Urban Health and Equity in Nepal: Analyzing Social Determinants, Disease Prevalence, and Health Outcomes

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Outline

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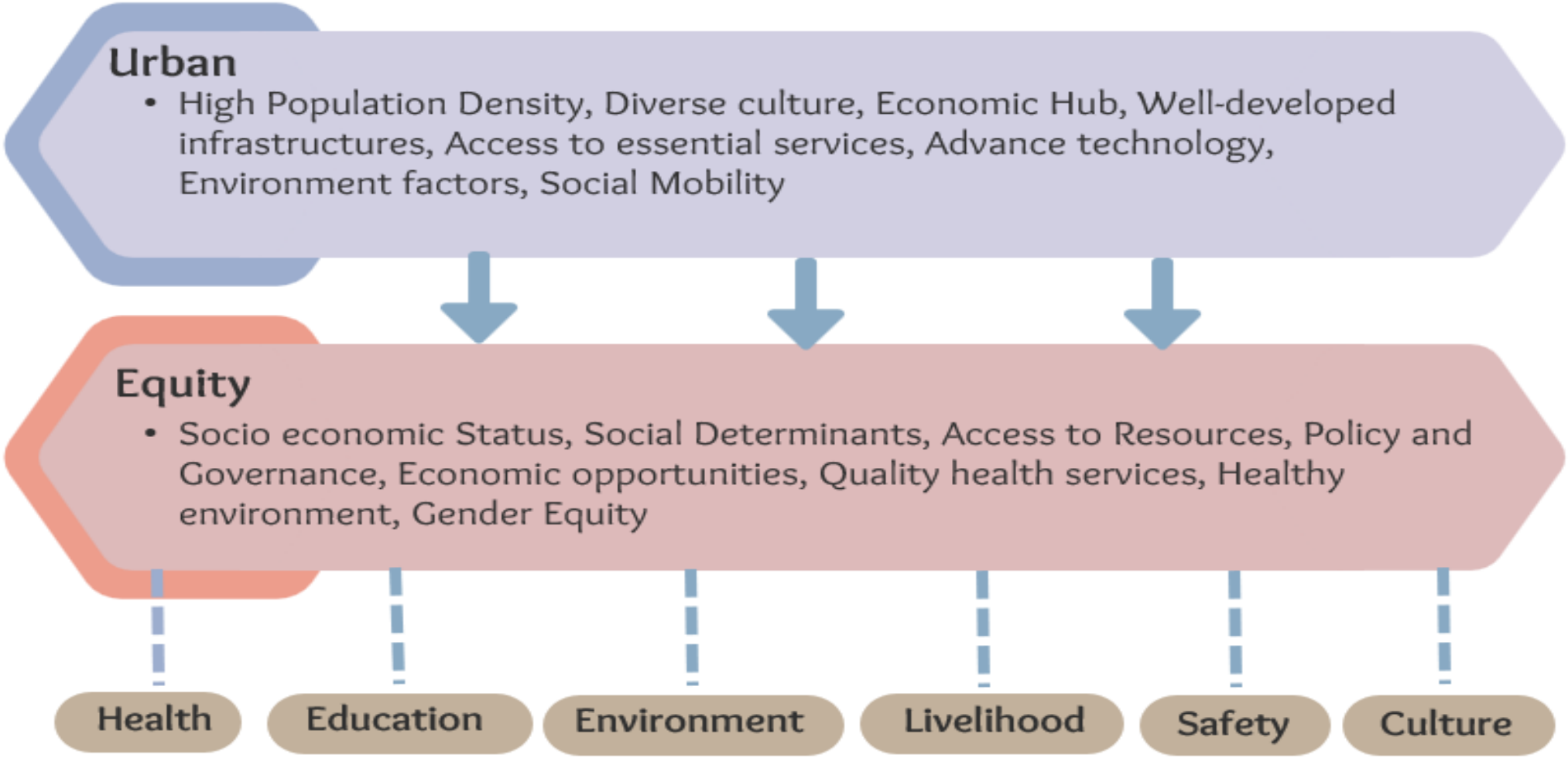
Urbanization and Equity Concerns



Background

Historical Context:

- Rapid urbanization in recent decades.

Urban Growth:

- 66% of Nepal's population lived in urban areas (2021, NSO), projected to rise further.

