



Karnali Province

**Key Findings from the
2015 Nepal Health Facility Survey &
2016 Nepal Demographic and Health Survey**



This report summarizes the key findings from two surveys: the 2015 Nepal Health Facility Survey (NHFS) and 2016 Nepal Demographic and Health Survey (NDHS). The 2015 NHFS received funding from USAID, the UK Department for International Development (DFID), and The World Health Organization (WHO). The Nepal Health Sector Support Program (NHSSP), a DFID-funded technical assistance program supporting MoHP to implement the second Nepal Health Sector Program (NHSP-2), also provided technical assistance to the survey. New ERA, a private research firm, implemented the survey. The 2016 NDHS was implemented by New ERA under the aegis of the Ministry of Health and Population (MoHP) of Nepal. Funding for the survey was provided by the United States Agency for International Development (USAID). Strengthening Systems for Better Health (SSBH), a USAID-funded project, provided insights in the production of this report.

ICF provided technical assistance for both surveys through The DHS Program, a USAID-funded project providing support and technical assistance in the implementation of population and health surveys in countries worldwide.

Additional information about the 2015 NHFS and 2016 NDHS may be obtained from the Nepal Ministry of Health and Population, Ramshahpath, Kathmandu; Telephone: +977-1-4262543/4262802; Internet: www.mohp.gov.np; and New ERA, Rudramati Marg, Kathmandu, P.O. Box 722, Kathmandu 44600, Nepal; Telephone: +977-1-4413603; Email: info@newera.com.np; Internet: www.newera.com.np.

Additional information about The DHS Program may be obtained from ICF, 530 Gaither Road, Suite 500, Rockville, MD 20850, USA; Telephone: +1-301-407-6500; Fax: 301-407-6501; E-mail: info@DHSprogram.com; Internet: www.DHSprogram.com.

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Ministry of Health and Population

Ministry of Social Development Karnali Province





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मा. मन्त्रीज्यू : ०८३-५२४६४०
सचिवज्यू : ०८३-५२४६९२
प्रशासन शाखा : ०८३-५२४६७२
लेखा शाखा : ०८३-५२९७९२
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Date: April 9, 2019

MESSAGE

I am pleased to know that the Ministry of Social Development (MOSD) is bringing out the Key Findings from the 2016 Nepal Demographic and Health Survey and 2015 Nepal Health Facility Survey for the Karnali Province. The document presents the health outcomes, particularly of the mothers and children of the Karnali Province, and also shows the status of the health services availability and readiness in the health facilities of the Karnali Province. These information are immensely helpful to understand the type and quality of health services that our health facilities are providing and to triangulate whether people are using those services or not.

I really appreciate the hard work of the officials of the MoSD including Health Division and Health Directorate in being so innovative in consolidating a wealth of information in this report, and ask that this information be well used when developing health plans and activities for this province. I would also like to express my gratitude to the United States Agency for International Development, ICF, and Strengthening Systems for Better Health project for their technical support in developing this report.

Mr. Dala Rawal
Minister
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FOREWORD

The 2015 Nepal Health Facility Survey (NHFS) is the first nationally representative comprehensive survey conducted as part of the worldwide Demographic and Health Survey (DHS) Project in the country. It harmonizes the existing health facility-based survey methodologies in Nepal. The 2016 Nepal Demographic and Health Survey (NDHS) is the fifth nationally representative comprehensive survey conducted as part of the DHS Program in the country. Both the surveys were implemented by New ERA under the aegis of the Ministry of Health and Population (MoHP). Technical support for NHFS was provided by ICF and Nepal Health Sector Support Program, with financial support from the United States Agency for International Development (USAID) and the UK's Department for International Development through their mission in Nepal, while technical support for the NDHS was provided from ICF, with USAID funding.

Under the leadership of the MoHP, DHS project has been supporting to conduct the national and regional/provincial disseminations of these surveys in each round. In addition, secondary analysis of the data sets from these surveys are also common activities that provides more in-depth knowledge and insights into key technical areas covering the key issues that emerged based on the data. The MoHP and the DHS project in Nepal have published four and seven reports using the 2015 NHFS and 2016 NDHS respectively. The province focused report is the first of its kind and is produced under the leadership of the Ministry of Social Development (MoSD) of the Karnali Province.

This Karnali Province report provides insights into provincial-level indicators from both the 2015 NHFS and 2016 NDHS. I believe that this report will be tremendously informative to the MoSD to plan, monitor and evaluate the health activities in this Province. In future if such reports could be made available on time, it will add much value to the evidence-based management of health activities in Karnali Province.

I would like to express my deep sense of appreciation for the contributions of a number of different stakeholders in the various phases of the report finalization. My sincere gratitude goes to the entire team of Health Division of MoSD and Health Directorate for their contribution. I would like to appreciate the efforts of the USAID's Strengthening Systems for Better Health project for facilitation in technical consultation of the report.

The technical support provided by ICF is highly appreciated and acknowledged. My special thanks goes to Ms. Sally Zweimueller. Lastly, I would like to express my gratitude to the USAID/Nepal Health Office for providing funds to publish this report. I am thankful to Ms. Carries Rasmussen/Director, Ms. Monica Villanueva/Deputy Director and Ms. Sabita Tuladhar/Strategic Information and Research Adviser for their continued support.

Dr. Man Bahadur B.K
Secretary
Ministry of Social Development, Karnali Province
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ABOUT THIS REPORT

The Ministry of Health and Population (MoHP) of Nepal has recently undertaken two surveys through the USAID-funded Demographic and Health Surveys (DHS) Program. These surveys respond to the ongoing need for data to plan, monitor, and evaluate population and health programs. The 2015 Nepal Health Facility Survey (NHFS) is the first comprehensive assessment of health facilities in Nepal. The 2016 Nepal Demographic and Health Survey (NDHS) is a household survey and is the fifth Demographic and Health Survey conducted in Nepal since 1996. This report was prepared in consultation with the Ministry of Development of Karnali Province to provide provincial disaggregation of key results from the 2015 NHFS and 2016 NDHS.

Nepal has entered into a new federal structure following the promulgation of the new constitution in September 2015. In the new federal structure, the MoHP is responsible for overall national-level planning and policymaking, while the local government has overall responsibility for local-level planning and program execution in alignment with the federal and provincial policies, strategies, and guidelines. The objective of this report is to provide provincial-level program managers with information on the population's health and health facility services. This will help decision makers determine how to allocate available resources within their province.

This report provides insights into provincial-level indicators from both the 2015 NHFS and the 2016 NDHS. First, the report describes the methodology of the two surveys. Secondly, topical results from the 2015 NHFS are described on the left-side pages highlighted in navy blue, while the results from the 2016 NDHS are described on the right-side pages highlighted in magenta. Finally, the report provides provincial-level tables at the back of the report. Tables 1 through 60 are from the 2015 NHFS, and tables 61 through 79 are from the 2016 NDHS.

There are limitations in terms of sample size at the provincial level. There are several indicators that have very few cases, and thus should be interpreted with caution. This should be noted in the interpretation of results.



2015 NHFS METHODOLOGY

About the 2015 NHFS

The 2015 Nepal Health Facility Survey (NHFS) is the first comprehensive assessment of health facilities in Nepal that harmonizes various health facility surveys among the MoHP and health development partners. The survey was designed to collect information from formal-sector health facilities in the country on the delivery of health care services and to examine the preparedness of facilities to provide quality health services in child health, family planning, maternal and newborn care, HIV, sexually transmitted infections (STIs), non-communicable diseases, tuberculosis, and malaria.

Sample

The 2015 NHFS sampled 1,000 facilities throughout Nepal. Of the 1,000 formal health facilities in Nepal that were visited during the assessment, 37 facilities were permanently closed, unreachable, duplicates of other facilities, or refused to participate. Data were successfully collected from a total of 963 facilities. The 2015 NHFS provides reliable estimates at the national level, by facility type and managing authority, for 3 ecological regions, 14 highly earthquake-affected districts, and 13 eco-development zones.

The 2015 NHFS interviewed 4,057 health service providers who were present in the facility on the day of the survey. The sample consisted of 43% paramedics, 39% nurses, 9% doctors, 9% technicians, and 1% other clinical providers.

For the observation component of the survey, antenatal care, family planning, and curative care for sick children clients were selected at each service site on the day of the survey. Overall, 2,186 sick children, 772 family planning clients, and 1,509 antenatal care consultations were observed.

Questionnaires

The 2015 NHFS used five types of questionnaires:

- Facility inventory questionnaire
- Health provider interview questionnaire
- Observation protocol of consultations of sick children, antenatal care, and family planning clients
- Client exit interview questionnaires for women attending antenatal care, family planning clients, and caretakers of sick children
- Health Facility Operation and Management Committee/Hospital Development Committee member interview questionnaire

Provincial Focus

The 2015 NHFS was designed to be representative for the 13 eco-development zones, thus all indicators are also representative at the provincial level. At the provincial level, health facilities are further disaggregated by managing authority into public facilities versus private/other facilities. In Karnali Province, data were successfully collected from a weighted total of 74 facilities, of which 72 were public facilities and 2 were private/other facilities. As there are very few cases at the private/other facility level, these indicators should be interpreted with caution.

