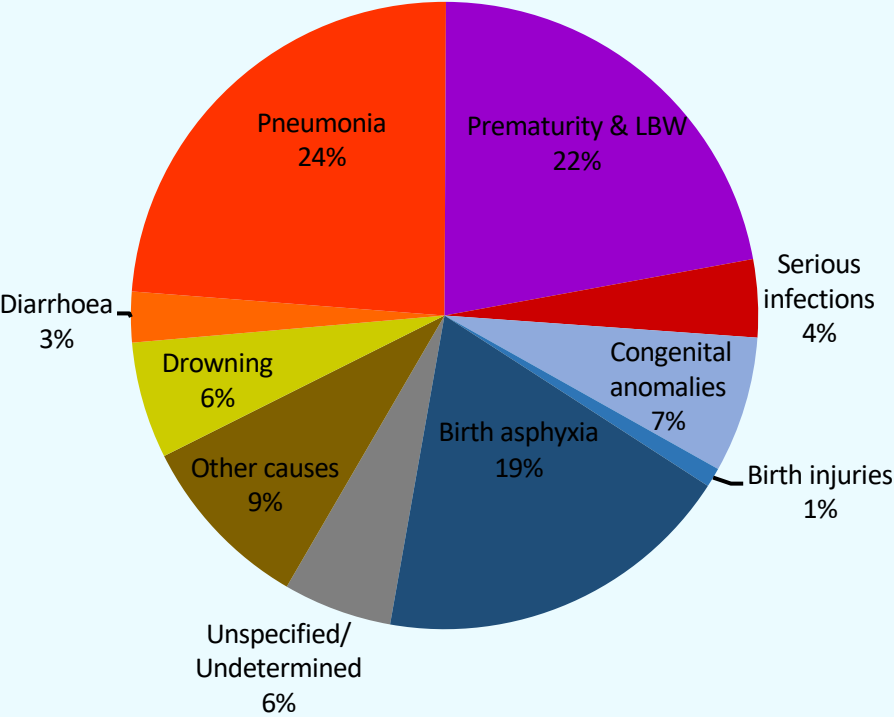
Causes of death

Source
BDHS 2022,
BMMS 2016 &
Excess mortality
survey, icddr,b,
2022-23

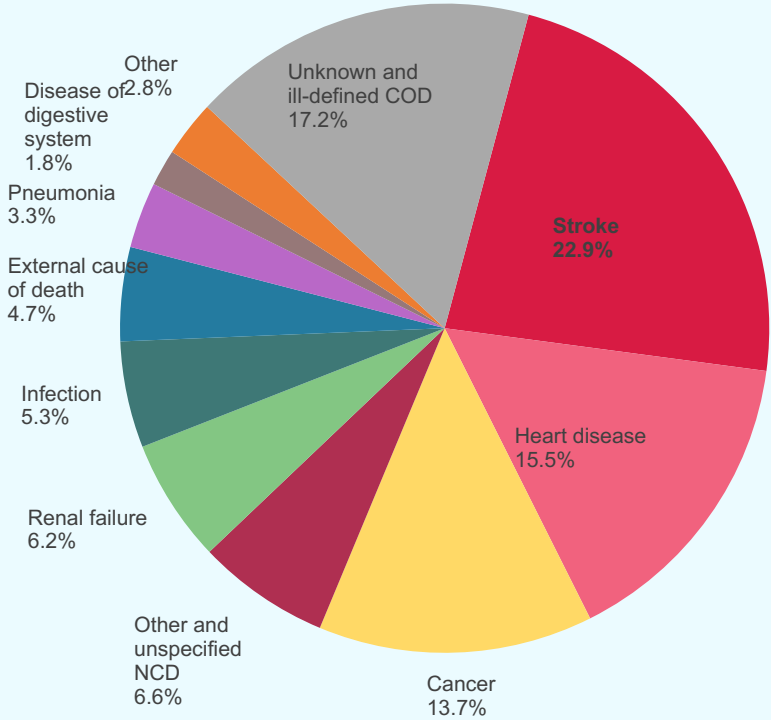
Maternal cause of death
(percentage distribution)



Under-5 child cause of death
(percentage distribution)