Disparities in Access:

- Inequities in healthcare, education, clean water, and opportunities.

Socioeconomic Determinants:

- Overcrowding, limited healthcare access, and higher disease burden.

Disease Burden:

- Dual burden of disease

Environmental Risks:

- Air pollution, poor sanitation, waste management.

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Objective

The objective of this study is to examine and compare the social determinants, health indicators, and disease burdens across different municipality types, urban/rural areas, and poverty statuses in Nepal.

Specific Objectives:

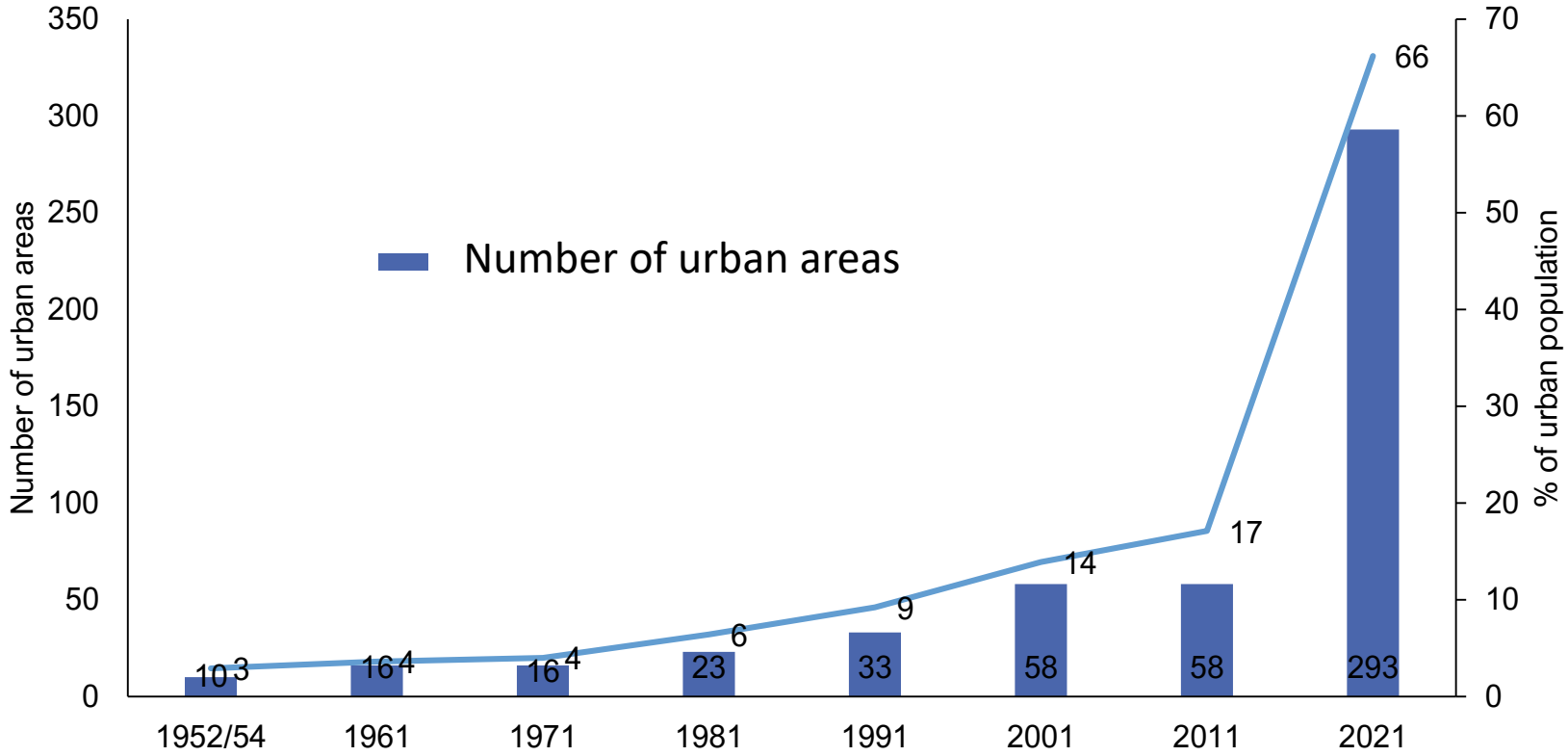
- Assess the distribution of key population characteristics and social determinants by place of residence.
- Analyze maternal and child health indicators, focusing on place of residence and wealth quintile, to identify disparities in health outcomes.
- Examine the prevalence of non-communicable diseases (NCDs) and associated risk behaviors by residence and wealth quintile.
- Determine regional variations in mortality rates per 1000 population, based on municipality types.

