Assess impact of COVID-19 pandemic in selected health services with estimation of 'excess maternal deaths'

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Ministry of Health and Population

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Management Division

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The analytical study report entitled to *'Assess impact of COVID-19 pandemic in selected health services with estimation of 'excess maternal deaths'*, presents the findings from an analysis of health information system 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 analysis of quantitative data. I am confident that this evidence will help all program managers to response in the COVID-19 pandemic for the continuation of the essential health service.

First of all, I would like to thank Prof. Dr. RP Bichha, Director General, Department of Health Services (DoHS), for guidance in the completion of this study. I would also like to thank Dr. Punya Paudel, Chief, Safe motherhood program and Mr. Badri Nath Gyawali former Chief, Integrated Health Information Management Section for the contribution in this study. I would also like to thank my colleagues, particularly the efforts and dedication of Mr. Shivlal Sharma and Ms. Nisha Joshi. My deep sense of gratitude goes to research team members, Mr. Pradeep Poudel, Dr. Prabhat Lamichhane, Mr. Bishnu Prasad Dulal, Mr. Harsha Raj Dahal, Mr. Sitaram Prasai and Mr. Devendra Raj Singh. My sincere thank also goes to the reviewer team of Nepal Health Research Council for their critical inputs during the ethical approval procedure.

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Executive Summary

The Government of Nepal (GoN) adopted a complete lockdown strategy to contain and curb the spread of the Coronavirus Disease 2019 (COVID-19) pandemic from 24 March 2020 to 21 July 2020, which led to closures of Outpatient Departments (OPDs) and widespread fear of COVID-19 transmission in institutional settings. This has threatened the progress made by Nepal in health care in the last three decades, with early evidence suggesting reduced coverage of institutional births, low utilisation of Reproductive Health (RH) services and increased institutional stillbirth and neonatal mortality rates. This study aimed to understand the initial impacts of COVID-19 on routine reporting systems, availability and utilisation of services on selected key indicators and excess maternal deaths so as to help the GoN to plan actions that can strengthen its response strategy and evaluate its response for the future.

A mixed-method approach was used with secondary analysis of routine health information system (Health Management Information System (HMIS), Maternal and Perinatal Death Surveillance and Response (MPDSR) and One-stop Crisis Management Centres (OCMCs), monitoring data of health facilities and qualitative interviews with key stakeholders. The study analysed trends of service utilisation from Falgun 2075 to Bhadra 2077, with Falgun 2076 taken as the cut-off point to distinguish the pre-COVID-19 and COVID-19 periods. Descriptive statistics were used to examine the change, i.e., difference from the same month of the previous year and monthly rate of change. A local polynomial regression with smoothing curve was used to examine the trend. The Auto Regressive Integrated Moving Average (ARIMA) model was used to estimate the excess maternal deaths by forecasting the maternal deaths after Falgun 2076 in the absence of pandemic. Key results are summarised below by themes.

Availability of services: Antenatal Care (ANC) and Family Planning (FP) services were unavailable in a higher proportion of referral facilities (25–80%) and for several days compared to fewer days in peripheral facilities (14–50%). In peripheral facilities, delivery services were unavailable (36–80%), drugs were stocked out (20–100%) and ambulance services were unavailable (17–80%) for several days. Fifty percent or more of Birthing Centres (BCs) and Basic Emergency Obstetric and Neonatal Care (BEONC) facilities were closed for delivery services, while all referral hospitals remained open for institutional delivery, except for a couple of days in the early lockdown period.

Service utilisation: The monthly rate of change for all service utilisation indicators from Falgun 2076 to Chaitra 2076 was negative at national level. The magnitude of decline varied from 56 per cent to 7 per cent and by province and type of health facility, with a greater decline in peripheral health facilities. However, there was strong rebound over the following couple of months (Baisakh 2077 to Asar 2077) as the average returned to pre-COVID-19 levels or higher for several indicators. Institutional delivery services declined by 18 per cent between Falgun 2076 and Chaitra 2076 but increased by 19 per cent from Jestha 2077 to Asar 2077. The gain was even higher for postnatal services, with the average returning above pre-COVID-19 levels. The FP method with the biggest decline was permanent sterilisation, with a 56 per cent decline in the number of procedures. New users of long-acting reversible contraceptives declined in Chaitra 2076, with the average returning to higher than pre-COVID-19 levels in the following few months. There was a sharp decline (36% decline in the first month) in abortion procedures performed, with the national average well below pre-COVID-19 level in subsequent months. The number of children immunised with three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine (DPT3) declined by 55 per cent in the first COVID-19 month but there was a strong rebound, with an increase in the next three months.

Excess maternal deaths: A total of 153 maternal deaths were reported in the COVID-19 months (Chaitra 2076 to Bhadra 2077). The equivalent period of last year (Chaitra 2075 to Bhadra 2076) recorded 104 deaths. The preliminary estimates from modelling suggest that there were 47 excess maternal deaths in COVID-19 months.

Functioning of routine reporting system: No noticeable impact was observed in the timeliness of HMIS reporting in COVID-19 months, with an improvement seen in the long term (Falgun 2075 to Bhadra 2077). A small increase in the percentage of non-reporting facilities was observed (4.5 percentage points from Shrawan 2077 to Asar 2077). Qualitative findings suggested that despite initial difficulties alternative approaches (virtual communication) were used for normal functioning of HMIS. Overall, improvements in timeliness of reporting as well as the percentage of facilities reporting to HMIS were attributed to regular monitoring and mentoring support from the Integrated Health Management Information System (IHIMS) to the provincial, local and hospital focal persons. There has been a gradual increase in the number of OCMC reporting sites over the years. However, disaggregated data on how many sites were listed by Fiscal Year (FY) was unavailable for all FYs, limiting the ability to gain a full picture on the reporting situation. The functionality of MPDSR systems in peripheral hospitals was more adversely affected by COVID-19 (e.g., no separate discussion of maternal deaths, inability of verbal autopsy due to feasibility issues) than in federal-level hospitals. Inadequate institutionalisation of systems, poor access to internet facilities, and inadequate human resources and monitoring systems were identified as the major factors influencing the poor functionality of the MPDSR during the pandemic period.

Health Sector Response: The Ministry of Health and Population (MoHP) has developed more than 50 plans, guidelines, standards and protocols for effective response to COVID-19 and continuity of regular services. These have been made public through the MoHP website. Some of the key documents include the Health Sector Emergency Response Plan for COVID-19 Pandemic, Rapid Action Plans and Interim Guidelines for continuity of specific health services, such as Reproductive, Maternal, Newborn and Child Health (RMNCH), leprosy, geriatric health care services, rehabilitation and physiotherapy of persons with COVID-19 in acute care settings, services for people with disabilities, dental services, ambulance services and Ayurveda and alternative medicine services. In addition to these, the MoHP has circulated several 'circulars and directives' for specific purposes, such as human resource management, case management and compliance to the developed guidelines. Qualitative findings suggest that the development of guidelines, setting up of COVID-19 dedicated hospitals and follow-up of maternal deaths were some of the key initiatives undertaken by the clusters and sub-clusters as support to the MoHP in continuing health service delivery during the pandemic. However, study results also showed that there was a lack of clear communication of service provision, not only to consumers but also within the health care system, contributing to service utilisation decline.

In conclusion, this mixed-method study showed that there were interruptions to public health care service availability and utilisation in Nepal immediately after the introduction of lockdown. This is not surprising as literature suggests that previous pandemics or outbreaks have resulted in service utilisation decline in resource-constrained settings like Nepal. The health care system has shown signs of resilience, as some of the indicators have returned to pre-COVID-19 levels. However, preliminary estimates of maternal deaths suggest that the pandemic may have taken away some of the progress made in the last three decades. Further analysis to estimate the net effect of missed childhood vaccinations, unplanned pregnancies and lost primary care visits may show a clearer picture. The magnitude of impact varied by province and type of health facility. Further research is needed to fully understand the reasons and the extent of disruptions to public health care delivery and the population groups they have affected the most.

Acronyms and Abbreviations

4ANC	Four Antenatal Care Visits
ACF	Autocorrelation Function
ANC	Antenatal Care
ARIMA	Auto Regressive Integrated Moving Average
BC	Birthing Centre
BEONC	Basic Emergency Obstetric and Neonatal Care
CCMC	COVID-19 Crisis Management Centre
CEONC	Comprehensive Emergency Obstetric and Neonatal Care
COVID-19	Coronavirus Disease 2019
DHIS2	District Health Information System 2
DLI	Disbursement-linked Indicator
DoHS	Department of Health Services
DPT	Diphtheria Pertussis Tetanus
EDP	External Development Partner
FCHV	Female Community Health Volunteer
FP	Family Planning
FWD	Family Welfare Division
FY	Fiscal Year
GoN	Government of Nepal
HMIS	Health Management Information System
IHMIS	Integrated Health Management Information System
IUCD	Intrauterine Contraceptive Device
mCPR	Modern Contraceptive Prevalence Rate
MERS	Middle East Respiratory Syndrome
MNH	Maternal and Newborn Health
MoHP	Ministry of Health and Population
MPDSR	Maternal and Perinatal Death Surveillance and Response
NCD	Non-communicable Disease
NHSSP	Nepal Health Sector Support Programme
NPR	Nepalese Rupees
OCMC	One-stop Crisis Management Centre
OCP	Oral Contraceptive Pill
ODK	Open Data Kit
OPD	Outpatient Department
PACF	Partial Autocorrelation Function
PCR	Polymerase Chain Reaction
PHCC	Primary Health Care Centre
PNC	Postnatal Care
PSI	Population Services International
RMNCH	Reproductive, Maternal, Newborn and Child Health

SARS	Severe Acute Respiratory Syndrome
SDG	Sustainable Development Goal
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VSC	Voluntary Surgical Contraception
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

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1. Background

The Government of Nepal (GoN) adopted a complete lockdown strategy to contain and curb the spread of the coronavirus Disease 2019 (COVID-19) pandemic from 24 March 2020 to 21 July 2020. The nationwide lockdown led to closures of Outpatient Departments (OPDs), widespread fear of COVID-19 transmission in institutional settings as a result of scarcity of proper protective equipment, and a reduced capacity to provide routine health services. This has threatened the progress made by Nepal in health care in the last three decades. Early evidence suggests that it has reduced coverage of institutional births, widened inequalities, and significantly increased institutional stillbirth and neonatal mortality rates (Ashish *et al.*, 2020; UNFPA, 2020). The rapid health facility assessment carried out by the United Nations Population Fund (UNFPA) Nepal in April 2020 also reported low utilisation rates of sexual and reproductive health services because of pandemic-related fears and travel restrictions (UNFPA, 2020).

Global literature suggests similar effects on the availability of and access to health services during other outbreaks and pandemics, such as Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), Ebola and Zika (Sochas, Channon and Nam, 2017; Wagenaar *et al.*, 2018). Routine health services receive lesser priority as resources and attention is diverted towards emergency response (World Health Organization (WHO), 2018). For instance, a study conducted in Taiwan in 2003 following SARS outbreak showed that ambulatory and inpatient services suffered decreases by 23.9 per cent and 35.2 per cent, respectively (Chang *et al.*, 2004). The Ebola outbreak in Africa led to an estimated decrease in Antenatal Care (ANC) coverage by 22 percentage points, Family Planning (FP) by six percentage points, institutional delivery by eight percentage points and Postnatal Care (PNC) by 13 percentage points (Sochas, Channon and Nam, 2017). As an immediate response, the UKaid-funded NHSSP supported the Family Welfare Division (FWD) to undertake regular monitoring of availability and use of selected Maternal-and-Newborn-Health- (MNH-) related services via telephone and virtual communication, at Comprehensive Emergency Obstetric and Neonatal Care (CEONC) and Basic Emergency Obstetric and Neonatal Care (BEONC) sites as well as Birthing Centres (BCs). Subsequent monitoring of CEONC sites has continued through a mobile-phone-based monitoring application, while telephonic-call-based monitoring continued for lower-level facilities. Over this period of monitoring, there have been reports of a decline in the availability of services for some duration, and of stockouts of essential MNH medicines, and several cases of maternal and perinatal deaths. Crude analysis from these monitoring data suggests decline in service utilisation and gaps in service availability.

A more detailed analysis of the data available through the routine information system and monitoring data gathered through support from the Nepal Health Sector Support Programme (NHSSP) at FWD and MoHP level is needed to gain a clearer picture on the impact of the COVID-19 pandemic. Thus, this study aims to understand the initial impacts of COVID-19 on the routine reporting system and availability and utilisation of services to help the GoN to plan actions that can strengthen its response strategy. This is important not only to shed light on the current situation and short-term needs but also to develop a resilient health system to combat future epidemics, and which can ensure continuity of services during and after the epidemic and relieve pressure on the health system and health care workers.

A quick scoping search of the PubMed database was conducted to identify literature specific to the impact of COVID-19 on health information systems and service utilisation in Nepal (see search details in Table A. 1*) resulting in 16 hits. Of the 16 articles, only two were directly relevant to the study: i) a prospective study of nine hospitals authored by Ashish and colleagues that assessed number of institutional births, health outcomes (stillbirth and neonatal mortality) and quality of postpartum care; and ii) a secondary analysis of health management information system data that analysed the trend of institutional delivery (Jha et. al 2020). Other publications were either irrelevant to our study or mostly the perspective of the authors rather than empirical research.*

2. Aims and objectives

The overall purpose of the study is to examine the initial effects of COVID-19 on routine reporting from health facilities, availability and utilisation of selected health services and any secondary effects on maternal mortality. The specific objectives are:

- To examine the effect of COVID-19 on routine reporting from health facilities through HMIS (Health Management Information System), MPDSR (Maternal and Perinatal Death Surveillance and Response) and OCMC (One-stop Crisis Management Centre) reporting
- To assess the effect of COVID-19 on availability and utilisation of regular maternal health, FP, safe abortion, child health and general OPD services, and on utilisation of services from OCMCs
- To examine the effect of COVID-19 on maternal mortality, with estimations of any 'excess mortality' as a result of the pandemic
- To explore the response initiatives undertaken by the Ministry of Health and Population (MoHP) and External Development Partners (EDPs) for the continuation of services in the COVID-19 context.

3. Methodology

A mixed-method approach was used to answer the study objective, with secondary analysis of routine health information systems, qualitative interviews of key stakeholders and telephone surveys of selected facilities.

Study period

The study period was from Falgun 2075 to Bhadra 2077, with Falgun 2076 taken as the cut-off point to distinguish the pre-COVID-19 and COVID-19 periods. The time point was selected for the following reasons: from Falgun 2076, the GoN: requested that programme monitoring be limited; restricted organisation of seminars or meetings with more than 25 participants; and asked for virement of existing regular programme budget to COVID-19 response activities. The whole country was under lockdown for 120 days, from 11 Chaitra 2076 to 7 Shrawan 2077, and long-distance travel, hotels and restaurants were resumed from early Ashoj 2077 (GoN, 2020) .

Data sources and indicators

Data was obtained from five different sources: i) HMIS, ii) MPDSR systems, iii) OCMC systems, iv) FWD/NHSSP monitoring of health facilities via telephone during lockdown, and v) qualitative interviews of key stakeholders.

The number of beneficiaries utilising the health service, timeliness and completeness of reporting were abstracted from HMIS for study via the District Health Information System 2 (DHIS2) platform. The information was aggregated at provincial and national level for analysis. The national-level data was also analysed by type of health facility, which were divided into two categories: i) hospitals (15 beds or more) and ii) peripheral health facilities (Primary Health Care Centres (PHCCs) and health posts). The MPDSR system is implemented in 77 hospitals and 42 districts and captures maternal deaths occurring at community and health institutions. The web-based datasets of MPDSR between Falgun 2075 and Bhadra 2077 was abstracted for the study purpose. The monitoring of health facilities via telephone was initiated on 10 Chaitra 2076. It captured information on availability and accessibility of Reproductive, Maternal, Newborn and Child Health (RMNCH) services, including but not limited to availability of drugs and transport and provision of fever clinics and isolation wards during COVID-19 months from a range of facilities: BCs, BEONC and CEONC sites and referral facilities. The number of beneficiaries utilising OCMC services and the timeliness of reporting were abstracted from the OCMC reporting system. Findings from a recent study – 'Access to OCMC Multi-Sectoral Services during COVID-19 Lockdown: A case study' – have been adapted in the results section on utilisation of OCMC services so as not to duplicate efforts. The indicators (outcome) for the study were selected based on programme and policy priorities for monitoring, i.e., the Nepal Health Sector Strategy, Sustainable Development Goals (SDGs) and Disbursement-linked Indicators (DLIs).