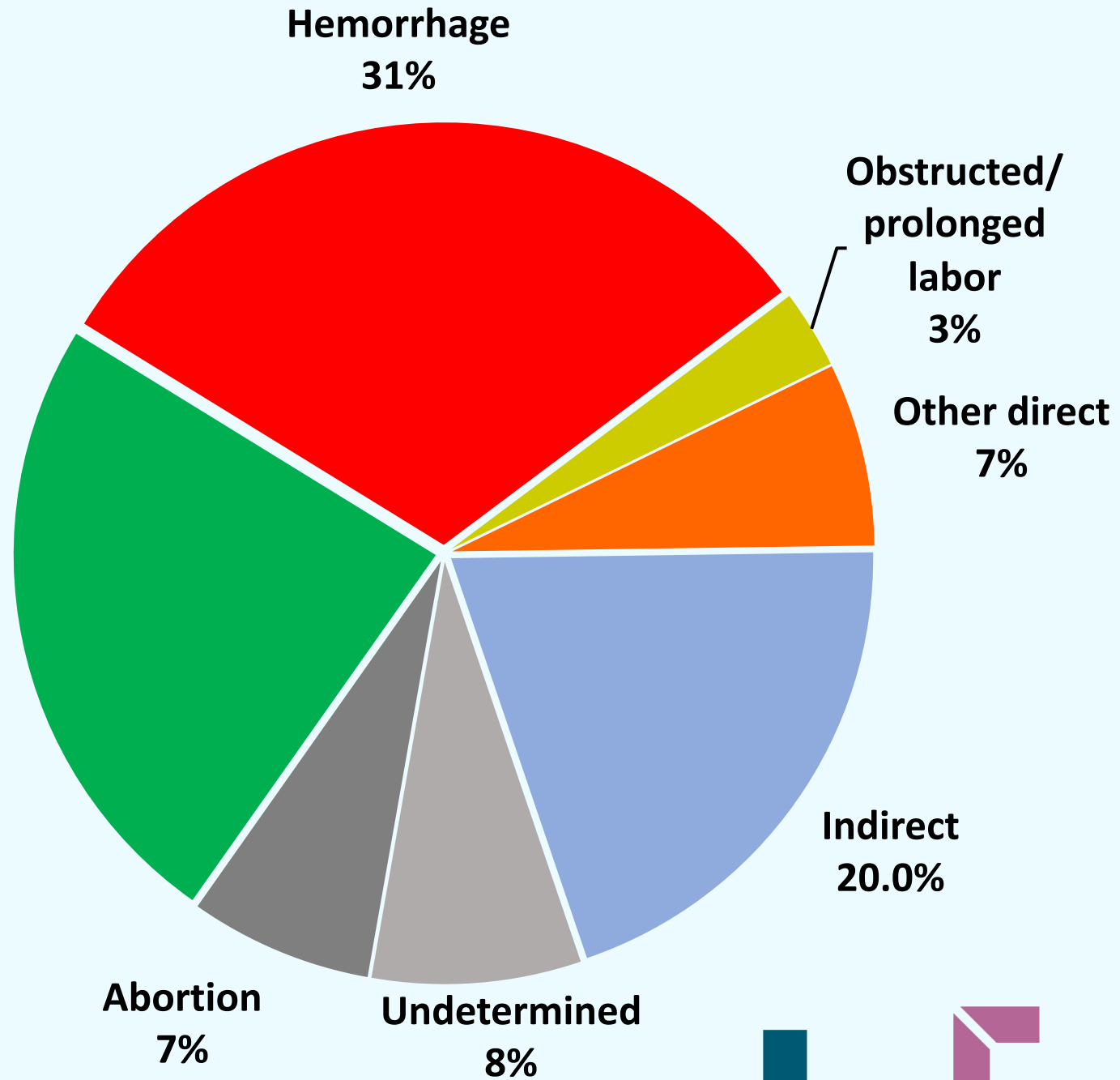
Adult cause of death
(percentage distribution)





Causes of death

Maternal cause of death
(percentage distribution)



