

# **Socioeconomic Determinants of Inequalities in use of Sexual and Reproductive Health Services among Currently Married Women in Nepal**

*[Further Analysis from Nepal Multiple Indicator Cluster Survey 2019, and Nepal  
Demographic and Health Survey 2016]*

June 2021



**Government of Nepal  
Ministry of Health and Population  
Department of Health Service  
Family Welfare Division  
Kathmandu, Nepal**

# **Socioeconomic determinants of inequalities in use of sexual and reproductive health services among currently married women in Nepal**

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June 2021.

Recommended citation:

Pokhrel Taranath, Adhikari Ramesh, Aryal Kabita, Gurung Rajendra, Dulal Bishnu Prasad, Dahal Harsha Raj. 2021. *Socioeconomic determinants of inequalities in use of sexual and reproductive health services among currently married women in Nepal*. A further analysis of NMICS 2019 and NDHS 2016, Family Welfare Division, Ministry of Health and Population: Kathmandu, Nepal.



Government of Nepal  
Ministry of Health and Population  
Department of Health Services  
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Ph. 01 4262155  
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FY 2077/78

Ref. no. 1183



### Acknowledgements

The analytical study report entitled to ‘*Socioeconomic determinants of inequalities in use of sexual and reproductive health services among currently married women in Nepal*’, presents the findings from a further analysis using the Nepal Multiple Indicator Cluster Survey (NMICS 2019) and Nepal Demographic and Health Survey 2016 (NDHS 2016) data. The study collects and analyse the qualitative data to explore the information to full fill the gap of information from the findings of the further analysis of quantitative data. I am confident that this evidence will help all program managers to refine the program covering the unreached group of the population.

First up all, I would like to thank Dr. Dipendra Raman Singh, Director General, Department of Health Services (DoHS), for guidance in the completion of this study. I would also like to thank my colleagues at Family Welfare Division (FWD), particularly the efforts and dedication of Ms. Kabita Aryal and Ms. Nujan Sharma. My deep sense of gratitude goes to research team members, Prof. Dr. Ramesh Adhikari, Dr. Rajendra Gurung, Mr. Bishnu Prasad Dulal, Mr. Harsha Raj Dahal, and Ms. Ranju KC. My sincere thank also goes to the reviewer team of Nepal Health Research Council for their review during the ethical approval procedure.

I am very thankful for your valuable comments for the reviewers Dr. Maureen Darlang, Ms. Shanti Mahendra, Mr. Pradeep Poudel, Mr. Navaraj Bhattarai, Mr. Binod Joshi and Ms. Milima Singh Dongol. I am also very thankful to all well-wisher to participate in this study with valuable information.

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## Executive Summary

**Introduction:** Universal access to and utilisation of reproductive health care, including FP and sexual health services, have been used by various governments as crucial strategies in achieving universal health coverage. Family Planning (FP) services can save women's lives by reducing unintended and high-risk pregnancies and unsafe abortions. Institutional delivery is an important factor in reducing health risks to both the mother and the baby. Institutional delivery is one of the most important factors in reducing the number of maternal deaths through complications during delivery. The main objective of the study was to examine the status and the socioeconomic determinants of inequalities in utilisation of selected reproductive health services (modern contraceptive methods and institutional delivery) among currently married women in Nepal.

**Methodology:** A mixed methods approach was used. Secondary data were obtained from the Nepal Multiple Indicator Cluster Surveys (NMICSs) and Nepal Demographic and Health Surveys (NDHSs). Data from NMICS 2014 and 2019 were used for trend analysis of the prevalence of Sexual and Reproductive Health (SRH) indicators (use of modern method, intention to use FP method and institutional delivery). NDHS 2011 and 2016 were used to examine the trend for the intention to use FP methods. Inequalities were measured using a ratio and concentration index. A binary logistic regression analysis was carried out to determine the adjusted effect of each factor on the dependent variables. Fifteen semi-structured qualitative interviews were conducted with federal, provincial and local-level key stakeholders from government (all three levels) and development partners, using a key informant interview guideline. The qualitative data were transcribed and translated into English and analysed thematically.

### Results

**Use of modern contraceptives:** The prevalence rate of modern contraceptive use has seen no increase over the past 13 years and stayed at around 44.2 per cent between 2006 and 2019. Key informants also agreed that use of modern contraception had stagnated and mentioned various reasons for this trend: spousal separation (couples living apart), FP services being replaced by Medical Abortion (MA) and an increasing number of people preferring natural methods of contraception.

**Inequality in use of modern contraceptive methods:** The inequality in use of modern contraception can be seen clearly by wealth status, province and other sociodemographic characteristics. The value of concentration index (-0.0204) indicates that modern contraception is higher among the poor. The prevalence of use of modern contraception among the poorest increased by 13.5 percentage points between 2006 and 2019. At the same time, it decreased by 14.2 percentage points among the richest (from 53.9% in 2006 to 39.7% in 2019). It is notable that the richest-to-poorest difference has decreased over time. The richest-to-poorest difference was high (23.6%) in 2006, decreasing to 13.3 percentage points in 2011 and further to 1.2 percentage points in NDHS 2016. The depicted by the NMICS data differs slightly: the richest-to-poorest difference was 1.3 percentage points in 2014 and the difference was negative in 2019. In 2019, the prevalence of modern contraceptive use was higher among the poorest (43.8%) than the richest (39.7%). NMICS data from 2019 shows that the richest-to-poorest differences were negative in all provinces except Karnali Province.

The multivariate analysis showed that wealth status, province, age of women, education of women, number of children born, level of media exposure, age of husband and 'husband has another wife' variables were significant predictors of use of modern contraception.

**Institutional delivery:** The utilisation of institutional delivery has increased over time. Institutional delivery varied largely by wealth quintile in both 2014 and 2019. Institutional delivery

was highest among the richest wealth quintile in both surveys (91% in 2014 and 96% in 2019). The richest-to-poorest difference was large in 2014 (62.8%) and reduced to 38.8 percentage points in 2019. The value of concentration index was 0.2082 in 2014, which decreased to 0.0988 in 2019, indicating that the inequality between the richest and poorest has been decreasing over time. Province-wise comparison shows that the richest-to-poorest difference in institutional delivery was very high in Province 2 (66.6%) and low in Sudurpashchim Province (16.9%). Similarly, the richest-to-poorest difference was higher in rural areas than urban areas (44.7% vs 35.6%) and among those who were illiterate (45.1%). Consistent with the quantitative findings, key informants also mentioned that utilisation in rural areas and among poor communities is not satisfactory. Factors hindering uptake of institutional delivery included: geographical difficulty; lack of access to well-equipped health institutions/Birthing Centres (BCs); lack of Skilled Birth Attendants (SBAs) at service delivery sites; and insufficient travel incentives for poor and rural women.

**Conclusion:** The study investigated three main markers of utilisation of reproductive health services: use of modern contraception, intention to use contraception and institutional delivery. Prevalence of modern contraception showed no remarkable change over the past decade. The growing inclination of people towards natural methods, increase in use of MA and EC, and increasing trend of spousal separation through foreign labour migration were some of the factors hypothesised by key informants to explain the plateauing of the Contraceptive Prevalence Rate (CPR). The analysis of NMICS found that there is a disproportionate concentration of use of modern methods among the poor. The important predictors of use of modern contraception were: wealth status, province, age of women, education, number of children born, level of media exposure and the age of husband.

This study shows that the utilisation of institutional delivery has increased over time. Although the richest-to-poorest gap has decreased over time, it is still high among the richest. Qualitative findings showed that major obstacles to accessing institutional delivery for the poor include: cultural and socioeconomic norms of specific communities; inaccessible health institutions/BCs, especially in hilly and remote areas, and lack of trained SBAs in service delivery sites.

The effectiveness of the programme is measured by evaluating the improvement in certain indicators, such as reduction in total fertility rate, reduction in the incidence of unsafe abortion etc., which are satisfactory. However, additional programmes need to be implemented, focussing on awareness, outreach activities, making all five FP commodities available in all health institutions, strengthening the supply side and mobilising the private sector to meet the targets of reproductive health programmes.

Although institutional delivery has increased over the time among both richest and poorest, the utilization of institutional delivery is still lower among poorest especially in province 2. Therefore program should focus on poor and marginalized population.

Both quantitative and qualitative findings show mass media is one of the strongest predictors to increase utilization of family planning services and institutional delivery. It would be better if program use media platform to spread extensive awareness about service availability and benefit of service utilization.

## Acronyms and Abbreviations

|          |  |
|----------|--|
| ANC      | Antenatal Care                                     |
| aOR      | Adjusted Odds Ratio                                |
| BC       | Birthing Centre                                    |
| CEONC    | Comprehensive Emergency Obstetric and Newborn Care |
| CI       | Confidence Interval                                |
| COVID-19 | Coronavirus Disease 2019                           |
| CPR      | Contraceptive Prevalence Rate                      |
| EC       | Emergency Contraception                            |
| EPI      | Expanded Programme on Immunization                 |
| FP       | Family Planning                                    |
| FWD      | Family Welfare Division                            |
| GoN      | Government of Nepal                                |
| IUCD     | Intrauterine Contraceptive Device                  |
| LARC     | Long-acting Reversible Contraception               |
| MA       | Medical Abortion                                   |
| MIS      | Maternity Incentive Scheme                         |
| MoHP     | Ministry of Health and Population                  |
| NDHS     | Nepal Demographic and Health Survey                |
| NHRC     | Nepal Health Research Council                      |
| NHSSP    | Nepal Health Sector Support Programme              |
| NMICS    | Nepal Multiple Indicator Cluster Survey            |
| OR       | Odds Ratio   |
| PPIUD    | Postpartum Intrauterine Device                     |
| RMNCH    | Reproductive, Maternal, Newborn and Child Health   |
| SBA      | Skilled Birth Attendant                            |
| RMNCH    | Reproductive, Maternal, Newborn and Child Health   |
| SBA      | Skilled Birth Attendant                            |
| SDG      | Sustainable Development Goal                       |
| SRH      | Sexual and Reproductive Health                     |
| UN       | United Nations                                     |
| UNICEF   | United Nations Children's Fund                     |
| WHO      | World Health Organization                          |

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# 1. Introduction

## 1.1 Background

Provision of universal access to and utilisation of reproductive health care, including FP and sexual health services and the integration of reproductive health into national strategies and programmes, have been some of the key strategies used by various governments in achieving universal health coverage (United Nations (UN), 2013). Family Planning (FP) services can save women's lives by reducing unintended and high-risk pregnancies and unsafe abortions (Cleland et al, 2006; Arulkumaran et al, 2012, Saifudin et al, 2012, World Health Organization (WHO) 2013). Equitable access to health services by all those who have the same health care needs, regardless of their socioeconomic and cultural background, needs to be prioritised by governments (Culyer AJ, & Wagstaff A., 1993). In Nepal, FP has been one of the priorities for the Government of Nepal (GoN): the GoN has made commitments in several development plans and strategies since 1968 (Ministry of Health and Population (MoHP), 2007, 2015). This has been addressed through the Costed implementation Plan 2015–2021 and the commitments to FP 2020 (MoHP, 2015). Alongside providing free services to ensure wide coverage across the country, efforts have also included integration of services alongside other Reproductive, Maternal, Newborn and Child Health (RMNCH) activities (e.g. FP/Expanded Programme on Immunization (EPI), Postpartum Intrauterine Device (PPIUD) Project etc.). Similarly, the Safe Motherhood Road Map 2030 was developed in 2019 with the support of the Nepal Health Sector Support Programme (NHSSP) to ensure a healthy life for, and the well-being of, all mothers and newborns.

Progress on FP services and their uptake across the country, however, has been slow and much needs to be done to ensure that commitments are met. The most recent Nepal Multiple Indicator Cluster Survey (NMICS), conducted in 2019, shows that only 46.7 per cent of women aged 15–49 years (currently married or in union) use a contraceptive method (modern or traditional) and that contraceptive use varies by province, the highest being reported in Bagmati at 48.7 per cent and the lowest in Gandaki at 35.6 per cent. NMICS 2019 has also revealed differences in the use of contraceptives by wealth status of the population. The NMICS 2014 and 2019 reports, however, do not explain or quantify the degree/magnitude of inequalities in the use of contraceptives by socioeconomic status of the women. Understanding the extent to which socioeconomic inequalities, and the nature of these inequalities, determine the use of Sexual and Reproductive Health (SRH) services is essential for enabling equitable policies and programmes so that the vulnerable and underserved populations in Nepal are not left behind.

This document reports on the trends and socioeconomic determinants of inequalities in utilisation of SRH services among currently married women in Nepal. The main aim of this report is to present evidence that can support policymaking and decision-making processes at federal, province and local levels.

## **1.2 Objectives**

The main objective of the study was to examine the status and the socioeconomic determinants of inequalities in utilisation of the selected sexual and reproductive health services among currently married women in Nepal.

The specific objectives were:

- To assess the levels and trends of inequalities in use of institutional delivery, modern contraceptives, and intention to use modern contraceptives
- To identify the socioeconomic determinants in use of modern contraceptives
- To explore the effects of current programmes in improving reproductive health services.

## 2. Methodology

The report draws on quantitative and qualitative evidence to arrive at its conclusions.

| Objectives  | Methods used                 | Explanatory notes   |
|---|------------------------------|---|
| To assess the levels and trends of inequalities in use of institutional delivery, modern contraceptives, and intention to use modern contraceptives | Quantitative and qualitative | NMICS and Nepal Demographic and Health Survey (NDHS) provide data to analyse trends; qualitative data provide explanation of the situation and trends |
| To identify socioeconomic determinants in use of modern contraceptives.   | Quantitative and qualitative | NMICS 2019 provides data for analysing determinants in use of modern contraception  |
| To explore the effects of current programmes in improving reproductive health services  | Qualitative                  | Key informant interviews provide perceptions of current programmes  |

### 2.1 Data sources

#### Quantitative data:

Secondary data from NMICSs and NDHSs have been used for this study. Data from NMICS 2014 and 2019 are used for trend analysis of SRH indicators. Three indicators were chosen for this analysis: use of modern contraceptives, intention to use FP methods and institutional delivery. The NMICS 2019 data were used to examine the levels and socioeconomic determinants of use of modern contraceptives. However, as NMICS 2019 does not have information on intention to use FP methods, NDHS 2011 and 2016 were used to examine the trend for this indicator.

#### Qualitative information:

Semi-structured qualitative interviews were conducted with federal, provincial and local-level key stakeholders from government (all three levels) and development partners using a key informant interview guideline. Ethical approval was taken ([ERB Protocol Registration No. 35/2021 P](#)) from the Nepal Health Research Council (NHRC). A total of 15 purposively selected participants from government and non-governmental organisations were interviewed using an interview guideline. Most of the interviews were performed virtually via online platforms, including Zoom and Microsoft Teams, as well as by phone, because of Coronavirus Disease 2019 (COVID-19) restrictions. A few face-to-face interviews were conducted maintaining physical distance and adopting necessary precautions for COVID-19. Qualitative information helped to explore the

current issues, potential barriers and opportunities to improve SRH services in Nepal. The interviews were conducted in Nepali and recorded. The data was then transcribed and translated into English before analysing it. Qualitative information has been gathered to supplement quantitative findings.

## 2.2 Variables

The dependent variables used in this study to examine determinants of inequalities in use of services were: modern contraceptives, intention to use modern contraceptives and use of institutional delivery.

Operational definitions of these indicators are as below:

**Modern contraception:** Percentage of women aged 15–49 who are using (or whose partner is using) a modern method of contraception during the survey. Modern methods include: oral contraceptive pills, implants, injectables, Intrauterine Contraceptive Devices (IUDs), male and female condoms, female and male sterilisation.

**Intention to use FP methods:** Percentage of currently married women who were not using any FP methods but intended to use FP in the future.

**Institutional delivery:** Percentage of live births in the **two years** preceding the survey delivered in a health facility.

## 2.3 Inequality measurement

Inequalities were measured using a ratio that measures disparity in utilisation of SRH services between the richest (highest wealth quintile) and the poorest (lowest wealth quintile), and a concentration index using NMICS 2019 data for both institutional delivery and use of modern contraception. NDHS 2016 was used for intention to use FP methods for all five wealth quintiles, providing a comprehensive picture of inequalities in the population.

The concentration index provides a means of quantifying the degree of income-related inequality in a specific health variable. The concentration index is zero if there is no income-related inequality. If the curve lies above the line of equality, the index has negative value (indicating a disproportionate concentration of the health variable among the poor), and a positive value if it lies below the line of equality.

## **2.4 Data analysis**

Data for this study was extracted from NMICS and NDHS, and both univariate and multivariate analyses were performed. Ratios, differences, concentration indices and concentration curves were used to analyse the inequality. A binary logistic regression analysis was carried out to determine the adjusted effect of each factor on the dependent variables. The variables identified in the literature were included as independent variables. The result of logistic regression analysis was presented by Adjusted Odds Ratio (aOR) with 95% Confidence Interval (CI). SPSS software was used to conduct multivariate analysis, and SPSS and Microsoft Excel were used to plot the concentration curves.

### 3. Results and Discussion

This section presents results and discussion of use of modern contraception, determinants of modern contraception, intention to use FP method and use of institutional delivery for the recent child.

#### 3.1 Use of modern contraceptives

##### 3.1.1 Background characteristics of respondents

NMICS is a country-wide sample survey, and the 2019 report covered 11,183 currently married women in total. Nearly one-quarter (24%) of these respondents were from Bagmati Province with Lumbini Province (19%) and Province 2 (19%) also providing high proportions of the total respondents. More than two-thirds of respondents (69%) were from urban areas, and one-fifth (20%) were youth aged 15–24 years. One-third of respondents were illiterate, and only six per cent had higher-level education. Almost three in ten women (29%) had three or four children. It is notable that one-quarter (25%) of respondents were not exposed to the media. On the other hand, one in ten respondents were highly exposed to the media (Table 1).

**Table 1 Background characteristics of currently married women, NMICS 2019**

|                              | %    | 95% CI |       | Total N |
|------------------------------|------|--------|-------|---------|
|                              |      | Lower  | Upper |         |
| <b>Wealth index quintile</b> |      |        |       |         |
| Poorest                      | 17.6 | 15.9   | 19.3  | 1971    |
| Second                       | 19.5 | 17.8   | 21.2  | 2178    |
| Middle                       | 20.2 | 18.5   | 21.9  | 2255    |
| Fourth                       | 21.4 | 19.8   | 23.0  | 2392    |
| Richest                      | 21.3 | 19.7   | 22.9  | 2386    |
| <b>Province</b>              |      |        |       |         |
| Province 1                   | 16.0 | 14.3   | 17.7  | 1790    |
| Province 2                   | 18.5 | 16.8   | 20.2  | 2070    |
| Bagmati Province             | 23.8 | 22.2   | 25.4  | 2667    |
| Gandaki Province             | 8.8  | 7.0    | 10.6  | 985     |
| Lumbini Province             | 18.9 | 17.2   | 20.6  | 2111    |
| Karnali Province             | 5.4  | 3.6    | 7.2   | 607     |
| Sudurpashchim Province       | 8.5  | 6.7    | 10.3  | 952     |
| <b>Place of residence</b>    |      |        |       |         |
| Urban                        | 68.7 | 67.7   | 69.7  | 7678    |
| Rural                        | 31.3 | 29.8   | 32.8  | 3504    |
| <b>Age of women</b>          |      |        |       |         |
| 15–19                        | 4.6  | 2.8    | 6.4   | 517     |
| 20–24                        | 15.8 | 14.1   | 17.5  | 1767    |
| 25–29                        | 19.4 | 17.7   | 21.1  | 2171    |
| 30–34                        | 17.8 | 16.1   | 19.5  | 1994    |
| 35–39                        | 16.9 | 15.2   | 18.6  | 1886    |
| 40–44                        | 13.9 | 12.2   | 15.6  | 1550    |
| 45–49                        | 11.6 | 9.9    | 13.3  | 1299    |
| <b>Education</b>             |      |        |       |         |

|                                | %     | 95% CI |       | Total N |
|--------------------------------|-------|--------|-------|---------|
|                                |       | Lower  | Upper |         |
| Illiterate                     | 33.0  | 31.5   | 34.5  | 3690    |
| Basic (Grades 1–8)             | 30.3  | 28.8   | 31.8  | 3390    |
| Secondary (Grades 9–12)        | 30.2  | 28.7   | 31.7  | 3382    |
| Higher                         | 6.4   | 4.6    | 8.2   | 720     |
| <b>Number of children born</b> |       |        |       |         |
| None                           | 9.2   | 7.4    | 11.0  | 1032    |
| 1–2                            | 55.0  | 53.8   | 56.2  | 6149    |
| 3–4                            | 28.7  | 27.1   | 30.3  | 3207    |
| 5–6                            | 5.9   | 4.1    | 7.7   | 664     |
| 7 or more children             | 1.2   | -0.7   | 3.1   | 131     |
| <b>Level of media exposure</b> |       |        |       |         |
| No exposure                    | 25.1  | 23.5   | 26.7  | 2803    |
| Low                            | 38.5  | 37.0   | 40.0  | 4302    |
| Medium                         | 26.3  | 24.7   | 27.9  | 2939    |
| High exposure                  | 10.2  | 8.4    | 12.0  | 1139    |
| Total                          | 100.0 | 100    | 100   | 11183   |

### 3.1.2 Trends of Modern CPR

As seen in Table 2 and Figure 1, the prevalence rate of modern contraceptive use has seen no increase over the past 13 years and stayed at 44.2 per cent between 2006 (NDHS 2006) and 2019 (NMICS 2019), although a small increase was noted in 2014 (NMICS 2014). The prevalence of use of modern contraception among the poorest increased by 13.5 percentage points during the period from 2006 to 2019. During the same time, it had decreased by 14.2 percentage points among the richest (from 53.9% in 2006 to 39.7% in 2019).