Facility Type	Number of Health Facilities Surveyed			
	Nepal		Karnali Province	
	Weighted	Unweighted	Weighted	Unweighted
Zonal and above hospitals	6	27	0	2
District-level hospitals	16	76	2	10
Private hospitals	70	144	2	9
Primary health care centers (PHCCs)	42	200	2	12
Health posts (HPs)	775	423	67	39
Urban health centers (UHCs)	32	45	1	2
HIV testing and counseling (HTCs)	23	48	0	1
Managing Authority				
Public	871	771	72	65
Private/other	92	192	2	10
Total	963	963	74	75

2016 NDHS METHODOLOGY

About the 2016 NDHS

The 2016 Nepal Demographic and Health Survey (NDHS) was designed to provide data for monitoring the population and health situation in Nepal.

The objective of the survey was to provide up-to-date estimates of fertility levels and preferences, marriage, sexual activity, family planning methods, breastfeeding practices, nutrition, anemia, childhood and maternal mortality, maternal and child health, HIV/AIDS and other STIs, women's empowerment, domestic violence, and hypertension that can be used by program managers and policymakers to evaluate and improve existing programs.

Sample

A nationally representative sample of 12,862 women age 15-49 in 11,040 surveyed households and 4,063 men age 15-49 in half of the surveyed households were interviewed. This represents a response rate of 98% of women and 96% of men. The 2016 NDHS provides reliable estimates at the national level, for urban and rural areas, 3 ecological zones, 5 development regions, and 7 provinces.

Results of Household and Individual Interviews in the 2016 Nepal DHS	
Household Interviews	
Households selected	11,473
Households occupied	11,203
Households interviewed	11,040
Response rate	99%
Interviews with Women age 15-49	
Eligible women	13,089
Women interviewed	12,862
Response rate	98%
Interviews with Men age 15-49	
Eligible men	4,235
Men interviewed	4,063
Response rate	96%

Questionnaires

The 2016 NDHS used five types of questionnaires:

- Household questionnaire
- Woman's questionnaire
- Man's questionnaire
- Biomarker questionnaire
- Verbal autopsy questionnaire

Provincial Focus

In Karnali Province, data were collected from 619 households, 724 women age 15-49, and 203 men age 15-49. Throughout this report, provincial-level NDHS indicators are disaggregated into two background characteristics: household wealth and population group. Wealth of households is calculated through household assets collected from NDHS surveys – i.e., type of flooring, source of water, availability of electricity, and possession of durable consumer goods. These are combined into a single wealth index. They are then divided into three groups based on their relative standing on the household wealth index. These three wealth groups – poor, middle, and wealthy – represent the bottom 40%, middle 20% and top 40% of the population, respectively.

The provincial-level indicators are also presented by two population groups: advantaged and disadvantaged. Groupings are based on the 2001 Census and analysis by *Bennett, L., Dahal, and Govindasamy 2008*. The advantaged group includes Hill Brahmin, Hill Chhetri, Terai Brahmin/Chhetri, Newars, and other. The disadvantaged group comprises Muslim, Hill Dalit, Terai Dalit, Hill Janajati, Terai Janajati, and other Terai caste.

Since the provincial government structure was enacted in 2015, previous NDHS surveys did not disaggregate data at the provincial level. However, data from the 2011 NDHS were tabulated at the provincial level to provide provincial trends in *Inequalities in Health Outcomes and Access to Services by Caste/Ethnicity, Province, and Wealth Quintile in Nepal* (Ghimire, Umesh et al. 2019).

Number of Respondents in Karnali Province (weighted)	
Households	619
Women age 15-49	724
Men age 15-49	203

NHFS: HEALTH FACILITIES

Availability of Basic Client Services

More than 6 in 10 (62%) health facilities excluding HTCs in Nepal offer all 6 basic client services, including curative care for sick children, child growth monitoring, child vaccination, any modern method of family planning (FP), antenatal care (ANC), and services for STIs.

In Karnali Province, half of health facilities offer all basic client services. While nearly all facilities in Karnali Province offer child curative care, child growth monitoring, modern methods of family planning, and ANC, only 87% of facilities offer child vaccination services and 63% offer services for STIs.

Basic Amenities

Two-thirds of facilities in Karnali Province lack emergency transport. Three in four facilities lack communication equipment. However, nearly 9 in 10 facilities have regular electricity and 3 in 4 facilities have a client latrine (74%). In the majority of facilities, consultations may take place with visual and auditory privacy (76%). In addition, 65% of facilities have an improved water source. Only 6% of facilities have all 6 basic amenities¹ (excluding computer with internet).

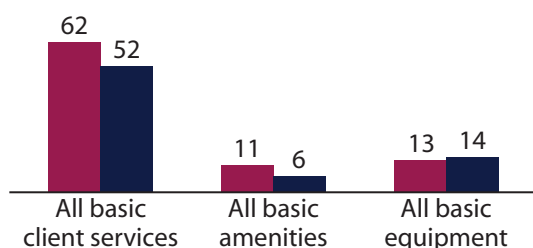
Basic Equipment

Only 14% of health facilities in Karnali Province have all equipment items considered basic to providing quality client services.² A stethoscope, blood pressure apparatus, adult weighing scale, and thermometer are the most commonly available basic equipment in health facilities in Karnali Province.

Basic Client Services, Amenities, and Equipment

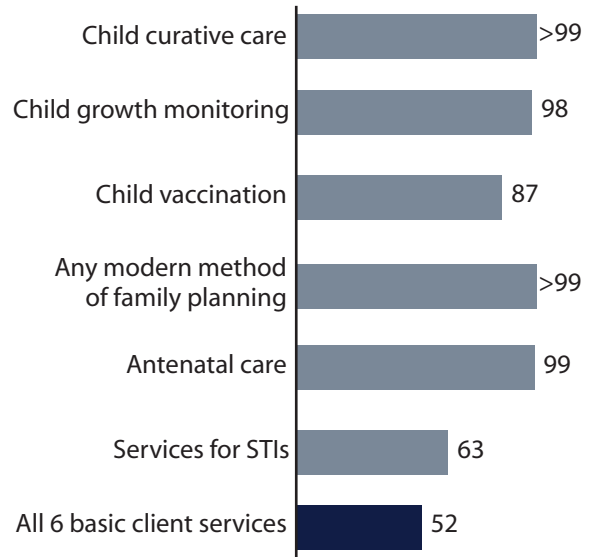
Percent of facilities offering or with:

■ Nepal ■ Karnali Province



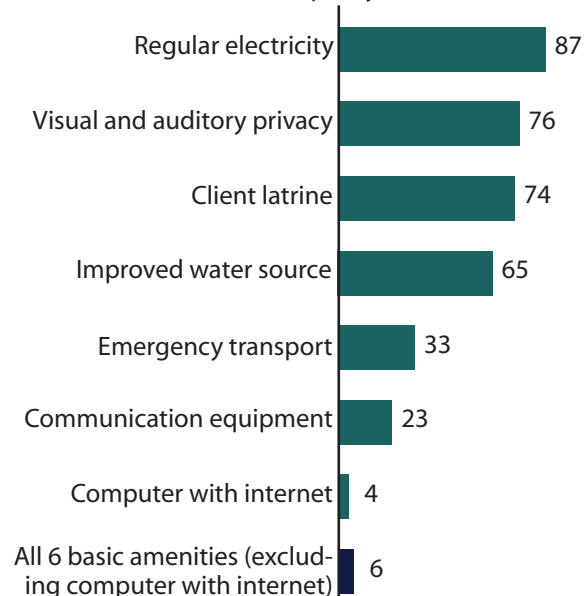
Availability of Basic Client Services: Karnali Province

Among all facilities excluding HTCs (N=74), percent offering indicated basic client services



Availability of Basic Amenities for Client Services: Karnali Province

Among all facilities, percent with indicated amenities considered basic for quality services (N=74)



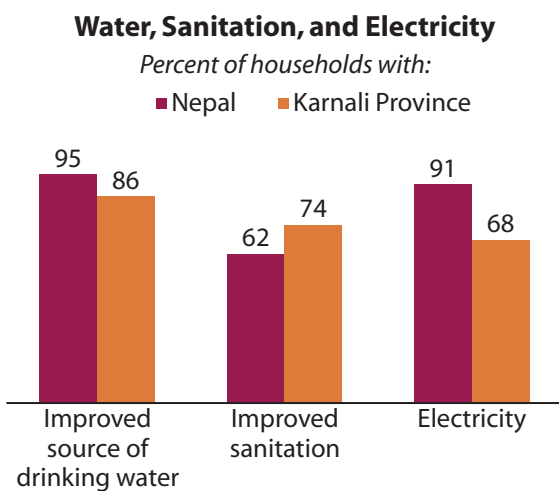
¹Facility has regular electricity, improved water source, visual and auditory privacy, client latrine, communication equipment, and emergency transport.

²Facility has an adult scale, child scale, infant scale, thermometer, stethoscope, blood pressure apparatus, and light source all available on the day of the survey.

NDHS: HOUSEHOLDS AND RESPONDENTS

Housing Characteristics

The majority of households in Nepal (95%) have access to an improved source of drinking water, compared to 86% of households in Karnali Province. More than 6 in 10 households (62%) in Nepal use improved sanitation, while 74% of households in Karnali Province have access to improved sanitation. Ninety-one percent of households in Nepal and 68% of households in Karnali Province have electricity.



Distance to Government Health Facility

Nearly half of households (49%) in Nepal are less than 30 minutes distance to the nearest government health facility, while 39% of households are 30 to 60 minutes away. In Karnali Province, 24% of households are located less than 30 minutes away from the nearest government facility, while 48% are 30 to 60 minutes away, and 29% of households are more than 60 minutes away.