Source
BDHS 2022,
BMMS 2016 &
Excess mortality
survey, icddr,b,
2022-23





Availability of medicines

Maternal health

Source
Bangladesh health
facility survey 2022



Rural



Urban



DH



UHC

Hemorrhage

Oxytocin
(percentage)



6

53

73

85

Ergometrine
(percentage)



<1

9

2

3

Eclampsia/
Pre-eclampsia

Magnesium sulfate
(percentage)



1

32

37

26

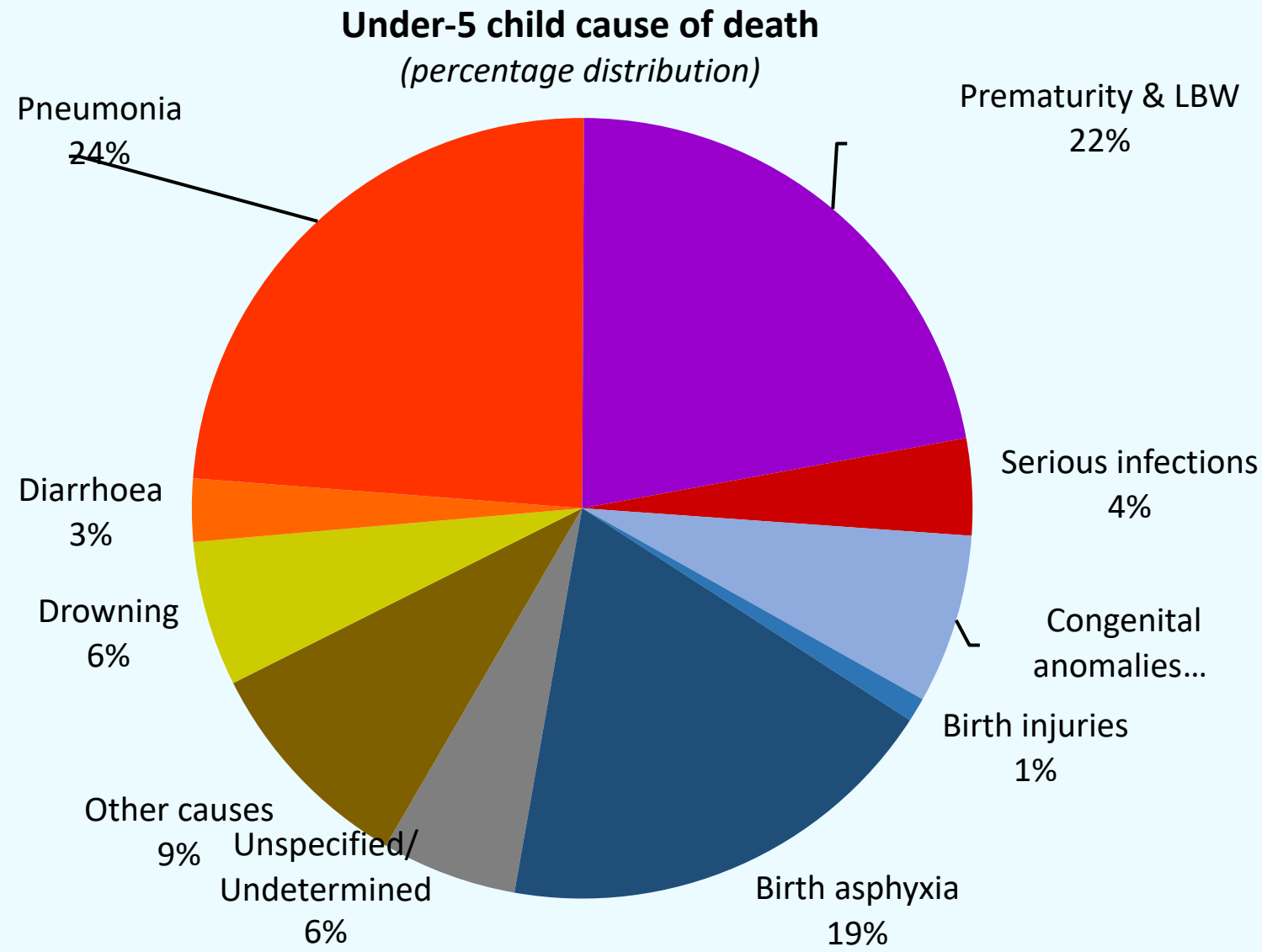




Causes of death

Source

BDHS 2022,
BMMS 2016 &
Excess mortality
survey, icddr,b,
2022-23





Availability of medicines

Child health

Source: Bangladesh health facility survey 2022

					
		Rural	Urban		
				DH	UHC
Pneumonia	Amoxicillin (percentage)	95	39	68	89
	Amoxiclav (percentage)	2	22	24	10