**Table 2 Trend of Modern CPR: 2006–2019**

|                                      | NDHS 2006   | NDHS 2011   | NDHS 2016   | NMICS 2014  | NMICS 2019  |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Poorest                              | 30.3        | 35.6        | 41.8        | 44.1        | 43.8        |
| Second                               | 40.6        | 41.1        | 44.8        | 46.8        | 47.5        |
| Middle                               | 46.8        | 43.3        | 42.6        | 50.1        | 44.8        |
| Fourth                               | 48.2        | 45.3        | 41.7        | 48.9        | 45.3        |
| Richest                              | 53.9        | 48.9        | 43.0        | 45.4        | 39.7        |
| All                                  | 44.2        | 43.2        | 42.8        | 47.1        | 44.2        |
| <i>Richest-to-poorest difference</i> | <i>23.6</i> | <i>13.3</i> | <i>1.2</i>  | <i>1.3</i>  | <i>-4.1</i> |
| <i>Ratio (richest to poorest)</i>    | <i>1.78</i> | <i>1.37</i> | <i>1.03</i> | <i>1.03</i> | <i>0.91</i> |

Key informants also agreed that use of modern contraception had plateaued for 15 years, which could imply problems at policy, service delivery and community levels. According to respondents, the main reason for this could be spousal separation (couple living apart). Couples often

*"I think the practice of using self-MA have also replaced the FP service utilisation"* Participants, 10



perceive it is unnecessary to use pills, injectables or any method, as they meet each other infrequently and therefore choose traditional methods. However, a few key informants mentioned that the main reason for CPR being stagnant is the substitution of FP services by Medical Abortion (MA).

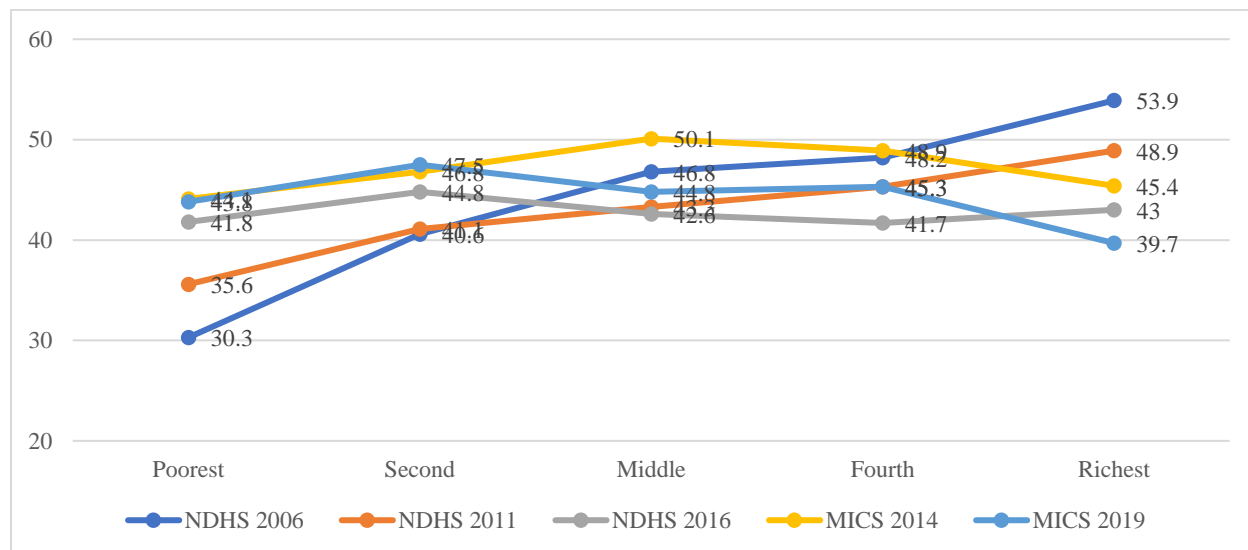
A few informants felt that although reluctance for FP service uptake has been decreasing, the supply side remains weak. 'Son preference' in some communities was also reported to have affected FP utilisation. Some informants report that there continue to be misconceptions among communities that they should not use FP devices before they have their first child, as this could lead to infertility. Some postpartum mothers are said to still believe that conception does not occur until the return of menstruation after delivery. Respondents also felt that newly married couples, despite being educated and aware of FP methods, seem to choose natural methods over modern contraceptive devices.

There is also a sense that the full range of methods available is not known by many people. A few informants also

*"People in remote areas still believe FP as only permanent method. Many people do not know about the LARC. They know about Depo and permanent FP method. They are not fully aware of the options they have. Highly educated people are more likely to use natural methods"* Participants, 3

mentioned that community people also have misconceptions regarding the use of FP.

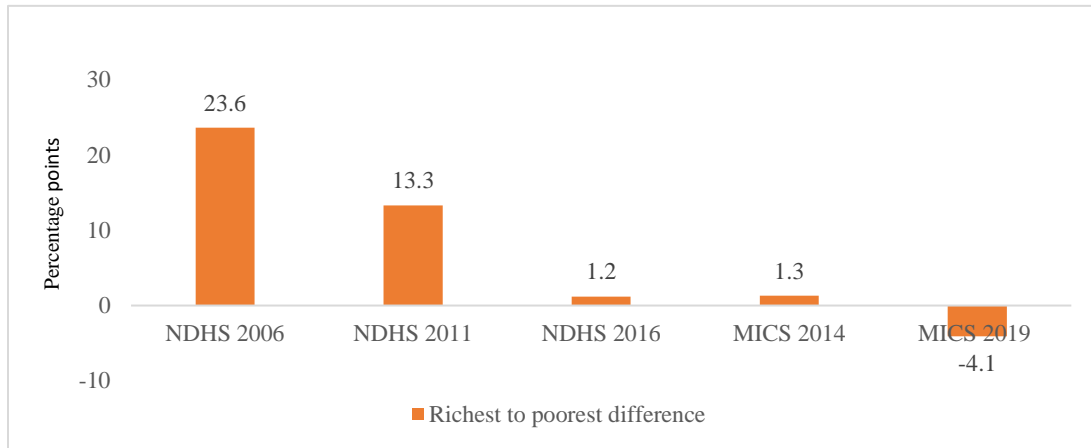
**Figure 1** Percentage of women aged 15–49 who are using any modern method of FP by wealth quintile, 2006–2019



As seen in Figure 2, the richest-to-poorest difference has decreased over time. Richest-to-poorest difference was high (23.6 percentage point) in 2006, decreasing to 13.3 percentage points in 2011 and further to 1.2 percentage points in NDHS 2016. NMICS data presented a slightly different

scenario: the richest-to-poorest difference was 1.3 percentage points in 2014 and was negative in 2019 (Figure 2).

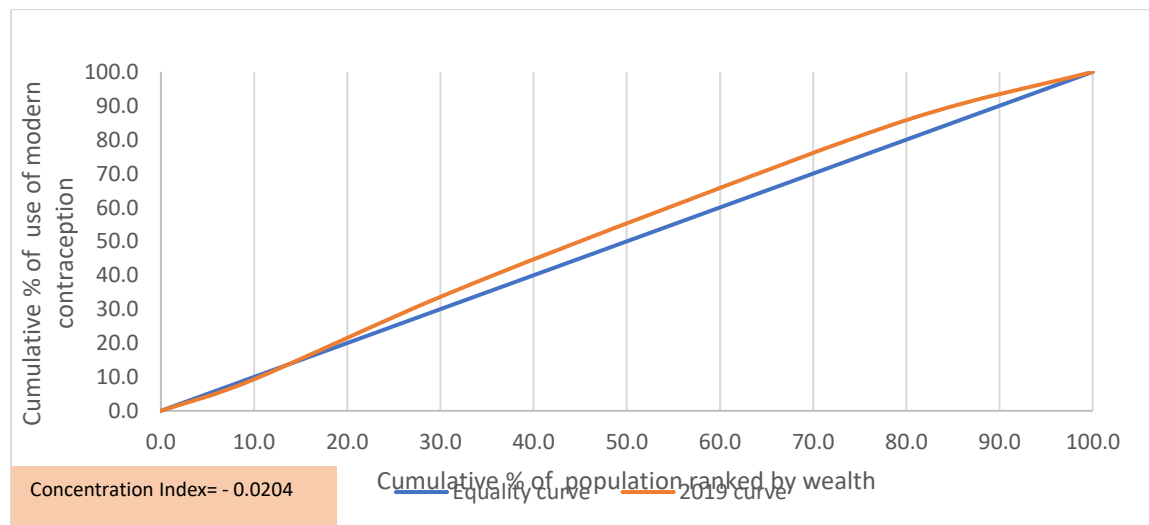
**Figure 2** Trend of richest-to-poorest differences (percentage points) in use of modern contraception, 2006–2019



### 3.1.3 Inequality in use of modern contraceptive methods

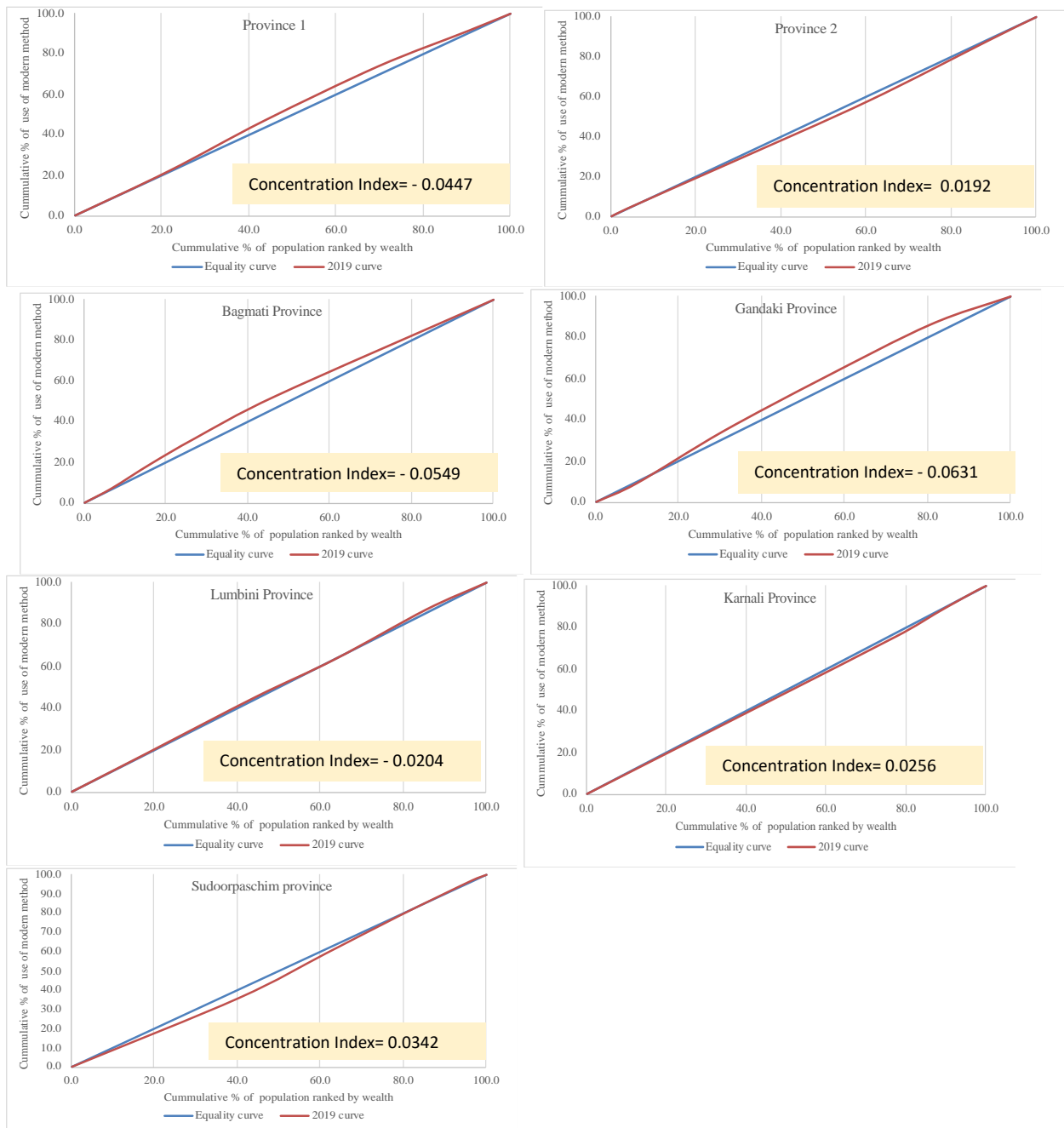
The concentration curve plots the cumulative percentage of the use of modern contraception (y-axis) against the cumulative percentage of the population, ranked by wealth beginning with the poorest, and ending with the richest (x-axis). The curve is above the equality line, which indicates that there is a disproportionate concentration of modern methods among the poor. The value of the concentration index is negative (-0.0204), which indicates that use of modern contraception is higher among the poor.

**Figure 3** Concentration curve and index for use of modern contraception: National, 2019



The province-wise concentration index shows that Province 1 (concentration index = -0.0447), Bagmati Province (concentration index = -0.0549), Gandaki Province (concentration index = -0.0631) and Lumbini Province (concentration index = -0.0204) have negative values, indicating that modern contraception is higher among the poor. On the other hand, Province 2 (concentration index = 0.0192), Karnali Province (concentration index = 0.0256) and Sudurpashchim Province (concentration index = 0.0342) have positive values of concentration index, which indicates that there is a disproportionate concentration of modern methods among the rich (i.e. use of modern contraception is higher among the rich) (Figure 4).

**Figure 4** Concentration curve and index for use of modern FP by province



As seen in Table 3, use of modern contraceptives varied by province and other sociodemographic characteristics; NMICS data 2019 shows that the richest-to-poorest differences were negative in all provinces except Karnali Province. The difference was largest in Bagmati Province (poorest, 48.7% and richest, 40.3%) followed by Gandaki Province (difference of -6.7) and Province 1 (difference of -6.3). On the other hand, a slightly higher percentage of the richest (45.6%) than poorest (44.7%) in Karnali Province were using modern contraception. Further details on the use of modern methods are included in Annex 1, Tables A1 and A2.

Overall, the richest-to-poorest difference was negative, which indicates that a higher percentage of the poorest quintile were using modern contraception than the richest in both urban and rural areas. However, the difference between richest and poorest was larger in urban (-5.6) than rural areas (-3.9), indicating that the inequality is higher in urban than rural areas. The richest-to-poorest differences were also larger among adolescents aged 15–19 (difference of 22.4; 16.8% among poorest and 39.2% among richest), followed by women who were aged 45–49 years (difference of 19.2; 39% among poorest and 58% among richest), also indicating that young women from the poorest families were the least likely adopt modern contraception. With regard to education of women, richest-to-poorest difference was positive among women who have secondary or below levels of education; however, it was negative among the women who had higher-level education (-16.7), indicating that a higher percentage of women from the poorest quintile were using modern contraception than those from the richest.

Among women who had no exposure to media, a higher percentage of poorest (45%) than richest (32%) women had used modern contraception. However, the opposite was true amongst women with high exposure to media, as contraceptive use was higher among richest (39%) than poorest (34%) women (Table 3).

**Table 3 Wealth status by use of modern FP method according to background characteristics of currently married women, NMICS 2019**

|                                | Using modern method |        |        |        |         |       | Richest to poorest |       |
|--------------------------------|---------------------|--------|--------|--------|---------|-------|--------------------|-------|
|                                | Poorest             | Second | Middle | Fourth | Richest | Total | Difference         | ratio |
| National                       | 43.8                | 47.5   | 44.8   | 45.3   | 39.7    | 44.2  | -4.1               | 0.9   |
| <b>Province</b>                |                     |        |        |        |         |       |                    |       |
| Province 1                     | 45.3                | 50.3   | 45.5   | 37.7   | 39.0    | 44.3  | -6.3               | 0.9   |
| Province 2                     | 49.6                | 44.3   | 44.7   | 50.3   | 49.2    | 46.9  | -0.4               | 1.0   |
| Bagmati Province               | 48.7                | 56.9   | 52.5   | 47.7   | 40.3    | 45.2  | -8.4               | 0.8   |
| Gandaki Province               | 29.7                | 39.6   | 34.9   | 32.8   | 23      | 32.5  | -6.7               | 0.8   |
| Lumbini Province               | 46.5                | 46.6   | 43.1   | 49.2   | 40.4    | 45.6  | -6.1               | 0.9   |
| Karnali Province               | 44.7                | 50.6   | 49.4   | 48.8   | 45.6    | 45.7  | 0.9                | 1.0   |
| Sudurpashchim Province         | 38.6                | 47.7   | 48     | 45.5   | 36.8    | 43.4  | -1.8               | 1.0   |
| <b>Place of residence</b>      |                     |        |        |        |         |       |                    |       |
| Urban                          | 45.3                | 46.4   | 44.1   | 45.4   | 39.7    | 43.6  | -5.6               | 0.9   |
| Rural                          | 42.9                | 49.3   | 46     | 45     | 39      | 45.5  | -3.9               | 0.9   |
| <b>Age of women</b>            |                     |        |        |        |         |       |                    |       |
| 15–19                          | 16.8                | 10.4   | 15.7   | 19     | 39.2    | 17.3  | 22.4               | 2.3   |
| 20–24                          | 29.1                | 30.7   | 27     | 28.5   | 18.1    | 27.2  | -11                | 0.6   |
| 25–29                          | 44.8                | 37.1   | 35.8   | 44.1   | 29.9    | 38    | -14.9              | 0.7   |
| 30–34                          | 54.7                | 58.1   | 49.4   | 53.5   | 33.7    | 48.7  | -21                | 0.6   |
| 35–39                          | 54.5                | 62.9   | 60.7   | 53.6   | 47.2    | 55.5  | -7.3               | 0.9   |
| 40–44                          | 57.3                | 62.7   | 58.6   | 51.8   | 52.9    | 56.4  | -4.4               | 0.9   |
| 45–49                          | 38.7                | 53.5   | 52.8   | 47.1   | 57.9    | 50.4  | 19.2               | 1.5   |
| <b>Education</b>               |                     |        |        |        |         |       |                    |       |
| None                           | 50.7                | 56.9   | 52.7   | 55.8   | 55      | 54    | 4.3                | 1.1   |
| Basic (Grades 1–8)             | 39.7                | 42.6   | 46.6   | 45.9   | 43.3    | 43.9  | 3.6                | 1.1   |
| Secondary (Grades 9–12)        | 32.2                | 35.6   | 33.9   | 40.3   | 38      | 36.9  | 5.8                | 1.2   |
| Higher                         | 46.9                | 34.1   | 18.6   | 30     | 30.2    | 29.6  | -16.7              | 0.6   |
| <b>Number of children born</b> |                     |        |        |        |         |       |                    |       |
| None                           | 6.4                 | 6.1    | 6.2    | 8.4    | 10      | 7.6   | 3.6                | 1.6   |
| 1–2                            | 41                  | 43.2   | 42.6   | 45.5   | 37.6    | 41.8  | -3.4               | 0.9   |
| 3–4                            | 52.8                | 62.9   | 55.9   | 57.2   | 66.8    | 58.4  | 14                 | 1.3   |
| 5–6                            | 51.1                | 57.6   | 58.1   | 54.2   | 49.8    | 54.5  | -1.3               | 1.0   |
| 7 or more children             | 52.2                | 32.5   | 31.9   | 30.4   | 100     | 44.7  | 47.8               | 1.9   |
| <b>Level of media exposure</b> |                     |        |        |        |         |       |                    |       |
| No exposure                    | 44.9                | 49     | 46.7   | 45.3   | 31.7    | 46    | -13.2              | 0.7   |
| Low                            | 43.4                | 46.7   | 44.3   | 47.8   | 42.5    | 45.1  | -0.9               | 1.0   |
| Medium                         | 41.3                | 46.9   | 45.5   | 43.2   | 38      | 42.7  | -3.3               | 0.9   |
| High exposure                  | 34.3                | 45.7   | 39.5   | 42.1   | 38.9    | 40.4  | 4.6                | 1.1   |
| Total N                        | 864                 | 1035   | 1011   | 1084   | 947     | 4941  | 83                 | 1.1   |

Key informants mentioned that the gap in equitable access in utilisation could be because of the high prevalence of early marriage and programmes not being able to focus on target groups.