Distance to Nearest Government Health Facility

Percent distribution of households with distance to the nearest government health facility

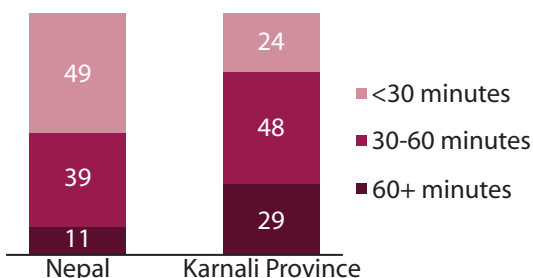


Figure is <100% due to rounding.

Ownership of Goods

Nearly all households in Nepal have a mobile telephone (93%), 52% have a television, and 29% have a radio. In Karnali Province, 89% of households have a mobile phone, 16% have a television, and 31% have a radio.

Education

One in three Nepali women age 15-49 have no education. Seventeen percent of women have only attended primary school, while 26% of women have attended some secondary education. Nearly one-quarter of women have their School Leaving Certificate (SLC) or above.

In Karnali Province, 42% of women have no education, 13% have attended primary education, 26% have some secondary education, and 20% have SLC and above education.

Education among Women

Percent distribution of women age 15-49 by highest level of education attended

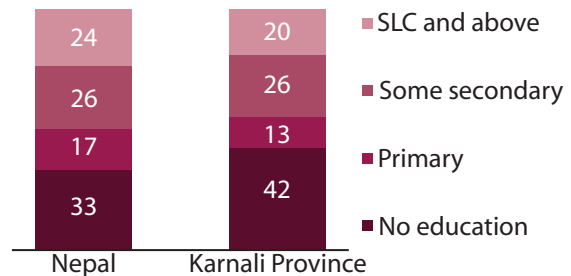


Figure is >100% due to rounding.

Exposure to Mass Media and Internet

The most common form of media for women in Nepal is the television, while the radio is the most common form of media for women in Karnali Province (50% and 33%, respectively). Only 3% of women in Nepal and 1% in Karnali Province access three media types (television, newspaper, and radio) within a week, while 37% of Nepali women and 59% of women in Karnali Province have no access to media on a weekly basis. Overall, 23% of Nepali women and 7% of women in Karnali Province have used the internet in the past year.

NHFS: FAMILY PLANNING SERVICES

Availability of Family Planning Services

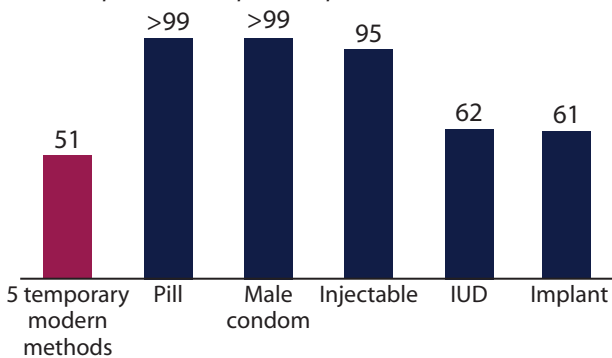
In both Nepal and Karnali Province, nearly all health facilities offer any modern method of family planning such as the pill, injectables (Progestin-only), implants, intrauterine contraceptive devices (IUDs), male condom, or female or male sterilization. In Nepal, 36% of facilities offer female or male sterilization services, compared to 53% of facilities in Karnali Province.

Family Planning Services Offered

Half of facilities in Karnali Province offering any modern method of FP (N=74) offer (provide, prescribe, or counsel clients on) five temporary modern methods – the pill, male condoms, injectables, IUD, and implant. Half of facilities offer male sterilization, one of the most commonly used modern methods according to the NDHS.

Family Planning Methods Offered: Karnali Province

Among facilities offering any modern method of FP (N=74), percent that provide, prescribe, or counsel clients



Provision and Availability of Family Planning Commodities

The majority of facilities offering any modern method of family planning in Karnali Province provide (stock in the facility and make it available to clients) the male condom (97%), the pill (96%), and injectables (89%). The IUD (20%), implants (20%), male sterilization (3%), and female sterilization (2%) are the least commonly provided family planning methods.

The majority of facilities that provide family planning methods had the methods available on the day of the survey. The pill, male condoms, injectables, and IUDs were among the most widely available methods in facilities.

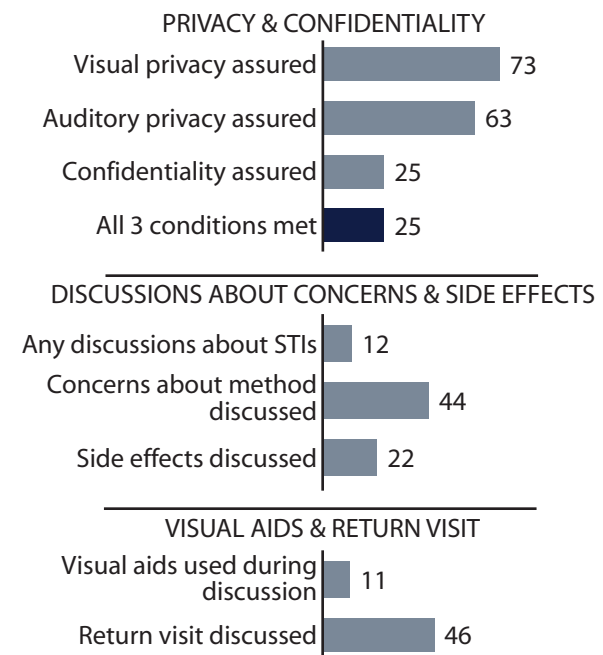
Observed Family Planning Consultations

Counseling of new and continuing family planning clients does not include all recommended elements, and providers miss opportunities to screen for STIs and chronic illnesses. Among consultations with new clients in Karnali Province (N=14), 11% included all elements of reproductive history (age, pregnancy history, current pregnancy status, the desired timing for the next child or desire for another child, breastfeeding status, and regularity of menstrual cycle) as part of the consultation. Eleven percent of new family planning clients were asked about smoking history, 2% any chronic illness, and <1% symptoms of STIs. Providers measured blood pressure and weighed clients in half of consultations.

Forty-four percent of consultations among all female family planning clients (N=24) included discussions of client concerns about her contraceptive method; fewer included discussions about side effects (22%). Merely 12% of consultations had any discussion related to STIs. Lack of privacy may account for this. One-quarter of consultations took place under conditions of privacy and confidentiality.

Observed Family Planning Consultations: Karnali Province

Among observed consultations with all female FP clients (N=24), percent that include:

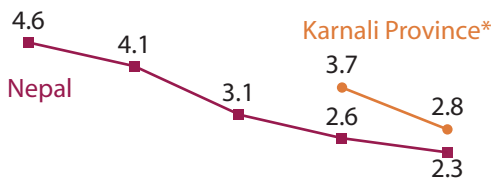


NDHS: FERTILITY AND FAMILY PLANNING

Total Fertility Rate

Women in Nepal have an average of 2.3 children. Since 1996, fertility has decreased from 4.6 children per woman to 2.3 children in 2016.

Trends in Total Fertility Rate
Births per woman for the three-year period before the survey



Year	1996	2001	2006	2011	2016
Survey	NFHS	NDHS	NDHS	NDHS	NDHS

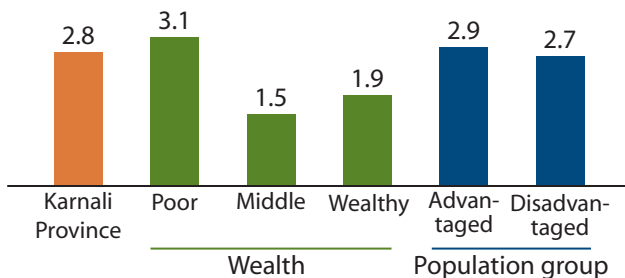
*The sample of the 2011 NDHS was not designed to be representative at the provincial level. See *Ghimire, Umesh et al. 2019* for retabulation.

Fertility varies by province. Fertility is lowest in Province 3 (1.8 children per woman) and highest in Province 2 (3.0 children per woman). Women in Karnali Province have an average of 2.8 children.

In Karnali Province, fertility varies by wealth and population group. Women living in the poorest households in Karnali Province have an average of 3.1 children, compared to less than 2.0 children among women living in the middle and wealthiest households. Women from advantaged population groups have slightly more children than disadvantaged women (2.9 versus 2.7).

Total Fertility Rate: Karnali Province

Births per woman for the three-year period before the survey

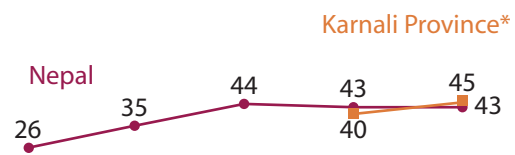


Family Planning

More than half (53%) of married Nepali women age 15-49 use any method of family planning—43% use a modern method and 10% use a traditional method. The use of modern methods of family planning has increased from 26% in 1996 to 43% in 2016.