Availability of medicines

Child health

Source: Bangladesh health facility survey 2022



Rural



Urban



DH



UHC

Pneumonia

Amoxicillin
(percentage)



95

39

68

89

Amoxiclav
(percentage)



2

22

24

10

Prematurity &
LBW



Sepsis

Ampicilin
(percentage)



2

11

11

48

Gentamicin
(percentage)



5

42

58

81

Ampicilin+Gentamicin
(percentage)



1

8

10

42

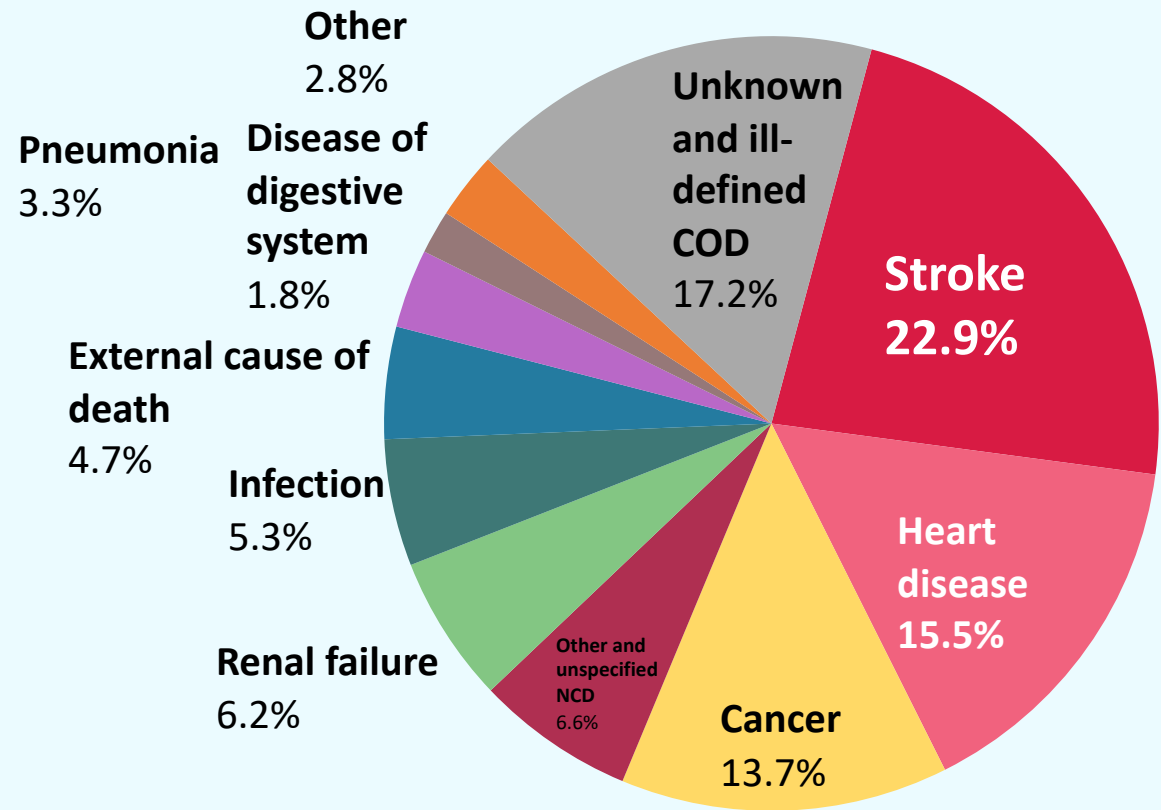




Causes of death

Source
BDHS 2022,
BMMS 2016 &
Excess mortality
survey, icddr,b,
2022-23

Adult cause of death
(percentage distribution)