*"We haven't yet catered for adolescents, Muslims, urban poor, ethnic minorities, people living in hard-to-reach areas, poor, marginalised, gender and sexual minorities people living with disabilities. The other reason could be educated people know about the safe period"* Participant, 4

The equity perspective is not addressed to the extent that it should have been.

*"We haven't yet studied FP utilisation rate among these people and there is no mechanism to make their access to health facilities for FP service uptake. I think our policies and papers need revision"* Participant, 2

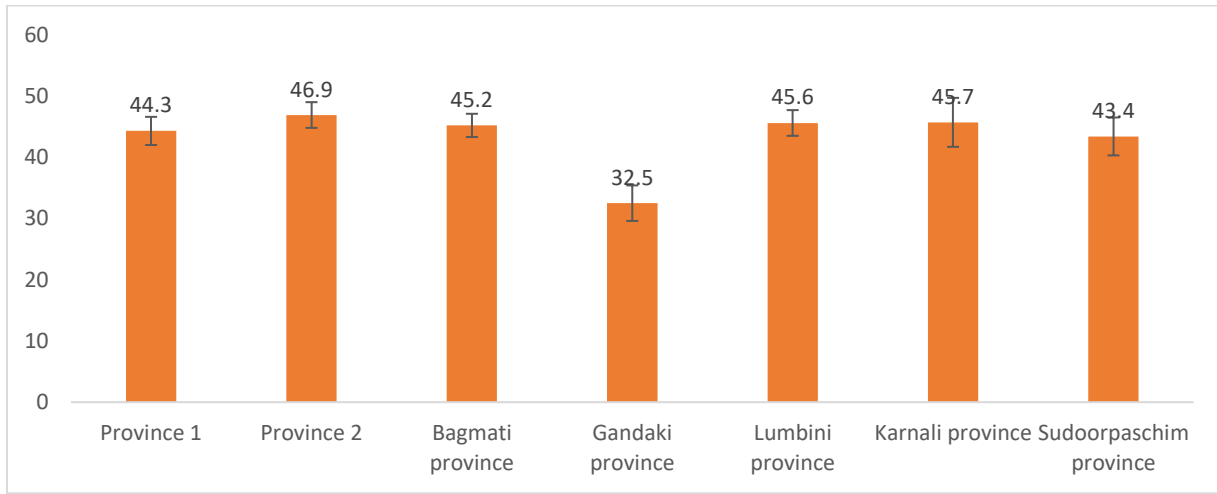
Many studies show that wealth index was independently associated with the current FP method utilisation in many countries. Women from the richest households were more likely to use modern FP methods than women of reproductive age belonging to the poorest households (Gebre & Edossa, 2020; Asresie et al., 2020; Singh et al., 2020). Similarly, a study conducted in Nepal showed that condom use was higher among respondents belonging to the richest group than those in the poorest (Sharma & Nam, 2018). NMICS data did not support this and gave a contrary finding.

On the other hand, our analysis found that adolescents from the richest quintile were more likely to use modern contraception than those from the poorest. This finding is supported by other studies conducted in sub-Saharan Africa that found that the odds of contraceptive use were higher among female adolescents from the richest wealth quintile than those from the poorest (Ahinkorah et al., 2020).

### **3.2 Determinants of use of modern contraceptives**

Overall, modern contraceptive use among currently married women was 44.2 per cent as per NMICS 2019 (Table 3). Use of modern methods was higher in Province 2 (47%) and lower in Gandaki Province (33%) (Figure 5).

**Figure 5 Modern contraception use by province, NMICS 2019**



As can be seen in Table 4, use of modern contraception varied with different socioeconomic variables. Use was highest among women in the second quintile (48%) and lowest among the richest (39.7%). The CPR of modern methods was found to be slightly higher in rural (45.5%) than urban areas (43.6%). NMICS data shows that a woman's level of education of women has an inverse relation with the use of modern contraception. For instance, use of modern contraception was higher among illiterate women (54%) than those who had basic education (44%), secondary-level education (37%) and higher-level education (30%).

Multivariate analysis showed that wealth status, province, age of women, education, number of children born, level of media exposure, age of husband and 'husband has another wife' variables were significant determinants of use of modern contraception. It was found that women in the second wealth quintile were most likely to use modern contraception (aOR=1.19, 95% CI=1.03–1.37) than those in other quintiles. However, there is no significant difference in use of modern contraception among poorest and richest in this study. The findings are contradicted with couple of other studies that shows that richest women were more likely to use modern contraception than poorest women (Gebre & Edossa, 2020, Ofonime 2017, Tekelab et al, 2015).

Women in Bagmati Province were most likely to use modern contraception (aOR=1.24, 95% CI=1.08–1.43), and women from Gandaki Province were least likely to use it (aOR=0.64, 95% CI=0.55–0.77). Women aged 25 or above were more likely to use modern contraception than younger women aged 15-19. The findings also contradict with other studies as they found younger women were more likely to use modern method than other women (Gebre & Edossa, 2020; Haq et al, 2017)

NMICS data shows findings that contradict other studies in regard to education. It is notable that education has a clear negative effect on the use of modern contraception. Women who had basic

education (aOR=0.876, 95% CI=0.79–0.98), secondary (aOR=0.81, 95% CI= 0.72-0.93) or higher education (aOR=0.61, 95% CI=0.49-0.75) were less likely to use modern contraception than illiterate women. Number of children borne are positively associated with use of modern contraception. Women who had more children were more likely to use modern methods than women who do not have children. The finding is in line with the result of other studies (Fort, 2008, Osmani, 2015, Gebre & Edossa, 2020).

Mass media exposure has also been shown to affect use of contraception. Women who had high exposure to mass media were more likely (aOR=1.24, 95% CI 1.04-1.47) to use contraception than women who had no exposure to mass media (Table 4) this finding is similar to the other studies findings (Gebre & Edossa, 2020, Fort et al, 2008, Haq et al 2017). This study found that the probability of using modern contraception is lower of women whose husband has another wife (aOR=0.56). It could be due to the partially separation of husband or due to less sexual intercourse with their husband who has another wife.

**Table 4 Adjusted odds Ratios (aOR) and 95% CI from logistic regression model of using modern contraception by wealth index and other predicators, NMICS 2019**

|                              | Any modern method | 95% CI |       | aOR      | 95% CI |       | Total N |
|------------------------------|-------------------|--------|-------|----------|--------|-------|---------|
|                              | %                 | Lower  | Upper | %        | Lower  | Upper |         |
| <b>Wealth index quintile</b> |                   |        |       |          |        |       |         |
| Poorest                      | 43.8              | 41.6   | 46.0  | ref.     |        |       | 1971    |
| Second                       | 47.5              | 45.4   | 49.6  | 1.189*   | 1.030  | 1.371 | 2178    |
| Middle                       | 44.8              | 42.7   | 46.9  | 1.059    | 0.914  | 1.226 | 2255    |
| Fourth                       | 45.3              | 43.3   | 47.3  | 1.130    | 0.969  | 1.319 | 2392    |
| Richest                      | 39.7              | 37.7   | 41.7  | 0.874    | 0.733  | 1.044 | 2386    |
| <b>Province</b>              |                   |        |       |          |        |       |         |
| Province 1                   | 44.3              | 42.0   | 46.6  | ref.     |        |       | 1790    |
| Province 2                   | 46.9              | 44.8   | 49.0  | 1.061    | 0.922  | 1.221 | 2070    |
| Bagmati Province             | 45.2              | 43.3   | 47.1  | 1.243*   | 1.084  | 1.426 | 2667    |
| Gandaki Province             | 32.5              | 29.6   | 35.4  | 0.649*** | 0.547  | 0.770 | 985     |
| Lumbini Province             | 45.6              | 43.5   | 47.7  | 1.166*   | 1.018  | 1.337 | 2111    |
| Karnali Province             | 45.7              | 41.7   | 49.7  | 1.187    | 0.963  | 1.464 | 607     |
| Sudurpashchim Province       | 43.4              | 40.3   | 46.5  | 0.975    | 0.823  | 1.156 | 952     |
| <b>Place of residence</b>    |                   |        |       |          |        |       |         |
| Urban                        | 43.6              | 42.5   | 44.7  | ref.     |        |       | 7678    |
| Rural                        | 45.5              | 43.9   | 47.1  | 1.039    | 0.946  | 1.142 | 3504    |
| <b>Age of women</b>          |                   |        |       |          |        |       |         |
| 15–19                        | 17.3              | 14.0   | 20.6  | ref.     |        |       | 517     |
| 20–24                        | 27.2              | 25.1   | 29.3  | 1.210    | 0.918  | 1.596 | 1767    |
| 25–29                        | 38.0              | 36.0   | 40.0  | 1.688*** | 1.261  | 2.261 | 2171    |
| 30–34                        | 48.7              | 46.5   | 50.9  | 2.188*** | 1.616  | 2.962 | 1994    |
| 35–39                        | 55.5              | 53.3   | 57.7  | 2.455*** | 1.786  | 3.375 | 1886    |
| 40–44                        | 56.4              | 53.9   | 58.9  | 2.458*** | 1.762  | 3.429 | 1550    |
| 45–49                        | 50.4              | 47.7   | 53.1  | 1.941*** | 1.367  | 2.756 | 1299    |
| <b>Education</b>             |                   |        |       |          |        |       |         |
| Illiterate                   | 54.0              | 52.4   | 55.6  | ref.     |        |       | 3690    |
| Basic (Grades 1–8)           | 43.9              | 42.2   | 45.6  | 0.876*   | 0.785  | 0.977 | 3390    |
| Secondary (Grades 9–12)      | 36.9              | 35.3   | 38.5  | 0.814**  | 0.716  | 0.925 | 3382    |



|  | Any modern method | 95% CI |       | aOR      | 95% CI   |        | Total N |
|--|-------------------|--------|-------|----------|----------|--------|---------|
|  | %                 | Lower  | Upper | %        | Lower    | Upper  |         |
| Higher   | 29.6              | 26.3   | 32.9  | 0.607*** | 0.489    | 0.752  | 720     |
| <b>Number of children born</b>                               |                   |        |       |          |          |        |         |
| None   | 7.6               | 6.0    | 9.2   | ref.     |          |        | 1032    |
| 1–2  | 41.8              | 40.6   | 43.0  | 6.644*** | 5.201    | 8.488  | 6149    |
| 3–4  | 58.4              | 56.7   | 60.1  | 9.762*** | 7.521    | 12.671 | 3207    |
| 5–6  | 54.5              | 50.7   | 58.3  | 7.789*** | 5.757    | 10.538 | 664     |
| 7 or more children   | 44.7              | 36.2   | 53.2  | 5.193*** | 3.349    | 8.053  | 131     |
| <b>Wife-beating justified</b>                                |                   |        |       |          |          |        |         |
| Wife-beating is not justified for any reasons                | 43.5              | 42.4   | 44.6  | ref.     |          |        | 7553    |
| Wife-beating is justified for at least one reason            | 45.7              | 44.1   | 47.3  | 1.001    | 0.907    | 1.104  | 3630    |
| <b>Daughter-in-law-beating justified</b>                     |                   |        |       |          |          |        |         |
| Daughter-in-law-beating is not justified for any reasons     | 43.4              | 42.1   | 44.7  | ref.     |          |        | 5598    |
| Daughter-in-law-beating is justified for at least one reason | 44.9              | 43.6   | 46.2  | 0.997    | 0.908    | 1.094  | 5585    |
| <b>Level of media exposure</b>                               |                   |        |       |          |          |        |         |
| No exposure  | 46.0              | 44.2   | 47.8  | ref.     |          |        | 2803    |
| Low  | 45.1              | 43.6   | 46.6  | 1.110    | 0.995    | 1.240  | 4302    |
| Medium   | 42.7              | 40.9   | 44.5  | 1.115    | 0.983    | 1.265  | 2939    |
| High exposure  | 40.4              | 37.6   | 43.2  | 1.237*   | 1.040    | 1.472  | 1139    |
| <b>Age of husband</b>  |                   |        |       |          |          |        |         |
| Less than 25 years   | 25.7              | 23.0   | 28.4  | ref.     |          |        | 1037    |
| 25–34  | 35.5              | 34.0   | 37.0  | 0.805*   | 0.664    | 0.977  | 3864    |
| 35–44  | 52.8              | 51.2   | 54.4  | 0.954    | 0.762    | 1.195  | 3715    |
| 45–54  | 53.0              | 50.9   | 55.1  | 0.923    | 0.713    | 1.196  | 2200    |
| 55 and above   | 47.2              | 42.1   | 52.3  | 0.818    | 0.587    | 1.140  | 366     |
| <b>Husband has more wives</b>                                |                   |        |       |          |          |        |         |
| No   | 44.5              | 43.6   | 45.4  | ref.0    |          |        | 10857   |
| Yes  | 34.3              | 29.1   | 39.5  | 0.560*** | 0.439    | 0.716  | 326     |
| <i>Constant</i>  |                   |        |       |          | 0.066*** |        |         |
| <i>-2 Log likelihood</i>                                     |                   |        |       |          | 14042.02 |        |         |
| <i>Cox &amp; Snell R Square</i>                              |                   |        |       |          | 0.110    |        |         |

Note: ref= Reference category \*\*\*=P<0.001, \*\*=P<0.01 and \*=P<0.05

Key informants reported that the plateauing of the CPR for modern methods over the past 15 years means that there are serious problems at policy, service delivery and community levels. There are many factors that determine the use of FP. Educated people know about the safe period: many educated couples in cities use apps to know their fertile days. Others use the natural withdrawal method instead of modern contraceptives. Use of implants and IUCDs among educated women is rare. Uneducated people believe that health workers provide them with good advice as they lack knowledge themselves. However, educated groups hardly listen to health workers: even when health service providers counsel them, they mostly choose natural methods of contraception as they are aware of the side effects of modern contraception. Similarly, because they are busy and working or living away from home, they might not need to use contraception. However, for couples in remote areas, it is reported that they work all day in the fields, returning in the evening to have their meal together and often have sex at night. However, urban people who are educated and employed might be working late at night, busy with emails or on the internet.

Similarly, utilisation is low among women living in some hilly areas, where not all FP services are available and health posts are far away from their villages. Respondents mentioned that in some remote areas, service delivery is interrupted by lack of availability or absence of trained service providers at service sites or lack of commodities and problems in the supply chain, which prevent the use of FP methods. Another discouraging factor could be that behaviour of few health workers are not devoted to their jobs. This has also hampered service delivery.

*"Most of the paramedic staffs of Nepal government as soon as they start their job, they reach the facility at the earliest 11am and leaves the service site at 2pm and do other private jobs in the evening"* Participant, 14

Historically, Muslim communities were very reluctant to use FP because of social norms that did not allow them to use such services. However, the scenario has changed slightly and increasing numbers of Muslim women are using FP.

*"Mostly evidences are there which shows that women in Muslim communities are not ready to take FP services because of their cultural concerns and they give birth to many children. Therefore, interventions should focus them"* Participant, 8

Misconceptions about the effects of FP methods persist in some communities.

*"Some of the women of rural even have misconception that if they use FP method, they will never have child and become infertile for life"* Participant, 10

Key stakeholders reported a few other factors acting as barriers to use of FP methods: a lack of proper education in school, the distance of health facilities from homes, absenteeism of health service providers, a lack of commodities and the behaviour of health care service providers.

*"There is course related to FP in school, but teachers themselves feel shy to teach these topics to students, they ask students to self-study and understand. This defect in our education system is affecting adolescents' awareness to reproductive health."* Participant, 11

A few informants also mentioned political instability as a restricting factor in achieving programme targets.

*"Political instability is hampering the leadership and thus policies and strategies are not being implemented effectively. Planning is also not appropriately done, which is affecting the overall achievement."* Participant, 1

The literature shows that contraception use allows individuals and couples to exercise their basic right to decide freely their desired number of children and to determine the spacing of their pregnancies (World Health Organization (WHO), 2021). FP is also a strategy proven to prevent unintended pregnancies and unsafe abortions that could lead to maternal deaths (Alkema, Kantorova, Menozzi, & Biddlecom, 2013; Asresie, Fekadu, & Dagneu, 2020; Habyarimana & Ramroop, 2018). Evidence shows that access to and use of contraceptives also helps improvements in schooling and economic outcomes for girls and women, contributes towards greater freedom, gender equity and independence of women and is a cornerstone of women's SRH rights (Gebre & Edossa, 2020).

