

# Institutional deliveries in Nepal: Leaving no-one behind

Institutional delivery services are crucial for reducing maternal deaths. Nepal has made steady progress in increasing institutional deliveries, but inequalities still persist among different population sub-groups. Some challenges are immense, particularly those resulting from financial, socio-cultural and geographical barriers. However, ongoing policies and programs that are designed to improve access to services have not taken these factors adequately into account. As a result, the under-reached population—including low-income communities, the less educated and those living in remote areas—continue to be left behind. Findings from different national data sources<sup>1,2</sup> also raise concerns over the unequal utilization of services. Using data from the Nepal Demographic and Health surveys (1996 to 2016), this briefing aims to understand whether inequalities have persisted and the extent to which they have, in order to identify key issues relevant for policy and program design. It examines the inequality of access to institutional



deliveries in terms of wealth quintiles and caste/ethnicity composition. The findings have been assessed by calculating the absolute and relative indicators of inequality, including the concentration index.

## Findings

- Between 1996 and 2016, the average annual increase in institutional delivery service use was lowest in the first quintile (Q1 – the poorest group) at 1.6 percentage points (PP), and highest in the fourth quintile (Q4) at 3.2 PP. The total increase between 1996 and 2016 for these two quintile groups was at 32 PP and 63 PP respectively.
- The absolute difference (i.e. the gap between Q5-Q1) in institutional delivery use steadily widened from 28 PP in 1996 to 67 PP in 2011, but declined to 56 PP in 2016. It is important to note that the large changes in absolute difference is a reflection of the overall increase in use of institutional delivery across all quintiles. However, estimates of relative differences (Q5/Q1), which compare the richest with the poorest quintile group, show that the disparity between the two is decreasing. In 1996, the ratio was at 17.2, while in 2016, it stood at 2.6 thereby reflecting the proportionate increase in uptake of institutional deliveries amongst the poorest (Refer to Table 1).
- Institutional deliveries have been increasing over the years across all castes/ethnicities, and particularly in the Newar group. Institutional deliveries have been consistently the lowest among Dalits since 2001. Between 1996 and 2016, the average increase in utilization per year was also lowest among Dalits at 2.0 PP, while it was highest among Brahmins/ Chhetris at 2.9 PP. The overall increase over the decade was highest among Brahmins/Chhetris (58 PP) and lowest among Dalits (41 PP). In 1996, the proportion of institutional deliveries among Newars was already high compared to Brahmins/Chhetris, and continued to be the highest in absolute terms. However, the subsequent years also show a trend of other caste/ethnicity groups catching-up in terms of proportionate increases (Refer to Table 2).
- Absolute differences among the caste/ethnicity groups (highest category – lowest category) in institutional delivery use show a decreasing trend initially (from 1996 to 2001) indicating that the gap between Dalit/Janjati

and Newar was narrowing. Although this gap increased between 2001 and 2011, it dropped by a large proportion between 2011 and 2016. Estimates of relative difference (highest category/lowest category) also show a similar trend. The disparity in use of institutional deliveries between these two caste groups narrowed from 5.2 to 1.6 between 2006 and 2016.

**5** The concentration index, which is a more sensitive measure of inequality and takes into account

disparity across all wealth groups, shows a decreasing trend in inequality from 0.551 in 1996 to 0.186 in 2016 (Refer to Figure 1). The positive values show that utilization of institutional deliveries is disproportionately concentrated in richer households, although the values have decreased over time. This drop is a clear indication that inequality has declined through the years. A concentration index value of zero would mean absence of inequality.

## Implications for programme and policy

- Although the findings show overall decreases in inequality in the use of institutional delivery services in terms of wealth and caste/ethnicity, it is important to note that other forms of inequalities may not show similar trends. These may include, for example, results of geographical barriers and educational attainment, which have not been examined in this briefing.
- Despite an overall trend in narrowing the gap, it is crucial to take into account that the poorest and Dalit communities continue to face barriers in accessing institutional delivery services. Social safety net programs and policies (for example, the Aama Surakshya Programme and Social Health Insurance) should introduce and provide momentum to efforts that incentivize the poorest women and Dalits to use institutional delivery services. These financial barriers should be reduced both in the public and private sector.
- It is essential for further research to identify the specific enablers that have contributed to the decreasing trends in inequality, and explore ways in which they can be amplified; this should include new ways in which the groups left behind can be supported better.