Trends in Modern Contraceptive Use

Percent of married women age 15-49 using a modern method of family planning



Year	1996	2001	2006	2011	2016
Survey	NFHS	NDHS	NDHS	NDHS	NDHS

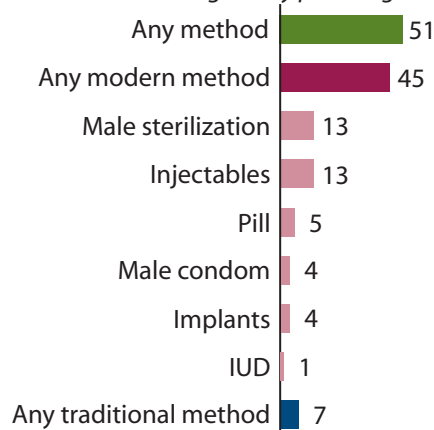
*The sample of the 2011 NDHS was not designed to be representative at the provincial level. See *Ghimire, Umesh et al. 2019* for retabulation.

By province, modern method use ranges from a low of 37% in Gandaki Province to a high of 49% in Province 3. In Karnali Province, 45% of married women use a modern method of family planning. Male sterilization and injectables are the most popular modern methods in Karnali Province (both 13%), followed by the pill (5%). Modern method use varies little by wealth or population group.

The total demand for family planning among married women in Karnali Province is 77%. More than 1 in 4 married women (26%) have an unmet need for family planning. Overall, 58% of the demand for family planning is satisfied by modern methods.

Family Planning: Karnali Province

Percent of married women age 15-49 using family planning



NHFS: ANTENATAL CARE SERVICES

Availability of Antenatal Care Services

Overall, 98% of health facilities in Nepal and 99% of facilities in Karnali Province offer antenatal care (ANC) services. Among facilities that offer ANC services in Karnali Province (N=74), 17% of facilities can test urine protein, 12% can conduct a urine glucose test, and 3% can test for HIV. Only 3% of facilities offering ANC services have all three basic tests.

More than 9 in 10 (91%) facilities offering ANC services had all essential medicines available on the day of the survey, which include combined iron and folic acid tablets and albendazole.

Observed Antenatal Care Consultations

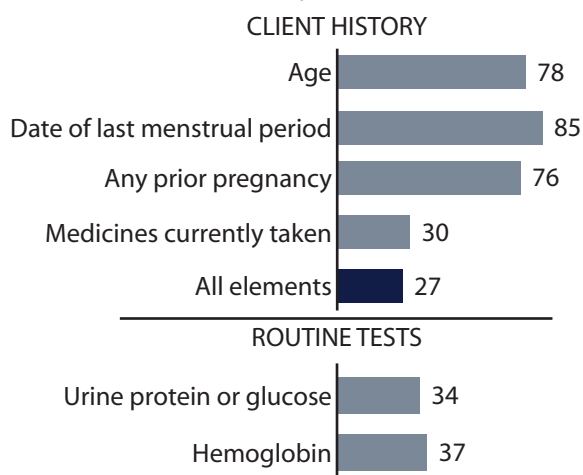
NHFS interviewers observed client-provider interactions for 1,502 ANC clients in Nepal of which 53 were in Karnali Province. In Karnali Province, ANC providers were not thorough in taking client history or providing routine tests. Although 85% of first-visit ANC clients in Karnali Province (N=20) were asked the date of their last menstrual period, only 30% were asked about current medications. More than one-quarter (27%) of consultations had all elements of client history assessed. More than one-third of first-visit ANC clients had a hemoglobin test (37%) or a urine protein or glucose test (34%).

Various components of the basic physical examination were performed in the majority of observed consultations for all ANC clients in Karnali Province (N=53). In 94% of consultations the provider listened to the fetal heart, 89% of pregnant women were weighed, and 84% had their blood pressure measured. Among preventive interventions, the provider gave or prescribed iron or folic acid tablets in half of consultations. In only 17% of consultations did the provider administer or prescribe the tetanus toxoid vaccine.

ANC providers did not routinely inform women of symptoms related to pregnancy complications. Severe lower abdominal pain was discussed in 69% of consultations and vaginal bleeding in 59%. Nearly half (46%) of consultations included discussion about loss of, excessive, or normal fetal movement, while 43% had discussions about headache or blurred vision. Three in ten (27%) consultations included discussions about swollen hands, face, or body or provided counseling on birth preparedness. Even fewer consultations included discussion of convulsion or loss of consciousness (23%), tiredness and shortness of breath (13%), or fever (2%). For 94% of the observed consultations, at least one risk symptom was discussed.

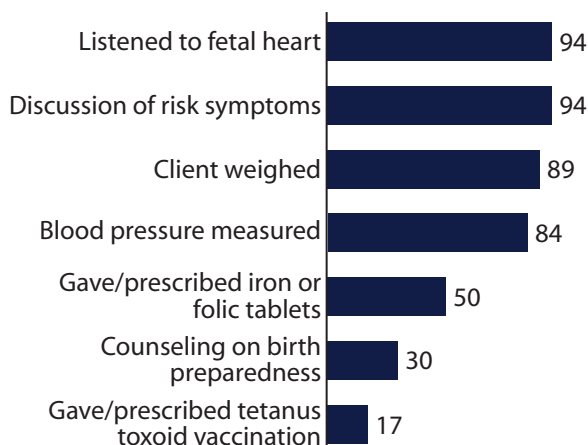
Observed Elements of Client History for First-visit ANC Clients: Karnali Province

Among observed consultations with first-visit ANC clients (N=20), percent that included:



Physical Examinations and Counseling for ANC Clients: Karnali Province

Among observed consultations with all ANC clients (N=53), percent of indicated interventions that were observed



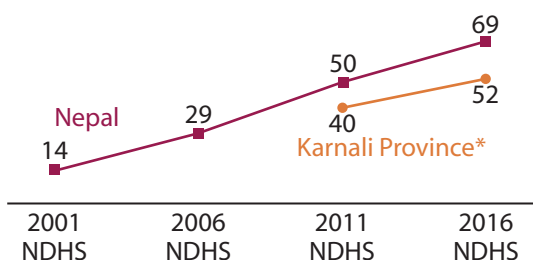
NDHS: ANTENATAL CARE

Antenatal Care

More than 8 in 10 Nepali women (84%) age 15-49 receive ANC from a skilled provider (doctor, nurse, and auxiliary nurse midwife). The timing and quality of ANC are also important. Two-thirds of women have their first ANC visit in the first trimester, as recommended. Seven in ten women make four or more ANC visits. Since 2001, more women have received ANC from a skilled provider and attended four or more ANC visits.

Trends in 4+ ANC Visits

Percent of women age 15-49 who had a live birth in the 5-year period before the survey with four or more antenatal care visits for the most recent birth

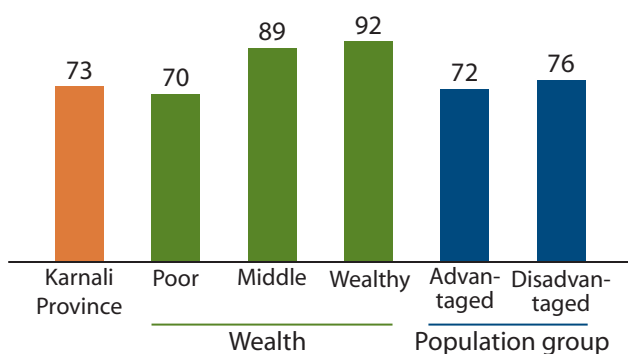


*The sample of the 2011 NDHS was not designed to be representative at the provincial level. See Ghimire, Umesh et al. 2019 for retabulation.

In Karnali Province, 73% of women receive ANC from a skilled provider. ANC with a skilled provider increases as the wealth of the household increases. Seven in ten women living in the poorest households in Karnali Province receive ANC from a skilled provider, compared to more than 9 in 10 (92%) women from the wealthiest households.

ANC from a Skilled Provider: Karnali Province

Percent of women age 15-49 with a live birth in the 5-year period before the survey who received ANC from a skilled provider

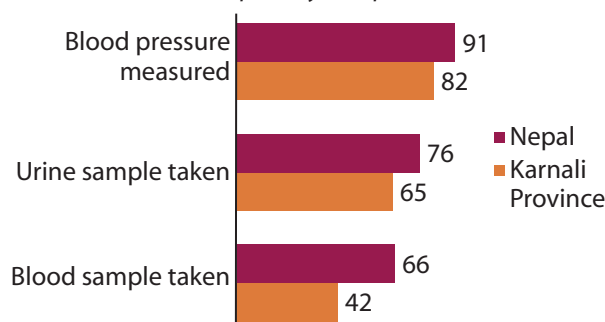


Components of Antenatal Care

Among women in Karnali Province who received ANC for their most recent birth, 82% had their blood pressure measured, while 65% had a urine sample taken and 42% had a blood sample taken. Women from the wealthiest households are more likely to receive each of the three ANC components than poorer women.

Components of ANC

Among women age 15-49 who received ANC for their most recent birth in the past 5 years, percent who had:

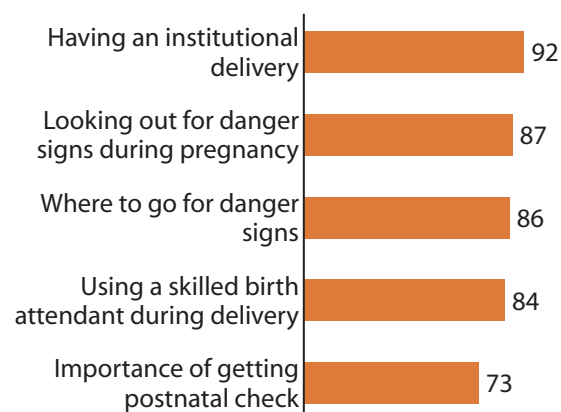


Antenatal Care Counseling

Among the topics women should be counseled on during ANC, women in Karnali Province who attended an ANC visit are most likely to report that they received counseling on the importance of institutional deliveries (92%) and least likely to hear about the importance of getting postnatal checks (73%). Women from the wealthiest households are more likely to receive each of the five components of counseling than poorer women.