Three sources were used for maternal deaths: HMIS, MPDSR and Open Data Kit (ODK) Application. ODK was recently adopted (Jestha 2077) as an alternative approach for monitoring of CEONC functionality, including maternal and perinatal deaths, during the COVID-19 pandemic. Data for the period of Shrawan 2075 to Bhadra 2077 was available from all three sources. The numbers were triangulated between the sources, with the highest number taken as the final value in case of discrepancy between sources. The data was cleaned and checked for consistency. Outliers were double checked with the reporting facility via telephone and the final dataset was created.

Quantitative data analysis

Data for the study period was abstracted from all sources (HMIS, OCMC, MPDSR and monitoring of facilities during the COVID-19 pandemic) and cleaned. The data was analysed to explore the trends of provision and uptake of selected health services across the country by province and type of facility, using descriptive statistics (percentage) and local polynomial regression in pre-COVID-19 and COVID-19 months. The Epanechnikov function was used for the regression as literature suggests it as the most efficient in minimising the mean integrated squared error (Stata Corp, 2013a). The smoothing curve (local regressions to produce the curve) was constructed with local mean smoothing (0 degree) and rule of thumb was used for bandwidth as it allows a trade-off between fit and variability (Stata Corp, 2013b). The shaded area in polynomial graphs corresponds to the 95 per cent confidence interval of the local polynomial regression. The vertical line is the time point, i.e., Falgun 2076 used as the cut-off point to distinguish pre-COVID-19 and COVID-19 periods.

For all tracer indicators except FP indicators, data was analysed twice. First, all health facilities reporting at least one case or observation over the study period, i.e., Falgun 2075 to Bhadra 2077, were included in the analysis: for example, if a health facility had only one instance of Four Antenatal Care Visits (4ANC) being attended in only a single month over the study period, it would be included. This gave an overall picture as all reporting facilities were included. Secondly, only selected health facilities were analysed for trends: a facility was only included if at least one case was reported for each month throughout the study period. This was done mainly to assess the impact of COVID-19 on functional facilities with continuous reporting as the HMIS does not recognise whether a given facility actually has 'zero' cases or did not report any data. This was also important because lack of reporting from facilities may bias the result and falsely accentuate the impression of a decline in service

utilisation of key indicators. For FP, data was analysed only for all reporting facilities because of the low number of continuously reporting facilities (Appendix Table A-3).

The numbers were aggregated at national level by each month of the study period for analysis of maternal deaths. A local polynomial regression with a smoothing curve was used to plot the average number of deaths per month, similar to service utilisation indicators. The Box-Jenkins Auto Regressive Integrated Moving Average (ARIMA) model was used to estimate the excess maternal deaths by forecasting the maternal deaths after Falgun 2076 in absence of pandemic (Helfenstein, 1996). Stationarity is a major assumption behind ARIMA; thus, the Augmented Dickey-Fuller unit-root test was used to test for stationarity of the monthly series. Partial Autocorrelation Function (PACF) and Autocorrelation Function (ACF) were used to estimate the possible values for the autoregressive and moving average orders. The most parsimonious model was identified through Akaike Information Criterion and Bayesian Information Criterion.

Qualitative data collection and analysis

The semi-structured qualitative interviews were conducted with 14 purposively selected participants (Appendix Table A.2) from government and non-government sectors at federal-, provincial- and local-level health institutions. The interviews were conducted between October and November 2020. This sampling method allowed the study to achieve maximum diversity of participants from different tiers of health institutions. Interviews were audio recorded and conducted via telephone because of the COVID-19 pandemic. Verbal consent was obtained from all participants after describing the study details (objective, study benefits, length of interview, anonymity and confidentiality). The mobile conversation was recorded on the phone and the file was transferred to a password-protected folder on a computer. The interviews were conducted in the Nepali language. The data was transcribed and translated into English before being transferring to Nvivo for coding and analysis.

The interview guidelines were initially developed in the following areas: effect of COVID-19 on routine reporting from health facilities (HMIS, MPDSR, OCMC); effect of pandemic and lockdown on availability and utilisation of key selected health services; and initiatives of MoHP to address the pandemic. Thematic analysis was performed employing a deductive approach.

4. Results

Table 4-1 displays the total number of facilities listed in HMIS and COVID-19 cases per 100,000 as of Bhadra 2077. A total of 8,538 facilities are registered in HMIS, of which 30 per cent are in Bagmati Province and less than 10 per cent are in Sudurpashchim and Karnali provinces. Bagmati and Province 1 recorded the highest and lowest number of COVID-19 cases per 100,000 population respectively as of Bhadra 2077.

Table 4-1: Number of health facilities, population and COVID-19 cases per 100,000 by province

Characteristics	Total number of facilities listed in HMIS as of Bhadra 2077	HMIS projected total population in FY 2076/77	Total number of confirmed COVID-19 cases as of 31 Bhadra 2077	COVID-19 cases per 100,000 as of Bhadra 2077
National	8,538	29,803,732	58,327	196
Province 1	1,255	4,921,498	5,250	107
Province 2	1,167	6,209,507	13,720	221
Bagmati	2,609	6,387,632	17,482	274
Gandaki	880	2,511,136	3,435	137
Lumbini	1,112	5,066,640	8,827	174
Karnali	748	1,796,822	2,973	165
Sudurpashchim	767	2,910,497	6,640	228

The total number of COVID-19 cases in the study period was 58,327 (Table 4-2). The strict nationwide lockdown was introduced from 11 Chaitra 2076 to 7 Shrawan 2077, with the highest number of cases in Province 2 followed by Lumbini during the lockdown period.

Table 4-2: COVID-19 cases in each month of the study period by province

	Magh 2076	Falgun 2076	Chaitra 2076	Baisakh 2077	Jestha 2077	Asar 2077	Shrawan 2077	Bhadra 2077	Total
National	1	0	12	228	5,519	11,417	9,483	31,667	58,327
Province 1	0	0	0	35	336	407	1,296	3,176	5,250
Province 2	0	0	3	93	2,010	2,308	3,211	6,095	13,720
Bagmati	1	0	2	7	200	625	2,023	14,624	17,482
Gandaki	0	0	2	0	198	1,118	509	1,608	3,435
Lumbini	0	0	0	93	1,542	2,452	1,031	3,709	8,827
Karnali	0	0	0	0	982	804	373	814	2,973
Sudurpashchim	0	0	5	0	251	3,703	1,040	1,641	6,640

Appendix **Error! Reference source not found.** displays the number of health facilities included in the s econdary data analysis of HMIS by type of health facility. The number of facilities that reported at least one case in the study period is hereafter referred as 'all reporting facilities' or 'total reporting facilities.' The number of facilities that reported at least one case each month in the study period is hereafter referred as 'selected reporting facilities' or 'continuously reporting facilities'.

4.1 Availability of services

Health facilities were monitored for service availability for the period of Chaitra 2076 to Ashoj 2077. However, this study was restricted from 10 Chaitra 2076 to 7 Jestha 2077, as not all facilities were monitored continuously throughout the study period. The nationwide lockdown was in place during the study period. A total of 16 referral hospitals, 109 CEONC sites and 164 BCs and BEONC sites were monitored over the study period (**Error! Reference source not found.**3).

Table 4-3: Facilities included in monitoring coverage in COVID-19 months until 7 Jestha 2077

Region	Districts	Number of facilities monitored			Number of calls
		Referral	CEONC	BC and BEONC	
Province 1	14	2	25	12	102
Province 2	8	4	11	23	146
Bagmati	12	2	12	13	125
Gandaki	11	1	15	30	74
Lumbini	12	2	18	53	169
Karnali	9	1	12	12	63
Sudurpashchim	9	4	16	21	171
National	75	16	109	164	850

Appendix Figure A.1 shows the availability of ANC services at different levels of facilities during the lockdown period. The proportion of referral hospitals that were closed for ANC services was high across the study period as compared to CEONC sites and BCs/BEONC sites. All CEONC facilities were open after 26 Baisakh 2077 while all the BCs/BEONC facilities were open after 11 Baisakh 2077. This is possibly because CEONC and referral facilities are located in urban areas where there were strict restrictions in movement, resulting in closure of facilities because of absence of human resources, and were dedicated as COVID-19 hospitals or in preparation for the surge in COVID-19 cases.

The opposite was true in the case of delivery services compared to ANC: a high proportion of BCs and BEONC facilities were closed while most referral hospitals and a large proportion of CEONC facilities remained open for delivery services (Appendix Figure A.2). This indicates a potential inequity issue as women living in rural and remote districts were likely to miss out on institutional delivery as there is reliance on BCs and BEONC sites in these regions.

FP services were available in most of the BCs and BEONC facilities for most days while a proportion of referral hospitals (17– 25%) and CEONC facilities (17–60%) were closed for FP services in several days of the study period (Appendix Figure A.3).

None of the monitored referral hospitals reported stockout of drugs at any point in the study (Appendix Figure A.4). There were a few days on which some of the CEONC facilities reported stockout of drugs, ranging from 20 to 60 per cent. However, a high proportion of BCs and BEONC sites reported stockout of drugs after 23 Baisakh 2077 showing the potential impact of restriction in movement, i.e. lockdown.

Except for a single day on 13 Chaitra, ambulance services were available at referral hospitals throughout the study period (Appendix Figure A.5). Likewise, there were only few days on which ambulance services was unavailable in a small proportion of CEONC facilities. On the other hand, in BCs and BEONC facilities, ambulance services were unavailable for several days in a proportion of facilities, ranging from 17 to 80 per cent.

The qualitative findings corroborated the quantitative findings. Many of the participants reported that the health care delivery system was disrupted during the COVID-19 pandemic, mainly because of fear,

stigma, mobility restrictions and lack of emergency health care policies and guidelines. RMNCH services and treatment for communicable and Non-communicable Diseases (NCDs) were thought to have been largely affected at all levels of health facility particularly during the lockdown.

> *"Basic facilities provided from local health centres like immunisation, child health, nutrition, family planning, reproductive, maternal, neonatal and child health services, communicable diseases, and other kinds of services were affected."*
>
> *(Participant from Curative Services Division, Department of Health Services (DoHS))*

Lack of clear communication did not help as participants felt that there was confusion in terms of service provision as well as utilisation. Service users were confused about services that were available at health facilities at the time of lockdown and availability of transportation. Health providers reported disruptions in essential health services, including child immunisation and inpatient and outpatient services at public health facilities, at all levels during the pandemic period.

"Three reasons for delayed service delivery during pandemic were: firstly, there was confusion in what kind of service is being provided at which institutions, and which COVID-19 and non-COVID-19 hospitals are. Another delay was in decision making for service-seeking. The third delay was there due to the transport systems disruptions… about one-third of the health service utility might have decreased."

(Participant from Curative Service Division, DoHS)

Health care providers at provincial and local-level health facilities reflected that the quality and accessibility of health care services during the early phase of the pandemic were somehow ignored. However, there were steps taken to cover gaps in services. For instance, left-out cohorts of children were immunised later.

> *"Even though health workers were ready to provide immunisation services at Palika level, parents thought gathering many children at a time might spread the virus. Immunisation service delivery got interrupted at the beginning 'maximum of two doses' but later we immunised to left-out 'cohorts'."*
>
> *(Participant from Child Health and Immunisation Section, FWD)*

Health care providers were concerned about the disruption of FP services and potential unintended pregnancies in future. There were also concerns around shortage of medicine from peripheral health facilities as well long-term interruption to FP camps.

> *"We had a shortage of Medabon. Many clients had to buy it at a private health center. The number of people opting for IUCD has increased as compared to that of earlier times. We could have distributed condoms to the couples in the community during lockdown but we could not do that. However, we provided family planning counselling services to those who visited the facility."*
>
> *(Participant from PHCC)*

> *"Our main challenge is how to conduct outreach Voluntary Surgical Contraception (VSC) camp, which is one of the most important approaches for reaching many clients for permanent family planning methods."*
>
> *(Participant from FP and Reproductive Health (RH) Section, FWD)*

4.2 Utilisation of services

4.2.1 Antenatal Care (ANC)

Figure 4-1 shows 4ANC visits attended as per protocol in all the reporting facilities by province and type of facility with the smoothing trend. The curve shows decline at the time when lockdown was introduced; however, the trend reverses to pre-COVID-19 levels to a varying degree in different

provinces. In Sudurpashchim, Lumbini and Karnali Provinces, the reversal seems to have already gathered pace, reaching pre-COVID-19 levels, while Bagmati Province, Province 1 and Province 2 remain way below pre-COVID-19 levels. This can be partly explained by the fact that COVID-19 cases are still higher in Bagmati Province and Provinces 1 and 2 (Table 4-2). This is also demonstrated in the monthly rate of change between successive months as there is a sharp decline between Falgun and Chaitra 2076 (31%) while positive momentum is gained in the remaining COVID-19 months (Appendix Table B. 3). When analysed by type of health facility at national level, the decline gradually returns towards pre-COVID-19 levels in peripheral health facilities, while the reversal of trend is slower in hospitals (Figure 4-1). It is important to note that the decline in 4ANC visits attended was sharper in peripheral health facilities than hospitals (Appendix Table B. 3).

Figure 4- 1: Number of 4ANC visits as per protocol in all reporting facilities by province and health facility with smoothing trend (Falgun 2075 to Bhadra 2077)