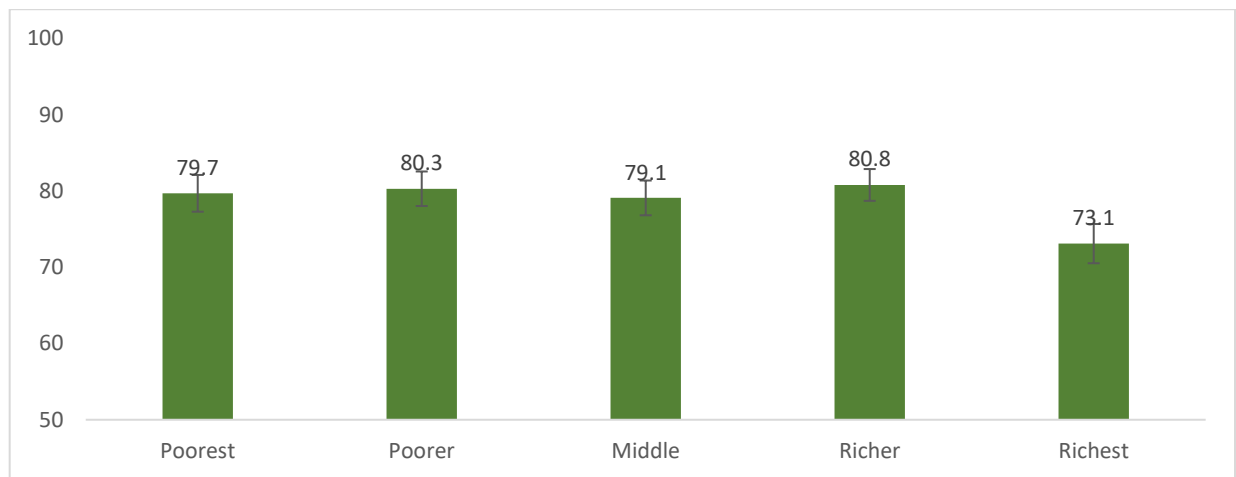
Globally, the unmet need of FP is higher among women less than 20 years of age and lower among women aged 35 years and older; these differences are widest in South Central Asia (Darroch, Sedgh, & Ball, 2011). A study conducted in Sub-Saharan Africa showed that the overall CPR in the region was 18.87 per cent, ranging from lowest in Chad (1.84%) to highest in Zimbabwe (45.75%). In Sub-Saharan countries, CPR was higher among women with higher literacy rates and in the richest wealth quintile (Ahinkorah et al., 2020). Further, the uptake of modern contraception is lower than the overall CPR, potentially indicating further inequalities in access even among those who do practice FP. A study conducted in Rwanda showed that CPR among married women of reproductive age was 52.7 per cent, with 46.8 per cent of women using modern contraceptive methods and 5.9 per cent traditional methods. This study also showed that the number of living children in the family, wealth index of the family and educational level of women were strongly associated with contraceptive use of any kind (Habyarimana & Ramroop, 2018). A positive relationship was observed between women with higher household wealth and educational status with the greater use of any contraceptive methods (Singh, Singh, Singh, & Pandey, 2020).

Studies found that FP use varies with different sociodemographic characteristics. A study conducted in Nepal showed that a higher percentage of men than women reported they or their partner used male condoms during their last sexual intercourse. It also identified that the percentage using condoms decreased with increase in age. The percentage of condom use was found to be highest (11.3%) among respondents belonging to upper caste and lowest (4.2%) among the respondents belonging to lower caste (Sharma & Nam, 2018). Another study conducted in Nepal also showed that half of the sexually active youth (15–24 years) who were not planning pregnancy had used a modern contraceptive method during their first sexual intercourse and the most used method was condoms (48%). FP services are offered in all district-level hospitals, primary health care centres, health posts, urban health centres of the government (MoHP et al. 2017). The modern CPR rate increased from 26 per cent in 1996 to 43 per cent in 2016 (Dev et al, 2019). It has also been shown that the use of modern contraceptive methods was significantly associated with schooling, relationship type and age at first sexual encounter (Tamang, Raynes-Greenow, McGeechan, & Black, 2017)

### 3.3 Intention to use modern contraceptives

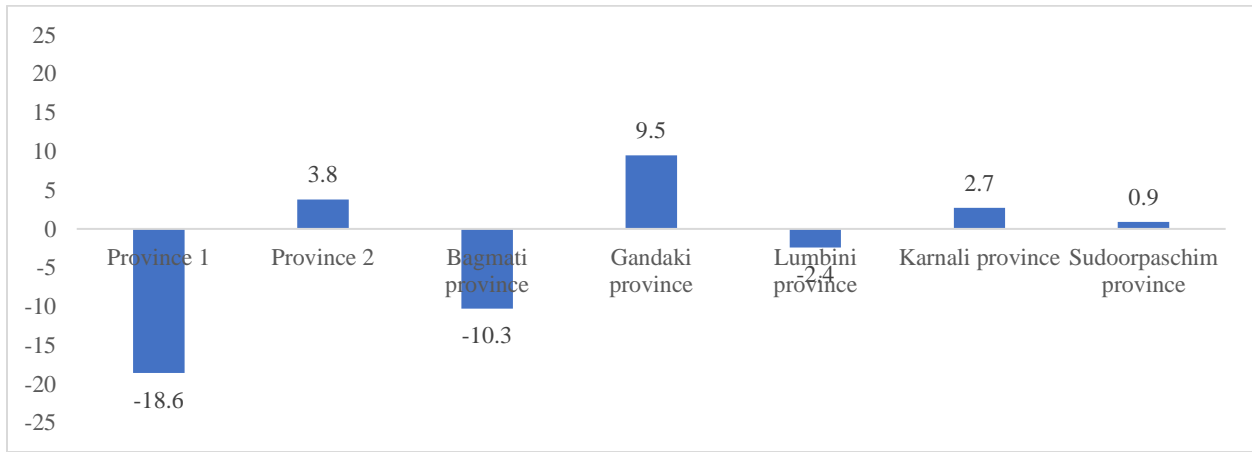
Intention to use FP methods among those women who were not using any contraceptives during the survey were explored in all the NDHSs across decades. Data from NDHS 2016 shows that a large proportion of women who were not using contraception do want to use it in the future. However, the richest women are less likely to have the intention to use modern contraception than women in other wealth quintiles. For instance, less than three in four (73%) of the richest women expressed their intention to use FP in future, while four in five (79–81%) of those in other wealth quintiles did (Figure 6).

**Figure 6 Intention to use FP in future (among those who were not using contraception) by wealth status, 2016**



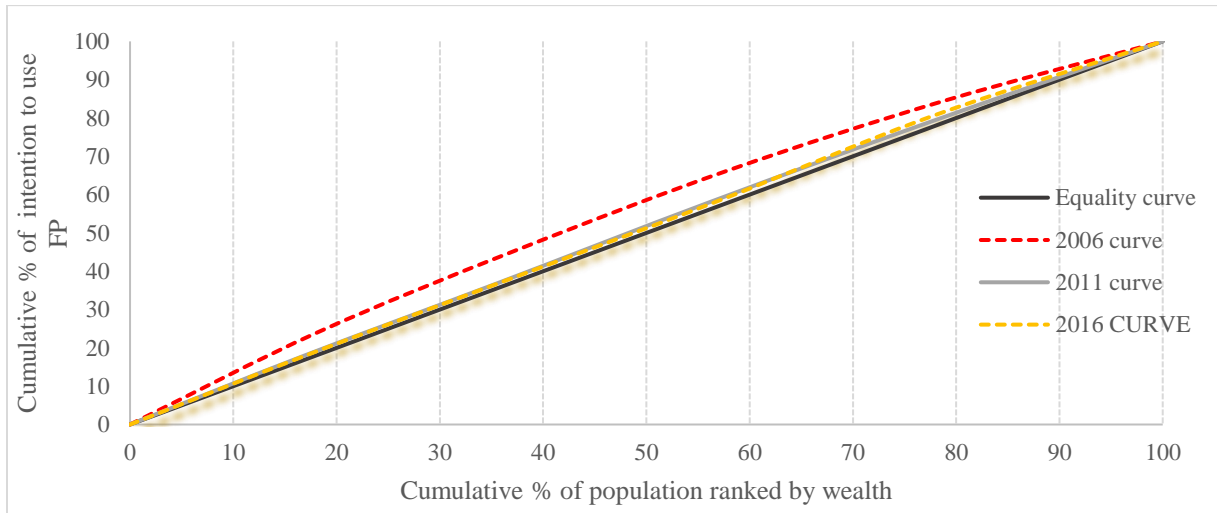
As seen in Figure 7, richest-to-poorest difference was very high in Province 1 (-18.6), with Bagmati Province reporting the next highest difference (-10.3). A higher proportion of women from the poorest families in Province 1, Bagmati Province and Lumbini Province had the intention to use contraception, while the opposite was found in Gandaki Province in particular, with lower proportions also reported in Province 2, Karnali Province and Sudurpashchim Province.

**Figure 7 Richest-to-poorest differences in intention to FP use by Provinces, 2016**



The concentration curve presented below shows that intention to use FP among the poorest women was higher in 2006. It was more or less similar in all wealth indices in 2011 and 2016 as the 2011 and 2016 curves are close to the equality curve (Figure 8).

**Figure 8 Concentration curve for intention to use FP by wealth index, 2006–2016**



As seen in Table 5, intention to use varied with wealth status. In 2011, intention to use was higher in the middle wealth quintile (83%) than others (78–82%). The difference between richest to poorest was 3.5 percentage points, indicating that a higher percentage of the richest (82.2%) than the poorest (78.7%) had the intention to use FP methods in the future. However, the trend was reversed in 2016: a higher percentage of poorest (80%) than richest (73%) women had the intention to use FP methods.

The difference in intention to use FP in the future between richest and poorest was negative and high among women aged 15–19 years (poorest 95% and richest 82%). Also, a higher percentage of poorest Hindu women (81%) than richest Hindu women (73%) intended to use contraception in the future, while the opposite was found among Muslim women (61% richest and 29% poorest).

The richest-to-poorest difference was higher among women who had moderate autonomy (-13%) than those who had no autonomy (-3%), indicating that a higher percentage of poorest women who have moderate autonomy intended to use FP than those who had no autonomy or high autonomy. It is notable that all poor women (100%) who had higher exposure to media intended to use FP in the future, while the proportion was only 75 per cent among richest women who had high exposure to media.

**Table 5** Currently married women who were not using any FP method by intention to use FP in future, 2016 NDHS

|                                     | % Intention to use FP in future |        |        |        |         |       | Richest to poorest |       |
|-------------------------------------|---------------------------------|--------|--------|--------|---------|-------|--------------------|-------|
|                                     | Poorest                         | Poorer | Middle | Richer | Richest | Total | Difference         | Ratio |
| National Level                      | 79.7                            | 80.3   | 79.1   | 80.8   | 73.1    | 78.6  | -6.6               | 0.92  |
| <b>Province</b>                     |                                 |        |        |        |         |       |                    |       |
| Province 1                          | 82.1                            | 83.2   | 80     | 82.7   | 63.5    | 78.9  | -18.6              | 0.77  |
| Province 2                          | 72.7                            | 78.1   | 76.8   | 80.1   | 76.5    | 77.8  | 3.8                | 1.05  |
| Bagmati Province                    | 79.6                            | 80     | 84.1   | 77.2   | 69.3    | 75.2  | -10.3              | 0.87  |
| Gandaki Province                    | 73.5                            | 72.4   | 78.6   | 79.2   | 83      | 77.5  | 9.5                | 1.13  |
| Lumbini Province                    | 80.9                            | 81.6   | 78.6   | 83.7   | 78.5    | 80.7  | -2.4               | 0.97  |
| Karnali Province                    | 83.4                            | 89.6   | 90.6   | 92.3   | 86.1    | 85.6  | 2.7                | 1.03  |
| Sudurpashchim Province              | 77.3                            | 81.5   | 82.7   | 83.6   | 78.2    | 80.2  | 0.9                | 1.01  |
| <b>Place of residence</b>           |                                 |        |        |        |         |       |                    |       |
| Urban                               | 79.6                            | 80     | 79.9   | 80.7   | 72.8    | 77.9  | -6.8               | 0.91  |
| Rural                               | 79.8                            | 80.6   | 78.2   | 81.1   | 76.9    | 79.7  | -2.9               | 0.96  |
| <b>Age in 5-year groups</b>         |                                 |        |        |        |         |       |                    |       |
| 15–19                               | 94.9                            | 93.3   | 90.3   | 91.2   | 81.6    | 90.4  | -13.3              | 0.86  |
| 20–24                               | 92.4                            | 93.3   | 90.8   | 93.6   | 93.6    | 92.8  | 1.2                | 1.01  |
| 25–29                               | 90.4                            | 89     | 87.7   | 89.8   | 86.3    | 88.5  | -4.1               | 0.95  |
| 30–34                               | 87.7                            | 76.8   | 79.7   | 81.2   | 75.7    | 79.9  | -12                | 0.86  |
| 35–39                               | 55.6                            | 56.6   | 50.7   | 61.7   | 48.2    | 54.7  | -7.4               | 0.87  |
| 40–44                               | 29.2                            | 38.4   | 31.5   | 18.3   | 26.3    | 28.3  | -2.9               | 0.90  |
| 45–49                               | 17.6                            | 7.5    | 13.3   | 7.4    | 11.5    | 11.6  | -6.1               | 0.65  |
| <b>Age at marriage/cohabitation</b> |                                 |        |        |        |         |       |                    |       |
| Less than 15                        | 64.4                            | 66.6   | 66.7   | 64.7   | 45.3    | 63.7  | -19.1              | 0.70  |
| 15–17                               | 75.9                            | 72.9   | 74.6   | 75.2   | 59.7    | 72.9  | -16.2              | 0.79  |
| 18–20                               | 77.4                            | 82.9   | 79.3   | 83.3   | 64.5    | 77.5  | -12.9              | 0.83  |
| 21 and above                        | 74.2                            | 78.1   | 80.6   | 74.5   | 74.3    | 75.9  | 0.1                | 1.00  |
| <b>Number of children born</b>      |                                 |        |        |        |         |       |                    |       |
| None                                | 90.2                            | 89.4   | 87.5   | 88     | 80.3    | 86.6  | -9.9               | 0.89  |
| One                                 | 89.9                            | 85.7   | 87.3   | 86.1   | 76.1    | 84.7  | -13.8              | 0.85  |
| Two                                 | 81.3                            | 82.1   | 81.6   | 79     | 67.9    | 78.1  | -13.4              | 0.84  |
| Three                               | 77.4                            | 63     | 69.1   | 66     | 44.1    | 65.4  | -33.3              | 0.57  |
| Four                                | 63.9                            | 60.1   | 55.4   | 59.3   | 25.8    | 56.5  | -38.1              | 0.40  |
| Five or more                        | 39.4                            | 45.1   | 39.5   | 41.6   | 37.5    | 40.9  | -1.9               | 0.95  |

|   | % Intention to use FP in future |        |        |        |         |       | Richest to poorest |       |
|---|---------------------------------|--------|--------|--------|---------|-------|--------------------|-------|
|   | Poorest                         | Poorer | Middle | Richer | Richest | Total | Difference         | Ratio |
| <b>Education</b>                              |                                 |        |        |        |         |       |                    |       |
| No education                                  | 58.3                            | 61.4   | 61.6   | 59.9   | 36.5    | 58.8  | -21.8              | 0.63  |
| Primary                                       | 86.1                            | 81.4   | 78.1   | 75.9   | 52      | 77    | -34.1              | 0.60  |
| Secondary or above                            | 93.4                            | 90.9   | 91.3   | 89.5   | 79      | 87.6  | -14.4              | 0.85  |
| <b>Religion</b>                               |                                 |        |        |        |         |       |                    |       |
| Hindu   | 80.5                            | 81.7   | 82.4   | 82.5   | 73.2    | 80.1  | -7.3               | 0.91  |
| Buddhist                                      | 72.4                            | 75.4   | 90.7   | 74.2   | 80.8    | 78.1  | 8.4                | 1.12  |
| Muslim  | 29.4                            | 58.3   | 54.1   | 66.8   | 60.6    | 59.2  | 31.2               | 2.06  |
| Kirat/Christian                               | 76.5                            | 80     | 79.1   | 87.4   | 77.4    | 80.1  | 0.9                | 1.01  |
| <b>Currently working</b>                      |                                 |        |        |        |         |       |                    |       |
| No  | 85.4                            | 85.9   | 80.8   | 84.5   | 73.7    | 81.1  | -11.7              | 0.86  |
| Yes   | 77.7                            | 76.7   | 77.2   | 75.9   | 72.3    | 76.2  | -5.4               | 0.93  |
| <b>Women's autonomy in household decision</b> |                                 |        |        |        |         |       |                    |       |
| No autonomy                                   | 81                              | 82.4   | 81.5   | 85.2   | 77.6    | 81.6  | -3.4               | 0.96  |
| Moderate autonomy (involved in 1–2 issues)    | 81.4                            | 80.1   | 76.3   | 75.2   | 68.1    | 76.4  | -13.3              | 0.84  |
| High autonomy (involved in all 3 issues)      | 74.8                            | 73.9   | 75.1   | 74.1   | 66      | 72.6  | -8.8               | 0.88  |
| <b>Exposure to media</b>                      |                                 |        |        |        |         |       |                    |       |
| No exposure                                   | 65.2                            | 75.8   | 65     | 67.6   | 63.5    | 68.2  | -1.7               | 0.97  |
| Low exposure                                  | 84.7                            | 81.4   | 82.6   | 82.5   | 73.3    | 80.7  | -11.4              | 0.87  |
| High exposure                                 | 46.8                            | 100    | 95.1   | 81.9   | 75.1    | 79.1  | 28.3               | 1.60  |
| N   | 1071                            | 1186   | 1221   | 1371   | 1140    | 5989  |                    |       |

Key stakeholders reported that most people wanted to limit the size of their families after having two children. However, women in remote villages are still not able to use FP methods as they desire. Their family members – mother and father-in law, husband and society – do not allow them to, even though they do not want the burden of having more than two children.

In almost all communities, people no longer want to bear many children, so they intend to use FP.

Most of them, even the uneducated group, have realised that it is very difficult to rear more than two children in terms of caring for them and giving them education. In addition to this, people now realise the importance of gaps between children. They only want to bear a second

*"Educated and advanced families want to limit after having 1–2 children while the deprived communities such as ethnic minorities like Mushar, Chamar have 4–5 children and still are not limiting". Participant, 14*

child when the first child is big enough to go to school. Thus, birth-spacing has also become more prevalent recently. The reason that people are left behind is lack of information and awareness among certain specific groups about FP services. In order to increase intention to use most marginalized and vulnerable population program should focus on them.

*FP programs should be approached just like the **adult literacy program**. Just like illiterate women are brought together for education, the marginalized and underserved population sub-groups need to be brought together for awareness. Those girls who are not enrolled in schools should also be targeted to awareness programs and they need to be aware on matters like how conception and pregnancy occurs and types of devices that can be used to prevent pregnancy. .... Participant-5*

### 3.4 Institutional delivery

#### 3.4.1 Background characteristics

A total of 1,950 married women aged 15–49 out of 11,183 (17.4%) had a live birth in the last two years. Among married women with a live birth in the last two years, more than one-fifth (21%) live in Province 2 while less than seven per cent live in Karnali Province. More than one-fifth were illiterate (21%) while less than one-tenth (9%) had a higher level of education. Almost four out of five women had visited health facilities four or more times for Antenatal Care (ANC). More than one-quarter (28%) of the women were not exposed to any media, while one in nine women (11%) had high exposure to mass media.