Method

- This study analyzed health and equity issues in Nepal using secondary data from various sources, including:
  1. Nepal Demographic Health Survey (NDHS), 2021/22
  2. Nepal Housing Population Census, 2021
  3. Nepal Living Standards Survey IV (NLSS), 2022/23
  4. STEPS Survey, 2019
- Data on social determinants, disease prevalence, and maternal and child health outcomes were compiled from the four national reports.
- Using these key indicators, comparisons between rural and urban areas, as well as Kathmandu Valley and other regions, were performed through cross-tabulation.

Urbanization in Nepal: Expansion to Explosion

- Nepal- one of the fastest urbanizing countries in Asia
- 70 percent of Internal migration is rural to urban



300% growth in urban populations and households from 2011-2021

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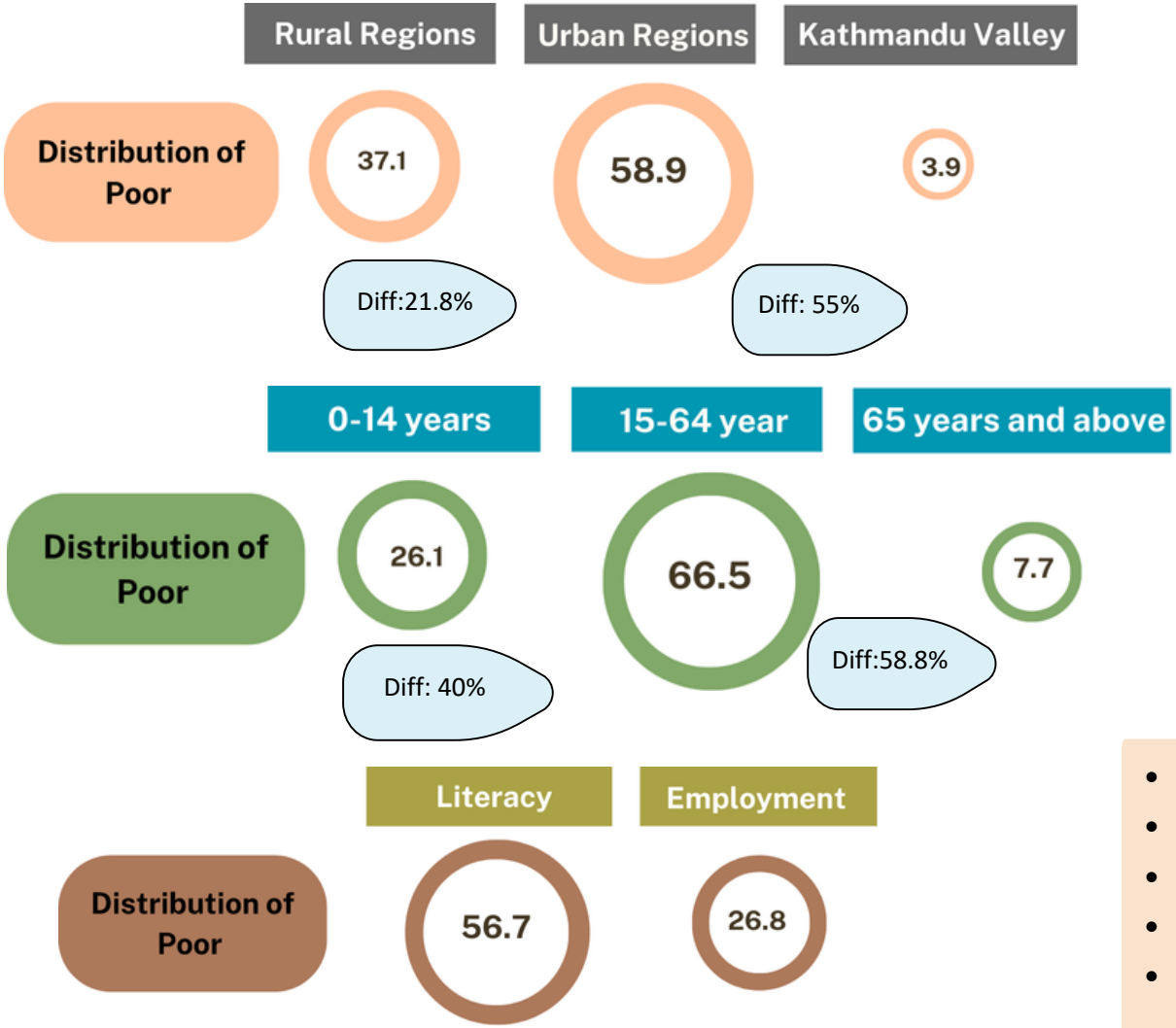
Urbanization and Social Stratification