Availability of medicines

Non-communicable disease

Source
Bangladesh health
facility survey 2022



**Amlodipine/
Nifedipine**
(percentage)



Rural

3



Urban

57



DH

65



UHC

73

Losartan
(percentage)



4

57

89

90



Availability of medicines

Non-communicable disease

Source
Bangladesh health
facility survey 2022



Rural



Urban

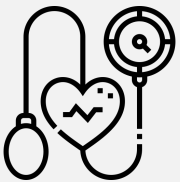


DH



UHC





Hypertension

Amlodipine/
Nifedipine
(percentage)

3

57

65

73

Losartan
(percentage)

4

57

89

90



Diabetes

Metformin
(percentage)

3

36

81

88

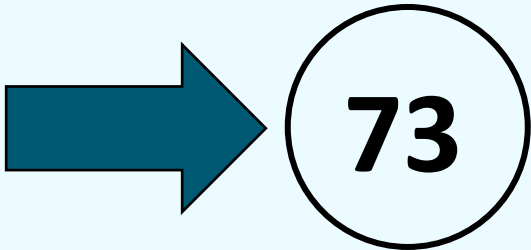
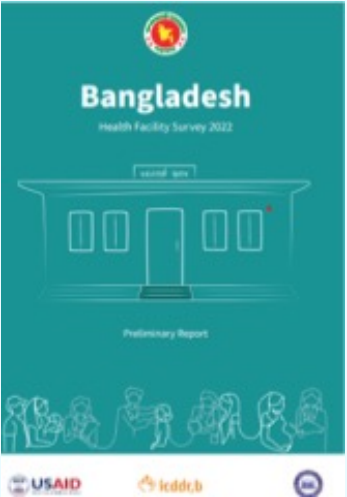
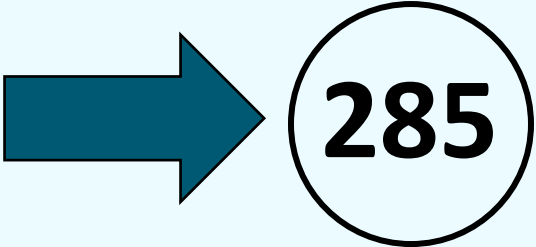


National Essential Medicine

Source
National Essential
Medicine List 2016,
BHFS 2022



National Essential
Medicine List 2016



National Essential Medicine

Source
National Essential
Medicine List 2016,
BHFS 2022



National Essential
Medicine List 2016

285

Availability of essential medicines
(Average score out of 73 medicines)