**Table 6 Background characteristics of married women aged 15–49 years with a live birth in the last two years, NMICS 2019**

|                              | %    | 95% CI |       | Total N |
|------------------------------|------|--------|-------|---------|
|                              |      | Lower  | Upper |         |
| <b>Wealth index quintile</b> |      |        |       |         |
| Poorest                      | 22.7 | 18.8   | 26.6  | 442     |
| Second                       | 21.2 | 17.3   | 25.1  | 414     |
| Middle                       | 19.7 | 15.7   | 23.7  | 384     |
| Fourth                       | 19.7 | 15.7   | 23.7  | 384     |
| Richest                      | 16.7 | 12.7   | 20.7  | 327     |
| <b>Province</b>              |      |        |       |         |
| Province 1                   | 15.7 | 11.6   | 19.8  | 306     |
| Province 2                   | 21.4 | 17.5   | 25.3  | 417     |
| Bagmati Province             | 19.7 | 15.7   | 23.7  | 384     |
| Gandaki Province             | 7.9  | 3.6    | 12.2  | 153     |
| Lumbini Province             | 19.0 | 15.0   | 23.0  | 371     |
| Karnali Province             | 6.8  | 2.5    | 11.1  | 132     |
| Sudurpashchim Province       | 9.6  | 5.4    | 13.8  | 187     |
| <b>Place of residence</b>    |      |        |       |         |
| Urban                        | 65.5 | 62.9   | 68.1  | 1277    |
| Rural                        | 34.5 | 30.9   | 38.1  | 673     |
| <b>Age of women</b>          |      |        |       |         |
| 15–19                        | 10.3 | 6.1    | 14.5  | 201     |
| 20–24                        | 37.4 | 33.9   | 40.9  | 730     |
| 25–29                        | 30.2 | 26.5   | 33.9  | 588     |
| 30–34                        | 15.0 | 10.9   | 19.1  | 292     |
| 35–39                        | 4.9  | 0.6    | 9.2   | 96      |



|  | %    | 95% CI |       | Total N |
|--|------|--------|-------|---------|
|  |      | Lower  | Upper |         |
| 40–44  | 1.4  | -3.0   | 5.8   | 28      |
| 45–49  | .8   | -3.7   | 5.3   | 15      |
| <b>Education</b>                                 |      |        |       |         |
| Illiterate                                       | 20.7 | 16.8   | 24.6  | 405     |
| Basic (Grades 1–8)                               | 30.7 | 27.0   | 34.4  | 600     |
| Secondary (Grades 9–12)                          | 39.7 | 36.3   | 43.1  | 775     |
| Higher   | 8.8  | 4.6    | 13.0  | 171     |
| <b>Number of ANC visits for the recent birth</b> |      |        |       |         |
| None   | 4.5  | 0.1    | 8.9   | 87      |
| Fewer than 4                                     | 17.7 | 13.7   | 21.7  | 346     |
| 4 or more  | 77.8 | 75.7   | 79.9  | 1517    |
| <b>Number of children born</b>                   |      |        |       |         |
| 1–2  | 76.7 | 74.6   | 78.8  | 1495    |
| 3–4  | 18.9 | 14.9   | 22.9  | 368     |
| 5–6  | 3.7  | -0.7   | 8.1   | 71      |
| 7 or more children                               | .8   | -3.6   | 5.2   | 16      |
| <b>Level of media exposure</b>                   |      |        |       |         |
| No exposure                                      | 28.4 | 24.6   | 32.2  | 555     |
| Low  | 36.6 | 33.1   | 40.1  | 714     |
| Medium   | 23.7 | 19.8   | 27.6  | 462     |
| High exposure                                    | 11.2 | 7.0    | 15.4  | 219     |
| N  |      |        |       | 1950    |

As seen in Table 7, institutional delivery was highest among the richest (96%) and lowest among the poorest (57%). Institutional delivery was highest in Gandaki Province (89%) and lowest in Karnali Province (62%). Province-wise details can be found in Annex Table A4.

A higher proportion of women in urban areas (84%) had institutional deliveries than those in rural areas (66%). Only half of the women (50%) of the age group 45–49 had had an institutional delivery. Institutional delivery had a positive relation with level of education. For instance, only 54 per cent of the women who were illiterate had had an institutional delivery, increasing to 75 per cent among those who had basic education and 88 per cent among those who had secondary education. It is encouraging to note that almost all women who had a higher level of education (98%) had an institutional delivery. The majority of women (86%) who visited a health facility four or more times for ANC had an institutional delivery. Similarly, the large majority of the women (84%) with one or two children had an institutional delivery. The proportion of institutional delivery was higher among those who were highly exposed to the media (92%) than those who were not exposed to media (61%) (Table 7).

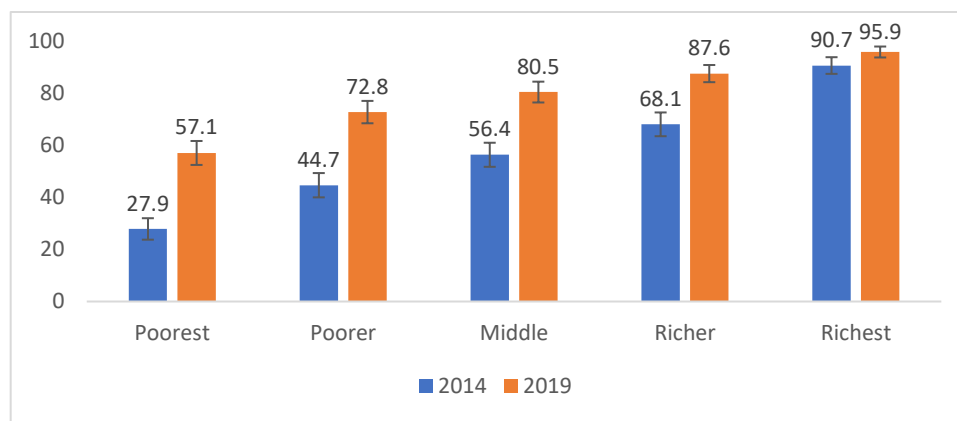
**Table 7 Institutional delivery by background characteristics of married women aged 15–49 years with a live birth in the last two years, NMICS 2019**

|  | %    | 95% CI |       | Total N |
|--|------|--------|-------|---------|
|  |      | Lower  | Upper |         |
| National Level                                   | 77.5 | 75.6   | 79.4  | 1950    |
| <b>Wealth index quintile</b>                     |      |        |       |         |
| Poorest  | 57.1 | 52.5   | 61.7  | 442     |
| Second   | 72.8 | 68.5   | 77.1  | 414     |
| Middle   | 80.5 | 76.5   | 84.5  | 384     |
| Fourth   | 87.6 | 84.3   | 90.9  | 384     |
| Richest  | 95.9 | 93.8   | 98.0  | 327     |
| <b>Province</b>                                  |      |        |       |         |
| Province 1                                       | 78.8 | 74.2   | 83.4  | 306     |
| Province 2                                       | 63.8 | 59.2   | 68.4  | 417     |
| Bagmati Province                                 | 88.7 | 85.5   | 91.9  | 384     |
| Gandaki Province                                 | 89.2 | 84.3   | 94.1  | 153     |
| Lumbini Province                                 | 78.1 | 73.9   | 82.3  | 371     |
| Karnali Province                                 | 62.0 | 53.7   | 70.3  | 132     |
| Sudurpashchim Province                           | 83.5 | 78.2   | 88.8  | 187     |
| <b>Place of residence</b>                        |      |        |       |         |
| Urban  | 83.6 | 81.6   | 85.6  | 1277    |
| Rural  | 66.0 | 62.4   | 69.6  | 673     |
| <b>Age of women</b>                              |      |        |       |         |
| 15–19  | 80.1 | 74.6   | 85.6  | 201     |
| 20–24  | 79.8 | 76.9   | 82.7  | 730     |
| 25–29  | 76.6 | 73.2   | 80.0  | 588     |
| 30–34  | 75.3 | 70.4   | 80.2  | 292     |
| 35–39  | 72.2 | 63.2   | 81.2  | 96      |
| 40–44  | 77.6 | 62.2   | 93.0  | 28      |
| 45–49  | 50.6 | 25.3   | 75.9  | 15      |
| <b>Education</b>                                 |      |        |       |         |
| Illiterate                                       | 54.2 | 49.3   | 59.1  | 405     |
| Basic (Grades 1–8)                               | 74.5 | 71.0   | 78.0  | 600     |
| Secondary (Grades 9–12)                          | 87.5 | 85.2   | 89.8  | 775     |
| Higher   | 98.2 | 96.2   | 100.2 | 171     |
| <b>Number of ANC visits for the recent birth</b> |      |        |       |         |
| None   | 16.0 | 8.3    | 23.7  | 87      |
| Fewer than 4                                     | 57.3 | 52.1   | 62.5  | 346     |
| 4 or more  | 85.7 | 83.9   | 87.5  | 1517    |
| <b>Number of children born</b>                   |      |        |       |         |
| 1–2  | 84.3 | 82.5   | 86.1  | 1495    |
| 3–4  | 56.1 | 51.0   | 61.2  | 368     |
| 5–6  | 56.4 | 44.9   | 67.9  | 71      |
| 7 or more children                               | 34.4 | 11.1   | 57.7  | 16      |
| <b>Level of media exposure</b>                   |      |        |       |         |
| No exposure                                      | 61.2 | 57.1   | 65.3  | 555     |
| Low  | 79.9 | 77.0   | 82.8  | 714     |
| Medium   | 86.7 | 83.6   | 89.8  | 462     |
| High exposure                                    | 91.7 | 88.0   | 95.4  | 219     |

### 3.4.2 Trends of use of institutional delivery

The utilisation of institutional delivery has increased over time. Although the richest-to-poorest gap has decreased over time, institutional delivery remains high among the richest. Institutional delivery varied largely by wealth quintile in both 2014 and 2019 surveys: it was highest among the richest wealth quintile in both surveys (91% in 2014 and 96% in 2019).

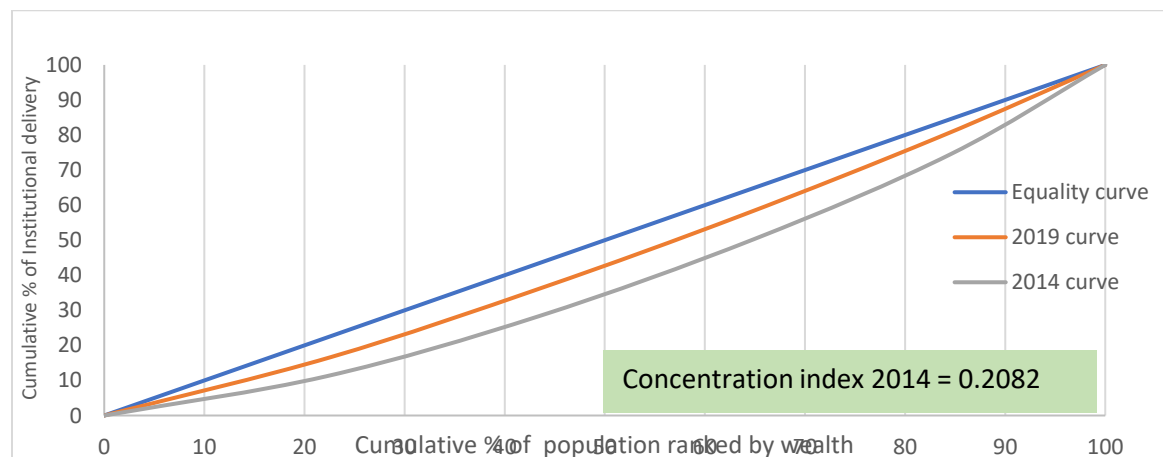
**Figure 9** Trend of institutional delivery- NMICS 2014-2019



### 3.4.3 Inequalities in use of institutional delivery

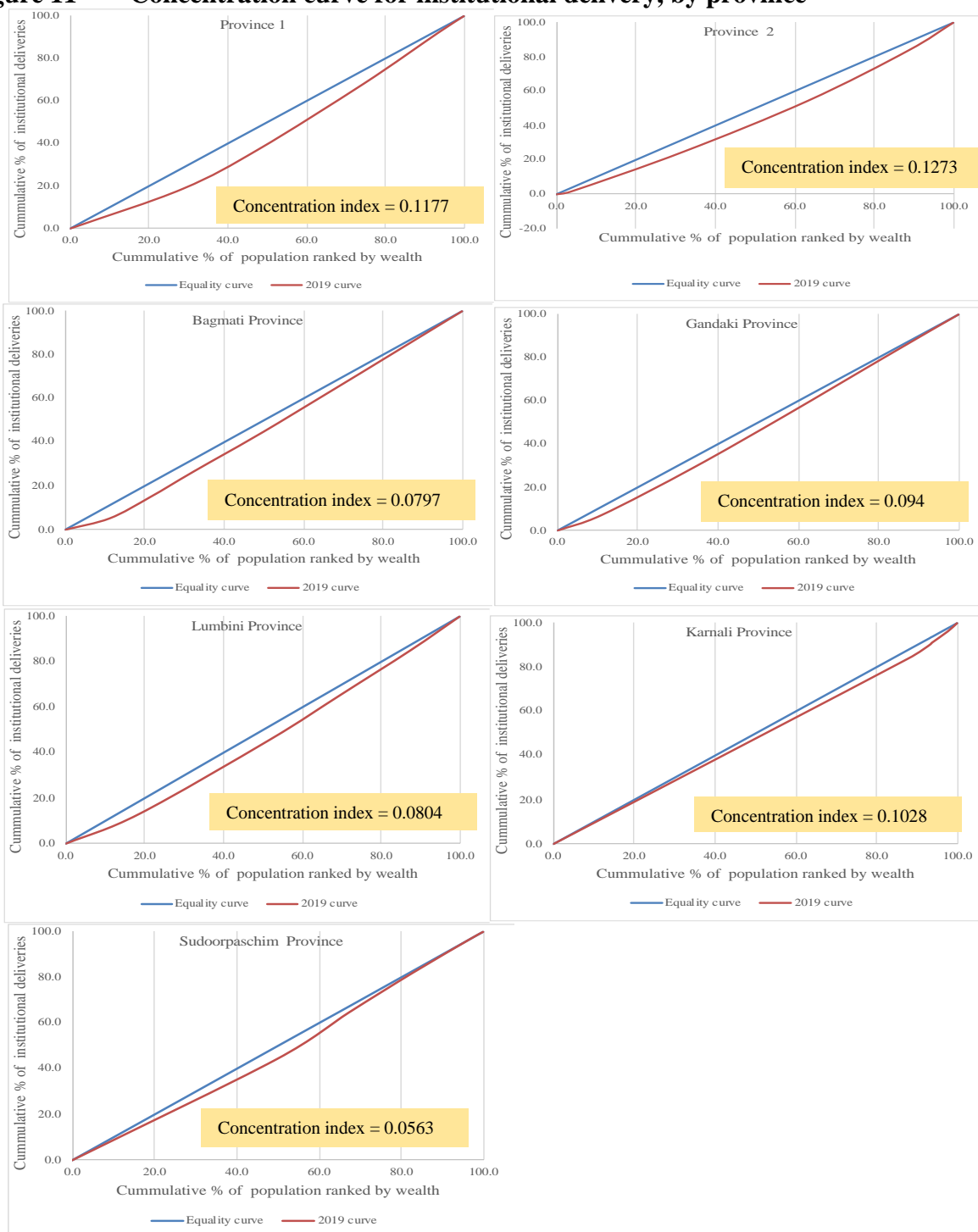
The below concentration curve shows that inequality in institutional delivery was higher in 2014 than 2019. The 2019 and 2014 curves are below the equality line, which indicates that there is a disproportionate concentration of institutional delivery among the richer quintiles. The concentration index was 0.2082 in 2014, decreasing to 0.0988 in 2019; this indicates that inequality between the richest and poorest has been decreasing over time (Figure 10).

**Figure 10** Concentration curve for institutional delivery: 2014-2019



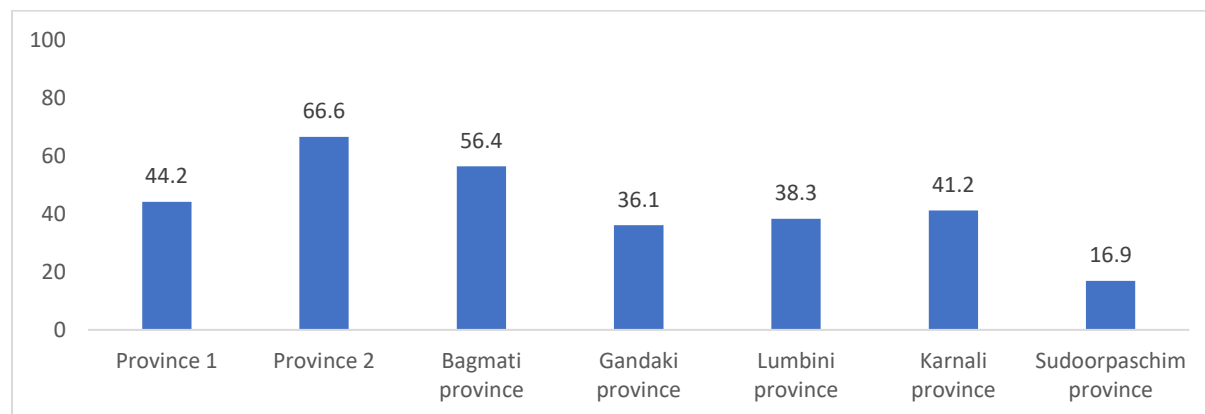
Inequality in institutional delivery can be observed in all provinces: richer women have higher rates of institutional delivery than poorer women. Figure 11 shows that the concentration curve is below the equality curve in every province and the value of concentration curve is positive throughout (Figure 11).

**Figure 11 Concentration curve for institutional delivery, by province**



Province-wise differences in percentage points in institutional delivery can be seen in Figure 12. The richest-to-poorest difference in institutional delivery was very high in Province 2 (difference = 66.6; richest = 91.5% and poorest = 24.9%) and lowest in Sudurpashchim Province (difference = 16.9, richest = 90.6% and poorest = 73.7%).

**Figure 12 Province-wise differences in percentage points (richest to poorest) in institutional delivery, 2019**



As seen in Table 8, many socioeconomic variables have associations with institutional delivery. The richest-to-poorest difference was higher in rural areas than urban areas (difference = 44.7 percentage points in rural and 35.6 in urban) and among illiterate women (difference = 45.1 percentage points; richest = 94.2% and poorest = 49.1%). The difference was negative among those who had higher education, indicating that a higher proportion of poorest women who had higher education (100%) utilised institutional delivery than richest women who had higher education (98.2%).

Inequality in institutional delivery among those who had no exposure to media was higher than those who had medium or high exposure. For instance, 51 per cent of poorest women who had no exposure to media had an institutional delivery, while 91 per cent of richest women who had no exposure to mass media had an institutional delivery. Similarly, only two-thirds (66%) of poorest women with high exposure to the media had an institutional delivery, while almost all richest women (97%) did.