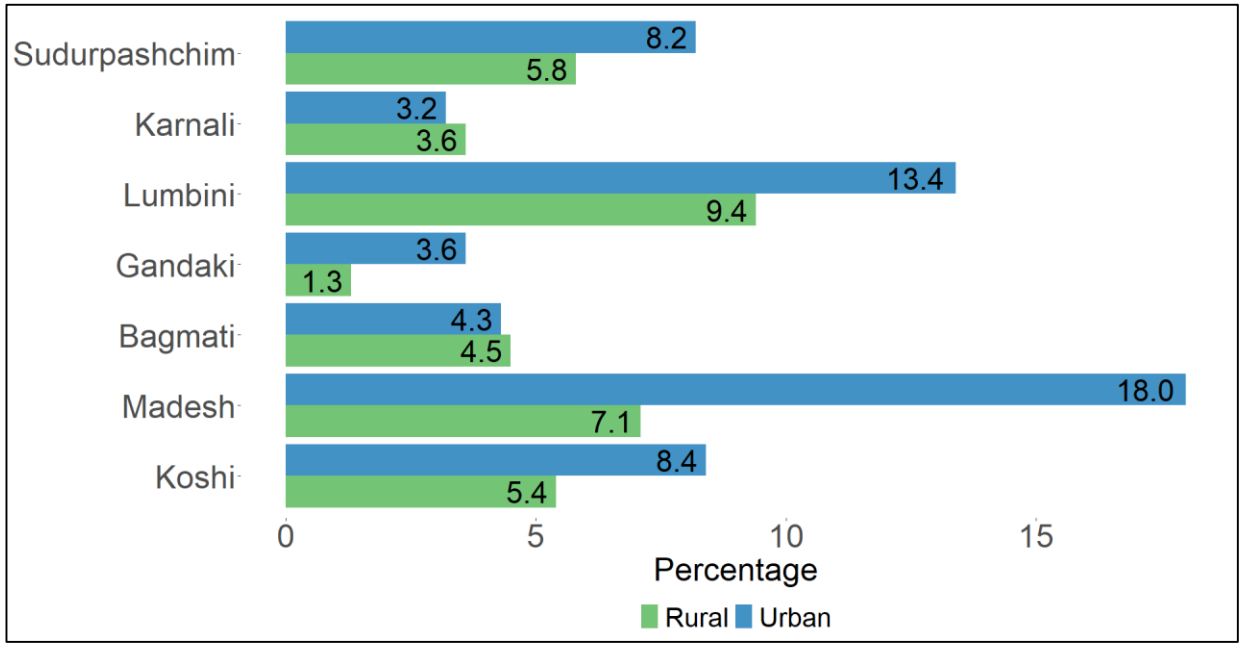
Characteristics	Rural Municipality	Urban Municipality	Sub-Metropolitan	Metropolitan
Literacy	71.8	74.5	80.9	**86.0**
Active employment	**47.3**	43.1	36.4	39.1
Ownership of household	63.6	81.4	90.5	**96.2**
Household Assets	93.2	95.8	97.9	**98.7**
Improved sanitation facility	94.7	94.7	96.5	**97.7**
Improved Drinking Water	91.2	91.4	94.3	**95.4**
Use of electricity	80.5	91.4	97.7	**99.1**
Clean Cooking Fuel	16.3	37.9	70.6	**89.1**

Source: National Population and Housing Census, 2021

- Urban areas generally exhibit better housing characteristics compared to rural.