73



Rural

13



Urban

18



DH

29

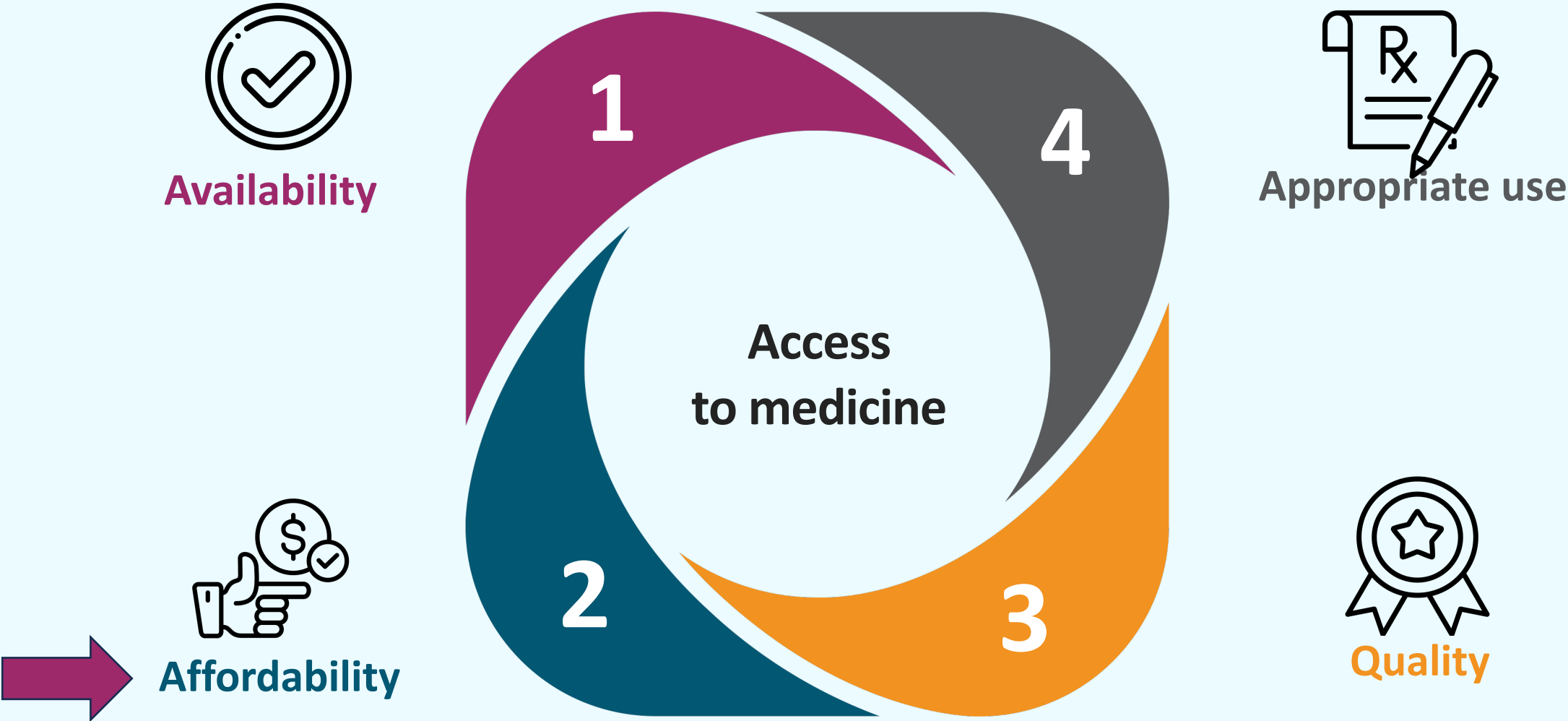


UHC

34

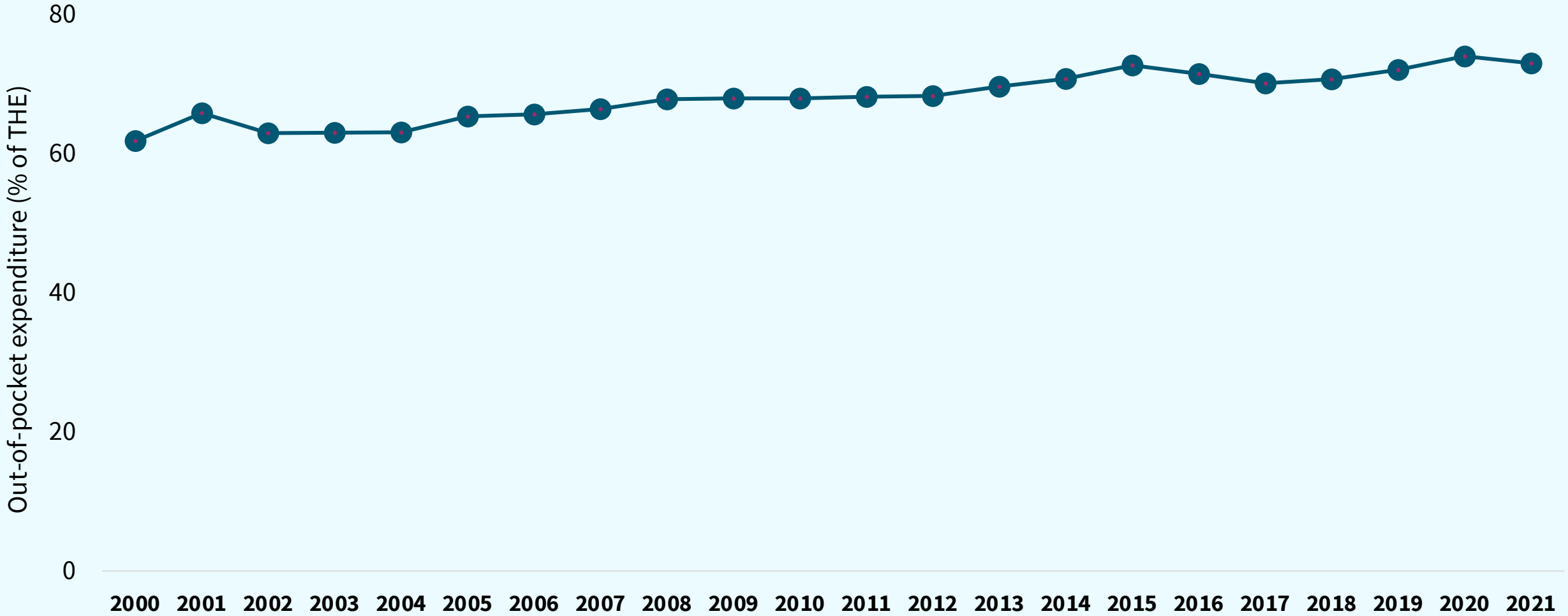


Concept of access to medicine

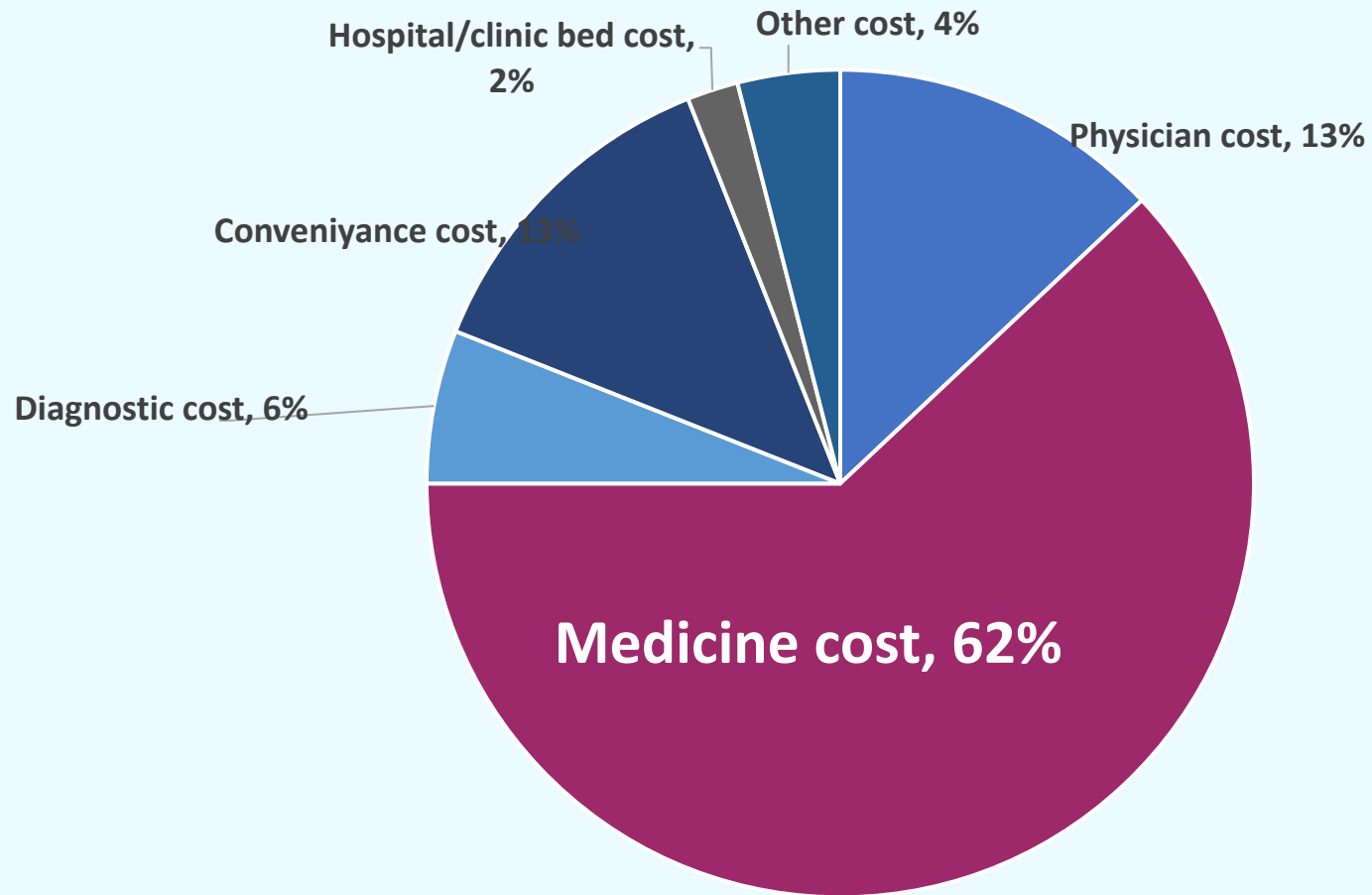


Trend of out-of-pocket expenditure (% of total health expenditure)

Source
WB, WHO,
BNHA



OOP healthcare expenditure: National



Source
HIES 2010

*Mahumud et al. (2017)
examined the distribution
and determinants of out-
of-pocket healthcare
expenditures in
Bangladesh
[https://doi.org/10.3961/jp
mph.16.089](https://doi.org/10.3961/jp
mph.16.089)*



OOP healthcare expenditure: urban-rural

Source
HIES 2010

*Mahumud et al. (2017)