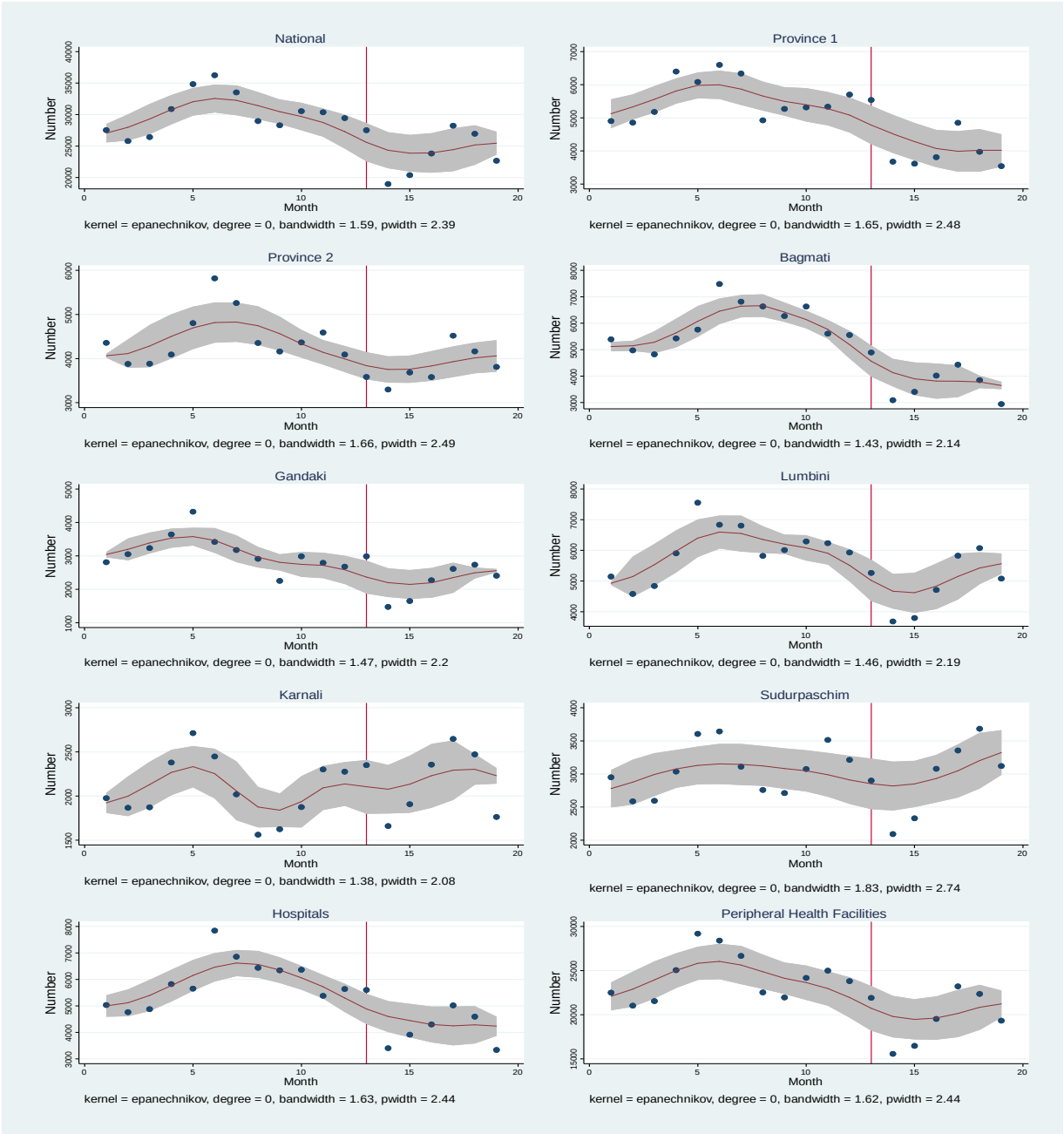
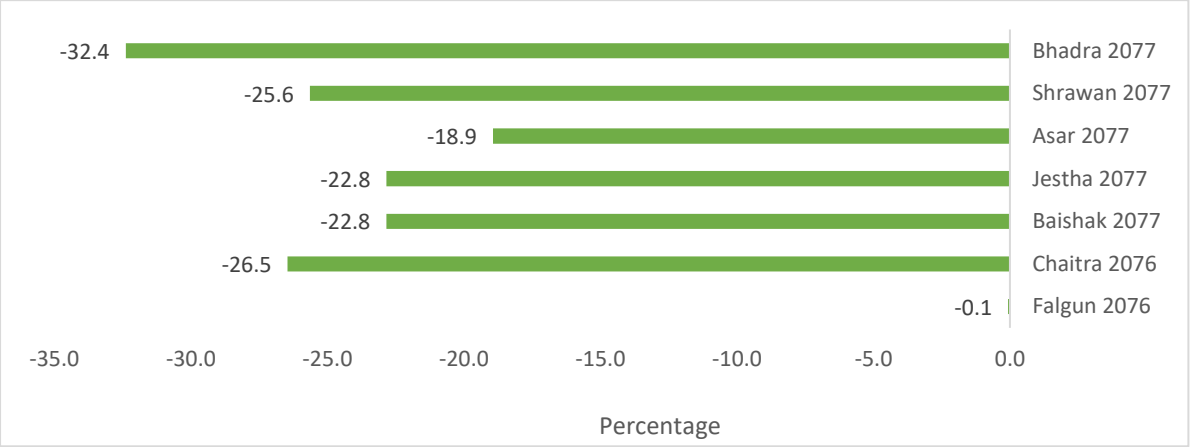


Figure 4-2 displays the difference in 4ANC attendance between the COVID-19 period and the same months of the previous year from all reporting facilities at national level. All months in the COVID-19 period had consistently lower 4ANC attendance. The biggest difference was observed for the month of Bhadra 2077 (32%), followed by Chaitra 2076 (26%) and Shrawan 2077 (25%). However, it is important to note that the HMIS data for Shrawan and Bhadra is not yet locked, which means that reported numbers could change.

Figure 4- 2: Difference in 4ANC attendance between COVID-19 months and same months of previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)



The trend for continuously reporting facilities was similar to all facilities except that the return to pre-COVID-19 levels could clearly be seen gathering pace in a greater number of provinces (Province 1, Province 2 and Gandaki Province), with the exception of Bagmati Province (Appendix Figure B.1). This is not surprising given that the second wave of COVID-19 has hit Bagmati Province particularly hard and the Kathmandu Valley the hardest. Karnali Province is performing even better than pre-COVID-19 levels. This is likely to be because the low number of COVID-19 cases has contributed to early resumption of services compared to other provinces. The polynomial regression smoothing curve for 4ANC attendance in continuously reporting hospitals revealed a slightly different picture than for all reporting hospitals as the decline was only for two months, with the average quickly climbing back towards pre-COVID-19 levels (Appendix Figure B.1 and Figure 4.1). In peripheral health facilities, the opposite was true as reversal towards pre-COVID-19 levels in continuously reporting facilities was a bit slow compared to all reporting peripheral facilities.

Although lower in the COVID-19 period, the difference 4ANC attendance between COVID-19 months and the same months from the previous year was not wide among selected facilities as compared to all reporting facilities (Figure 4-2). Chaitra 2076 had the largest reduction as compared to Chaitra 2075 (29%) with the numbers picking up in Asar 2077 (17% lower compared to Asar 2076) and Shrawan 2077 (17% lower compared to Shrawan 2076) (Appendix Table B.5).

4.2.2 Institutional Delivery

Unlike 4ANC attendance, the return to pre-COVID-19 levels of institutional delivery in all reporting facilities seems to be sharper at national level as well as in all provinces (Figure 4-3). In fact, at national level and in some of the provinces (Provinces 1 and 2, Sudurpashchim and Karnali) the average is higher than pre-COVID-19 levels, with an immediate bounce back after a dip of a couple of months. When analysed by type of health facility, the number of institutional deliveries in all reporting hospitals and peripheral health facilities returns to pre-COVID-19 levels with an increase in the average (Figure 4-3). In both cases the average is pulled downward by the number of institutional deliveries in Bhadra 2077, which is still being reported by facilities (Figure 4-3 and Appendix Table C.1).

Figure 4- 3: Number of institutional deliveries in all reporting facilities by province with smoothing trend (Falgun 2075 to Bhadra 2077)

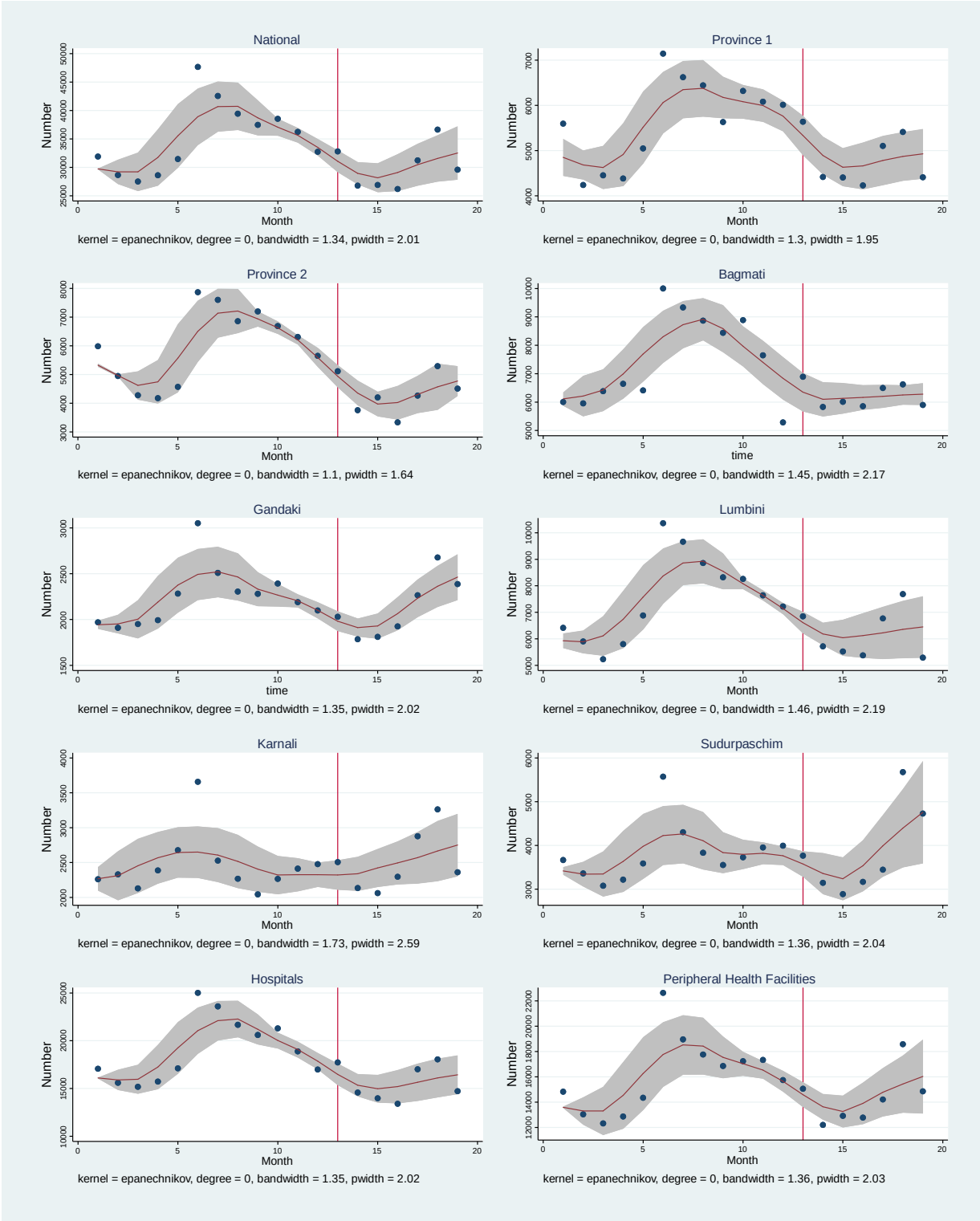
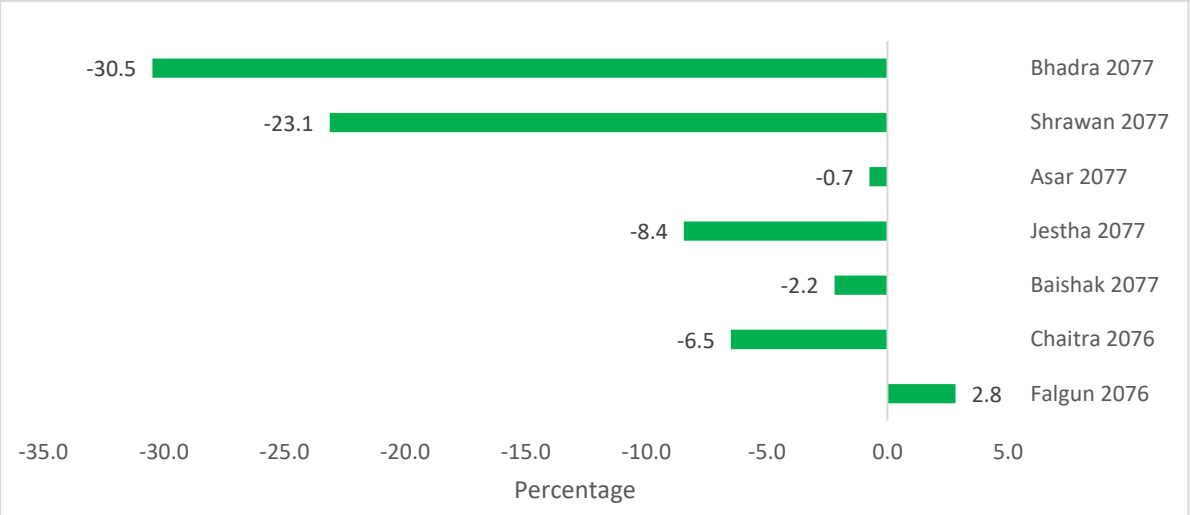


Figure 4-4 displays the percentage difference in the number of institutional deliveries between COVID-19 months and the same months of the previous year from all reporting facilities at national level. All COVID-19 months had a consistently lower number of institutional deliveries. The biggest differences were observed for the month of Bhadra 2077 (30%) and Shrawan 2077 (23%). However, as for 4ANC

attendance, the numbers for Shrawan and Bhadra will likely change given that several facilities continue to report.

Figure 4- 4: Difference in number of institutional deliveries between COVID-19 months and same months of previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)



Appendix Figure C.1 shows the number of institutional deliveries by province in continuously reporting facilities. The pattern is similar to all reporting facilities as the average is already past pre-COVID-19 levels at the national and provincial level, except in Bagmati and Gandaki Provinces, where the average is still below pre-COVID-19 levels. When examined among continuously reporting facilities, there was a sharp reversal of trend in the number of institutional deliveries towards pre-COVID-19 level by type of health facility, with the average almost equal or nearly equal to pre-COVID-19 levels (Appendix Figure C.1).

The difference in institutional deliveries conducted between COVID-19 months and the same months of the previous year was widest for the first three months: Chaitra 2076 (8.7% lower compared to Chaitra 2075), Baisakh (6.9% lower) and Jestha 2077 (8.4% lower) (Table C.5). After the initial decline, the difference gradually tapered, with a difference of 2.8 per cent in Bhadra 2077 as compared to Bhadra 2076.

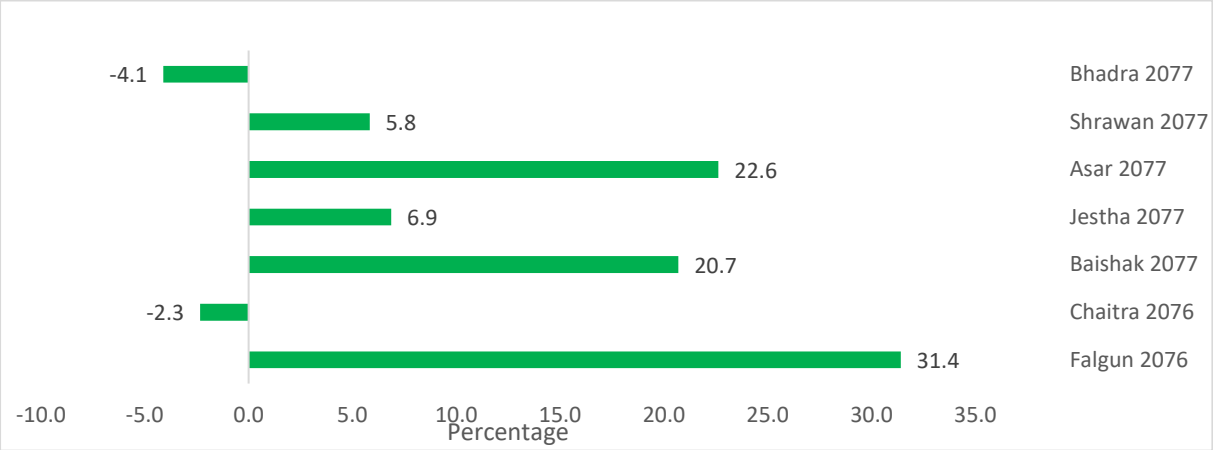
4.2.3 Postnatal Care (PNC)

Appendix Figure D.1 shows the number of PNC visits as per protocol in all reporting facilities by province with the smoothing trend. Compared to 4ANC attendance and institutional delivery, there was a smaller decline in the number of PNC visits after Falgun 2076 with the average well past the pre-COVID-19 average in Bhadra 2077. The pattern of decline and increase in COVID-19 months in Gandaki, Lumbini and Sudurpashchim Provinces was similar to the national level. In Province 1 and Karnali, the decline after lockdown was even smaller, with a subsequent increase in the following few months taking the curve above pre-COVID-19 levels (Appendix Table D.3). The sharpest decline was observed in Bagmati Province in the first month post lockdown (32% lower than Falgun 2076) (Appendix Table D.3). Although there was decrease in the number of PNC visits in hospitals, the decline was not as sharp as observed in the case of 4ANC attendance and institutional delivery in all reporting hospitals when analysed by type of health facility (Appendix Figure D.1). The trend returned above pre-COVID-19 levels in the month of Bhadra 2077, even for peripheral health facilities.