ANC Counseling: Karnali Province

Among women age 15-49 who received ANC for their most recent birth in the past 5 years, percent who received counseling during ANC about the following:



NHFS: DELIVERY AND NEWBORN CARE SERVICES

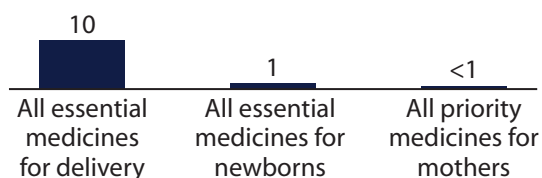
Availability of Delivery Services

Among all facilities in Nepal, 49% offer normal vaginal delivery services and 5% offer Cesarean delivery. In Karnali Province, 83% of facilities offer normal vaginal delivery services and 3% offer Cesarean delivery.

Medicines for Delivery and Newborn Care

Among facilities in Karnali Province offering normal vaginal delivery services (N=62), the majority of facilities (90%) did not have all four essential medicines for delivery on the day of the survey – injectable uterotonic (oxytocin), injectable antibiotic, skin antiseptic, and intravenous fluids with infusion set. Only 1% of facilities offering normal vaginal delivery services had all five essential medicines for newborns – tetracycline eye ointment, 4% chlorhexidine ointment, injectable gentamicin, ceftriaxone powder for injection, and amoxicillin. The eight priority medicines for mothers were also not readily available at facilities. Less than 1% of health facilities in Karnali Province had all eight medicines – sodium chloride injectable solution, injectable calcium gluconate, ampicillin powder for injection, injectable metronidazole, misoprostol, azithromycin, cefixime, and injectable bethamethasone or dexamethasone.

Medicines for Delivery and Newborn Care: Karnali Province
Among facilities offering normal vaginal delivery services (N=62), percent that have:

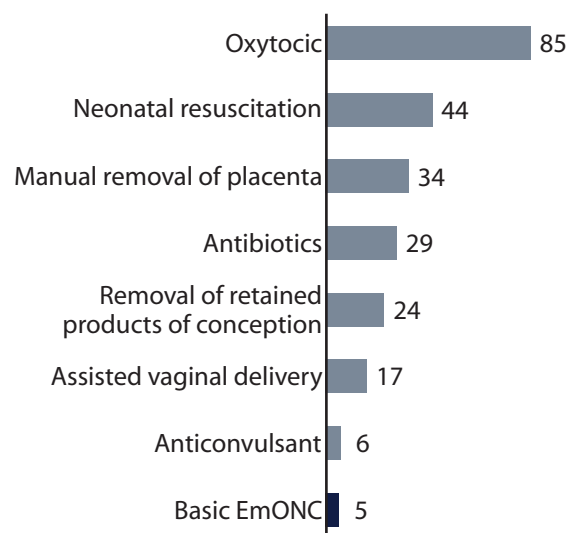


Signal Functions for Emergency Obstetric and Neonatal Care

Facilities that offer normal vaginal delivery care should be prepared to provide the most important interventions – emergency obstetric and neonatal care (EmONC) signal functions – to manage delivery complications when they occur. Among signal functions performed in the last three months in Karnali Province, the most commonly practiced is the administration of parenteral oxytocic (85%) and the least common is the administration of anticonvulsants (6%). Nearly half (44%) of facilities carried out neonatal resuscitation, while 34% of facilities conducted manual removal of the placenta. Three in ten facilities administered parenteral antibiotics at least once during the same time period, while 24% had removed retained products of conception. Seventeen percent of facilities carried out an assisted vaginal delivery. Only 5% of facilities had performed all seven basic EmONC signal functions.

Signal Functions for Emergency Obstetric and Neonatal Care: Karnali Province

Among facilities offering normal vaginal delivery services (N=62), percent that performed the following services at least once during the 3 months before the survey



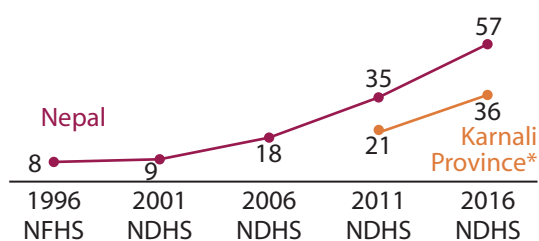
NDHS: DELIVERY AND POSTNATAL CARE

Delivery Care

In Nepal, 91% of births are normal vaginal deliveries, while 9% are delivered by Cesarean section. More than half of births (57%) in Nepal are delivered in a health facility, primarily in government sector facilities. However, 41% of births are delivered at home. Only 8% of births in 1996 were delivered in a health facility, compared to 57% in 2016.

Trends in Health Facility Deliveries

Percent of live births in the 5-year period before the survey delivered in a health facility

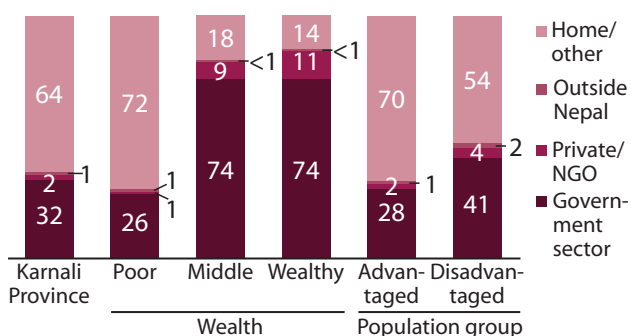


*The sample of the 2011 NDHS was not designed to be representative at the provincial level. See Ghimire, Umesh et al. 2019 for retabulation.

In Karnali Province, 98% of births are delivered by normal vaginal delivery and 2% by Cesarean section. More than one-third (36%) of births are delivered in a health facility. While 32% of births are delivered in a government sector facility and 2% at private/NGO sector facilities, 64% are delivered at home/other. More than 80% of births among women from the middle and wealthiest households are delivered in a health facility; in contrast, 72% of births among women from the poorest households are delivered at home/other.

Place of Delivery: Karnali Province

Percent distribution of live births in the 5-year period before the survey



Figures don't equal 100% due to rounding.

Skilled Birth Assistance

Overall, 58% of births in Nepal are assisted by a skilled provider, the majority by doctors (31%). One in ten births are assisted by no one. Skilled assistance during delivery has increased from 11% in 2001 to 58% in 2016.

In Karnali Province, 35% of births are assisted by a skilled provider, the majority by nurses/auxiliary nurse midwives (22%). Four in ten births are assisted by a relative/other. Women from the wealthier households and those from disadvantaged population groups (44%) are most likely to receive delivery assistance from a skilled provider.

Postnatal Care

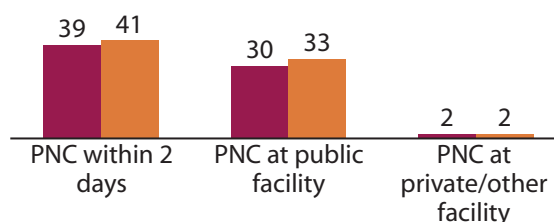
Postnatal care helps prevent complications after childbirth. More than half of Nepali women (57%) receive a postnatal check within two days of delivery, while 42% did not have a postnatal check. Similarly, 57% of newborns receive a postnatal check within two days of birth, while 40% did not have a postnatal check.

In Karnali Province, 39% of women receive a postnatal check within two days of delivery, the majority at public facilities (30%). Similarly, 41% of newborns receive a postnatal check within two days of birth, the majority at public facilities (33%).

Postnatal Care (PNC) for Mothers and Newborns: Karnali Province

Percent of most recent live births in the 2 years before the survey

■ Mother ■ Newborn



NHFS: CHILD HEALTH SERVICES

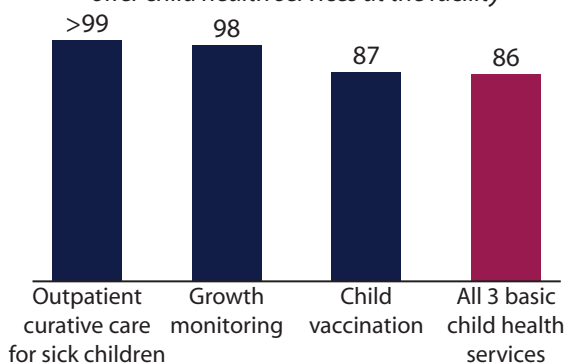
Availability of Child Health Services

In Nepal, all health facilities offer outpatient curative care for sick children, 93% offer growth monitoring services, and 87% offer child vaccination services. Eighty-five percent of health facilities offer all three basic child health services.

In Karnali Province, >99% of health facilities offer outpatient curative care for sick children, 98% offer growth monitoring, and 87% offer child vaccination services. Nearly 9 in 10 (86%) facilities offer all three basic child health services.

Availability of Child Health Services: Karnali Province

Among all facilities (N=74), percent that offer child health services at the facility



Laboratory Diagnostic Capacity

Among facilities offering outpatient curative care for sick children in Karnali Province (N=74), 14% can diagnose malaria, 9% have the ability to measure hemoglobin to assess anemia, and 6% have the capacity to do a stool microscopy. Only 5% of facilities have the capacity to perform all three diagnostic tests.