examined the distribution
and determinants of out-
of-pocket healthcare
expenditures in
Bangladesh
<https://doi.org/10.3961/jpmph.16.089>*

Urban area



**62% out-of-pocket
expenditure on medicine**

Rural area



**60% out-of-pocket
expenditure on medicine**





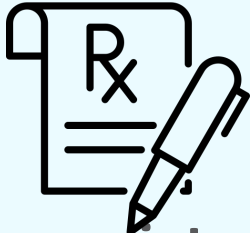
Concept of access to medicine



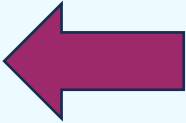
Availability



Affordability



Appropriate use



Quality





Appropriate Use of Drugs

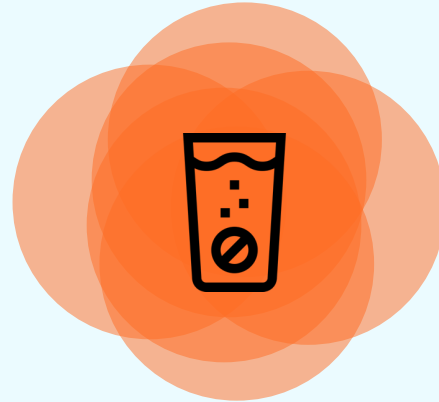
Urban residents typically follow a pattern of:

Source

1. Roy et al. (2024) <https://doi.org/10.3390/epidemiologia5020010>
2. Access to Medicine in Urban Settings: A Comprehensive Analysis of Bangladesh
3. S. M. Ahmed et al. (2017); doi: 10.1186/S40545-017-0108-8
4. Bonna et al. (2022); <https://doi.org/10.1016/j.ijso.2022.100581>

Self-medication

over **40% of adults**
in Bangladesh



Purchase without prescriptions

65% of drug shop clients
arrived without
prescriptions



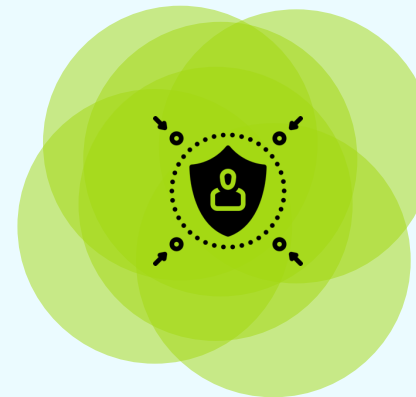
Consultation with Informal drug sellers

49% salespersons have no
formal training in
dispensing drugs



Antibiotic resistance

63% of antibiotics are
prescribed by unqualified
health care providers
68.8% antibiotic resistance due
to non-compliance



Thank you