Except for Chaitra 2076 (2.3% lower) and Bhadra 2077 (4.1% lower), all other COVID-19 months had higher numbers of PNC visits as compared to the same month from the previous FY when analysed for

all reporting facilities at national level (Figure 4-5). On a closer look, the data showed that the decline was higher in peripheral health facilities than in hospitals for Chaitra 2076. No consistent pattern emerged when examined by province, demonstrating potential issues with the data, particularly in Province 1 (Appendix Table D.2).

Figure 4- 5: Difference in number of PNC visits between COVID-19 months and same months of previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)



Except for Bagmati Province, the pattern stayed the same with an initial decline for the first few COVID-19 months, gradually increasing to higher than the pre-COVID-19 level average in continuously reporting facilities (Appendix Figure D.2). The overall pattern for number of PNC visits in selected facilities looked similar to all facilities when disaggregated by type of health facility (Appendix Figure D.2). However, the low number of PNC cases for selected continuously reporting facilities meant that it was hard to draw a direct comparison with all reporting facilities.

The difference in number of PNC visits in selected continuously reporting facilities was similar to the pattern that was observed at national level for all facilities, with a decline in the first month by 7.8 per cent in Chaitra 2076 as compared to Chaitra 2075 (Table D.5). The decline was seven per cent in hospitals as well as peripheral health facilities. Noticeably, the lower percentage of PNC visits continued for at least two more months in peripheral health facilities. There was no clear pattern when analysed by province as the numbers were better for COVID-19 months in Bagmati and Gandaki, while fluctuating in other provinces (Appendix Table D.5).

Although the quantitative data does not reveal the full picture of who did not attend services, participants from the qualitative study were concerned that people with poor socioeconomic backgrounds, health illiteracy and living in difficult geographical territory were severely affected in terms of health service accessibility and affordability. Further, people suffering from chronic health conditions were deprived of regular health services. Patients had to bear an unnecessary financial burden because of mandatory Polymerase Chain Reaction (PCR) tests. Moreover, irregularities in health service provision and poor awareness among the public about the availability of services during the COVID-19 pandemic had affected the health service utilisation.

> *"I think people with financial difficulties were affected. Those who could afford went to private health institutions to seek the services. Recently, when PCR results were demanded, more than 500 patients paid 2,000 NPR [Nepalese Rupees] and sought the testing from private hospital."*
>
> *(Participant from PHCC)*

"Some patients are aware that they should get regular check-ups else the condition might worsen. So, they visit the facilities regularly. But those who are unaware, come to hospitals once their health condition is beyond their control… those who have life-threatening disease… around 75 to 80 per cent, patients with NCDs: blood pressure, diabetes, mental health, etc. those who do not have any deterring signs are awaiting to seek facilities."

(Participant from Curative Services Division, DoHS)

4.2.4 Family Planning

Table 4-4 displays the modern Contraceptive Prevalence Rate (mCPR) for the last three FYs by province. There has been a marginal decline in the mCPR nationally from 39.6 per cent in FY 2075/76 to 38 per cent in FY 2076/77. The only province with noticeable decline is Lumbini, where mCPR declined by 5.6 percentage points.

Table 4-4: mCPR by province (FY 2074/75 to FY 2076/77) (%)

Region	FY 2074/75	FY 2075/76	FY 2076/77
Province 1	42.3	40.7	40.3
Province 2	46.9	46.7	44.4
Bagmati	36.2	32.5	32.1
Gandaki	32.7	34.3	33.4
Lumbini	40.8	43.3	37.7
Karnali	34.5	35.5	36.1
Sudurpashchim	39.0	38.6	38.6
National	40.0	39.6	38.0

Appendix Figure E.1 shows the number of permanent sterilisation procedures performed in all reporting facilities by province and type of facility. Nationally, the average number of permanent sterilisations performed was found to be declining, with a noticeable decline in the first and second COVID-19 months (Chaitra 2076 and Baisakh 2077). The average was declining by province as well as health facility. It was well below the pre-COVID-19 level. However, the numbers jumped quite a bit, resulting in a wide confidence interval. The number of permanent sterilisation procedures performed in the first COVID-19 month, i.e., Chaitra 2076, was higher than Chaitra 2075 (Appendix Table E.2). The numbers for rest of the COVID-19 months were lower, by 93 per cent in Baisakh 2077 to 36 per cent in Jestha 2077. There was a positive gain (84%) in the number of procedures in hospitals in Chaitra 2076 compared to Chaitra 2075.

At national level, although there was an initial decline, it was relatively smaller (30.7% in Chaitra 2076) compared to permanent sterilisation (Appendix Figure E.2). In the final month of the study period, i.e., Bhadra 2077, there was an abrupt increase in the number of IUCD users, pulling the average line higher. When examined by province, there was no overall pattern as there was fluctuation of data between months. For example, in Province 1 there was an increase in the number of IUCD users in the first three COVID-19 months, after which the number sharply dropped for the next three months. On the other hand, in Sudurpashchim Province, the average declined for the first three months, gradually picking up in the last four COVID-19 months. There was no noticeable impact of COVID-19 in hospitals as the average line was largely linear, while there was marginal decline in new IUCD users in peripheral health facilities for the first couple of months. The number of new IUCD users in COVID-19 months was consistently lower compared to the same months of the previous year except for Bhadra 2077, where there was an increase of 357 per cent (Appendix Table E.5). This increase was observed in Sudurpashchim hospitals (Appendix Table E.5).

The number of new implant users declined for the first two COVID-19 months, after which the average line returned to pre-COVID-19 level at the national level (Appendix Figure E.3). There was no overall pattern for provinces as the average continued to decline for some in COVID-19 months (Provinces 1 and 2) while the trend returns towards pre COVID-19 levels in Sudurpashchim and Bagmati. When analysed by health facility, the large decline in number of new implant users was noticeable in peripheral health facilities but only marginal in hospitals. Similar to IUCDs, the numbers of new implant users in COVID-19 months were consistently lower compared to the same months of the previous year, except for Bhadra 2077, in which there was an increase in implant users of 832 per cent (Table E.8). This increase was largely observed in hospitals of Bagmati Province (Appendix Table E.8).

Appendix Figure E.4 displays the number of new Depo-Provera users in all reporting facilities by province and health facility. The average was largely linear, with only a marginal decline in the first few COVID-19 months, after which the average went back to pre-COVID-19 level at national level. The pattern was similar for Province 1 and Lumbini Province. There was a sharp increase in the number of Depo-Provera users in Sudurpashchim and Karnali after an initial drop for the first few months. In Province 2, there was an overall decline in the number of Depo-Provera users in the COVID-19 period, while the trend was higher or similar to pre-COVID-19 levels in Bagmati and Gandaki. A sharp decline in the number of new Depo-Provera users following COVID-19 was observed in hospitals, while the decline was small in peripheral health facilities. At national level, the numbers of new Depo-Provera users were lower in COVID-19 months when compared to the same months of the previous year for the first three months. There was an increase in new Depo-Provera users in Jestha 2077 as compared to 2076 but the numbers declined by 38 per cent in Asar 2077. This decline was largely observed in peripheral health facilities in Lumbini Province (Appendix Table E.11).

The average number of new OCP users just before and during COVID-19 was largely linear at national level and for Lumbini Province (Appendix Figure E.5). In Provinces 1 and 2, there was a decline in the number of new OCP users for the first month of COVID-19, after which it returned to pre-COVID-19 level only to decline again in the last two months of the study period. On the other hand, in Bagmati, Sudurpashchim and Karnali Provinces, there was a slight increase in the average number of new OCP users in the COVID-19 months. However, as with other contraceptives there was a lot of fluctuation in the data. The numbers of OCP users were lower in the first two COVID-19 months as compared to the same months of the previous year, after which there was an increase of 25 per cent in Baisakh and Jestha 2077 (Appendix Figure E.14). There was a 38 per cent decline in Asar 2077, after which there was no further decline.

The average number of condoms distributed was largely linear just before and during COVID-19 months at national level and for Gandaki Province (Appendix Figure E.6). There was a decline in number of condoms distributed across all provinces for the first COVID-19 month, although the percentage of decline varied largely. In Province 2 and Bagmati, the overall average for condoms distributed in COVID-19 months was declining, while it increased to pre-COVID-19 levels or higher in Karnali and Sudurpashchim Provinces. By type of facility, the decline in the first COVID-19 month was largely observed in hospitals and less in peripheral health facilities. The numbers of condoms distributed in COVID-19 months were lower for COVID-19 months when compared to the same months of the previous year. The percentage ranged from 38 per cent in Asar 2077 to 9 per cent in Shrawan 2077 (Appendix Table E.17).

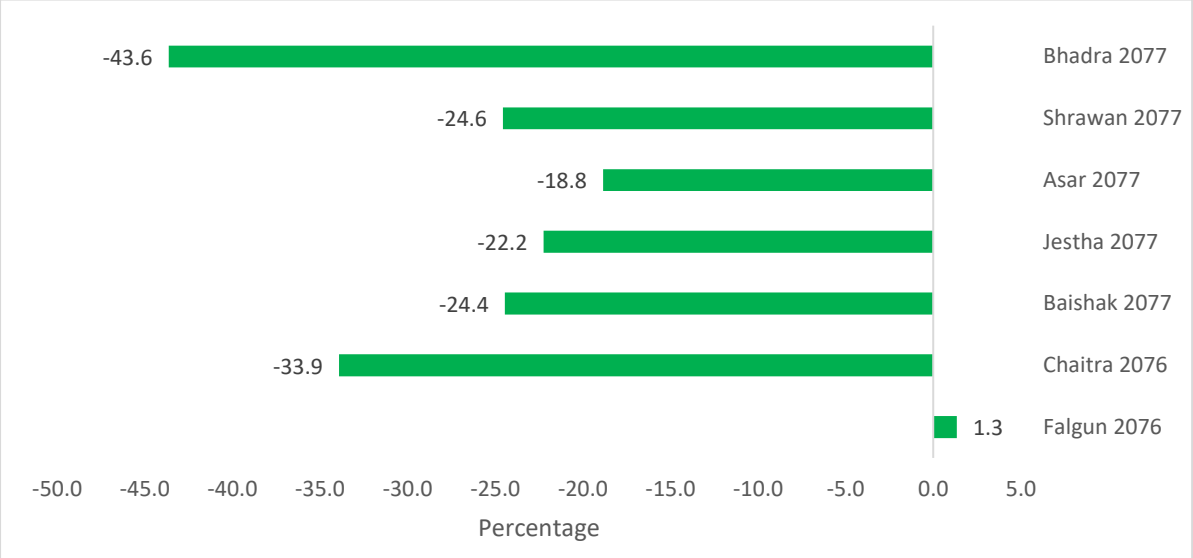
4.2.5 Safe Abortion Services

The number of abortions performed in all reporting facilities sharply declined at national and province level in the first COVID-19 month (36% in Chaitra 2076). The numbers have not returned to pre-COVID-19 averages in any province except Sudurpashchim, where the number from Shrawan 2077 was an outlier that pulled up the average (Appendix Figure F-1 and Appendix Table F.1). When analysed by

type of facility, the trend showed that the decline was greater in hospitals than peripheral health facilities (43% vs 34%) for the first COVID-19 month. The numbers are still well below pre-COVID-19 levels, suggesting that abortion services have been severely impacted in COVID-19 months.

The percentage difference in the number of abortion services performed was consistently negative for COVID-19 months compared to the same months of the previous year at national level for all reporting facilities (Appendix Figure 4-6). The difference was 34 per cent for Chaitra 2076, gradually improving over the next several months. When examined by type of facility, there was a sharp decline at hospitals in Chaitra 2076 of 39 per cent. This reduced to nine per cent in Baisakh 2077 and then slowly widened over the next couple of months. In peripheral health facilities, the difference was 20 per cent or higher for all COVID-19 months. By province, the difference was lowest in Lumbini (13%) followed by Gandaki (27%) and Karnali (31%) for the month of Chaitra 2076. The difference was 40 per cent or more for other provinces (Province 1, Province 2, Bagmati and Sudurpashchim).

Figure 4- 6: Difference in number of abortions performed between COVID-19 months and the same months of the previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)



Appendix Figure F.2 displays the number of abortions performed in continuously reporting health facilities by province. Although the trend was suggestive of a decline at national level, the numbers fluctuated in COVID-19 months. The trend was declining and well below pre-COVID-19 levels in Bagmati and Lumbini Province, while the average had returned to pre-COVID-19 levels in Sudurpashchim, Gandaki, Karnali and Province 1. The number of abortions performed in hospitals dropped sharply in the first month as compared to peripheral health facilities (35% vs 24%) (Figure F.2). There was a positive gain in the next month, followed by a decline in the fourth COVID-19 month when limited to hospitals. There was a sharp increase in the number of abortions performed for both hospitals and peripheral health facilities in Shrawan 2077 (Appendix Table F.6).

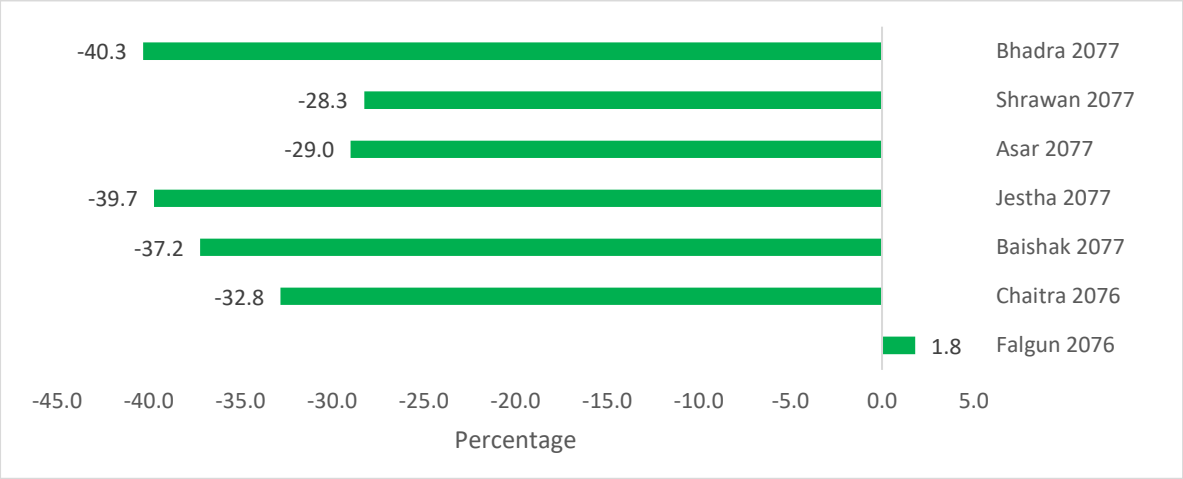
The pattern of difference in abortion services performed in continuously reporting facilities for the same month from the previous year was largely similar to all reporting facilities at national level and by type of health facility (Appendix Table F.5). The numbers of abortions performed in COVID-19 months increased in Province 1 compared to the same months of the previous year, while it declined in all other provinces at least for the first few months in continuously reporting facilities (Appendix Table F.5).

4.2.6 Childhood Diarrhoea

There was no large noticeable effect of COVID-19 lockdown on the number of children presenting for diarrhoea at national and province level (Appendix Figure G.1). The number of cases spiked for Province 1, Bagmati and Gandaki at the time of lockdown and then slightly declined below pre-COVID-19 levels in Bagmati and Province 1. Overall, the trend was visibly bimodal (two peaks) in Bagmati, Gandaki and Karnali, while the trend plateaued to low numbers in Sudurpashchim, Lumbini, Province 1 and Province 2. Overall, the number of children presenting with diarrhoea at hospital showed a declining trend (Appendix Figure G.1). There was no noticeable shift in numbers around lockdown period for peripheral health facilities. It is important to note here that majority of children presented in peripheral health facilities rather than hospitals (Appendix Table G.2).

The difference in numbers of children presenting with diarrhoea between COVID-19 months and the same months of the previous year consistently declined for all provinces and months, except Falgun 2076 (Figure 4-7 and Appendix Table G.2). It varied by province a high of 53 per cent for Province 1 in Baisakh 2077 to a low of 17 per cent for Karnali in Shrawan 2077.