Urban Poverty: Demographic and Provincial Outlook

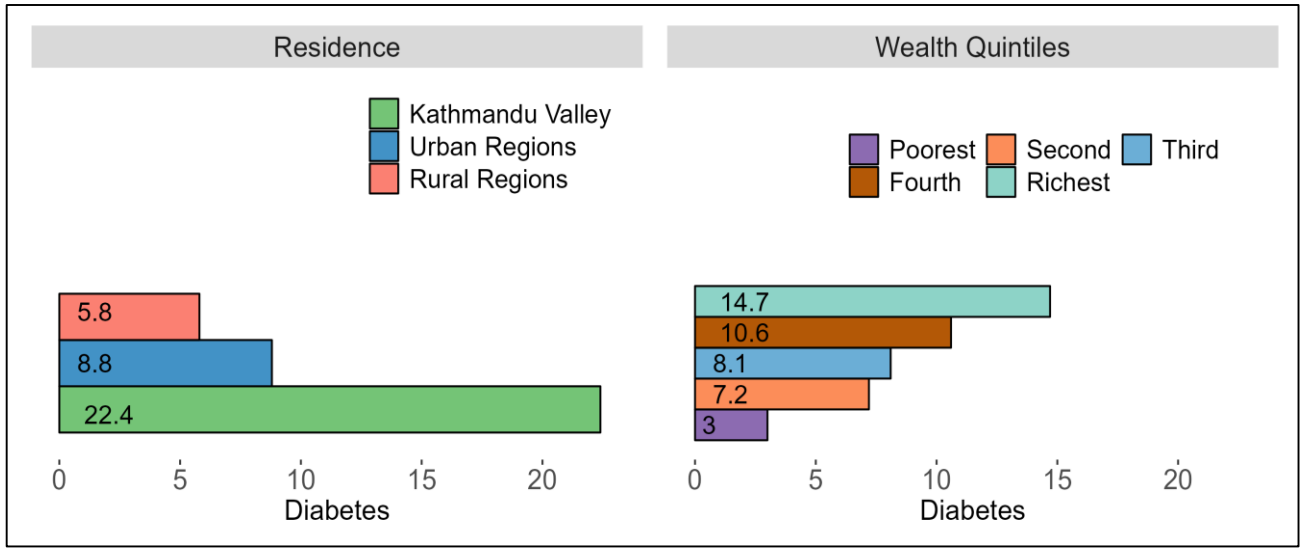


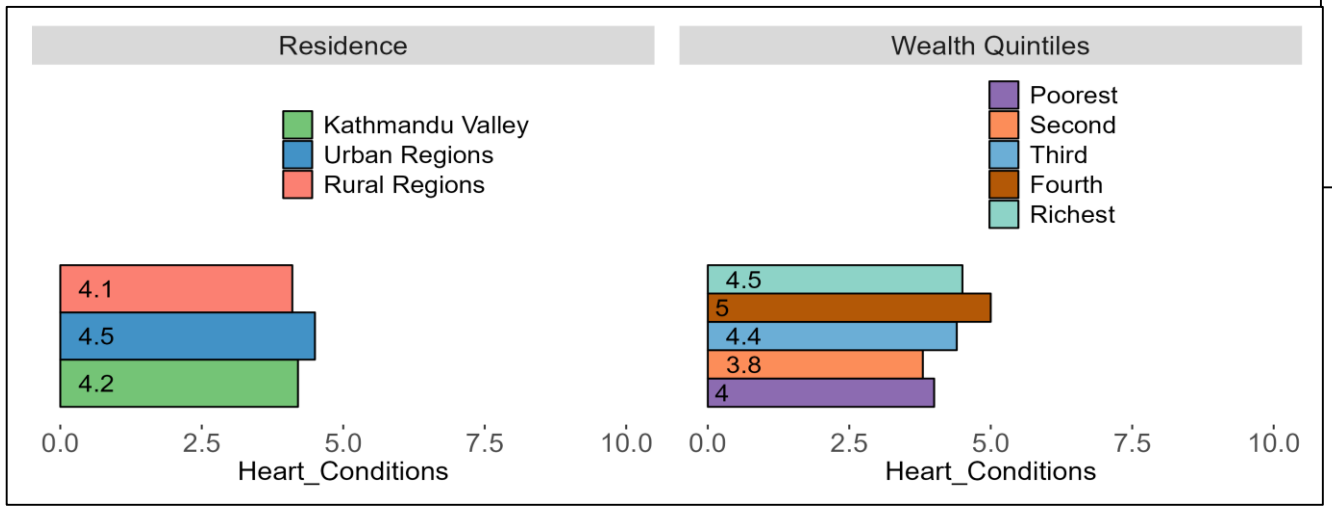


- 58.9% of the population in urban regions are poor.
- A significant portion of the poor fall within the 15-64 age group.