Availability of Essential Medicines

In Karnali Province, more than 9 in 10 facilities offering outpatient curative care services for sick children had oral rehydration salts (ORS) for dehydration (92%), albendazole for worm infestation (95%), and zinc tablets (97%) on the day of the survey. Eighty-four percent of facilities had paracetamol and 81% had vitamin A capsules. Only 37% of facilities had co-trimoxazole and 14% had amoxicillin.

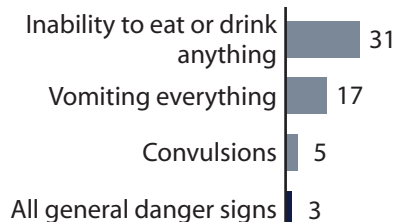
Observed Sick Child Consultations

A total of 150 sick child consultations were observed in Karnali Province. Providers checked for all three major danger signs in only 3% of consultations: inability to eat or drink anything (31%), vomiting (17%), and convulsions (5%). Providers assessed all three main symptoms of childhood illness in 28% of observed consultations: fever (77%), diarrhea (54%), and cough/difficulty breathing (50%). Various aspects of the physical examinations were also missing – only 6% of sick children were assessed for dehydration. Only 38% of sick children had their respiratory rate assessed, and 69% had their temperature taken. Few providers in Karnali Province advised caretakers how to increase fluids (20%), to continue feeding the child (26%), and the symptoms requiring a return visit (3%).

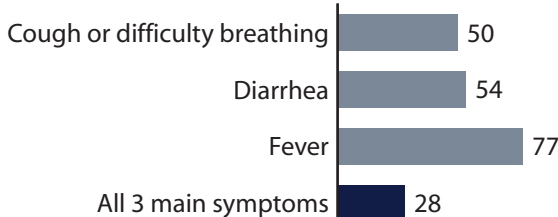
Observed Sick Child Consultations: Karnali Province

Among observed consultations with sick children (N=150), percent that include:

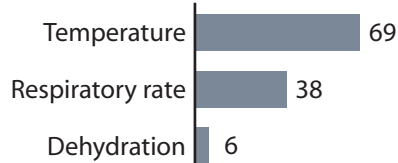
ASSESSMENT OF GENERAL DANGER SIGNS



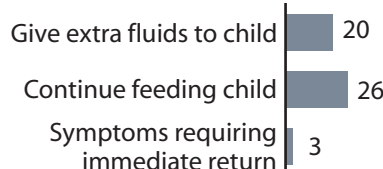
ASSESSMENT OF MAIN SYMPTOMS



PHYSICAL EXAM



ESSENTIAL ADVICE TO CARETAKER



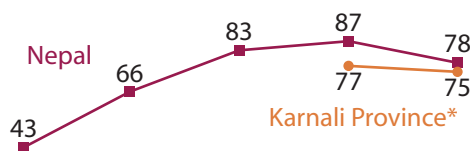
NDHS: CHILD HEALTH AND MORTALITY

Vaccination Coverage

In Nepal, 78% of children age 12-23 months have received all eight basic vaccinations – one dose each of BCG and Measles-Rubella and three doses each of DPT-HepB-Hib and polio vaccine. Basic vaccination coverage has increased since 1996 when 43% of children had received all basic vaccinations, but has declined since 2011.

Trends in Basic Vaccination Coverage

Percent of children age 12-23 months who have received all basic vaccinations



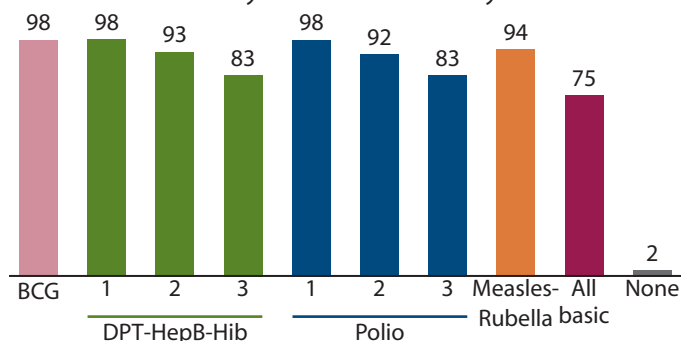
Year	1996	2001	2006	2011	2016
Survey	NFHS	NDHS	NDHS	NDHS	NDHS

*The sample of the 2011 NDHS was not designed to be representative at the provincial level. See Ghimire, Umesh et al. 2019 for retabulation.

Basic vaccination coverage is lowest in Province 2 (65%) and highest in Gandaki Province (93%). In Karnali Province, 3 in 4 children have received all eight basic vaccinations. Eighty-three percent of children in Karnali Province received the third doses of either DPT-HepB-Hib and polio vaccines. Overall, 2% of children received no basic vaccinations.

Basic Vaccination Coverage: Karnali Province

Percent of children age 12-23 months vaccinated at any time before the survey



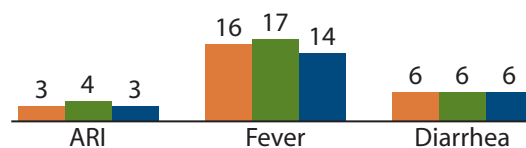
Childhood Illnesses

In the two weeks before the survey, 2% of Nepali children under five and 3% of children in Karnali Province were ill with cough and rapid breathing, symptoms of acute respiratory infection (ARI). Twenty-one percent of Nepali children under five and 16% of children in Karnali Province had recent fever. Eight percent of children under five in Nepal and 6% of children in Karnali Province had diarrhea. There is little variation across all three illnesses by population group.

Childhood Illnesses: Karnali Province

Percent of children under 5 with symptoms of specific illnesses in the 2 weeks before the survey

Legend: Karnali Province (orange), Advantaged population groups (green), Disadvantaged population groups (blue)

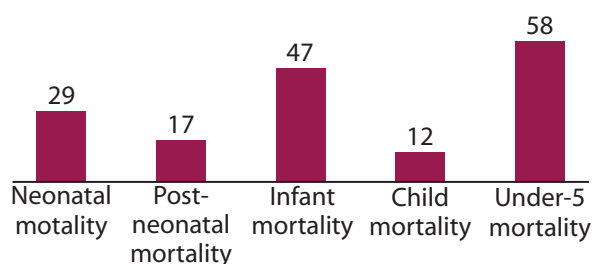


Childhood Mortality Rates

In Nepal, infant and under-5 mortality rates for the five-year period before the survey are 32 and 39 deaths per 1,000 live births, respectively. Childhood mortality rates have declined since 1996. In Karnali Province, the infant and under-5 mortality rates for the ten-year period before the survey are 47 and 58 deaths per 1,000 live births, respectively.

Childhood Mortality: Karnali Province

Deaths per 1,000 live births for the 10-year period before the survey



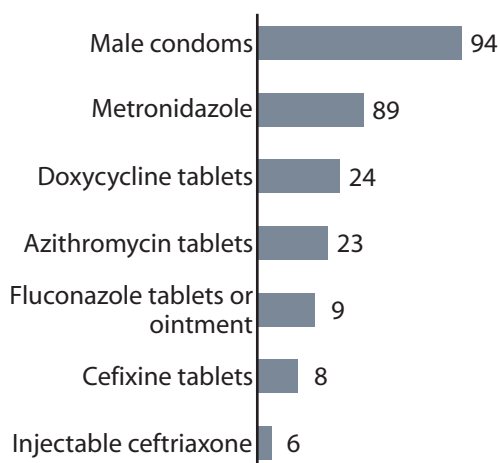
NHFS: SERVICES FOR HIV/AIDS AND STIs

Services for Sexually Transmitted Infections

Three in four health facilities in Nepal offer services for STIs. In Karnali Province, 63% of health facilities offer STI services. Among health facilities offering STI services in Karnali Province (N=47), 94% had male condoms and 89% had metronidazole on the day of the survey. Only 11% of facilities had syphilis rapid diagnostic testing capacity. Nearly one-quarter of facilities had both doxycycline tablets and azithromycin tablets to treat infections.

Medicines and Commodities for STIs: Karnali Province

Among facilities offering services for STIs (N=47), percent with indicated items available on the day of the survey



HIV Testing and Counseling Services

Few health facilities in Nepal and Karnali Province have an HIV testing system (6% and 3%, respectively). In Karnali Province, very few public facilities have an HIV testing system (3%).

HIV/AIDS Care and Support Services

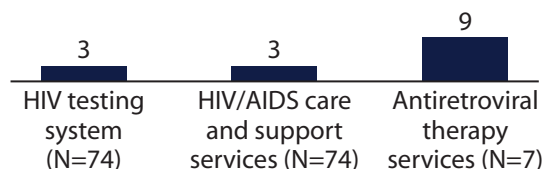
HIV/AIDS care and support services are not readily available at health facilities—only 5% of all health facilities in Nepal and 3% of facilities in Karnali Province offer services such as treatment for opportunistic infections, fungal infections, or Kaposi’s sarcoma; palliative care; nutritional rehabilitation; fortified protein supplementation; care for pediatric patients; preventive treatment for tuberculosis (TB) or opportunistic infections; general family planning counseling; or condoms. Very few public facilities in Karnali Province offer HIV/AIDS care and support services (2%).