Figure 4- 7: Difference in number of children presenting with diarrhoea between COVID-19 months and same months of previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)



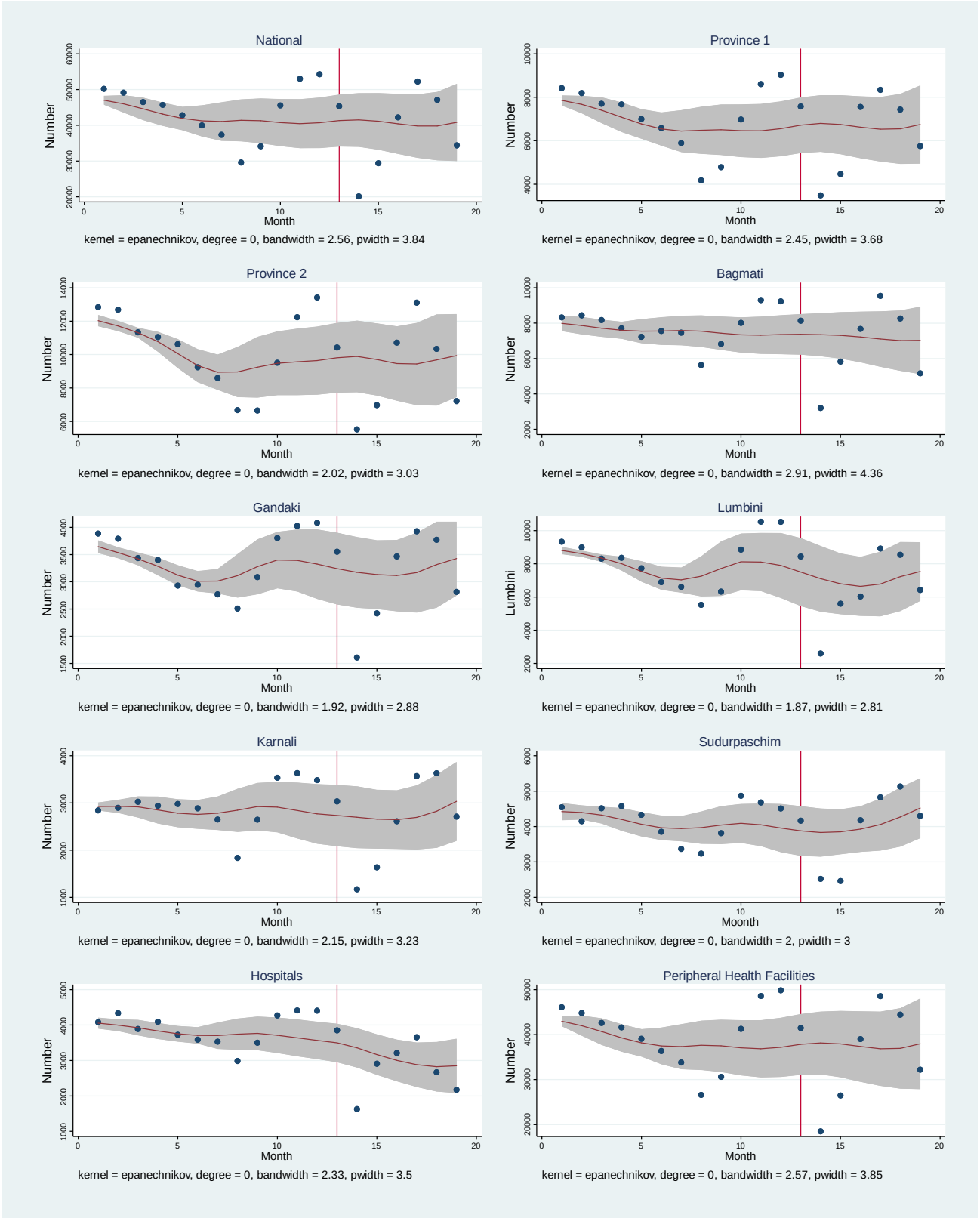
The declining trend was evident at national and province level, even for continuously reporting facilities (Appendix Figure G.2). There was no noticeable shift in number of children presenting with diarrhoea during or after lockdown, except in Province 1, where there was a comparatively greater decline for the first few months. The declining trend seen for all reporting hospitals was observed even for continuously reporting hospitals, with a sharp increase in the number of children presenting with diarrhoea at the time of lockdown, after which it declined. However, this needs to be interpreted with caution as the figures reported in HMIS during the study period might change over time as facilities are still reporting cases managed in the previous months. The declining trend in number of children presenting with diarrhoea was further confirmed as the differences between COVID-19 months and the same months of the previous year consistently declined for all months and provinces (Appendix Table G.5).

4.2.7 Immunisation

The polynomial regression line suggests that there was a sharp decline in the number of children immunised with three doses of the combined Diphtheria, Tetanus Toxoid and Pertussis vaccine (DPT) between Chaitra 2076 and Baisakh 2077, with a reversal of trend over the next few months as it jumped back to pre-COVID-19 level (Figure 4-8). The pattern was similar by province as well as by type

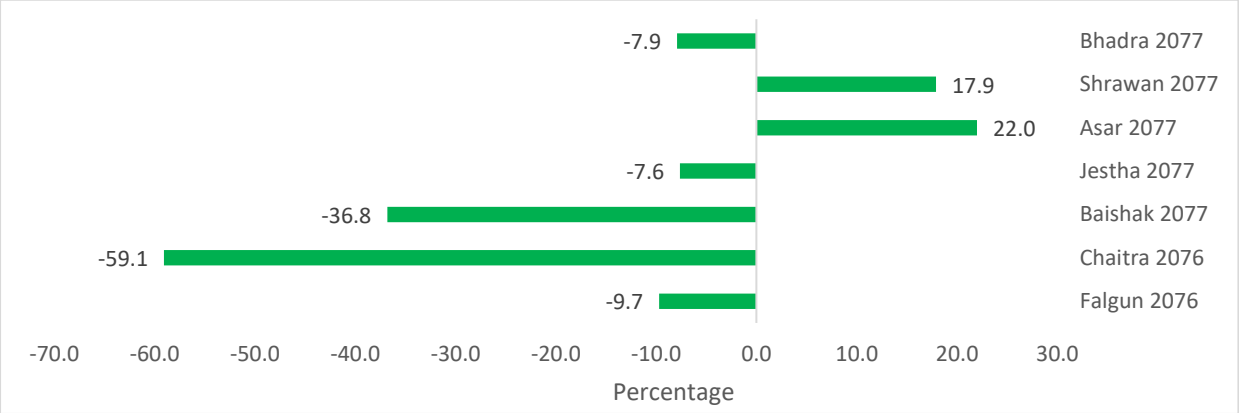
of facility (Figure 4-8). The wide confidence interval in some of the provinces and by type of health facility showed the fluctuation of the numbers just before and during the COVID-19 months.

Figure 4- 8: Number of children immunised for DPT3 in all reporting facilities by province (Falgun 2075 to Bhadra 2077)



The number of children immunised for DPT3 in COVID-19 months was lower when compared to the same months of the previous year for the first few months (Falgun 2076, 9.7%; Chaitra 2076, 59.1%; Baisakh 2077, 36.8%; and Jestha 2077, 7.6%) (Figure 4-9). There was a positive gain in Asar 2077 (22%) and Shrawan 2077 (17.9%), with a slight decline in Bhadra 2077 (7.9%). When examined by type of health facility, the number of children immunised for DPT3 in hospitals was lower for all COVID-19 months. However, in peripheral health facilities, the difference was lower in the first four months of COVID-19, after which the difference was positive for COVID-19 months, showing an increase in number of children immunised as compared to the previous year (Appendix Table H.2).

Figure 4- 9: Difference in number of children immunised for DPT3 between COVID-19 months and same month of previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)



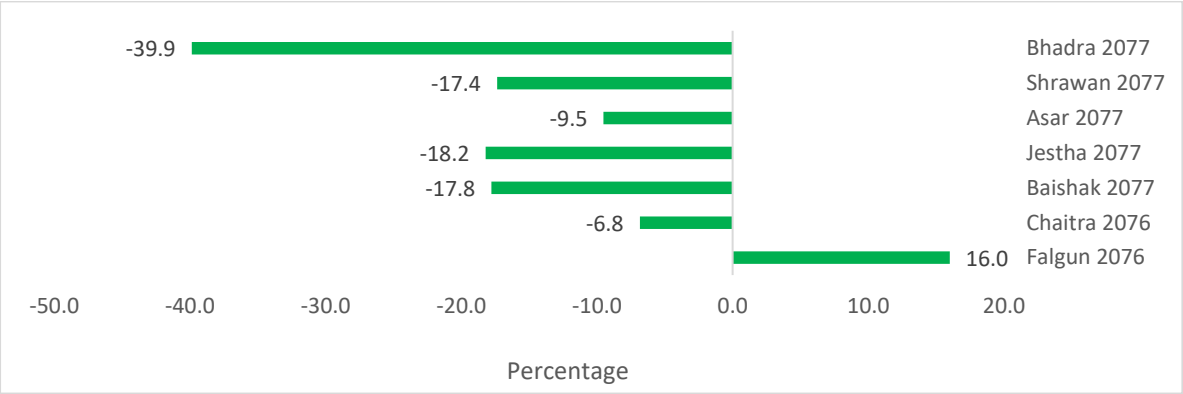
When analysed among continuously reporting facilities, the figure showed a slightly declining average (Appendix Figure H.1). The number of children immunised with DPT3 vaccine dropped sharply for the first month (Chaitra 2076) and then returned to pre-COVID-19 level in the next few months. The pattern was similar by province and type of facility. The difference in the numbers of children immunised for DPT3 between COVID-19 months and the same months of the previous year in continuously reporting facilities showed that the numbers had declined for the first two to three months, after which there was an increase during COVID-19 months (Asar and Shrawan 2077) across all provinces and health facilities (Appendix Table H.5).

4.2.8 OPD visit

Appendix Figure I.1 displays the number of OPD visits in all reporting facilities by province with smoothing trend. There is a slight decline in the number of OPD visits in the first couple of months at national level and for some of the provinces. The numbers are back to pre-COVID-19 levels for Karnali, Sudurpashchim, Gandaki and Lumbini Provinces, while in Bagmati the average is well below pre-COVID-19 levels. This is probably indicative of the fact that Bagmati Province has the highest number of COVID-19 cases (Table 4-2). The number of OPD visits in hospitals declined sharply following COVID-19 lockdown and are yet to return to pre-COVID-19 levels. The decline was also observed in peripheral health facilities, but it was not as high as in hospitals: there was a 60.7 per cent decline between Falgun and Chaitra 2076 in hospitals compared to a 10 per cent decline in peripheral health facilities over the same period (Appendix Table I.3)

The number of OPD visits was lower for most COVID-19 months as compared to the same month of the previous year for all provinces and types of health facility (Figure 4-10). The largest decline was observed for the months of Baisakh, Jestha and Bhadra 2077. The decline was smaller in peripheral health facilities than in hospitals for all COVID-19 months.

Figure 4- 10: Difference in number of OPD visits between COVID-19 months and same month of previous year in all reporting facilities (Falgun 2076 to Bhadra 2077)

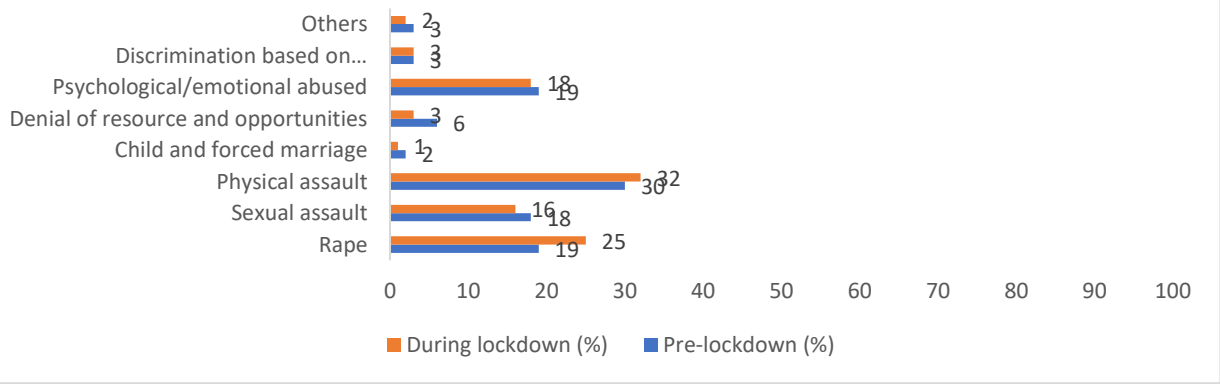


The trend in the number of OPD visits in continuously reporting facilities showed a pattern similar to that for all reporting facilities as there was slight decline for the first few months, gradually returning to pre-COVID-19 levels in all provinces (Appendix Figure I.2). The fluctuation in the number of cases meant that the confidence interval was wide at national level as well as for some of the provinces (Province 2, Lumbini, Karnali and Sudurpashchim). A sharp decline in number of OPD visits was observed for hospitals immediately following the lockdown, with the average still well below pre-COVID-19 levels. The decline was small in the case of peripheral health facilities, with the average returning towards pre COVID-19 levels. When limited to selected reporting facilities, the pattern for difference in number of OPD visits was similar to that for all reporting facilities, with a decline observed across all provinces and types of health facility (Appendix Table I.5). However, the percentage decline for selected continuously reporting hospitals was greater than for all hospitals.

4.2.9 OCMC services

For OCMCs, Magh and Falgun 2076 were considered as pre-lockdown and Chaitra 2076, Baisakh 2077 and Jestha 2077 were considered as the early lockdown period. A total of 1,411 cases were registered at the 58 OCMCs in the pre-lockdown period, while 1,516 cases were registered in the early lockdown period (MoHP, 2020). The average monthly number of clients in pre COVID-19 months was 505.3, while it was 705 in COVID-19 months. The number of rape cases and physical assaults increased during lockdown as compared to the pre-lockdown period (Figure 4-11).

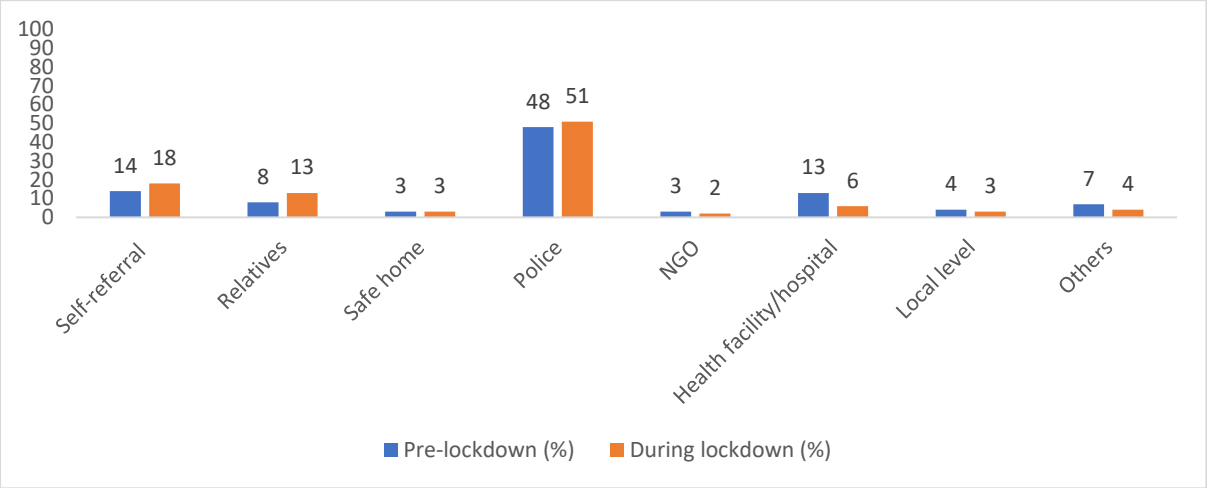
Figure 4- 11: Average monthly number of OCMC clients by type of violence in pre COVID-19 and COVID-19 months



Source: MoHP/NHSSP, 2020. Access to OCMC Multisectoral Services during COVID-19: A Case Study (not published)

The number of clients referred to OCMCs by the police increased by three percentage points (48% to 51%), by self-referral by four percentage points (14% to 18%) and by relatives by five percentage points (8% to 13%). However, the percentage referred by health facilities declined by seven percentage points (13% to 6%). This likely reflects the reduced access to and use of health services during lockdown as demonstrated for other indicators. The fact that several OCMC-based hospitals became designated COVID-19 hospitals may have to some extent created additional barriers for survivors to seek help (Government of Nepal, 2020).