**Table 8 Institutional delivery by wealth status, NMICS 2019**

|  | Wealth index quintile |             |             |             |             | Total       | Richest and poorest |            |
|--|-----------------------|-------------|-------------|-------------|-------------|-------------|---------------------|------------|
|  | Poorest               | Second      | Middle      | Fourth      | Richest     |             | Difference          | Ratio      |
| <b>National</b>                                  | <b>57.1</b>           | <b>72.8</b> | <b>80.5</b> | <b>87.6</b> | <b>95.9</b> | <b>77.5</b> | <b>38.8</b>         | <b>1.7</b> |
| <b>Province</b>                                  |                       |             |             |             |             |             |                     |            |
| Province 1                                       | 51.7                  | 75.8        | 91          | 99.3        | 95.9        | 78.8        | 44.2                | 1.9        |
| Province 2                                       | 24.9                  | 52.1        | 60.4        | 73.8        | 91.5        | 63.8        | 66.6                | 3.7        |
| Bagmati Province                                 | 41.7                  | 84          | 94.5        | 92.6        | 98.1        | 88.7        | 56.4                | 2.4        |
| Gandaki Province                                 | 59.2                  | 86.3        | 93.2        | 97.6        | 95.3        | 89.2        | 36.1                | 1.6        |
| Lumbini Province                                 | 54.4                  | 77.3        | 86.5        | 86          | 92.7        | 78.1        | 38.3                | 1.7        |
| Karnali Province                                 | 58.8                  | 76.5        | 100         | 86.9        | 100         | 62          | 41.2                | 1.7        |
| Sudurpashchim Province                           | 73.7                  | 96.8        | 92.5        | 90.3        | 90.6        | 83.5        | 16.9                | 1.2        |
| <b>Place of residence</b>                        |                       |             |             |             |             |             |                     |            |
| Urban  | 60.2                  | 74.4        | 85.2        | 90          | 95.8        | 83.6        | 35.6                | 1.6        |
| Rural  | 55.3                  | 70          | 72.8        | 79.8        | 100         | 66          | 44.7                | 1.8        |
| <b>Age of women</b>                              |                       |             |             |             |             |             |                     |            |
| 15–19  | 57.2                  | 89          | 90.4        | 82.5        | 95.3        | 80.1        | 38.1                | 1.7        |
| 20–24  | 65.3                  | 78.6        | 79.2        | 90.3        | 94.2        | 79.8        | 28.9                | 1.4        |
| 25–29  | 56.3                  | 63.1        | 76.6        | 89.4        | 94.7        | 76.6        | 38.4                | 1.7        |
| 30–34  | 45.3                  | 65.6        | 82.4        | 84.7        | 98.8        | 75.3        | 53.5                | 2.2        |
| 35–39  | 51                    | 56.1        | 74.6        | 76.1        | 100         | 72.2        | 49                  | 2.0        |
| 40–44  | 45.3                  | 100         | 100         | 100         | 100         | 77.6        | 54.7                | 2.2        |
| 45–49  | 17                    | 66.5        |             |             |             | 50.6        | -17                 | 0.0        |
| <b>Education</b>                                 |                       |             |             |             |             |             |                     |            |
| Illiterate                                       | 49.1                  | 47.4        | 57.8        | 64.3        | 94.2        | 54.2        | 45.1                | 1.9        |
| Basic (Grades 1–8)                               | 51.9                  | 75.7        | 82.9        | 87.1        | 92.9        | 74.5        | 41                  | 1.8        |
| Secondary (Grades 9–12)                          | 68.7                  | 86.3        | 92.5        | 92          | 96.1        | 87.5        | 27.4                | 1.4        |
| Higher   | 100                   | 100         | 100         | 97.6        | 97.6        | 98.2        | -2.4                | 1.0        |
| <b>Number of ANC visits for the recent birth</b> |                       |             |             |             |             |             |                     |            |
| None   | 9.3                   | 14.1        | 7.6         | 48.1        | 100         | 16          | 90.7                | 10.8       |
| Fewer than 4                                     | 40.1                  | 54          | 63.3        | 69.1        | 95.5        | 57.3        | 55.4                | 2.4        |
| 4 or more  | 68.3                  | 83.2        | 88.4        | 92.8        | 95.9        | 85.7        | 27.6                | 1.4        |
| <b>Number of children born</b>                   |                       |             |             |             |             |             |                     |            |
| 1–2  | 64                    | 80.6        | 88          | 91.8        | 96          | 84.3        | 32                  | 1.5        |
| 3–4  | 45.5                  | 48.5        | 56.4        | 72.6        | 94.1        | 56.1        | 48.6                | 2.1        |
| 5–6  | 46.6                  | 47.5        | 73.3        | 59.7        | 100         | 56.4        | 53.4                | 2.1        |
| 7 or more children                               | 25.4                  |             | 78.5        |             |             | 34.4        | -25.4               | 0.0        |
| <b>Level of media exposure</b>                   |                       |             |             |             |             |             |                     |            |
| No exposure                                      | 51                    | 61.1        | 69.7        | 83.8        | 90.6        | 61.2        | 39.6                | 1.8        |
| Low  | 63.1                  | 80.4        | 79.4        | 84.5        | 94.4        | 79.9        | 31.3                | 1.5        |
| Medium   | 67.1                  | 78.8        | 87.5        | 91.5        | 96.8        | 86.7        | 29.7                | 1.4        |
| High exposure                                    | 66.3                  | 76          | 100         | 93.3        | 97.3        | 91.7        | 31                  | 1.5        |
| <b>Total N</b>                                   | <b>252</b>            | <b>301</b>  | <b>309</b>  | <b>336</b>  | <b>313</b>  | <b>1512</b> |                     |            |

Key informants reported that the percentage increase in institutional delivery is overwhelming compared to previous years but disparities can be seen in many areas.

*"The trend in institutional delivery is quite positive. There is continuous expansion of services through increasing the number of birthing centres but still the number of women who deliver in health institutions is very less in remote areas because the birthing centres established are not capable of complication management"* Participant, 3

All key informants reported discrepancies in terms of equity in the uptake of institutional delivery: institutional delivery was concentrated in urban areas and more often utilised by the educated and rich. Uptake in rural areas and among poor communities is not satisfactory. Women who have access to and

can afford services are more likely to have institutional deliveries. Cultural and socioeconomic norms of specific communities hinder service utilisation: there remains a number of people who hesitate to visit health facilities because their culture does not allow them to. Other factors hindering institutional delivery include: geographical barriers; lack of access to well-equipped health institutions/Birthing Centres (BCs); lack of trained Skilled Birth Attendants (SBAs) in service delivery sites; and the incentive for institutional delivery being insufficient to cover the costs for transportation or ambulances for rural women.

*"People who have access and information are coming for institutional delivery regardless the focus of the programme but strategies should be made to implement programmes to address those who don't come"* Participant, 5

*"Very rich and middle-class people don't have problem for service access. But women from Dalit communities within Madhesi – Mushar, Jhahagar, Shah, Teli, Kalwar – who live around the territory of India still don't know about ANC check-ups and delivering in health institutions. The main reason behind this is poverty and lack of education and awareness"* Participant, 8

The main reason for low utilisation and inequitable utilisation of services is low socioeconomic status and lack of literacy. In remote areas (hills), the major barrier to institutional delivery service utilisation is lack of access to roads. In remote and rural areas, health facilities are far away. It is very difficult for pregnant women to travel (walk) the distance of two to three hours to reach the facility and access services.

Women lack empowerment: many do not even know how to utilise their rights. In some orthodox families, although women want to deliver in a health facility, family members prevent them, saying, "We delivered our child at home, why do you need to visit a health facility?" (*'hamile ta gharmai janmayeko, timi kina janu paryo'*). Women in such households cannot fight with their family and are therefore compelled to deliver at home.

*"Though the services are free of cost, the poor people may not afford other opportunistic cost; husbands not taking responsibility; due to lack of birth-preparedness in emergency circumstances women deliver at home"* Participant, 13

Key informants also mentioned that mass media plays important role to improve institutional delivery.

*Media need to provide information about the availability of services and incentives to the rural women which encourage them to uptake institutional delivery. Similarly, media should be sensitized to put on their pens about, if or not the women are actually getting the incentive for delivery., .....Participant-9*

The literature illustrates that institutional delivery is one of the most important factors in reducing the number of maternal deaths through complications during delivery. Institutional delivery is a delivery that takes place at any medical facility operated by a SBA. It is a proven and well-known intervention to improve the health and wellbeing of the mother and her child (Yarinbab & Balcha, 2018). In the majority of developing countries, 57 per cent of births occurred in the absence of SBAs, while more than one-third of pregnant women reported that they had no access to or contact with a skilled health professional before they delivered (Coeytaux, Bingham, & Langer, 2011).

Studies conducted in African countries show that the proportion of institutional delivery was low: 26 per cent in Ethiopia (Ketemaw et al., 2020) and 17 per cent in Kenya (Van Eijk et al., 2006). It was also illustrated that women with higher education and wealth status were significantly more likely to have an institutional delivery compared to those with no education and lower wealth status (S. Yaya, Idriss-Wheeler, Shibre, Amouzou, & Bishwajit, 2020).

In low- and middle-income countries such as Nepal, a substantial percentage of deliveries occur at home without the assistance of any skilled health workers. The proportion of women who had delivered their child in a health facility was lower in Bangladesh (53%), Afghanistan (56%), Nepal (57%), and Pakistan (66%) than in Bhutan (74%), India (79%), Maldives (95%), and Sri Lanka (100%) (United Nations Children's Fund (UNICEF), June 2020). Similarly, a study conducted in Pakistan showed that 41 per cent of women had their last delivery at a health facility. This study also found that institutional delivery was highly influenced by parity, mother's education, household wealth and mass media exposure (Sohail Agha & Carton, 2011).

Wealth is considered the most important predictor for institutional delivery. Our study shows that among many other variables, wealth status has played a great role in determining uptake of institutional delivery. The findings are similar to those from studies undertaken in India (Kesterton, Cleland, Sloggett, & Ronsmans, 2010), Pakistan (Sohail Agha & Carton, 2011), Bangladesh (Sanni Yaya, Bishwajit, & Ekholuenetale, 2017), Southwest Ethiopia (Yoseph, Abebe, Mekonnen, Sisay, & Gonete, 2020), The Gambia (S. Yaya & Bishwajit, 2020) and Mozambique (S. Yaya et al., 2020),



### 3.5 Perception of key informants about current programmes/policies on reproductive health

The GoN has recognised reproductive health rights as a constitutionally protected fundamental right. The Right to Safe Motherhood and Reproductive Health Act, 2075, Aama Programme and Maternity Incentive Scheme (MIS) are some of the policies and programmes targeting reproductive health. The Public Health Act and Public Health Regulation also advocate safe motherhood and institutional delivery as basic rights. In line with this, the Safe Motherhood Road Map 2030 was developed in 2019 with the support of NHSSP to ensure a healthy life for, and the well-being of, all mothers and newborns. During qualitative data collection, the majority of respondents reported that the policies and programmes targeting reproductive health are theoretically sound and complete as documents; however, there are some gaps in implementation that eventually affect the outcome of reproductive health programmes. Participants noted that policy makers promote the quality of services in documents, but on the ground, service quality is always lacking. They reported that this shortfall is because of a lack of guidelines for maintaining service standards and the absence of strong monitoring mechanisms.

*“...in the present context many gaps are seen in programme implementation, which makes it difficult to achieve the targets. For instance, in the recent years we have been observing mismatch of resource allocations for programmes. We set the targets in one side while the budget allocation is not based on those targets. Similarly, there is lack of uniformity in service delivery. Quality of care is also very important part to attract the service users to receive service and retain them which is often compromised.” Participant, 7*

The Safe Motherhood Road Map has advanced the concept of establishing BCs in strategic locations. However, the current focus remains only on extending the number of BCs. According to the key informants, rather than increasing the number of the sites, the focus should be on strengthening BCs, ensuring their readiness for complication management through the provision of Comprehensive Emergency Obstetric and Newborn Care (CEONC) services.

Nepal has shifted from a centuries-old centralised government system to the three-layered federal system of government, i.e. federal, province, and local levels, for better coordination, cooperation, and coexistence within the system. However, respondents reported that the GoN is still using central-level

*“I think, whatever policy we have, it is enough and it doesn't need much changes. The gap is there in implementation level. Local level government are the one who can identify the gap and address the need of the people. Therefore, they should be empowered and made more accountable. We need to see how many local policies are made on family planning? Then only we can bring changes to the central policies. FWD [Family Welfare Division] hasn't monitored this aspect nor has NHSSP supported it. I think now policies should come from the bottom.” Participant, 2*

blanket policies instead of adopting a needs-/context-based approach for running reproductive health programmes, which has a direct effect on programme outcomes. There are discrepancies between policy development and resource allocation: federal government formulates policy and allocates resources, while local government has responsibility for implementing programmes.

There is a gap between those who make the policy at the top and those who implement the policy on the ground; this is a serious issue.

Similarly, respondents stated that the effectiveness of any programme is measured in terms of impact, i.e., the ultimate results generated by the programmes and activities. On a macro level, there have been no significant changes in Nepal over the past many years. Demand satisfaction is close to 60 per cent and has not improved to the extent that it should have. Informants noted that the effectiveness of a programme can be measured by evaluating improvement in certain indicators, such as reduction in maternal mortality or reduction in incidence of unsafe abortion, but added that further programmes need to be implemented. These targeted programmes would raise awareness, perform outreach activities, ensure the availability of all five FP commodities in all health institutions, strengthen the supply side and mobilise the private sector to meet the targets of reproductive health programmes.

*“...90% of the documents of Nepal have been ended by 2020. It is unclear now what we are going to do beyond 2020? Policy makers, implementers and general public do not know about it. Thus, nobody can claim, where our programmes and services fit in SDG [Sustainable Development Goal] targets of 2030. Thus, some government agency, some forum needs to disclose, what is there (the plan) beyond 2020.”*  
Participant, 7

According to key informants, the GoN has been using two models to run reproductive health programmes: one model is to find gaps and provide technical assistance through the federal system; the other is to provide financial aid. Where there is financial need, even if the GoN lacks budget, government coordinates with donors to manage budgets and run programmes. To date, both of these models have been effective. Respondents noted, however, that in order to achieve universal health coverage, the budget for health should

make up a minimum of 10 per cent of the national budget, while in Nepal only five to six per cent of the total budget for the country has been being allocated for health. When examining expenditure, it becomes apparent that less than 100 per cent of the budget allocated to health is being spent. The health system therefore needs to be efficient and the mindset of health workers needs to be changed. Informants suggested that FP components are lacking in non-health sector programmes and that the GoN thus needs to integrate FP services with other programmes, such as nutrition and livelihood.

Most of the study participants are hopeful of achieving the SDG 2030 targets: although Nepal may not attain all of its goals, it is possible to come close if strategies are devised and activities focused in accordance with the Safe Motherhood Road Map 2030 targets. It is now time to emphasise programmes targeting unreached and unserved population subgroups so as to introduce them to services and thereby meet national goals. Therefore, identifying the subgroups at grass-roots level with the lowest rates of service utilisation and making interventions to reach them should be the strategy of the GoN.

#### 4. Conclusion

The study investigated three main markers of utilisation of reproductive health services: use of modern contraception, intention to use contraception and institutional delivery. In regard to the prevalence of modern contraceptives, it is notable that the mCPR has shown no remarkable change over the past decade. The growing inclination of people towards natural methods and increase in use of MA and increasing trend of spousal separation through foreign labour migration were some of the factors hypothesised by key informants as reasons for the plateauing of the CPR. However, the use of modern contraceptives varied by wealth status, province and other socio-demographic characteristics. Use of modern contraception has increased over time among the poor and poorest; however, use has decreased among the rich and richest groups. NMICS analysis showed that there is a disproportionate concentration of use of modern methods among the poor. It is noteworthy that the richest-to-poorest difference in intention to use modern contraception has decreased over time. Province-wise comparisons showed that there is disparity between the poorest and richest. A higher percentage of poorer have used modern contraception in Province 1, Bagmati Province, Gandaki Province and Lumbini Province, while the opposite was observed in other provinces. Multivariate analysis shows that wealth, province, age of women, education, number of children born, level of media exposure and the age of husband are important predictors of using modern contraception.

This study shows that the utilisation of institutional delivery has increased over time. Although the richest-to-poorest gap has decreased over time, uptake remains highest among the richest. The richest-to-poorest difference was highest in Province 2, followed by Bagmati Province and Province 1, and was low in Sudurpashchim Province. A higher percentage of poorest women had institutional deliveries in health facilities in Sudurpaschim province compared with other provinces. A higher percentage of poorest youth women are utilising institutional delivery than any other age group: it was shown that all poorest women who had higher education had utilised institutional services. Similarly, the richest-to-poorest difference was higher in rural areas than in urban areas. Qualitative findings showed that major obstacles to accessing institutional delivery for the poor included cultural and socioeconomic norms of specific communities, inaccessible health institutions/BCs, especially in hilly and remote, areas and lack of trained SBAs in service delivery sites.

The majority of key informants reported that policies and programmes targeting reproductive health are theoretically sound and complete but that there are some gaps regarding implementation, which eventually affect the outcomes of reproductive health programmes. Federal government formulates policy and allocates resources, while local government has responsibility for implementing programmes.

The effectiveness of the programme were linked with improvement in certain indicators, such as reduction in total fertility rate, maternal mortality and incidence of unsafe abortion. However,

programmes need to be tailored, focusing on awareness, outreach activities, making all five FP commodities available in all health institutions, strengthening the supply side and mobilising the private sector to meet the targets of reproductive health programmes.

Although institutional delivery has increased over the time among both richest and poorest, the utilization of institutional delivery is still lower among poorest especially in province 2. Therefore program should focus on poor and marginalized population.

Both quantitative and qualitative findings show mass media is one of the strongest predictors to increase utilization of family planning services and institutional delivery. It would be better if program use media platform to spread extensive awareness about service availability and benefit of service utilization.

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## Annexes

### Key Informant Interview Checklist

#### Trends and determinants of socioeconomic inequalities in sexual and reproductive health among currently married women (15-49) years in Nepal

##### KEY INFORMANT INTERVIEW CHECKLIST/GUIDELINES

*Conducted for Ministry of Health and Population, Department of Health Services, Family Welfare Division with technical and financial support from Nepal Health Sector Support Programme (NHSSP)*

##### INFORMED CONSENT

Greetings! My name is \_\_\_\_\_. I am working with the Nepal Health Sector Support Program (NHSSP). We along with Family Welfare Division are conducting a mixed method study to examine trends and determinants of socioeconomic inequalities in sexual and reproductive health among currently married women in Nepal. We selected you purposively with the consideration of your involvement in the reproductive health services and the richness of information you have in these areas. Our conversation is expected to last for about 35-40 minutes. The conversation will be recorded and strictly kept confidential and your name or any other identifiers will not appear in any of the published reports. The information we collect will be only used for study purpose. The evidence you provided will help to address the equity gaps in family planning services across the different arrangement of Ministry of Health and Population. Agreeing to participate in the interview does not oblige you to answer all the questions. You may skip the questions you do not want to answer or leave the interview any time you like. If you need more information about this study, you may contact to principal investigator of the research Ms Kabita Aryal, Senior Community Nursing Administrator Contact no: 9851227991 or via email [bitak006@gmail.com](mailto:bitak006@gmail.com).

Do you agree to participate in the interview? Yes.....1 (Proceed the interview)

No .....2 (Stop Interview and Greet)

Do you have any question before you continue?

*(To be completed by the interviewer)*

|                                      |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
|--------------------------------------|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------|--|-------|--|------|--|
| 1. Organisation Name:                |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
| 2. Participant position/designation: |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
| 3. Section/Department:               |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
| 4. Date of Interview:                | <table><tr><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td colspan="2">Date</td><td colspan="2">Month</td><td colspan="2">Year</td></tr></table> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | Date |  | Month |  | Year |  |
| <input type="text"/>                 | <input type="text"/>  | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |                      |                      |      |  |       |  |      |  |
| Date                                 |   | Month                |                      | Year                 |                      |                      |                      |      |  |       |  |      |  |
| 5. Name of interviewer:              |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
| 6. Place of interview                |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
| 7. Start time                        |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |
| 8. End Time                          |   |                      |                      |                      |                      |                      |                      |      |  |       |  |      |  |

## OPENING

- Do you have any questions before you continue?
- Please share with me your experience on reproductive and maternal health services programmes so far.

## INSTITUTIONAL DELIVERY

- Please tell me about the current situation of institutional delivery in Nepal.
- What do you think about the critical factors involved on utilization of Institutional Delivery?

*Probe: Why do not all pregnant women go for institutional delivery?  
(Share the evidence of uptake of institutional delivery with the respondents NDHS 2016 and 2019)*

*Probe: Can you explain more and clarify it with NDHS 2016 (57.4%) and NMICS 2019 (77.5%) findings?*

- What is your thought regarding equitable access in uptake of institutional delivery in our country? Please entail it.

**Probe:** What are the major enabling or disabling factors for the service utilization based on equity?

- How can we fulfil the equity gaps in utilization of institutional delivery?
- What could be the roles of private organizations (health facilities) or INGO/NGOs to increase institutional delivery?
- What are the current policies in hand to address the equity?
  - Probe: What are the features of it?
  - Probe: How it is been implementing?
  - Probe: What do you think are the major gap in guideline or in implementation mechanism? How it is sufficient or insufficient to achieve the equity goals of SDGs?
- What do you think are the measures to be adopted for improvement in equity gaps?

Probe: In your opinion, what could be the strategic intervention?

Probe: What could be the policy intrusion?

Probe: What could be done to improve the implementation of the program?