**Table 1** Wealth quintile specific trends and estimates for institutional delivery in 1996, 2001, 2006, 2011 and 2016

Categories	Institutional Delivery					Absolute Increase (Percent points)	
						Average Increase Per Year	Absolute Increase (Percent Points)
	1996	2001	2006	2011	2016	1996-2016	1996-2016
First quintile (poorest)	1.7	2.3	4.3	11.4	33.9	1.6	32.2
Second quintile	3.5	3.0	9.3	23.3	46.6	2.2	43.1
Third quintile	4.8	5.5	11.9	35.4	57.6	2.6	52.8
Fourth quintile	6.2	9.0	21.7	51.9	69.5	3.2	63.3
Fifth quintile (richest)	29.9	36.5	55.0	77.9	89.6	3.0	59.7
Total	7.6	9.1	17.7	35.3	57.4	2.5	49.8
Ratio of fifth to first quintile	17.2	15.6	12.7	6.8	2.6		
Difference in fifth and first quintile	28.2	34.2	50.7	66.5	55.6		

**Source:** Further analysis – Data for 1996 from Nepal Health Facility Survey (NHFS), rest of the data from succeeding Nepal Demographic and Health Survey (NDHS)

**Note:** Data for 1996 are estimated three years preceding the survey; for other years, data are estimated five years preceding the survey

Table

2

## Caste/ethnicity specific trends and estimates for delivery in a health facility in 1996, 2001, 2006, 2011 and 2016

Categories	Institutional Delivery					Absolute Increase (Percent points)	
						Average Increase Per Year	Absolute Increase (Percent Points)
	1996	2001	2006	2011	2016	1996-2016	1996-2016
Dalit	4.9	5.7	9.3	26.4	45.4	2.0	40.5
Janajati	4.4	6.2	14.2	28.9	57.9	2.7	53.5
Other Terai caste	6.4	6.8	15.2	37.9	48.1	2.1	41.7
Muslim	4.4	6.3	12.2	32.3	51.6	2.4	47.2
Newar	29.0	28.0	47.9	68.0	74.6	2.3	45.6
Brahmin/Chhetri	10.6	13.0	24	44.1	68.4	2.9	57.8
Ratio of highest to lowest category	6.6	4.9	5.2	2.6	1.6		
Difference in highest and lowest category	24.6	22.3	38.6	41.6	29.2		
<b>Weighted N</b>	<b>4,373</b>	<b>6,972</b>	<b>5,545</b>	<b>5,391</b>	<b>5,060</b>		

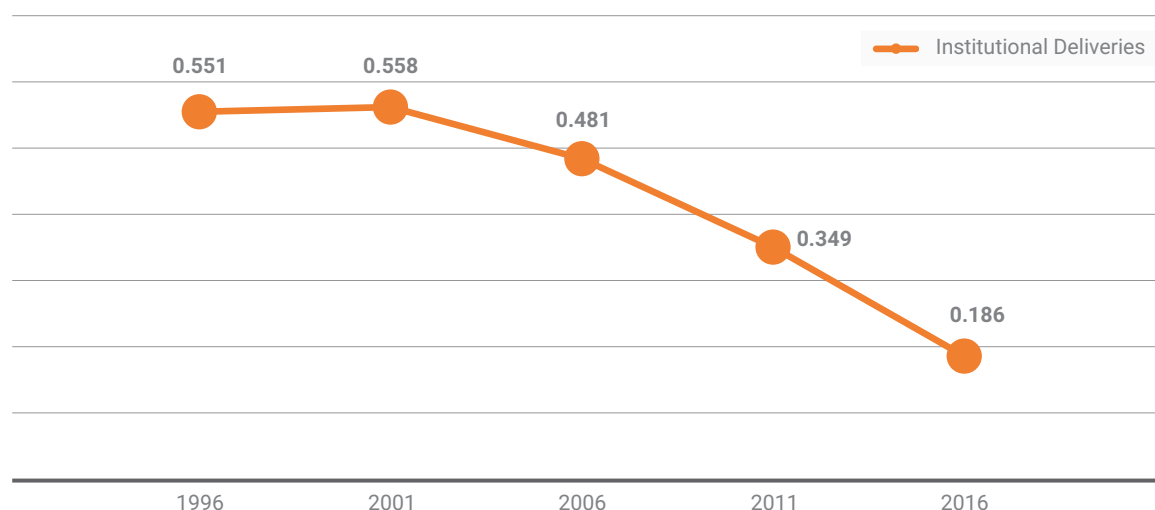
**Source:** Further analysis – Data for 1996 from Nepal Health Facility Survey (NHFS), rest of the data from succeeding Nepal Demographic and Health Survey (NDHS)

**Note:** Highest and lowest values in each category, in a particular year are underlined where there are three or more categories. Data for 1996 are was estimated three years preceding the survey; for other years, data are was estimated five years preceding the survey

Figure

1

## Trend in concentration index of institutional deliveries



The concentration index is expressed in a scale ranging from -1 to 1; a value of zero represents perfect equality, whereas a value of 1 to -1 indicates that only the richest or the poorest households bear the burden.

## References

1. Ministry of Health and Population, New ERA and ICF. Nepal Health Facility Survey. Kathmandu : Ministry of Health and Population, 2015.
2. Ministry of Health and Population, New ERA and ICF. Nepal Demographic and Health Survey 2016. Kathmandu, Nepal : Ministry of Health, Nepal, 2017.