Figure 4- 12: Referral route of clients to OCMCs pre-lockdown and during lockdown (%)



Despite the extensive dissemination of information about OCMC services through various media, OCMC services were affected by the COVID-19 lockdown. Disruption to transportation, mandatory paid-for PCR testing for hospital admission of victims, poor referral mechanisms, inadequate training among concerned staff, delays in timely reporting and case registration for legal action, poor arrangement of COVID-19 preventive measures at safe homes, and delayed medico-legal evidence collection presented major issues in delivering complete OCMC services during the COVID-19 pandemic. However, health services under OCMCs in hospital settings were kept as a priority and several cases were managed during the lockdown period. Hospitals have played a proactive role in operating OCMC services during the pandemic. Moreover, poor ownership of the OCMC mechanism among multiple service providers and the absence of OCMC service delivery protocols for emergency situations were further impeding factors for the effective functioning of the OCMC mechanism during the pandemic.

> *"We have had cases about child abuse who was 9–10 years old, few cases about family-level conflicts. Most recurring cases at OCMC are domestic violence among women, sexual abuse. We actively search for the clients who come for in-service… We have had quite a difficulty with the referral mechanism. None were ready to take patients. None took the patients from province level at Kathmandu, they demanded a PCR test result."*
>
> *(Participant from Provincial Hospital)*

> *"There should be a regular review of OCMC services and information during the pandemic, and the gap should be identified… The way the government has planned for the referral mechanism, they should orient and train the workers accordingly."*
>
> *(Participant from EDP)*

4.3 Maternal death

A total of 548 maternal deaths were reported from 273 health facilities from Shrawan 2075 to Bhadra 2077, of which 153 maternal deaths were in COVID-19 months (Chaitra 2076 to Bhadra 2077). The deaths were in 69 districts and all provinces. The same period of the previous year (Chaitra 2075 to Bhadra 2076) recorded 104 deaths. The local polynomial regression line showed an increasing trend, with a higher number of deaths in Asar, Shrawan and Bhadra 2077 (Figure 4-13).

Figure 4- 13: Number of maternal deaths at national level with smoothing curve (Asar 2075 to Shrawan 2077)

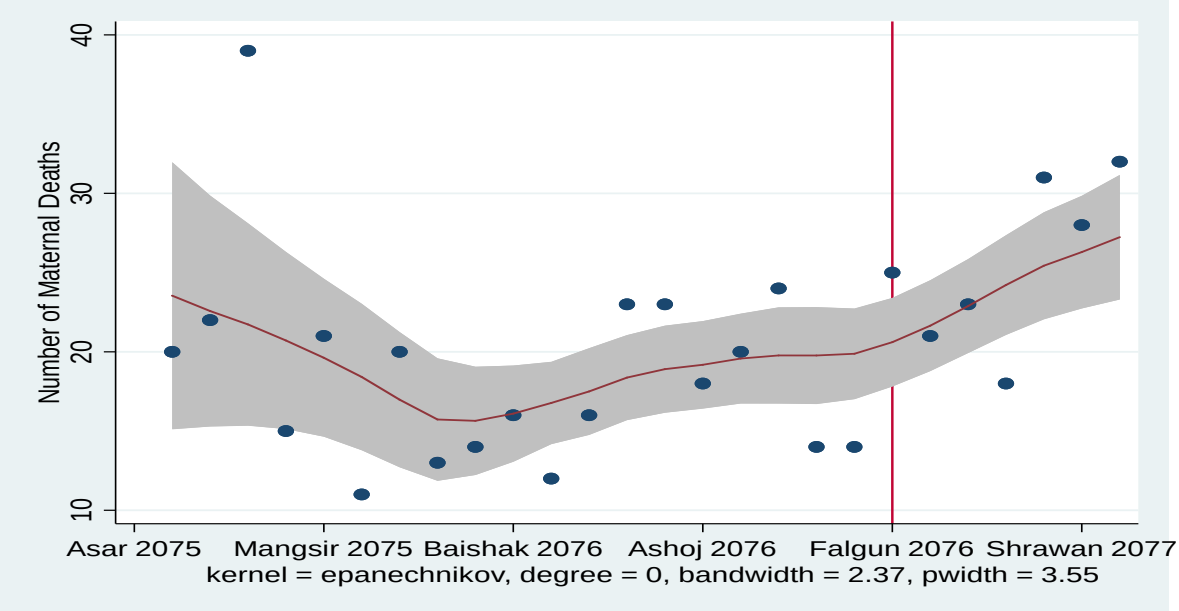


Table 4-5 displays the predicted and observed number of maternal deaths in COVID-19 months. The preliminary estimate suggests that there were 47 excess deaths in COVID-19 months, with an average of seven additional maternal deaths in each COVID-19 month. However, the model needs further work as the R-squared value was low (34%). The next steps are to refine the model with additional time points and, if possible and available, using additional variables to improve the model.

Table 4-5: Predicted and observed number of maternal deaths in the COVID-19 period

Months	Predicted	Observed	Excess
Falgun 2076	17.9	25	7.1
Chaitra 2076	18.2	21	2.8
Baisakh 2077	18.4	23	4.6
Jestha 2077	18.7	18	-0.7
Asar 2077	18.9	31	12.1
Shrawan 2077	19.2	28	8.8
Bhadra 2077	19.4	32	12.6
National	**130.7**	**178**	**47.3**

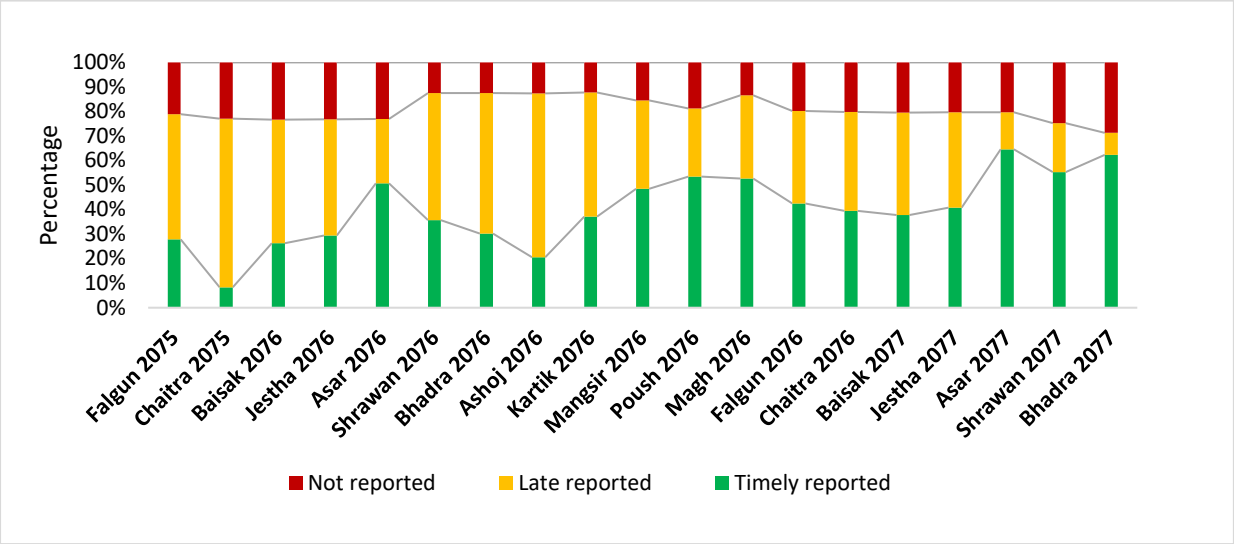
4.4 Functioning of Reporting System in COVID-19 months

This section discusses the functioning of three systems (HMIS, MPDSR and OCMC) in COVID-19 months using secondary data and qualitative interviews.

4.4.1 HMIS

The timeliness of reporting status has improved over time (Figure 4-14). Although there was a small decline in the timeliness of reporting in the first few COVID-19 months, it immediately returned to pre-COVID-19 level. There was a small increase in the percentage of total facilities not reporting at the end of the study period.

Figure 4- 14: HMIS reporting status by timeliness and final reporting status



Qualitative data reconfirmed our quantitative findings as participants suggested that despite some difficulties as a result of fear of COVID-19 transmission during the initial stages, there were no substantial obstructions in the functioning of HMIS. Virtual coordination via Skype/Zoom meetings was used extensively to allow the timely operation of HMIS throughout all provinces. However, poor accessibility of internet facilities and inadequate skill in operating computer software were identified as barriers to the smooth operation of HMIS in rural health facilities. Participants from the provincial level also stated that the recording of data was not maintained on paper, which further delayed or resulted in incomplete reporting.

> *"At the beginning, recording and reporting systems were quite in chaos. Staff from the recording section feared of papers. So, they didn't touch one. Because of that file remained as it is. There were no written notes, just an oral conversation. Because of that, there was incompleteness, which made quite a difficulty for record keepers. There was a delay in reporting. Because of fear of COVID-19, files were left intact for like two to three months."*
>
> *(Participant from Provincial Hospital)*

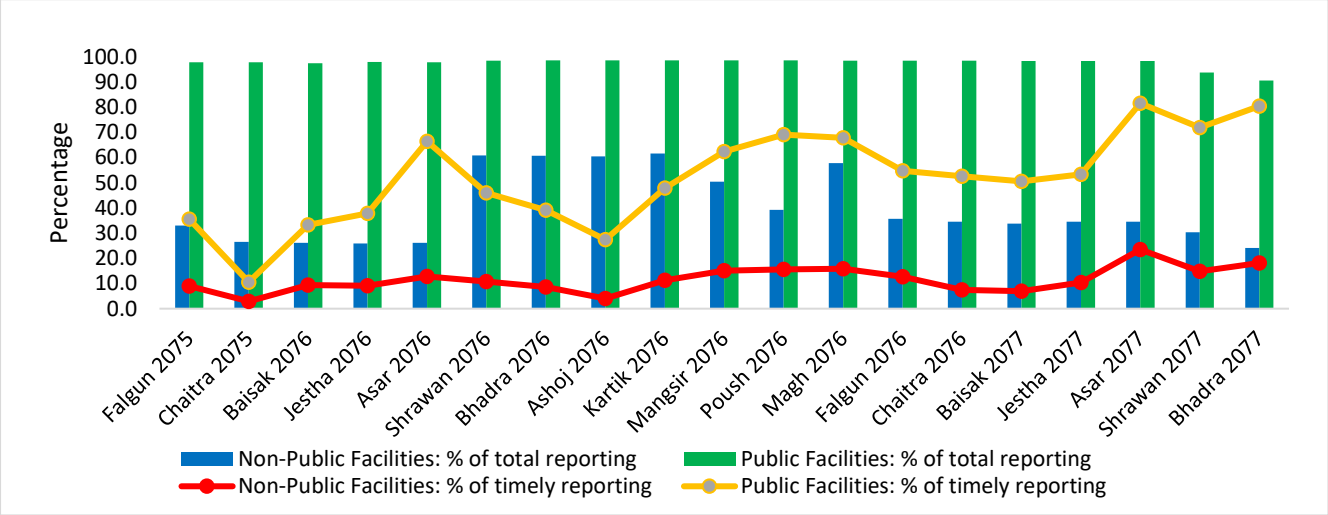
"You might think that I've exaggerated but no effect [recording and reporting system] was observed at all. If you come over and compare the data, nothing is affected. As we are just focused on recording and reporting status, the total number does not really bother us. The only problem is geographical difficulties or when they don't have internet."

(Participant from Integrated Health Information Management Section (IHIMS), Management Division)

When disaggregated by type of facility, the results showed a decline in timely reporting for the first few months in both public and non-public facilities (Figure 4-15). A marginal decline in percentage of non-public facilities and public facilities reporting to HMIS was also observed. Overall, the improvement of timeliness of reporting as well as the percentage of facilities reporting to HMIS was

attributed to regular monitoring and mentoring support from the IHIMS to the provincial, local and hospital focal persons.

Figure 4- 15: HMIS reporting status by health facility ownership



This finding was corroborated in qualitative interviews. IHIMS capacity-building activities were conducted to strengthen the online data system. There were several online meetings and follow-up was conducted by phone for reporting during the pandemic. The initiative has also provided support in connecting HMIS focal persons at all levels during this crisis period.

> *"We have sent enough funds from the central level [IHIMS]. Around 10 capacity-building activities at the province, two activities at districts, and one activity at Palika – for the first time in history. I've conducted multiple webinars,… keeping in contact with friends. We have had an intense discussion with all seven provinces during this period."*
>
> *(Participant from IHIMS, Management Division)*

However, there was a difference in opinion as participants from provincial and local levels identified several challenges to the smooth functioning of HMIS. They reported the storage of HMIS tools, poor coordination and delayed budget release for activities during the pandemic period as major barriers to generating high-quality data in the HMIS system in provincial and local level health institutions.

> *"Some local health facility needed 10 sets of HMIS tools where only 2 were sent. Firstly, there should be a regular supply of adequate tools. Health workers are maintaining records on a white sheet. Secondly, capacity building for data quality improvement is not regular. Thirdly, I think the chain of command is a bit deterred as compared to previous years."*
>
> *(Participant from Provincial Health Directorate)*

A few participants also expressed that there had been challenges in gaining EDPs' support during the pandemic period.

> *"We have already conducted a meeting in regard to support for HMIS tools. The organisations were UNICEF [United Nations Children's Fund], UNFPA, WHO, Save the Children, PSI [Population Services International] and Ipas. They have agreed to support but we haven't received support yet even after several follow-up meetings and sending formal letters."*
>
> *(Participant from Provincial Health Directorate)*

4.4.2 OCMC

A total of 8,265 cases have been reported from 59 facilities, with an average of 140 cases per facility in FY 2076/77 (Table 4-6). The average number of cases per facility has gradually increased from 27 in FY 2068/69 to 140 in FY 2076/77, with a steep decline to 69 in FY 2075/76. There has been a gradual increase in the number of OCMC reporting sites over the years. However, disaggregated data on the number of sites listed by FY was unavailable for all FYs, limiting our ability to gain a full picture on the reporting system.

Table 4-6: Number of reporting sites and average number of cases per facility (FY 2068/69–2076/77)

FY/Indicator	2068/69	2069/70	2070/71	2071/72	2072/73	2073/74	2074/75	2075/76	2076/77
Number of OCMC sites reporting at least one case	7	12	14	15	17	23	37	44	59
Total number of cases	187	545	1,049	1,730	2,004	3,018	4,525	3,050	8,265
Average number of cases per facility	27	45	75	115	118	131	122	69	140

Qualitative interview participants recognised that maintaining a regular reporting system for OCMCs has been a challenge. It was reported that the development and establishment of a one-window reporting system for OCMCs has been overshadowed by the COVID-19 pandemic. A temporary recording and reporting Excel spreadsheet (rapid electronic reporting system) for record-keeping and reporting was used at all OCMC health facilities to track the functioning and utilisation of OCMCs. Necessary virtual meetings were also conducted during the lockdown period to ensure the smooth functioning of OCMCs.

> *"During the lockdown period, Ministry of Health and Population has circulated temporary recording and reporting Excel sheets at all OCMC health facilities for record-keeping and reporting. Also, regular virtual meetings were conducted with stakeholders to discuss data collection procedures during the pandemic."*
>
> *(Participant from EDP)*

4.4.3 MPDSR system

Under the MPDSR system, information on 'maternal deaths in the community' are collected through verbal autopsy, and 'maternal deaths in the health facilities' are collected through maternal death reviews at the health facility level. The functionality of the MPDSR system in peripheral hospitals has been more adversely affected during the COVID-19 pandemic than in federal-level hospitals. Inadequate institutionalisation of the system, poor access to internet facilities, and inadequate human resources and monitoring systems were found to be major factors influencing the functionality of the MPDSR during the pandemic period (Appendix Figure J.1).