## FAMILY PLANNING

- Please tell me about the current situation of family planning services in Nepal.  
*(Share the key findings of Family Planning from NDHS 2016 and NMICS 2019 survey to the Respondent) [MICS=46.7% (any method/CPR), modern method 44.2%, traditional=2.5%]  
[NDHS=53%, modern 43%, traditional 10%]*
- What do you think makes a family planning program more meaningful in terms of utilization?
  - Probe: What do you think about the situation on use of modern contraceptive among currently married woman in Nepal? Who seems to have benefitted most? Can you give me some specific examples?*
  - Probe: “Modern Contraceptive Prevalence Rate (mCPR) is stagnant across the years”, what is your view on this?*
- What is your thought regarding equitable access in utilization of family planning services in our country? Please entail it.
  - Probe: What are the major enabling or disabling factors for the service utilization based on equity?*



- In your opinion, how the socio-demographic factors such as age, education, place of residence, working status, and wealth affect to use of contraception?

Probe: Why poor women have higher intentions to use modern contraceptive devices {NDHS 2016 data} poorest=79.7%, richest=73.1

- In your opinion, to what degree married women and men intend to use of family planning methods across the country.
  - Probe: What extent in case of spacing? Who seems to have been adopted this? Can you provide some examples?
  - Probe: What extent in case of limiting? Who seems to have been adopted this? Can you provide some examples?
- What do you think regarding the socioeconomic status to curb the use of family planning services?
  - Probe: How can you relate it to intention to use of family planning?
  - Probe: Does the country strategy of Universal access to reproductive health (Leave No One Behind) could address this? How?
- What do you think about programs that focus on influencing reproductive health decision (intention to use) of family planning services for the currently married women?
  - Probe: To whom (any specific groups) need to be intervened to achieve the equity in utilization of FP services.
  - Probe: What types of interventions should the government and other organization should acquire to motivate the currently woman of reproductive age and men?
- What could be the roles of private organizations (health facilities) or INGO/NGOs to improve the family planning service?
- What do you think are the measures to be adopted for improvement in equity gaps?

Probe: In your opinion, what could be the strategic intervention?

Probe: What could be the policy intrusion?

Probe: What could be done to improve the implementation of the program?

## **EXISTING HEALTH POLICIES AND PROGRAM**

- In your opinion, how effective are the current programs of Nepal government in improving reproductive health services?
  - Probe: Elaborate some evidence.
  - Probe: How such programs have resulted in the higher utilization of reproductive health services?
  - Probe: Is it sufficient? Or Not, If not what should be done?
- What do you think about the SDGs 2030 target in terms of family planning to be achieved by Nepal? (*Provide evidence generated from NDHS series and NMICS surveys to the respondent*)
  - Probe:** Does the current plan, policy and program help in reaching the target? If yes How?
  - Probe: If No, what needs to be revised? In addition, how it will help in achieving?
- What needs to be the role of federal government in policy and planning for improved service utilization (family planning, and institutional delivery) in terms of equity?
- What needs to be the role of provincial government in policy and planning for improved service utilization (family planning, and institutional delivery) in terms of equity?
- What needs to be the role of local government in policy and planning for improved service utilization (family planning, and institutional delivery) in terms of equity?

## **CLOSING**

**At last, do you think I have missed anything to ask you? or If you want to add something more you are free to augment? Thank you for your time and consideration.**

## Use of modern methods of contraception by province

Table A1 Background characteristics of currently married women by province, NMICS 2019

|                         |                     | National |       | Province   |      |            |      |                  |      |                  |     |                  |      |                  |     |                        |     |
|-------------------------|---------------------|----------|-------|------------|------|------------|------|------------------|------|------------------|-----|------------------|------|------------------|-----|------------------------|-----|
|                         |                     | %        | N     | Province 1 |      | Province 2 |      | Bagmati province |      | Gandaki province |     | Lumbini province |      | Karnali province |     | Sudoorpaschim province |     |
|                         |                     |          |       | %          | n    | %          | n    | %                | n    | %                | n   | %                | n    | %                | n   | %                      | n   |
| Wealth index quintile   | Poorest             | 17.6     | 1971  | 21.4       | 383  | 3.7        | 77   | 6.5              | 174  | 9.7              | 96  | 18.2             | 385  | 77.8             | 472 | 40.3                   | 384 |
|                         | Second              | 19.5     | 2178  | 21.9       | 392  | 24.7       | 512  | 9.8              | 260  | 20.9             | 206 | 26.2             | 553  | 9.3              | 57  | 20.8                   | 198 |
|                         | Middle              | 20.2     | 2255  | 26.3       | 470  | 31.8       | 658  | 10.8             | 289  | 24.0             | 236 | 19.2             | 405  | 3.9              | 23  | 18.2                   | 173 |
|                         | Fourth              | 21.4     | 2392  | 20.6       | 369  | 28.1       | 582  | 19.6             | 522  | 26.0             | 256 | 21.8             | 459  | 6.4              | 39  | 17.3                   | 164 |
|                         | Richest             | 21.3     | 2386  | 9.8        | 175  | 11.6       | 240  | 53.3             | 1423 | 19.3             | 191 | 14.6             | 309  | 2.7              | 16  | 3.4                    | 32  |
| Place of residence      | Urban               | 68.7     | 7678  | 63.6       | 1139 | 72.4       | 1498 | 82.0             | 2186 | 68.7             | 676 | 61.0             | 1288 | 53.5             | 325 | 59.5                   | 567 |
|                         | Rural               | 31.3     | 3504  | 36.4       | 652  | 27.6       | 572  | 18.0             | 481  | 31.3             | 309 | 39.0             | 823  | 46.5             | 282 | 40.5                   | 385 |
| Age of women            | 15-19               | 4.6      | 517   | 3.7        | 66   | 5.7        | 119  | 3.0              | 81   | 5.0              | 49  | 5.0              | 106  | 8.4              | 51  | 4.7                    | 45  |
|                         | 20-24               | 15.8     | 1767  | 14.9       | 267  | 17.4       | 360  | 11.6             | 311  | 14.9             | 146 | 18.2             | 384  | 19.9             | 121 | 18.8                   | 179 |
|                         | 25-29               | 19.4     | 2171  | 17.6       | 314  | 20.8       | 430  | 19.2             | 511  | 20.7             | 203 | 21.0             | 444  | 16.1             | 98  | 17.9                   | 171 |
|                         | 30-34               | 17.8     | 1994  | 18.4       | 330  | 15.6       | 324  | 20.2             | 539  | 19.2             | 189 | 16.1             | 340  | 15.9             | 96  | 18.5                   | 176 |
|                         | 35-39               | 16.9     | 1886  | 18.6       | 332  | 16.2       | 335  | 18.0             | 480  | 15.8             | 156 | 16.7             | 352  | 14.9             | 90  | 14.8                   | 141 |
|                         | 40-44               | 13.9     | 1550  | 15.7       | 281  | 11.5       | 238  | 15.5             | 413  | 14.4             | 142 | 12.3             | 260  | 13.7             | 83  | 13.8                   | 132 |
| Education               | 45-49               | 11.6     | 1299  | 11.2       | 200  | 12.8       | 265  | 12.5             | 332  | 10.1             | 99  | 10.7             | 225  | 11.2             | 68  | 11.4                   | 109 |
|                         | None                | 33.0     | 3690  | 25.7       | 460  | 50.0       | 1035 | 21.9             | 585  | 16.4             | 162 | 35.6             | 752  | 45.1             | 274 | 44.3                   | 422 |
|                         | Basic (Gr 1-8)      | 30.3     | 3390  | 35.5       | 636  | 25.8       | 534  | 28.9             | 770  | 39.7             | 391 | 31.5             | 665  | 21.5             | 130 | 27.7                   | 264 |
|                         | Secondary (Gr 9-12) | 30.2     | 3382  | 34.4       | 616  | 20.7       | 429  | 36.0             | 960  | 35.8             | 353 | 29.1             | 614  | 29.8             | 181 | 24.1                   | 229 |
| Number of Children born | Higher              | 6.4      | 720   | 4.4        | 79   | 3.4        | 71   | 13.2             | 352  | 8.1              | 80  | 3.8              | 80   | 3.6              | 22  | 3.9                    | 37  |
|                         | None                | 9.2      | 1032  | 7.3        | 132  | 6.9        | 144  | 10.4             | 277  | 11.2             | 110 | 10.7             | 226  | 9.7              | 59  | 8.9                    | 84  |
|                         | 1-2                 | 55.0     | 6149  | 58.0       | 1038 | 43.1       | 892  | 65.9             | 1758 | 62.4             | 615 | 54.9             | 1159 | 40.3             | 245 | 46.4                   | 442 |
|                         | 3-4                 | 28.7     | 3207  | 28.6       | 511  | 39.9       | 826  | 20.6             | 548  | 23.4             | 230 | 26.9             | 569  | 34.8             | 211 | 32.7                   | 311 |
|                         | 5-6                 | 5.9      | 664   | 5.0        | 89   | 8.7        | 180  | 2.7              | 72   | 2.8              | 28  | 6.1              | 129  | 11.5             | 70  | 10.2                   | 97  |
| Level of media exposure | 7 or more children  | 1.2      | 131   | 1.2        | 21   | 1.4        | 29   | .4               | 12   | .2               | 2   | 1.4              | 29   | 3.6              | 22  | 1.8                    | 17  |
|                         | No exposure         | 25.1     | 2803  | 23.5       | 421  | 30.0       | 621  | 9.6              | 256  | 14.0             | 138 | 33.2             | 700  | 58.2             | 353 | 32.8                   | 313 |
|                         | Low                 | 38.5     | 4302  | 37.0       | 662  | 39.2       | 811  | 39.7             | 1060 | 41.2             | 406 | 40.0             | 844  | 28.2             | 171 | 36.6                   | 348 |
|                         | Medium              | 26.3     | 2939  | 27.3       | 489  | 26.1       | 539  | 33.5             | 893  | 28.0             | 276 | 20.6             | 435  | 10.5             | 64  | 25.5                   | 243 |
| Age of husband          | High exposure       | 10.2     | 1139  | 12.2       | 218  | 4.7        | 98   | 17.2             | 458  | 16.7             | 165 | 6.2              | 132  | 3.1              | 19  | 5.1                    | 49  |
|                         | Less than 25 years  | 9.3      | 1037  | 6.8        | 121  | 8.7        | 180  | 7.1              | 188  | 8.0              | 78  | 11.1             | 235  | 19.8             | 120 | 11.9                   | 114 |
|                         | 25-34               | 34.6     | 3864  | 31.7       | 568  | 34.3       | 710  | 33.4             | 892  | 36.6             | 360 | 37.9             | 799  | 31.5             | 191 | 36.1                   | 344 |
|                         | 35-44               | 33.2     | 3715  | 37.3       | 669  | 32.6       | 676  | 34.1             | 910  | 32.3             | 318 | 31.4             | 663  | 29.6             | 180 | 31.5                   | 300 |
|                         | 45-54               | 19.7     | 2200  | 20.8       | 372  | 20.7       | 428  | 22.1             | 589  | 19.9             | 196 | 16.5             | 347  | 16.6             | 101 | 17.6                   | 168 |
| Husband has more wives  | 55 and above        | 3.3      | 366   | 3.4        | 62   | 3.7        | 76   | 3.3              | 88   | 3.2              | 32  | 3.1              | 66   | 2.5              | 15  | 2.9                    | 27  |
|                         | No                  | 97.1     | 10857 | 97.1       | 1739 | 98.3       | 2035 | 96.3             | 2567 | 96.9             | 955 | 97.0             | 2048 | 96.8             | 587 | 97.2                   | 926 |
| Total                   | Yes                 | 2.9      | 326   | 2.9        | 51   | 1.7        | 35   | 3.7              | 100  | 3.1              | 30  | 3.0              | 64   | 3.2              | 19  | 2.8                    | 26  |
|                         |                     | 100.0    | 11183 | 100.0      | 1790 | 100.0      | 2070 | 100.0            | 2667 | 100.0            | 985 | 100.0            | 2111 | 100.0            | 607 | 100.0                  | 952 |

**Table A2 Use of modern method by province according to background characteristics of currently married women, NMICS 2019**

|  |                     | National |      | Province   |     |            |     |                  |      |                  |     |                  |     |                  |     |                        |     |
|--|---------------------|----------|------|------------|-----|------------|-----|------------------|------|------------------|-----|------------------|-----|------------------|-----|------------------------|-----|
|  |                     | %        | N    | Province 1 |     | Province 2 |     | Bagmati province |      | Gandaki province |     | Lumbini province |     | Karnali province |     | Sudurpashchim province |     |
|  |                     |          |      | %          | n   | %          | n   | %                | n    | %                | n   | %                | n   | %                | n   | %                      | n   |
| Wealth index quintile                                | Poorest             | 43.8     | 864  | 45.3       | 174 | 49.6       | 38  | 48.7             | 85   | 29.7             | 29  | 46.5             | 179 | 44.7             | 211 | 38.6                   | 148 |
|  | Second              | 47.5     | 1035 | 50.3       | 198 | 44.3       | 227 | 56.9             | 148  | 39.6             | 81  | 46.6             | 258 | 50.6             | 29  | 47.7                   | 95  |
|  | Middle              | 44.8     | 1011 | 45.5       | 214 | 44.7       | 294 | 52.5             | 152  | 34.9             | 83  | 43.1             | 175 | 49.4             | 12  | 48.0                   | 83  |
|  | Fourth              | 45.3     | 1084 | 37.7       | 139 | 50.3       | 292 | 47.7             | 249  | 32.8             | 84  | 49.2             | 226 | 48.8             | 19  | 45.5                   | 75  |
|  | Richest             | 39.7     | 947  | 39.0       | 68  | 49.2       | 118 | 40.3             | 573  | 23.0             | 44  | 40.4             | 125 | 45.6             | 7   | 36.8                   | 12  |
| Place of residence                                   | Urban               | 43.6     | 3348 | 43.7       | 497 | 46.2       | 693 | 43.4             | 948  | 30.9             | 209 | 47.7             | 615 | 46.5             | 151 | 41.6                   | 236 |
|  | Rural               | 45.5     | 1593 | 45.3       | 295 | 48.5       | 277 | 53.6             | 258  | 36.1             | 111 | 42.2             | 347 | 44.8             | 127 | 45.9                   | 177 |
| Age of women   | 15-19               | 17.3     | 89   | 19.7       | 13  | 5.3        | 6   | 35.9             | 29   | 16.9             | 8   | 15.4             | 16  | 15.0             | 8   | 19.3                   | 9   |
|  | 20-24               | 27.2     | 481  | 33.8       | 90  | 18.4       | 66  | 33.7             | 105  | 24.0             | 35  | 26.5             | 102 | 28.5             | 34  | 27.4                   | 49  |
|  | 25-29               | 38.0     | 824  | 43.2       | 136 | 35.7       | 154 | 35.2             | 180  | 22.9             | 47  | 43.5             | 193 | 49.2             | 48  | 39.2                   | 67  |
|  | 30-34               | 48.7     | 972  | 51.5       | 170 | 58.0       | 188 | 42.5             | 229  | 33.9             | 64  | 51.1             | 174 | 57.0             | 55  | 52.5                   | 92  |
|  | 35-39               | 55.5     | 1047 | 49.4       | 164 | 64.2       | 215 | 55.7             | 268  | 35.7             | 56  | 58.2             | 205 | 60.2             | 54  | 60.8                   | 86  |
|  | 40-44               | 56.4     | 873  | 52.5       | 148 | 69.6       | 166 | 52.9             | 218  | 45.5             | 65  | 64.0             | 166 | 58.6             | 49  | 46.6                   | 61  |
| Education  | 45-49               | 50.4     | 655  | 36.0       | 72  | 66.2       | 175 | 53.4             | 177  | 46.3             | 46  | 47.1             | 106 | 43.7             | 30  | 44.6                   | 49  |
|  | None                | 54.0     | 1992 | 52.2       | 240 | 52.9       | 547 | 57.2             | 335  | 49.3             | 80  | 55.8             | 420 | 55.5             | 152 | 51.7                   | 218 |
|  | Basic (Gr 1-8)      | 43.9     | 1487 | 49.6       | 315 | 42.5       | 227 | 48.1             | 370  | 33.3             | 130 | 41.5             | 276 | 43.2             | 56  | 42.2                   | 111 |
|  | Secondary (Gr 9-12) | 36.9     | 1250 | 35.2       | 217 | 37.2       | 160 | 42.9             | 412  | 25.8             | 91  | 39.6             | 243 | 31.9             | 58  | 29.9                   | 69  |
| Number of Antenatal care visits for the recent birth | Higher              | 29.6     | 213  | 25.6       | 20  | 50.0       | 36  | 25.2             | 89   | 24.3             | 19  | 28.7             | 23  | 54.0             | 12  | 40.0                   | 15  |
|  | None                | 34.5     | 30   | 27.2       | 3   | 24.4       | 9   | 44.5             | 5    | 40.3             | 1   | 60.9             | 5   | 39.8             | 4   | 54.2                   | 2   |
|  | Less than 4 times   | 27.3     | 94   | 39.4       | 19  | 18.6       | 26  | 53.7             | 21   | 20.3             | 2   | 21.0             | 13  | 30.4             | 8   | 27.2                   | 5   |
| Number of Children born                              | 4 or more times     | 28.9     | 438  | 38.8       | 95  | 16.5       | 39  | 34.1             | 114  | 24.2             | 34  | 29.0             | 87  | 25.8             | 25  | 27.2                   | 45  |
|  | None                | 7.6      | 78   | 6.5        | 9   | 3.6        | 5   | 12.2             | 34   | 7.6              | 8   | 3.5              | 8   | 14.2             | 8   | 7.4                    | 6   |
|  | 1-2                 | 41.8     | 2569 | 42.5       | 441 | 35.4       | 315 | 44.8             | 787  | 31.8             | 195 | 45.8             | 532 | 41.4             | 101 | 44.6                   | 197 |
|  | 3-4                 | 58.4     | 1874 | 56.5       | 289 | 64.5       | 533 | 62.2             | 341  | 42.8             | 98  | 58.1             | 330 | 57.4             | 121 | 51.7                   | 161 |
|  | 5-6                 | 54.5     | 362  | 49.9       | 44  | 57.0       | 102 | 54.2             | 39   | 59.2             | 16  | 61.4             | 79  | 52.0             | 36  | 45.7                   | 44  |
| Level of media exposure                              | 7 or more children  | 44.7     | 58   | 46.1       | 10  | 49.0       | 14  | 42.1             | 5    | 88.4             | 2   | 46.8             | 13  | 47.8             | 10  | 25.4                   | 4   |
|  | No exposure         | 46.0     | 1289 | 44.9       | 189 | 45.8       | 284 | 47.0             | 121  | 38.6             | 53  | 47.5             | 333 | 45.5             | 161 | 47.4                   | 148 |
|  | Low                 | 45.1     | 1938 | 46.9       | 310 | 46.6       | 378 | 48.1             | 509  | 29.6             | 120 | 47.6             | 401 | 45.4             | 78  | 40.6                   | 141 |
|  | Medium              | 42.7     | 1254 | 42.7       | 209 | 47.5       | 256 | 41.9             | 374  | 35.7             | 99  | 41.9             | 182 | 48.7             | 31  | 42.5                   | 103 |
| Age of husband                                       | High exposure       | 40.4     | 460  | 38.6       | 84  | 52.3       | 51  | 44.1             | 202  | 29.4             | 48  | 34.4             | 45  | 43.6             | 8   | 42.1                   | 21  |
|  | Less than 25 years  | 25.7     | 267  | 27.6       | 33  | 10.1       | 18  | 41.6             | 78   | 23.1             | 18  | 26.5             | 62  | 22.5             | 27  | 26.0                   | 29  |
|  | 25-34               | 35.5     | 1374 | 41.1       | 233 | 30.7       | 218 | 34.3             | 306  | 23.2             | 84  | 38.7             | 310 | 47.7             | 91  | 38.2                   | 132 |
|  | 35-44               | 52.8     | 1962 | 49.5       | 331 | 57.4       | 388 | 51.1             | 465  | 35.8             | 114 | 59.2             | 393 | 56.3             | 101 | 57.1                   | 171 |
|  | 45-54               | 53.0     | 1166 | 45.5       | 169 | 68.7       | 294 | 53.3             | 314  | 47.3             | 93  | 48.9             | 170 | 53.7             | 54  | 43.2                   | 73  |
| Husband has more wives                               | 55 and above        | 47.2     | 173  | 42.0       | 26  | 68.1       | 52  | 48.6             | 43   | 37.7             | 12  | 42.0             | 28  | 27.4             | 4   | 30.5                   | 8   |
|  | No                  | 44.5     | 4829 | 44.6       | 776 | 47.2       | 961 | 45.5             | 1169 | 32.7             | 312 | 45.8             | 938 | 46.3             | 272 | 43.4                   | 402 |
| Total  | Yes                 | 34.3     | 112  | 32.0       | 16  | 26.3       | 9   | 37.1             | 37   | 26.4             | 8   | 37.5             | 24  | 30.3             | 6   | 43.5                   | 11  |
|  |                     | 44.2     | 4941 | 44.3       | 793 | 46.9       | 970 | 45.2             | 1206 | 32.5             | 320 | 45.6             | 962 | 45.7             | 278 | 43.4                   | 413 |