Antiretroviral Therapy Services

Among hospitals and PHCCs in Nepal (N=134), 12% offer antiretroviral therapy (ART) services such as prescribing ART, providing treatment follow-up services, or providing community-based services. Only 9% of these facilities in Karnali Province (N=7) offer ART services.

Availability of HIV Services: Karnali Province

Percent of facilities offering the following services:



NDHS: HIV/AIDS

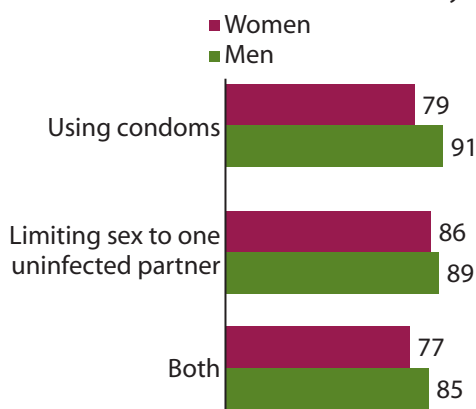
Knowledge of HIV Prevention Methods

In Nepal, 70% women and 89% of men know that the risk of getting HIV can be reduced by using condoms and limiting sex to one monogamous, uninfected partner.

In Karnali Province, men (85%) also have higher knowledge of HIV prevention methods than women (77%). Knowledge of HIV prevention methods is lowest among women and men from the poorest households.

Knowledge of HIV Prevention Methods: Karnali Province

Percent of women and men age 15-49 who know that the risk of HIV transmission can be reduced by:

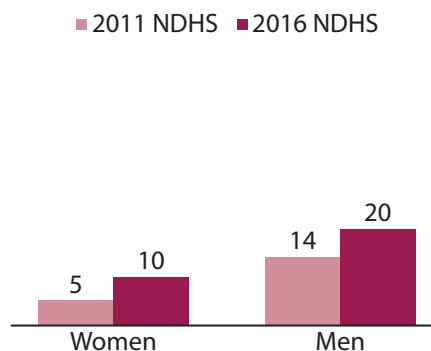


HIV Testing

Only one-third of Nepali women and 58% of men know where to get an HIV test. One in ten women and 2 in 10 men have ever been tested for HIV and received the results, while the majority of women (89%) and men (80%) have never been tested for HIV. Within the 12 months before the survey, 4% of women and 8% of men had been tested and received the results. HIV testing has slightly increased since 2011 when 5% of women and 14% of men had ever been tested for HIV and received the results.

Trends in HIV Testing: Nepal

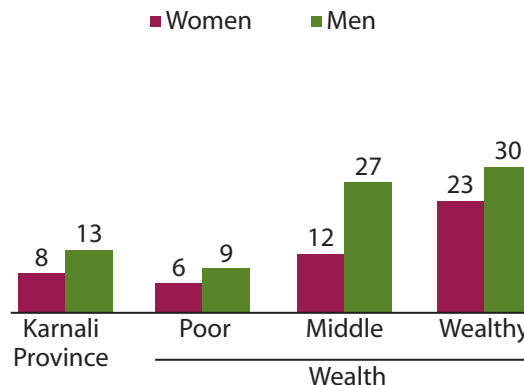
Percent of women and men age 15-49 who were ever tested for HIV and received their results



In Karnali Province, 35% of women and 69% of men know where to get an HIV test. Only 8% of women and 13% of men have ever been tested for HIV and received their results. Women and men from the wealthiest households are more likely to have ever been tested for HIV and received their results than poorer women and men. Within the 12 months before the survey, 3% of women and 5% of men had been tested and received the results.

HIV Testing among Adults: Karnali Province

Percent of women and men age 15-49 who have ever been tested for HIV and received their results



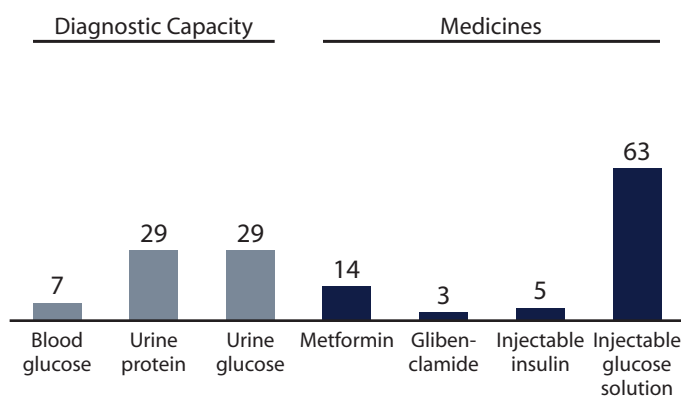
NHFS: SERVICES FOR NON-COMMUNICABLE DISEASE

Diabetes Services

One in five health facilities in Nepal and 21% of facilities in Karnali Province offer services for diabetes, including diagnosis, prescription of treatment, or management of diabetic patients. Among facilities offering services for diabetes in Karnali Province (N=16), diagnostic capacity and availability of medicines are generally low. Only 7% of facilities have the capacity to test for blood glucose, 29% have capacity to test urine protein, and 29% have capacity to test for urine glucose. Various diabetes treatments were not readily available. Overall, 3% of facilities had glibenclamide, 5% had injectable insulin, 14% had Metformin, and 63% had injectable glucose solution on the day of the survey.

Diagnostic Capacity and Essential Medicines for Diabetes: Karnali Province

Among facilities offering services for diabetes (N=16), percent with indicated diagnostic capacity and medicines available on the day of the survey

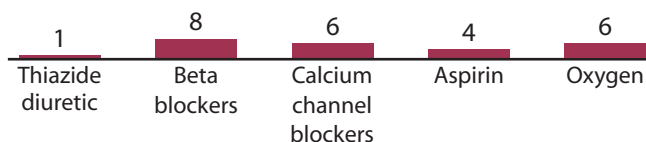


Cardiovascular Disease Services

Nearly three-quarters of health facilities in Nepal and 64% of facilities in Karnali Province offer services for cardiovascular disease (CVD), including diagnosis, prescription of treatment, and management of patients with CVD. However, among facilities offering CVD services in Karnali Province (N=47), only 1% had thiazide diuretic for reducing high blood pressure. Less than 1 in 10 facilities had Beta blockers for angina or hypertension (8%), calcium channel blockers (6%), oxygen (6%), and aspirin (4%).

Essential Medicines and Commodities for Cardiovascular Disease: Karnali Province

Among facilities offering services for cardiovascular disease (N=47), percent with indicated items available on the day of the survey

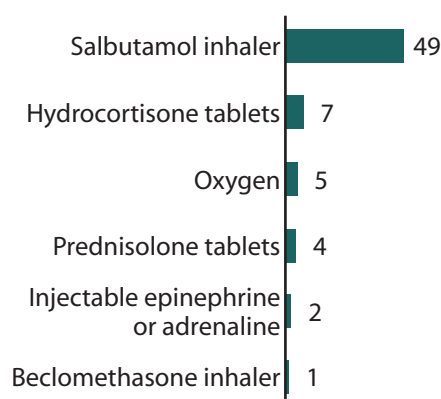


Chronic Respiratory Disease Services

Ninety-four percent of facilities in Nepal and 80% of facilities in Karnali Province offer support services for chronic respiratory disease including diagnosis, prescription of treatment, or management of patients with chronic respiratory diseases. In Karnali Province, availability of essential medicines and commodities in facilities offering services for chronic respiratory disease (N=59) was relatively low with the exception of salbutamol inhalers (49%). Less than 1 in 10 facilities had hydrocortisone tablets (7%), oxygen (5%), prednisolone tablets (4%), injectable epinephrine or adrenaline (2%), or beclomethasone inhalers (1%).

Essential Medicines and Commodities for Chronic Respiratory Disease: Karnali Province

Among facilities offering services for chronic respiratory disease (N=59), percent with indicated items available on the day of the survey



NDHS: NON-COMMUNICABLE DISEASE

Prevalence of Hypertension

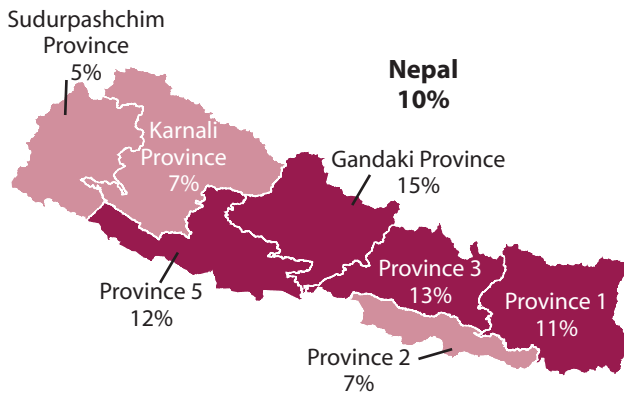
The 2016 NDHS measured the blood pressure of women and men. In Nepal, 10% of women and 17% of men age 15-49 are hypertensive.

By province, hypertension among women ranges from a low of 5% in Sudurpashchim Province to a high of 15% in Gandaki Province. Among men, hypertension ranges from a low of 11% in Province 2 to a high of 22% in Province 3 and Gandaki Province.

In Karnali Province, 7% of women and 16% of men are hypertensive. Among women, the prevalence of hypertension increases with household wealth. By population group, slightly more women from disadvantaged population groups (10%) are hypertensive than advantaged women (6%). Among men, those from the wealthiest households (35%) and disadvantaged population groups (20%) are more likely to have hypertension.