> *"As most of the people have tested positive for this virus, we do not have sufficient human resources for data collection. Foremost, we have a problem in timely recording and reporting and the system is not yet institutionalised at the provincial and local level. Secondly, it's related to inadequate human resources due to the mobilisation of the health workforce in COVID-19-related services. Also, while doing it online, not everyone has access to the internet."*
>
> *(Participant from Maternal and Newborn Health Section, FWD)*

EDPs, such as the WHO, UK aid/NHSSP and UNICEF were major supporting agencies for the MPDSR system at federal, provincial, and local level both before and during the COVID-19 pandemic. MoHP adopted a mobile reporting tool (ODK) as an alternative approach for monitoring of CEONC functionality, which includes the collection of information on maternal and perinatal deaths during the COVID-19 pandemic. However, only a few health workers from limited health facilities are trained on ODK reporting tools, and it does not cover all health facilities. Participants mentioned that additional training, human resources, and partner support were necessary for further strengthening functionality and institutionalising the system at the local level.

> *"From our experience of two to four years, I think, it is not possible without establishing effective monitoring and follow-up the system. What we need right now is a good team of supporting agencies, government efforts at the federal level, and local level…"*
>
> *(Participant from Maternal and Newborn Health Section, FWD)*

Despite the effects of COVID-19 on the MPDSR recording and reporting system, few health facilities have been reviewing the causes of maternal death in their regular COVID-19 update meetings. However, no separate in-depth discussion on maternal deaths was conducted within the MPDSR system during the COVID-19 period. Participants stated that, during the pandemic, verbal autopsy was not feasible in community-based MPDSR.

> *"I don't think it is affected at large. We have not gone thoroughly through the file of it… We discussed possible causes and ways to improve them in the context of COVID. Definitely, there was not an in-depth discussion about maternal deaths as used to before."*
>
> *(Participant from Provincial Hospital)*

> *"At the community level, we tried to audit maternal deaths and review total maternal deaths by sending charts… We tried to maintain records with the help of PHCC's staff and FCHVs [Female Community Health Volunteers]. But still, we are facing problems. It's difficult to reach out in remote areas. Because of COVID-19, mobility is not feasible… the verbal autopsy is not possible now."*
>
> *(Participant from Maternal and Newborn Health Section, FWD)*

4.5 Health Sector Response for Continuity of Regular Health Services

The GoN, through MoHP, in collaboration with EDPs, has been leading the health sector response to COVID-19. After the first case was detected on 23 January 2020, the WHO declared a Public Health Emergency of International Concern on 30 January 2020 and a pandemic on 11 March 2020; efforts were scaled up to curb the spread, manage the pandemic and prepare the health care system to mitigate adverse consequences. A high-level COVID-19 Crisis Management Centre (CCMC), chaired by the Deputy Prime Minister, was established and an Incident Command System within the MoHP was activated, for integrated response to COVID-19. Ensuring the continuity of essential health service delivery across the country and utilisation of services by those in need has been the key challenge to the MoHP during this crisis. For effective response to COVID-19 and continuity of regular services, the MoHP has developed more than 50 plans, guidelines, standards and protocols and made them public through the MoHP website. Some of the key documents include: Health Sector Emergency Response Plan for the COVID-19 Pandemic, Rapid Action Plans, Interim Guidelines for continuity of specific health services, such as RMNCH, leprosy, geriatric health care services, rehabilitation and physiotherapy of persons with COVID-19 in acute care settings, services for people with disabilities, dental services, ambulance services and Ayurveda and alternative medicine services. In addition to these, the MoHP has circulated several 'circulars and directives' for specific purposes, like human resource management, case management and compliance to the developed guidelines.

Specific initiatives were also undertaken for strengthening health care service delivery (Appendix Table J-1). Governments at all levels set up COVID-19-dedicated hospitals for the treatment of an increasing number of coronavirus cases, so that the regular non-COVID-19 health services could be continued in other health facilities. Online platforms were used extensively by different levels of government authorities to maintain the functioning of the health system and strengthen coordination mechanisms during the pandemic, as discussed in regard to the reporting system for HMIS. In addition, stakeholders' engagement was sought by activating clusters such as Health, Reproductive Health, WASH (Water, Sanitation and Hygiene) and Nutrition. These clusters and sub-clusters had several online meetings, which helped strengthen sector coordination during the pandemic. For instance, GoN officials highlighted the development of guidelines, setting up of COVID-19-dedicated hospitals and follow-up of maternal deaths as key initiatives undertaken by the clusters and sub clusters as support to the MoHP in continuing health service delivery during the pandemic.

> *"One of the major things that we did at that time [start of pandemic] was developing 'Interim Guideline on RMNCH during COVID-19 Period' and provided online training. We set the criteria for referral mechanism and treatment according to the symptoms. This guideline was made at the central level and was endorsed by the Ministry of Health and Population. After it got endorsed… everyone was ready to provide services related to maternal and child health."*
>
> *(Participant from Child Health and Immunisation Section, FWD)*

> *"First we set up COVID-19-dedicated hospitals. For critical services, we have set programmes for quality improvement [Starr Unnatii]. We are trying to use the latest technology in the health system – Electronic Health Records, EHR system, and other softwares, digitalising the profile of different hospitals. We are trying to continue services in an alternative way. For this, we are gaining support from different organisations."*
>
> *(Participant from Curative Services Division, DoHS)*

> *"Institutions where MPDSR is adopted have had very minimal home deaths… We give orientation to the new persons… We provided training related to PPH management, awareness programme, virtual orientation and so forth. No matter what the problem is we are responding to it from our side. We are doing up the intense follow-up. So, we are getting reports… We have activated Reproductive Health Clusters, and we are planning to address issues related to reproductive health, family planning."*
>
> *(Participant from Maternal and Newborn Health Section, FWD)*

MoHP has also been airing COVID-19-related health public service announcements through radio and television channels, print, and distribution of leaflets/brochures in various local languages/dialects, targeting a diverse group of people, including those with disabilities. Programme divisions, with support from cluster and sub-cluster members, have been monitoring the availability and continuity of essential health service delivery and essential commodities, including food supplements, through phone calls, weekly monitoring of MNH services, monitoring of children with malnutrition and weekly monitoring of maternal and perinatal deaths.

FWD, with support from UK aid/NHSSP, has undertaken an alternative approach for monitoring of CEONC functionality that includes the collection of information on maternal and perinatal deaths during the COVID-19 pandemic using ODK. Likewise, a web-based platform was developed for daily reporting of utilisation of selected services from health facilities on the DHIS2 platform in alignment with the HMIS in Jestha 2077, during the lockdown period. The lockdown ended on 6 Shrawan 2077, prior to its complete rollout.

Federal-level government authorities reported that the MoHP worked with EDPs to strengthen health facilities and provide both COVID-19 and non-COVID-19 services. However, they agreed that the available facilities for COVID-19 management were inadequate and the quality of services required improvement. Provincial-level authorities pointed to poor infrastructure and inadequate human resources for COVID-19 management.

> *"MoHP has prepared several guidelines for the management of COVID-19 ……The critical cases of COVID-19 will continue to increase. It may go beyond our capacity. We must strengthen our health system as far as possible. However, there may be competition on receiving services and compromised quality services. There are also probable chances for discrimination in service delivery."*
>
> *(Participant from Curative Service Division)*

> *"We don't have even an inch to set up new beds for COVID-19 patients. We have a house here and have to place 200 patients there. Making a building is not possible. But the Government of Nepal has never thought of strengthening the infrastructure of the health sector… There is neither infrastructure nor human resources… The two to four government curative hospitals are just to showcase. This is not enough for providing services to all populations."*
>
> *(Participant from Provincial Hospital)*

There were different views from provincial- and local-level health care providers as they expressed frustration at the inability to provide services, lack of clarity in communication and lack of support from EDPs.

> *"Government should have aimed at providing health service for at least 90 per cent of the people after certain time intervals of the pandemic. But it has not happened like that. It is obvious if the government has no specific emergency health plans."*
>
> *(Participant from Provincial Hospital)*

> *"No, nothing happened. At this time of the pandemic, External Developing Partners have 'gone inside their own fort'. The partner does not do much work in service delivery. All they do is organise training, seminars, orientation; none of which happened… They have not yet mobilised their staff. So in that part, we did not get that much support from partners as expected."*
>
> *(Participant from Provincial Health Directorate)*

On the other hand, an EDP participant highlighted that EDPs had supported the government in developing guidelines, undertaking surveys and surveillance.

> *"External Development Partners have supported the Government of Nepal in developing many guidelines, conveying information, conducting survey and surveillance related to COVID."*
>
> *(Participants from External Development Partner)*

Participants perceived private health sector efforts in COVID-19 pandemic management during the period of lockdown to be negligible. The government directives to close OPD services, absence of emergency health service guidelines, poor stewardship and fragile health care system were believed to be contributing factors to the minimal involvement of the private sector in the containment of the COVID-19 pandemic.

> *"We portrayed private sectors to be quite strong but when COVID-19 hit the country, we realised that's not true. It exposed us to the reality of our health care system, as in: we are not pre-prepared, we do not have proper policy documentation and our basic health delivery system is very fragile. We are not resilient to accept health emergency shock."*
>
> *(Participant from External Development Partner)*

The lack of coordination and pre-emptive preparation among the three spheres of health governance was recognised as one of the major reasons for the ineffective delivery of health services during the COVID-19 pandemic. In addition to the poor coordination and preparedness, the spread of infection among health workers further jeopardised the capacity of the health system in responding to COVID-19 cases among the population. Participants expressed that there was a lack of clarity around roles and responsibilities for delivering COVID-19-related health services by different levels of government.

> *"I have found shortcomings in the principle of the federal government, which is the coordination, collaboration, combination. In the context of coordination, the chain of accountability is functioning on the basis of individual relationships. It is not being guided by the system".*
>
> *(Participant from Provincial Health Directorate)*

> *"Our major challenge was safety measures for health workers… Both public and health workers suffered… In monitoring and health services, delivery had to be done with a lot of difficulties. So, there definitively was a lot of compromise in services quality and accessibility."*
>
> *(Participant from Provincial Hospital)*

5. Discussion

This mixed-method study showed that COVID-19 had an impact on Nepal's health care system, including its routine reporting system, service availability and utilisation of various health services in the COVID-19 months when lockdown was in place. The magnitude of impact varied by province and health facility, with some services and provinces showing a greater degree of resilience than others. In particular, there was a strong rebound of institutional delivery service utilisation after an initial decline, little to no impact on PNC service utilisation, continuous uptake of some of the FP methods (IUCD, implant) and rebound of immunisation with DPT3 to pre-COVID-19 levels. On the other hand, utilisation of safe abortion services and some of the FP methods (e.g. permanent sterilisation) continued to decline. The initial blip in service availability shown by the monitoring survey to some extent explains the decline in service utilisation. This is not surprising as literature suggests that previous pandemics or outbreaks have resulted in service utilisation decline in resource-constrained settings like Nepal (Wilhelm and Helleringer, 2019; UNDP, 2020). For example, a systematic review that examined utilisation of non-Ebola services during Ebola outbreaks found that health systems often struggle to maintain routine services, with a decline in service utilisation (Wilhelm and Helleringer, 2019). Likewise, a study conducted in Liberia found that the health system lost 35 to 67 per cent of essential primary health care system outputs across Liberian clinics (Wagenaar *et al.*, 2018).

When disaggregated, decline in service utilisation varied by indicator, facility type and province. This can again be explained by monitoring survey data. For instance, the slightly higher monthly rate of change in institutional delivery in peripheral health facilities is reflective of the lack of availability of delivery services in BCs and BEONC sites. There was large variation between provinces for certain indicators, which needs further investigation to identify if there is difference by type of facility, by district or by where referral facilities are located. The study findings on institutional delivery were similar to a study published by Jha and colleagues using HMIS data (Jha *et al.*, 2020). The overall reduction of institutional delivery in successive months was lower in our study as additional facilities may have reported late. Moreover, the study findings demonstrated that the rebound of institutional delivery was stronger across provinces and by type of health facility, showing strong resilience of the health system. Another study conducted in hospitals by Ashish and colleagues found that institutional delivery reduced by more than half during the lockdown (Ashish *et al.*, 2020). On the contrary, the

monthly rate of change was not below 20 per cent for any of the study months in our analysis (Appendix Table C.3).

Our estimates suggest there were 30 per cent more maternal deaths than expected; however, it is too early to conclude and make recommendations as this is a preliminary estimate. Nevertheless, it is important to note that increased scrutiny during lockdown, with triangulation through multiple methods, may have led to more accurate capture of the number of deaths than in the pre-COVID-19 period, resulting in a higher number of excess maternal deaths. Ashish and colleagues also found a more than threefold increase in neonatal deaths in hospital settings (13 deaths per 1,000 livebirths before lockdown to 40 deaths per 1,000 livebirths during lockdown) (Ashish *et al.*, 2020). There are also important limitations with the study data as only 26 data points were used to arrive at the estimate. Hence, we plan to make use of all available data from previous FYs and refine the model before making a firm conclusion.

While there have been efforts made by government, through development of several policies, guidelines and directives, to mitigate the effects of the pandemic, the study findings suggested that these was inadequate. The qualitative findings showed there was a lack of clear communication of service provision not only to consumers but also within the health care system, resulting in decline of service utilisation. There was also disconnect and dissonance between health care providers and policymakers. Similar concerns have been documented in other resource-poor settings where COVID-19 has brought significant challenges for all health services and where access to supplements and health care services expansion are difficult (UNDP, 2020).

Our study has several limitations. First, for the quantitative component this study relied on secondary analysis of routine information data. While this approach does have its strengths, as it covers the whole country and provides information on all key service statistics, there are often question marks around accuracy, timeliness and completeness of these routine information systems, particularly in countries like Nepal. This was reflected in some of our indicators as well through the outliers and fluctuation of data, particularly in the case of FP methods. We tried to address this through two levels of analysis: i) analysis of all reporting facilities and ii) analysing continuously reporting facilities. The differences that were observed between continuously reporting facilities and all reporting facilities highlighted the need to strengthen the reporting system for complete, accurate and timely reporting. For example, the reversal of trends towards pre-COVID-19 levels was strong and clear in continuously reporting facilities as compared to all reporting facilities. Secondly, the routine reporting systems used in this study do not recognise whether a given facility actually has zero cases or did not report that indicator. This hindered our capacity to draw any conclusion regarding completeness of reporting and we had to fall back on traditional indicators (late reporting, not reporting). Any future improvements in the routine reporting system should address these issues to shed clear light on reporting and make routine data more useful. Thirdly, the study was limited in its scope as some of the data limitations could not be addressed through analytical methodology (e.g. adjusting for seasonality, time differences). This will be addressed through further analysis of the current study using modelling techniques, along with a lay summary for key stakeholders. Fourth, data sources such as monitoring of facilities were not primarily designed for study purposes and consequently there were gaps in data points, or key variables that would have provided further insight on the situation were missing.

Nevertheless, this study also provides important new insights on the initial impact of COVID-19 on different elements of the health system along with important avenues for future research, which include: estimating the impact on unplanned pregnancies as there was reported decline of new users of some contraceptive methods coupled with decline in safe abortion procedures performed. This becomes even more important as there was a large temporary influx of migrants and it could help estimate the potential demand of maternal health services for the next four to six months. The

differences in service utilisation by province needs a more thorough analysis to identify their causes. A thorough audit of the HMIS system needs to be undertaken to identify facilities that are dysfunctional or closed as there was a significant proportion of facilities that did not report a single case in the 19-months study period (Table 4-1 and Appendix Table A-3). Likewise, there is a need to investigate the reasons for clustering of the HMIS data every two or three months.