## Institutional delivery by province

**Table A3 Background characteristics of married women age 15-49 years with a live birth in the last 2 years, NMICS 2019**

|   |                     | National |      | Province   |     |            |     |                  |     |                  |     |                  |     |                  |     |                        |     |
|---|---------------------|----------|------|------------|-----|------------|-----|------------------|-----|------------------|-----|------------------|-----|------------------|-----|------------------------|-----|
|   |                     | %        | N    | Province 1 |     | Province 2 |     | Bagmati province |     | Gandaki province |     | Lumbini province |     | Karnali province |     | Sudurpashchim province |     |
|   |                     |          |      | %          | n   | %          | n   | %                | n   | %                | n   | %                | n   | %                | n   | %                      | n   |
| Wealth index quintile                     | Poorest             | 22.7     | 442  | 28.4       | 87  | 3.5        | 15  | 11.3             | 44  | 11.5             | 18  | 18.8             | 70  | 88.1             | 117 | 49.8                   | 93  |
|   | Second              | 21.2     | 414  | 19.3       | 59  | 28.3       | 118 | 10.3             | 40  | 22.5             | 34  | 33.2             | 123 | 5.0              | 7   | 17.7                   | 33  |
|   | Middle              | 19.7     | 384  | 26.5       | 81  | 31.5       | 131 | 10.9             | 42  | 22.9             | 35  | 17.4             | 65  | .6               | 1   | 15.8                   | 29  |
|   | Fourth              | 19.7     | 384  | 19.2       | 59  | 25.3       | 106 | 21.2             | 81  | 26.4             | 41  | 18.0             | 67  | 3.8              | 5   | 13.9                   | 26  |
|   | Richest             | 16.7     | 327  | 6.6        | 20  | 11.4       | 48  | 46.3             | 178 | 16.7             | 26  | 12.6             | 47  | 2.5              | 3   | 2.9                    | 5   |
| Place of residence                        | Urban               | 65.5     | 1277 | 62.1       | 190 | 71.7       | 299 | 77.8             | 299 | 68.0             | 104 | 58.1             | 215 | 47.7             | 63  | 57.0                   | 107 |
|   | Rural               | 34.5     | 673  | 37.9       | 116 | 28.3       | 118 | 22.2             | 85  | 32.0             | 49  | 41.9             | 155 | 52.3             | 69  | 43.0                   | 80  |
| Age of women                              | 15-19               | 10.3     | 201  | 11.2       | 34  | 11.7       | 49  | 8.4              | 32  | 8.1              | 12  | 10.8             | 40  | 14.2             | 19  | 7.8                    | 15  |
|   | 20-24               | 37.4     | 730  | 37.4       | 114 | 42.2       | 176 | 27.0             | 104 | 33.7             | 52  | 39.5             | 147 | 40.1             | 53  | 45.1                   | 84  |
|   | 25-29               | 30.2     | 588  | 30.1       | 92  | 29.9       | 125 | 34.3             | 132 | 36.8             | 56  | 28.5             | 106 | 23.1             | 31  | 24.9                   | 47  |
|   | 30-34               | 15.0     | 292  | 14.9       | 45  | 9.4        | 39  | 22.9             | 88  | 15.3             | 23  | 14.0             | 52  | 12.8             | 17  | 14.5                   | 27  |
|   | 35-39               | 4.9      | 96   | 4.1        | 13  | 4.4        | 18  | 5.7              | 22  | 4.9              | 7   | 5.2              | 19  | 5.5              | 7   | 5.0                    | 9   |
|   | 40-44               | 1.4      | 28   | 1.9        | 6   | 1.4        | 6   | 1.2              | 5   | 1.2              | 2   | .9               | 3   | 2.4              | 3   | 1.6                    | 3   |
| 45-49                                     | .8                  | 15       | .4   | 1          | 1.0 | 4          | .5  | 2                |     |                  | 1.0 | 4                | 1.9 | 3                | 1.1 | 2                      |     |
| Education                                 | None                | 20.7     | 405  | 12.4       | 38  | 41.2       | 172 | 11.3             | 44  | 3.4              | 5   | 18.3             | 68  | 27.8             | 37  | 22.3                   | 42  |
|   | Basic (Gr 1-8)      | 30.7     | 600  | 32.3       | 99  | 24.4       | 102 | 30.6             | 117 | 34.0             | 52  | 37.4             | 139 | 23.5             | 31  | 32.0                   | 60  |
|   | Secondary (Gr 9-12) | 39.7     | 775  | 48.1       | 147 | 30.6       | 128 | 38.4             | 148 | 53.1             | 81  | 38.6             | 143 | 45.0             | 60  | 36.9                   | 69  |
|   | Higher              | 8.8      | 171  | 7.3        | 22  | 3.8        | 16  | 19.7             | 76  | 9.5              | 15  | 5.7              | 21  | 3.7              | 5   | 8.8                    | 16  |
| Number of ANC visits for the recent birth | None                | 4.5      | 87   | 3.7        | 11  | 9.2        | 39  | 2.7              | 10  | 1.6              | 2   | 2.7              | 10  | 8.5              | 11  | 1.7                    | 3   |
|   | Less than 4 times   | 17.7     | 346  | 15.9       | 49  | 33.9       | 141 | 10.1             | 39  | 7.2              | 11  | 16.6             | 61  | 19.3             | 25  | 10.3                   | 19  |
|   | 4 or more times     | 77.8     | 1517 | 80.3       | 246 | 56.8       | 237 | 87.2             | 335 | 91.2             | 140 | 80.7             | 299 | 72.3             | 96  | 88.0                   | 165 |
| Number of Children born                   | 1-2                 | 76.7     | 1495 | 80.1       | 245 | 66.5       | 277 | 87.7             | 337 | 85.6             | 131 | 76.5             | 284 | 65.4             | 87  | 72.0                   | 135 |
|   | 3-4                 | 18.9     | 368  | 15.3       | 47  | 26.6       | 111 | 10.9             | 42  | 13.7             | 21  | 19.8             | 73  | 27.1             | 36  | 20.6                   | 38  |
|   | 5-6                 | 3.7      | 71   | 4.0        | 12  | 5.6        | 23  | 1.1              | 4   | .8               | 1   | 2.7              | 10  | 5.9              | 8   | 6.6                    | 12  |
|   | 7 or more children  | .8       | 16   | .6         | 2   | 1.3        | 5   | .3               | 1   |                  |     | .9               | 3   | 1.6              | 2   | .8                     | 2   |
| Level of media exposure                   | No exposure         | 28.4     | 555  | 23.3       | 71  | 33.0       | 137 | 14.8             | 57  | 17.6             | 27  | 34.4             | 128 | 58.4             | 77  | 30.8                   | 58  |
|   | Low                 | 36.6     | 714  | 37.9       | 116 | 34.6       | 144 | 34.4             | 132 | 41.9             | 64  | 39.7             | 147 | 29.0             | 38  | 38.5                   | 72  |
|   | Medium              | 23.7     | 462  | 23.5       | 72  | 28.3       | 118 | 27.4             | 105 | 23.5             | 36  | 19.5             | 72  | 10.0             | 13  | 24.5                   | 46  |
|   | High exposure       | 11.2     | 219  | 15.4       | 47  | 4.1        | 17  | 23.5             | 90  | 16.9             | 26  | 6.4              | 24  | 2.6              | 3   | 6.3                    | 12  |
| Age of husband                            | Less than 25 years  | 21.9     | 426  | 18.7       | 57  | 20.2       | 84  | 18.1             | 69  | 18.0             | 28  | 23.6             | 87  | 40.4             | 53  | 25.4                   | 47  |
|   | 25-34               | 57.2     | 1114 | 56.0       | 171 | 58.5       | 244 | 56.1             | 215 | 63.0             | 97  | 59.9             | 221 | 42.0             | 55  | 59.6                   | 111 |
|   | 35-44               | 18.1     | 353  | 21.6       | 66  | 19.0       | 79  | 23.4             | 90  | 17.1             | 26  | 13.7             | 50  | 14.0             | 18  | 12.2                   | 23  |
|   | 45-54               | 2.2      | 44   | 3.7        | 11  | 1.5        | 6   | 2.3              | 9   | 1.7              | 3   | 2.0              | 7   | 3.1              | 4   | 1.8                    | 3   |
|   | 55 and above        | .5       | 10   |            |     | .7         | 3   | .2               | 1   | .2               | 0   | .9               | 3   | .4               | 1   | 1.0                    | 2   |
| Husband has more wives                    | No                  | 97.7     | 1906 | 95.9       | 293 | 98.6       | 411 | 97.8             | 376 | 97.5             | 150 | 97.3             | 361 | 98.4             | 130 | 99.0                   | 185 |
|   | Yes                 | 2.3      | 45   | 4.1        | 13  | 1.4        | 6   | 2.2              | 8   | 2.5              | 4   | 2.7              | 10  | 1.6              | 2   | 1.0                    | 2   |
| Total                                     |                     | 100.0    | 1950 | 100.0      | 306 | 100.0      | 417 | 100.0            | 384 | 100.0            | 153 | 100.0            | 371 | 100.0            | 132 | 100.0                  | 187 |

**Table A4 Institutional delivery by Province, NMICS 2019**

|  |                     | National |      | Province   |     |            |     |                  |     |                  |     |                  |     |                  |    |                        |     |
|--|---------------------|----------|------|------------|-----|------------|-----|------------------|-----|------------------|-----|------------------|-----|------------------|----|------------------------|-----|
|  |                     | %        | N    | Province 1 |     | Province 2 |     | Bagmati province |     | Gandaki province |     | Lumbini province |     | Karnali province |    | Sudurpashchim province |     |
|  |                     |          |      | %          | n   | %          | n   | %                | n   | %                | n   | %                | n   | %                | n  | %                      | n   |
| Wealth index quintile                          | Poorest             | 57.1     | 252  | 51.7       | 45  | 24.9       | 4   | 41.7             | 18  | 59.2             | 10  | 54.4             | 38  | 58.8             | 69 | 73.7                   | 69  |
|  | Second              | 72.8     | 301  | 75.8       | 45  | 52.1       | 62  | 84.0             | 33  | 86.3             | 30  | 77.3             | 95  | 76.5             | 5  | 96.8                   | 32  |
|  | Middle              | 80.5     | 309  | 91.0       | 74  | 60.4       | 79  | 94.5             | 40  | 93.2             | 33  | 86.5             | 56  | 100.0            | 1  | 92.5                   | 27  |
|  | Fourth              | 87.6     | 336  | 99.3       | 58  | 73.8       | 78  | 92.6             | 75  | 97.6             | 40  | 86.0             | 57  | 86.9             | 4  | 90.3                   | 23  |
|  | Richest             | 95.9     | 313  | 95.9       | 19  | 91.5       | 43  | 98.1             | 175 | 95.3             | 24  | 92.7             | 43  | 100.0            | 3  | 90.6                   | 5   |
| Place of residence                             | Urban               | 83.6     | 1068 | 86.1       | 163 | 67.0       | 200 | 92.6             | 277 | 93.7             | 98  | 89.3             | 192 | 70.7             | 45 | 86.6                   | 92  |
|  | Rural               | 66.0     | 445  | 67.0       | 78  | 55.6       | 66  | 74.8             | 64  | 79.7             | 39  | 62.5             | 97  | 54.0             | 37 | 79.4                   | 64  |
| Age of women                                   | 15-19               | 80.1     | 161  | 67.8       | 23  | 78.3       | 38  | 83.8             | 27  | 80.4             | 10  | 89.5             | 36  | 70.9             | 13 | 91.9                   | 13  |
|  | 20-24               | 79.8     | 582  | 83.1       | 95  | 64.4       | 113 | 88.0             | 91  | 95.7             | 49  | 84.8             | 124 | 62.5             | 33 | 89.4                   | 75  |
|  | 25-29               | 76.6     | 451  | 77.7       | 72  | 59.5       | 74  | 89.4             | 118 | 85.9             | 49  | 74.4             | 79  | 66.3             | 20 | 84.4                   | 39  |
|  | 30-34               | 75.3     | 220  | 86.4       | 39  | 52.4       | 20  | 90.9             | 80  | 87.7             | 21  | 61.0             | 32  | 52.4             | 9  | 69.7                   | 19  |
|  | 35-39               | 72.2     | 69   | 56.4       | 7   | 67.0       | 12  | 82.3             | 18  | 86.0             | 6   | 79.0             | 15  | 56.5             | 4  | 67.9                   | 6   |
|  | 40-44               | 77.6     | 22   | 75.0       | 4   | 84.5       | 5   | 100.0            | 5   | 100.0            | 2   | 73.1             | 3   | 49.5             | 2  | 54.7                   | 2   |
|  | 45-49               | 50.6     | 8    | 38.9       | 0   | 56.0       | 2   | 100.0            | 2   |                  |     | 31.8             | 1   | 29.0             | 1  | 61.9                   | 1   |
| Education                                      | None                | 54.2     | 219  | 70.0       | 26  | 42.3       | 73  | 66.9             | 29  | 69.1             | 4   | 55.9             | 38  | 47.7             | 18 | 77.2                   | 32  |
|  | Basic (Gr 1-8)      | 74.5     | 447  | 70.0       | 69  | 72.0       | 73  | 81.2             | 95  | 85.8             | 45  | 73.5             | 102 | 52.8             | 16 | 76.7                   | 46  |
|  | Secondary (Gr 9-12) | 87.5     | 679  | 83.9       | 123 | 81.6       | 104 | 96.9             | 143 | 90.8             | 74  | 90.4             | 129 | 72.5             | 43 | 89.4                   | 62  |
|  | Higher              | 98.2     | 168  | 100.0      | 22  | 100.0      | 16  | 96.8             | 73  | 100.0            | 15  | 96.5             | 20  | 100.0            | 5  | 100.0                  | 16  |
| Number of ANC care visits for the recent birth | None                | 16.0     | 14   | 29.2       | 3   | 12.7       | 5   | 8.1              | 1   | 79.1             | 2   | 8.1              | 1   | 10.6             | 1  | 26.4                   | 1   |
|  | Less than 4 times   | 57.3     | 198  | 62.8       | 31  | 50.1       | 71  | 76.1             | 30  | 68.5             | 8   | 61.9             | 38  | 40.0             | 10 | 59.5                   | 11  |
|  | 4 or more times     | 85.7     | 1300 | 84.3       | 207 | 80.2       | 190 | 92.6             | 310 | 91.1             | 127 | 83.7             | 251 | 73.9             | 71 | 87.5                   | 144 |
| Number of Children born                        | 1-2                 | 84.3     | 1260 | 83.7       | 205 | 75.1       | 208 | 91.4             | 308 | 90.7             | 119 | 85.0             | 241 | 68.5             | 59 | 88.6                   | 119 |
|  | 3-4                 | 56.1     | 207  | 60.8       | 29  | 37.7       | 42  | 72.3             | 30  | 79.8             | 17  | 58.1             | 43  | 52.8             | 19 | 72.6                   | 28  |
|  | 5-6                 | 56.4     | 40   | 56.6       | 7   | 57.5       | 13  | 39.7             | 2   | 100.0            | 1   | 55.6             | 6   | 39.0             | 3  | 67.5                   | 8   |
|  | 7 or more children  | 34.4     | 5    | 35.4       | 1   | 46.4       | 3   | 56.4             | 1   |                  |     |                  |     | 38.4             | 1  | 45.4                   | 1   |
| Level of media exposure                        | No exposure         | 61.2     | 340  | 61.3       | 44  | 49.5       | 68  | 62.1             | 35  | 74.8             | 20  | 67.2             | 86  | 56.7             | 44 | 74.6                   | 43  |
|  | Low                 | 79.9     | 571  | 83.4       | 97  | 65.4       | 94  | 89.3             | 118 | 90.6             | 58  | 81.3             | 120 | 63.0             | 24 | 82.9                   | 60  |
|  | Medium              | 86.7     | 401  | 83.7       | 60  | 78.4       | 93  | 95.5             | 100 | 91.8             | 33  | 86.2             | 62  | 80.4             | 11 | 91.5                   | 42  |
|  | High exposure       | 91.7     | 201  | 86.7       | 41  | 62.9       | 11  | 96.6             | 87  | 97.3             | 25  | 91.9             | 22  | 100.0            | 3  | 100.0                  | 12  |
| Age of husband                                 | Less than 25 years  | 80.1     | 341  | 75.0       | 43  | 73.9       | 62  | 90.4             | 63  | 87.3             | 24  | 85.4             | 74  | 64.4             | 34 | 86.0                   | 41  |
|  | 25-34               | 77.5     | 863  | 79.3       | 135 | 61.5       | 150 | 87.5             | 188 | 87.8             | 85  | 78.5             | 174 | 64.0             | 35 | 86.1                   | 96  |
|  | 35-44               | 76.1     | 268  | 80.6       | 53  | 60.9       | 48  | 90.8             | 81  | 96.8             | 25  | 69.7             | 35  | 54.5             | 10 | 65.3                   | 15  |
|  | 45-54               | 69.0     | 30   | 78.2       | 9   | 44.5       | 3   | 86.9             | 8   | 100.0            | 3   | 65.1             | 5   | 25.7             | 1  | 76.6                   | 3   |
|  | 55 and above        | 62.3     | 6    |            |     | 76.3       | 2   |                  |     |                  |     | 42.0             | 1   | 100.0            | 1  | 100.0                  | 2   |
| Husband has more wives                         | No                  | 77.8     | 1482 | 79.5       | 233 | 64.0       | 263 | 89.2             | 335 | 89.2             | 133 | 78.0             | 282 | 61.9             | 81 | 83.8                   | 155 |
|  | Yes                 | 67.7     | 30   | 63.4       | 8   | 45.5       | 3   | 66.8             | 6   | 90.5             | 3   | 79.2             | 8   | 71.1             | 1  | 57.3                   | 1   |
| Total  |                     | 77.5     | 1512 | 78.8       | 241 | 63.8       | 266 | 88.7             | 341 | 89.2             | 137 | 78.1             | 289 | 62.0             | 82 | 83.5                   | 156 |

This 'Socioeconomic determinants of inequalities in use of sexual and reproductive health services among currently married women in Nepal 2021' is an initiative of the Family Welfare Division, Department of Health Services, Ministry of Health and Population and its partners to lay down and strategic vision for Nepal's progress on reproductive health issues. This document was developed on the basis of further analysis of Nepal Multiple Indicators Cluster Survey 2019 and Demographic Health Survey 2016 and qualitative interviews with key stakeholders. The comprehensive report was developed through team work of all contributors. Findings from the analysis may help for the programmers to reduce the equity gap in the reproductive health program for better health outcomes.

This material has been funded by UKaid from the UK Government; however the views expressed do not necessarily reflect the UK government's official policies. NHSSP supported in gathered the qualitative information, analysis of NMICS 2019 and NDHS 2016 data along with preparing the report.

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