- 56.7% of the poor are literate.
- Only 26.8% of the poor are employed.
- Higher concentrations of urban poverty are found in Madesh, Lumbini, Koshi and Sudurpashchim provinces

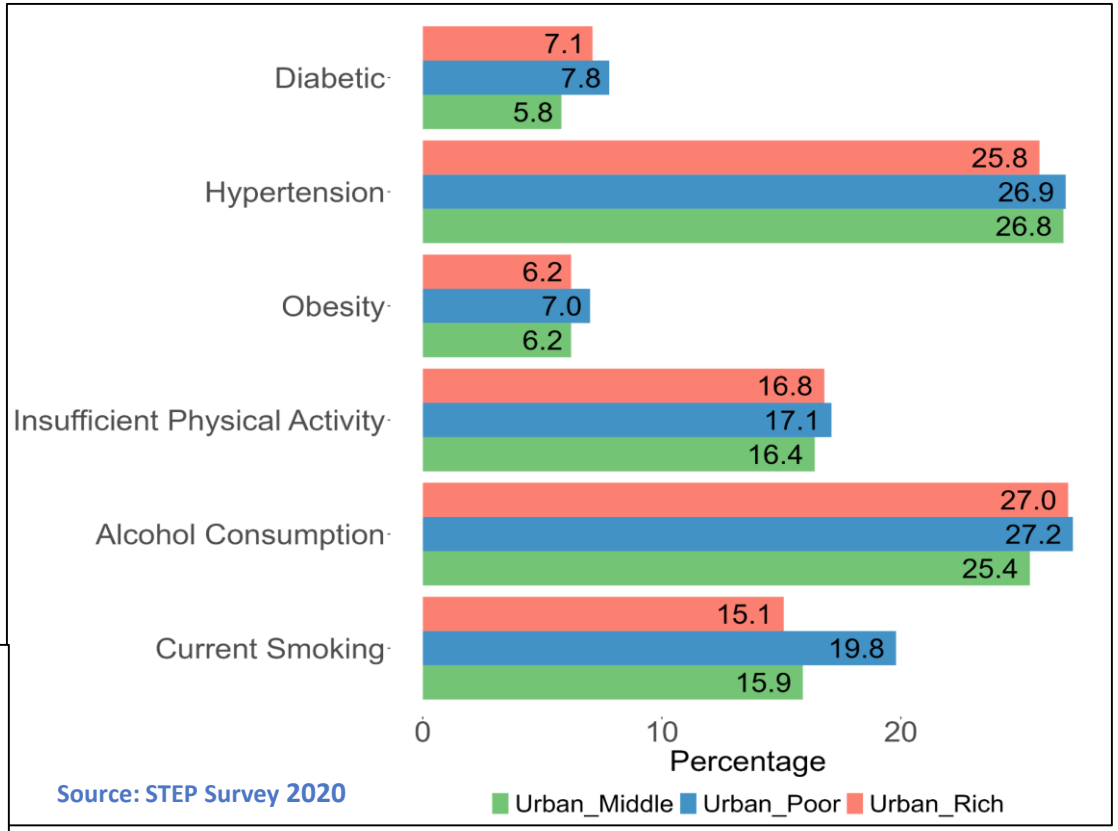
Source: Fourth Nepal Living Standard Survey 2022/23