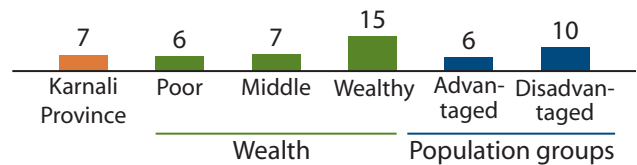
Hypertension among Women by Province

Prevalence of hypertension among women age 15-49



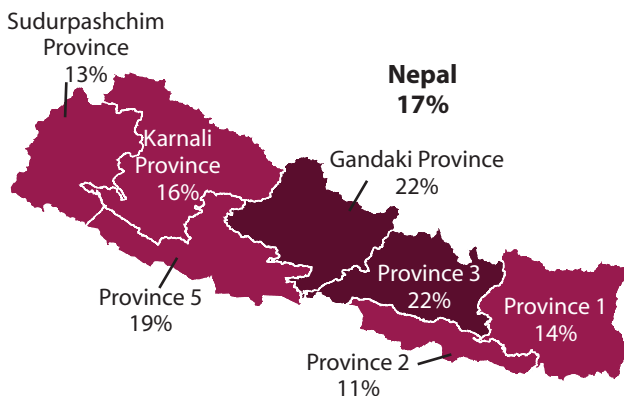
Hypertension among Women: Karnali Province

Prevalence of hypertension among women age 15-49



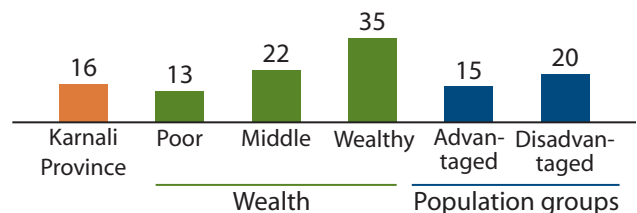
Hypertension among Men by Province

Prevalence of hypertension among men age 15-49



Hypertension among Men: Karnali Province

Prevalence of hypertension among men age 15-49



NHFS: TUBERCULOSIS AND MALARIA SERVICES

Tuberculosis Services

Forty-four percent of facilities in Nepal and 45% of facilities in Karnali Province offer screening and referrals for TB diagnosis. One-third of facilities in Nepal and 13% of facilities in Karnali Province offer any TB diagnostic service. Overall, 94% of facilities in Nepal and 91% of facilities in Karnali Province offer any TB diagnostic or treatment and/or treatment follow-up services.

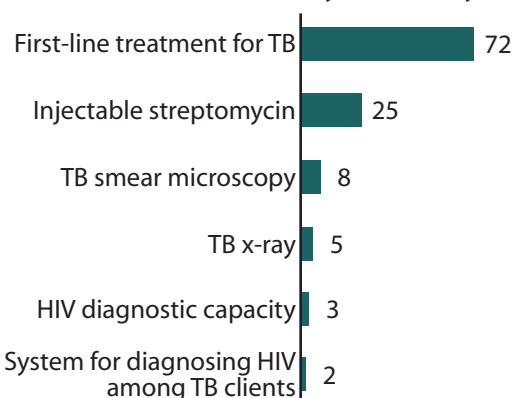
Among facilities in Karnali Province (N=67) offering TB services (diagnosis or treatment and/or treatment follow-up services), one-quarter of facilities have guidelines on the diagnosis and treatment of TB and 2% have guidelines on HIV and TB co-infection.

Few facilities offering TB services have the equipment to diagnose TB. Among facilities that offer any TB services, only 8% have TB smear microscopy which includes a functioning microscope, slides, and all stains for the Ziehl-Neelson test. Only 5% of facilities has the capacity to conduct TB x-rays. Three percent of facilities offering any TB services have HIV diagnostic capacity, and only 2% have a system for diagnosing HIV among TB clients. This system includes a record or register indicating TB clients who have been tested for HIV.

Among facilities offering any TB services, 72% had the first-line treatment for TB, four-drug fix dose combination available on the day of the survey. One-quarter of facilities have injectable streptomycin.

Diagnostic Capacity and Availability of Medicines for TB Treatment: Karnali Province

Among facilities offering TB diagnosis or treatment and/or treatment follow-up services (N=67), percent with diagnostic capacity and medicines available on the day of the survey



Malaria Services

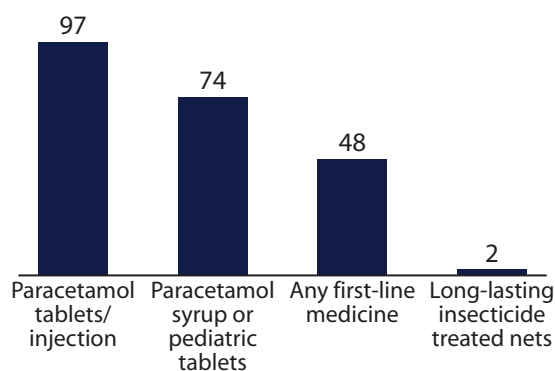
Half of health facilities in Nepal and 30% of facilities in Karnali Province offer malaria diagnosis and/or treatment services. In Karnali Province, 28% of public facilities offer malaria diagnosis or treatment.

Only 2% of facilities offering curative care for sick children in Karnali Province (N=74) have the capacity to diagnose malaria by having unexpired malaria rapid diagnostic test (RDT) kits or a functioning microscope as well as staff member recently trained and malaria RDT protocol available in the facility.

Among facilities offering malaria diagnosis and/or treatment services in Karnali Province (N=22), 97% had paracetamol tablets or injection and 74% had paracetamol syrup or dispersible pediatric-dosed tablets for fever. Half of facilities had any first-line treatment such as ACT, quinine, chloroquine, or primaquine on the day of the survey. Only 2% of facilities had long-lasting insecticidal nets (LLINs).

Malaria Medicines & Commodities: Karnali Province

Among facilities offering malaria diagnosis or treatment services (N=22), percent with indicated medicines and commodities available on the day of the survey



NDHS: NUTRITIONAL STATUS

Children's Nutritional Status

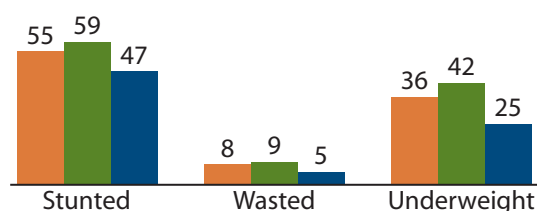
More than one-third (36%) of children under five in Nepal are stunted, or too short for their age. Overall, 10% of children are wasted, or too thin for their height. In addition, 27% of children are underweight, or too thin for their age. The nutritional status of children in Nepal has improved since 1996. More than half (57%) of children under five were stunted in 1996 compared to 36% in 2016.

By province, stunting ranges from 29% in both Province 3 and Gandaki Province to 55% in Karnali Province. Additionally in Karnali Province, 8% of children under 5 are wasted and 36% are underweight. Children from advantaged population groups in Karnali Province have higher stunting, wasting, and underweight than disadvantaged children.

Children's Nutritional Status: Karnali Province

Percent of children under 5, based on 2006 WHO Child Growth Standards

■ Karnali Province ■ Advantaged population groups ■ Disadvantaged population groups



Anemia

In Nepal, more than half (53%) of children age 6-59 months are anemic. Anemia prevalence among children has increased since 2011 when 46% of children were anemic. Four in ten women age 15-49 in Nepal are anemic. Since 2006, anemia among women has increased from 36% to 41% in 2016.

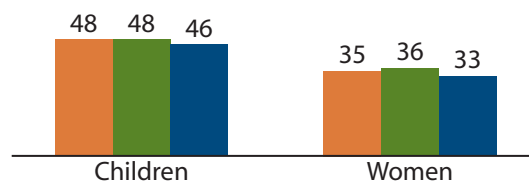
Anemia in children ranges from a low of 43% in Province 3 to a high of 59% in Province 2. Among women, anemia prevalence ranges from a low of 28% in Gandaki Province to 58% in Province 2.

In Karnali Province, 48% of children and 35% of women are anemic. Anemia prevalence among children and women varies little by population group.

Anemia among Children & Women: Karnali Province

Percent of children age 6-59 months and women age 15-49 with anemia

■ Karnali Province ■ Advantaged population groups ■ Disadvantaged population groups



Women and Men's Nutritional Status

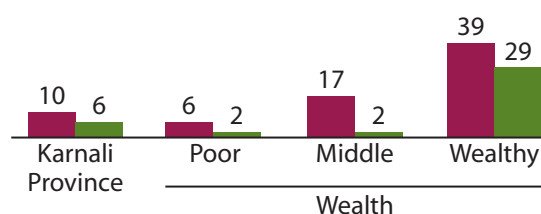
In Nepal, 17% of women are thin and 22% are overweight or obese. Since 2006, overweight or obesity among women has more than doubled from 9% to 22% in 2016. Among Nepali men, 17% are thin and 17% are overweight or obese.

In Karnali Province, 10% of women and 6% of men are overweight or obese. Overweight and obesity among adults increases with household wealth, as women and men from the wealthiest households (39% and 29%, respectively) are most likely to be overweight or obese.

Adult Overnutrition: Karnali Province

Percent of women and men age 15-49 who are overweight or obese

■ Women ■ Men



2015 Nepal Health Facility Survey (NHFS): Karnali Province

Tables 1-60

2016 Nepal Demographic and Health Survey (NDHS): Karnali Province

Tables 61-79