Urban Clusters Witnessing High NCDs Prevalence





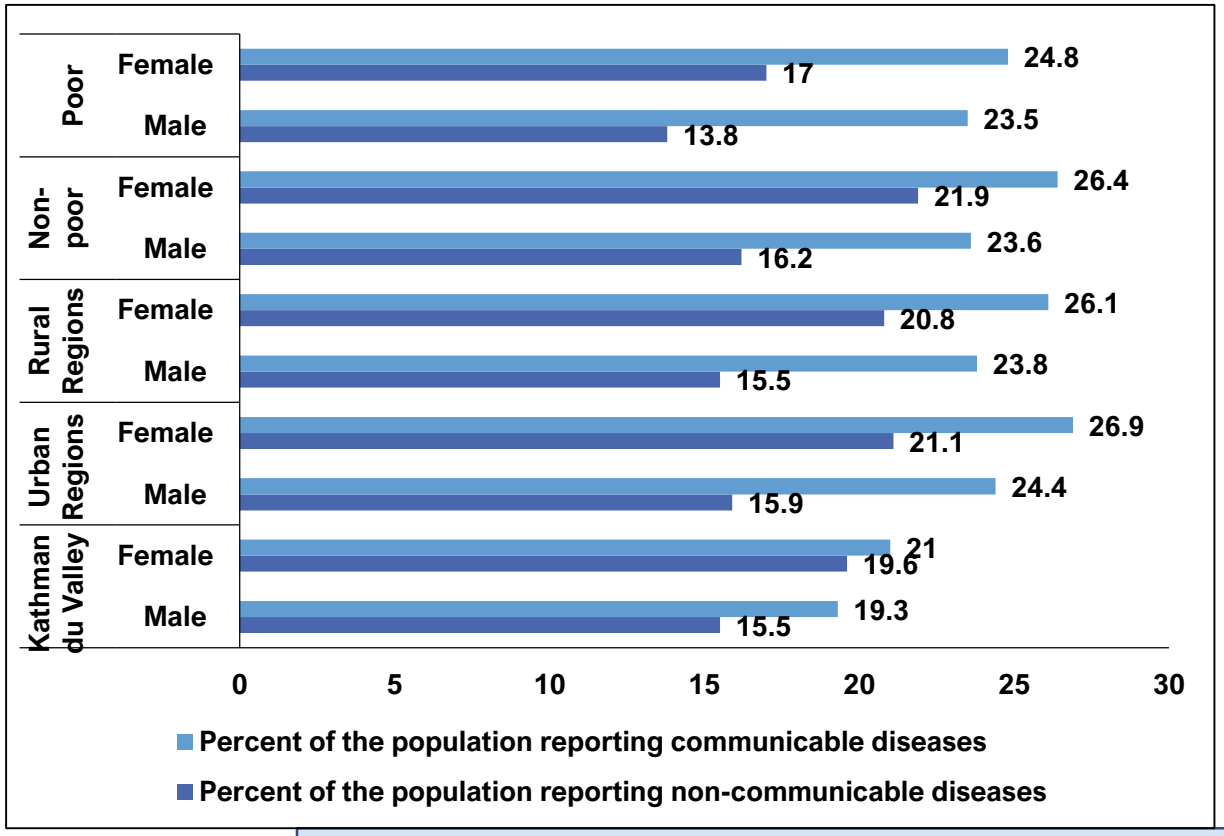
Source: Fourth Nepal Living Standard Survey 2022/23



Source: STEP Survey 2020

- Kathmandu valley and Richest wealth quintiles had highest prevalence of diabetes
- Urban Regions and from richer wealth quintiles had highest prevalence of heart conditions.
- Urban poor had comparatively higher risk for NCDs and NCDs risk behaviors compared to urban middle and urban rich.

High Disease Burden & Mortality in Urban Clusters



Source: Fourth Nepal Living Standard Survey 2022/23

Mortality per 1000 population	Rural Municipality	Urban Municipality	Sub-metro	Metro
Non communicable Disease	3.290	3.401	3.438	**3.866**
Communicable Disease	0.768	0.823	1.056	**1.161**
Road Traffic Accidents	0.118	**0.136**	**0.136**	0.125
Pregnancy related	**0.033**	0.021	0.015	0.015
Suicide	**0.215**	0.198	0.160	0.104

- Burden of NCDs and CDs high in females
- Urban areas outside of Kathmandu Valley report higher rates of CDs.
- Highest Burden of NCD were blood pressure in male poor and gastrointestinal disease in female poor
- Highest Burden of CD were Cold/fever/flu in Kathmandu Valley

Urban-rural disparities in maternal and child health

Maternal and Child Health Indicators	Urban	Rural	Lowest	Second	Middle	Fourth	Highest
Women attending four or more ANC visits (%)	79.5	**82.4**	74.5	76.7	77.7	84.5	**92.6**
Institutional delivery (%)	**80.9**	76.5	65.8	73.2	79.6	87.1	**97.6**
Delivery assisted by skilled provider (%)	**81.4**	77.6	67	73.1	81.2	88.2	**97.4**
Fully vaccinated children aged 12-23 months (%)	79.8	**80.3**	75.8	74.1	85	**85.2**	82.8
Children under age 5 years who are stunted (%)	**21.5**	31	36.9	28.4	22.3	17.7	**13.1**
Children under five years wasted (%)	7.9	**7.5**	**5.6**	7.8	8.5	8.4	9.2
Total fertility rate (births per women aged 15-49 years)	2	**2.4**	**2.8**	2.4	2.1	1.7	1.6
Contraceptive prevalence rate (any method) among currently married women of age 15-49 years (%)	56.9	**58**	54.3	56.4	56.2	56.6	**62.5**

- Women in the highest wealth quintile show significantly higher rates of institutional deliveries and skilled provider assistance compared to those in the lowest quintile
- Children in rural areas have a higher prevalence of stunting than those in urban areas
- Vaccination coverage is relatively equitable across urban and rural settings but still shows disparities across wealth quintiles.

Source: Nepal Demographic and Health Survey 2021/22

Urban Disparity in Health Services

Preference and access in Health Service	Kathmandu Valley	Urban Regions	Rural Regions	Poor	Non-poor
Preferred Health Consultation for Communicable Disease: **Pharmacy**	34.9	**40.2**	38.7	11.4	6.8
Preferred Health Consultation for Non -Communicable: **Private Hospitals**	**44.4**	34.8	32.4	23.5	37.4
Mean time (min) taken to reach Government Hospital	22.7	47.4	**132.6**	99.5	64.3
Mean time (min) taken to reach Private Hospital	15.6	39.4	**119.3**	93.8	53.9

Source: Fourth Nepal Living Standard Survey 2022/23

- Pharmacists are commonly preferred for communicable diseases
- Private hospitals are favored for NCDs, especially in Kathmandu Valley.
- The cost of consulting for NCDs is 16 times higher than for CDs

Conclusion

- This study highlights significant disparities in health and socio-economic indicators across different residence and wealth status.
- Literacy rates, maternal and child health services, and non-communicable disease (NCD) prevalence vary considerably among metropolitan, sub-metropolitan, and rural areas.
- Urban areas have greater access to healthcare services but also experience a higher burden of NCDs.
- Rural areas face elevated rates of hypertension, limited access to maternal healthcare services, and higher suicide rates, emphasizing the need for targeted mental health interventions.
- These findings underscore the necessity of context-specific policies and strategic resource allocation to address the distinct health and socio-economic challenges in different regions.

Takeaway message

Are we closing the gap?

What is our health equity agenda/priority?

- Identify and prioritize addressing systematic and preventable health inequities linked to social, economic, environmental, and structural factors.

What health inequities exist in our country and respective communities in urban areas?

- Assess disparities in health outcomes that disproportionately affect marginalized populations.

Is our outcome specific focus enough to identify factors that can be changed?

- Ensure that outcomes are clearly defined to target modifiable factors influencing health inequities.

What resources is needed and available to support health equity strategies in urban areas?

- Evaluate and mobilize necessary resources to sustain health equity initiatives in communities and priority populations in the decision-making process to ensure strategies are relevant and effective.

Do our health information systems and population surveys capture the required equity variables to measure trends in gap closing in urban areas?

- Enhance data collection systems to include equity variables, enabling the measurement and monitoring of progress in closing health equity gaps.

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THANK YOU!

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I am a public health graduate from Pokhara University. Currently, I am involved in the CHORUS project at HERD International which focuses on strengthening urban health systems. I am committed to generating evidence that drives policy change and programmatic interventions aimed at improving health outcomes and reducing health inequities in communities.