6. Conclusion

In conclusion, there were interruptions to public health care service availability and utilisation in Nepal immediately after the introduction of lockdown. The health care system has shown signs of resilience as some of the indicators have returned to pre-COVID-19 levels. However, preliminary estimates of maternal deaths suggest that the COVID-19 pandemic may have taken away some progress. Further analysis to estimate the net effects of missed childhood vaccinations, unplanned pregnancies and lost primary care visits may show a clearer picture. The findings also suggested that the magnitude of impact varied by province and type of health facility and further research is needed to fully understand the reasons and the extent of disruptions to public health care delivery and which population groups have been affected the most.

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Appendix

Table A. 1: Literature search details and results

Search number	Query	Search Details	Results	Date and Time
7	((((Wuhan) AND (Coronavirus)) OR ((((COVID-19) OR (Coronavirus)) OR (severe acute respiratory syndrome coronavirus 2)) OR (2019-nCoV))) AND ((((((((((utilization[Title/Abstract]) OR (utilisation[Title/Abstract])) OR (utilise[Title/Abstract])) OR (utilize[Title/Abstract])) OR (health services[Title/Abstract])) OR (routine information[Title/Abstract])) OR (information system[Title/Abstract])) OR (mortality[Title/Abstract])) OR (morbidity[Title/Abstract])) OR (health system[Title/Abstract])))) AND (Nepal[Title/Abstract])	(("Wuhan"[All Fields] AND ("coronavirus"[MeSH Terms] OR "coronavirus"[All Fields] OR "coronaviruses"[All Fields])) OR ("severe acute respiratory syndrome coronavirus 2"[Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2"[All Fields] OR "ncov"[All Fields] OR "2019 ncov"[All Fields] OR "COVID-19 19"[All Fields] OR "sars cov 2"[All Fields] OR (("coronavirus"[All Fields] OR "cov"[All Fields]) AND 2019/11/01:3000/12/31[Date - Publication]) OR ("coronavirus"[MeSH Terms] OR "coronavirus"[All Fields] OR "coronaviruses"[All Fields]) OR ("severe acute respiratory syndrome coronavirus 2"[Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2"[All Fields]) OR ("severe acute respiratory syndrome coronavirus 2"[Supplementary Concept] OR "severe acute respiratory syndrome coronavirus 2"[All Fields] OR "2019 ncov"[All Fields]))) AND ("utilization"[Title/Abstract] OR "utilisation"[Title/Abstract] OR "utilise"[Title/Abstract] OR "utilize"[Title/Abstract] OR "health services"[Title/Abstract] OR "routine information"[Title/Abstract] OR "information system"[Title/Abstract] OR "mortality"[Title/Abstract] OR "morbidity"[Title/Abstract] OR "health system"[Title/Abstract]) AND "Nepal"[Title/Abstract]	16	23/11/2020 18:09:10

Table A. 2: Study participants and institution

SN	Participants	Name of Institution
1	Participant -1	Child health and Immunization section, Family Welfare Division
2	Participant -2	Curative Service Division, Department of Health Services
3	Participant -3	Family planning and reproductive health section, FWD
4	Participant- 4	Integrated Health Information Management Section, Management Division
5	Participant- 5	Primary Health Care Center
6	Participant- 6	Maternal and Newborn Health Section, FWD (1)
7	Participant- 7	Maternal and Newborn Health Section, FWD (2)
8	Participant- 8	Provincial Health Directorate office- Province 1
9	Participant- 9	Provincial Health Directorate office -Province -2
10	Participant- 10	Provincial Hospital, Province -2
11	Participant- 11	District Hospital, Province -5
12	Participant- 12	Paropakar Maternity Hospital, Federal Hospital
13	Participant- 13	External Development partner –(1)
14	Participant- 14	External development partners-(2)

Table A. 3: Number of health facilities included in the secondary data analysis of HMIS by type of health facility

Indicators	Number of facilities that reported at least one case in the study period	Number of facilities that reported at least one case each month in the study period
Number of 4ANC visits as per protocol	5,426	1,173
Number of deliveries at health facility	2,931	719
Number of PNC visits as per protocol	3,181	200
Number of abortions performed	987	134
Number of FP users by methods		
Permanent Method	6,119	2
Intaruterine Contraceptive Device (IUCD)	1,676	4
Implant	3,731	41
Depo-Provera	6,074	748
Oral Contraceptive Pills (OCPs)	5,920	108
Condom	8,456	7,783
Number of children immunised with DPT3	5,165	330
Number of children (6–59 months) with diarrhoea	5,661	954
Number of new OPD visits	6,954	3,800

Figure A.1: Availability of ANC services by level of facility

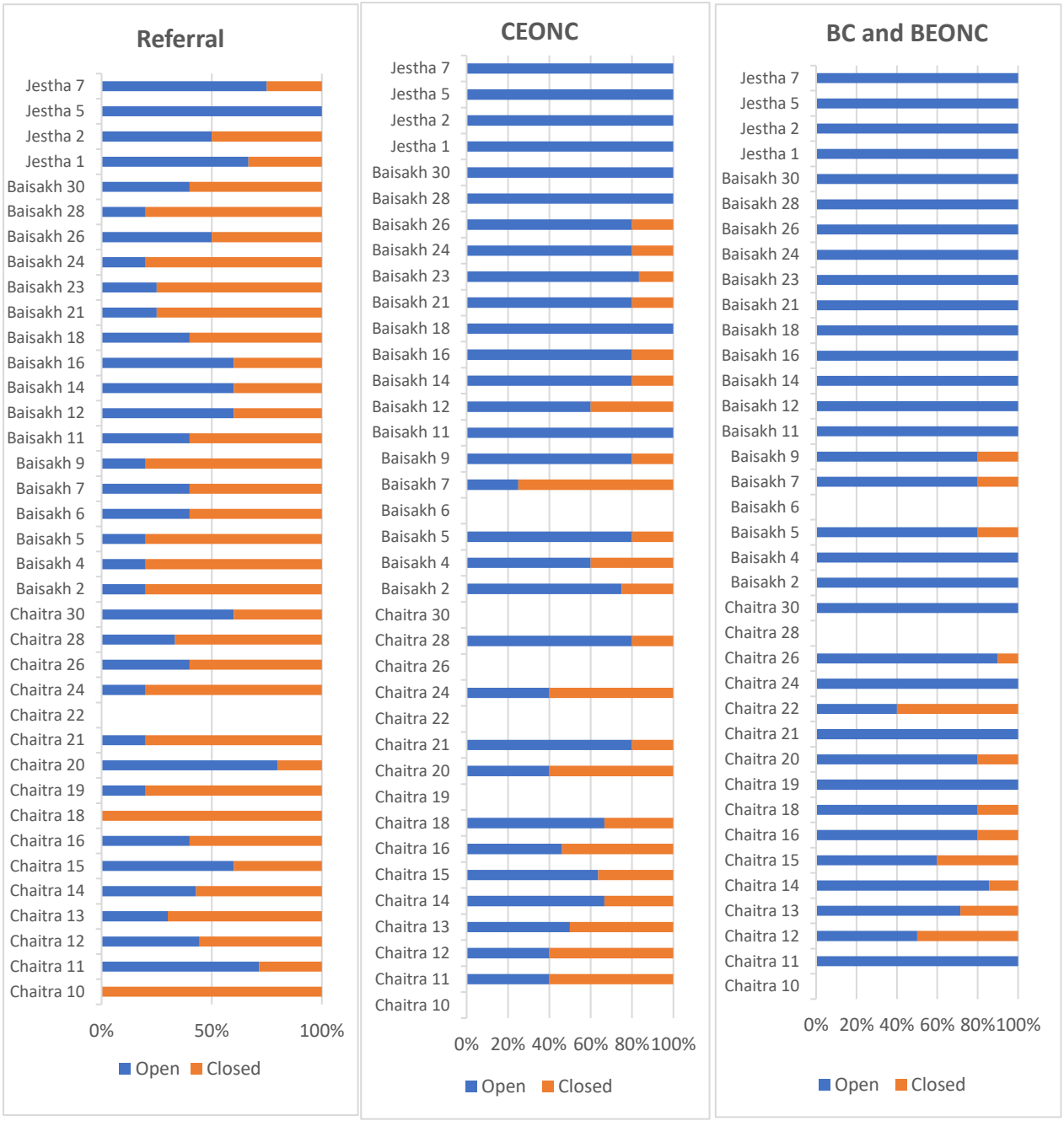


Figure A.2: Availability of delivery services by level of facility

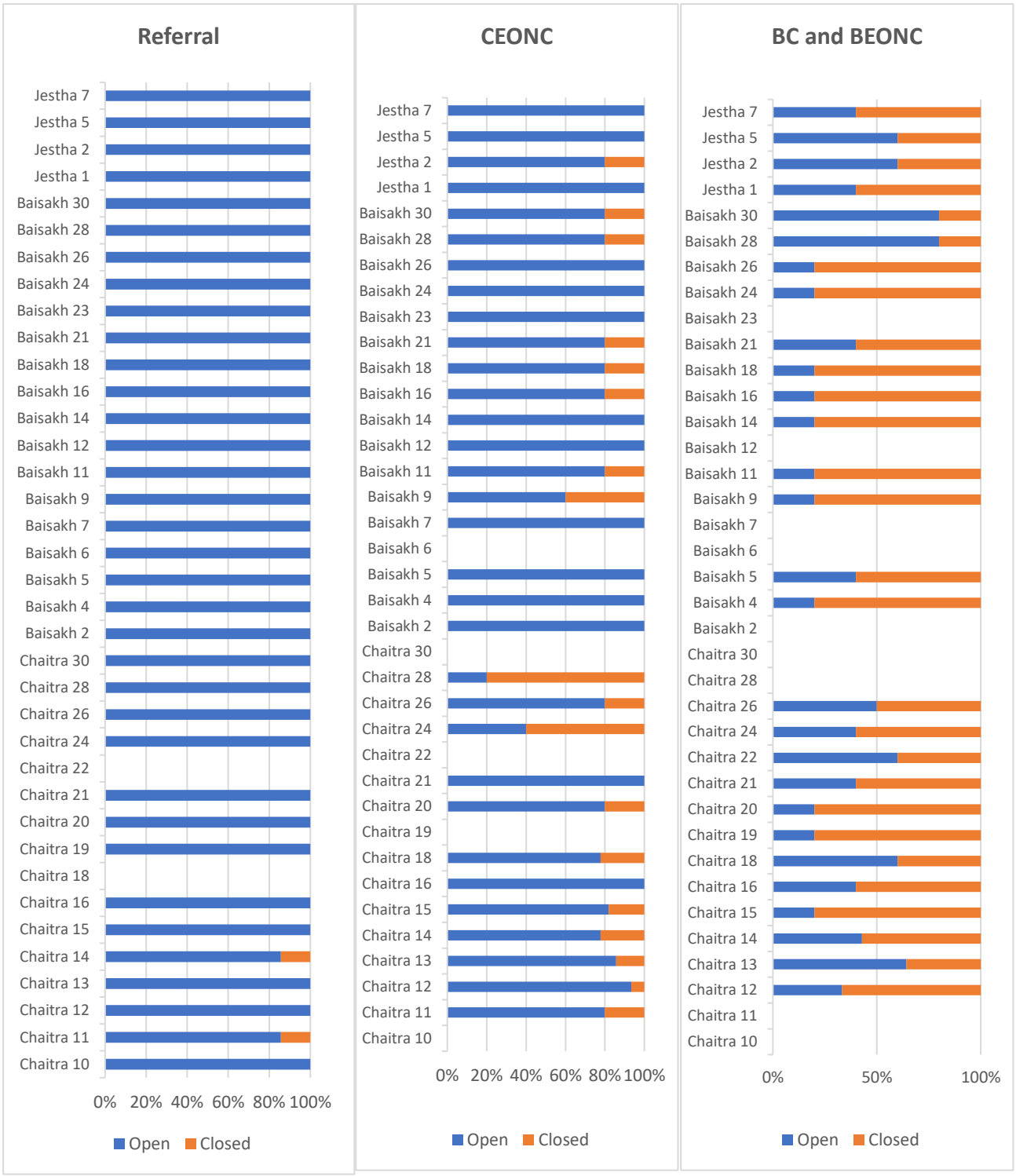


Figure A.3: Availability of FP services by level of facility

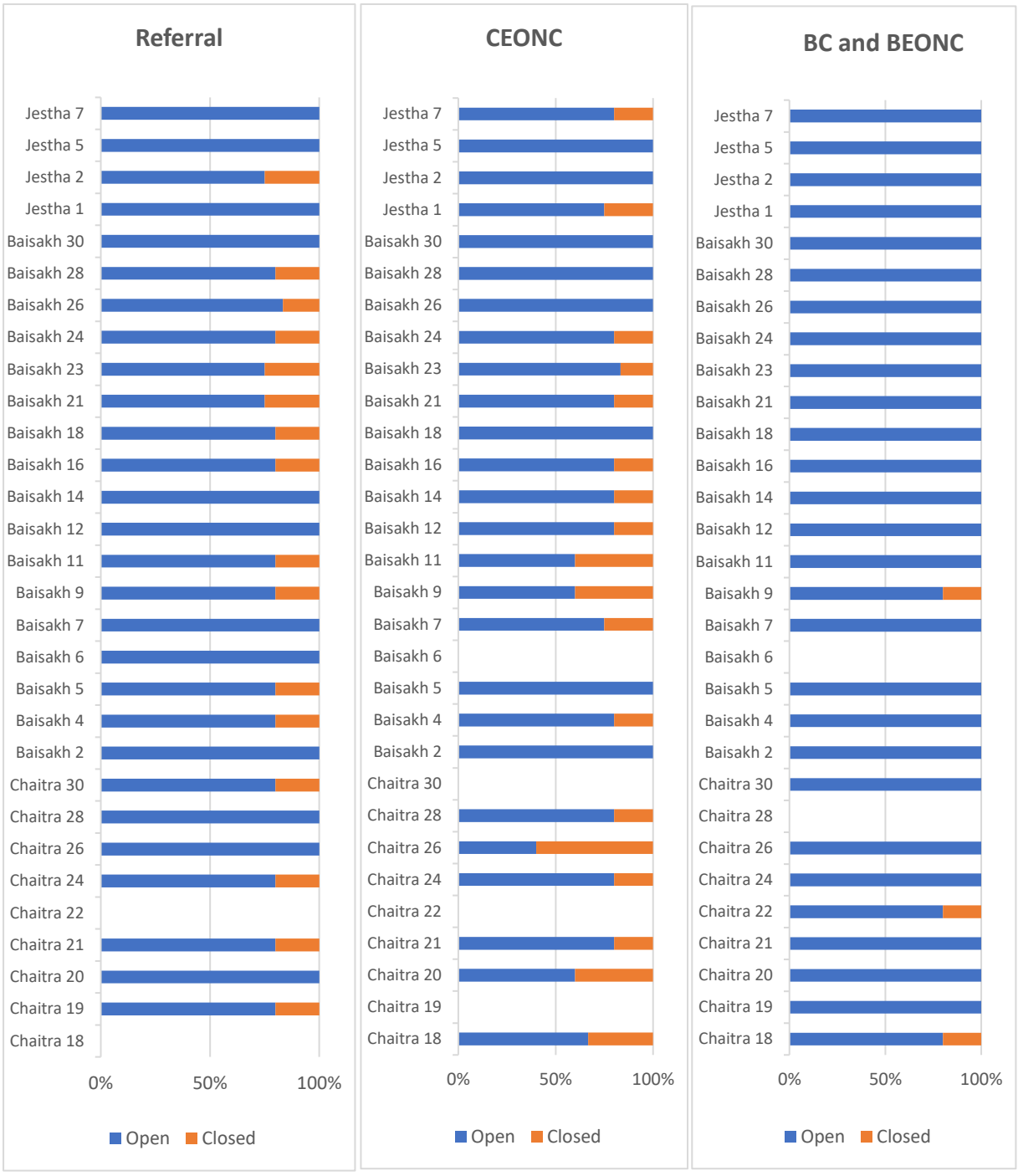


Figure A.4: Drug stockout by level of facility

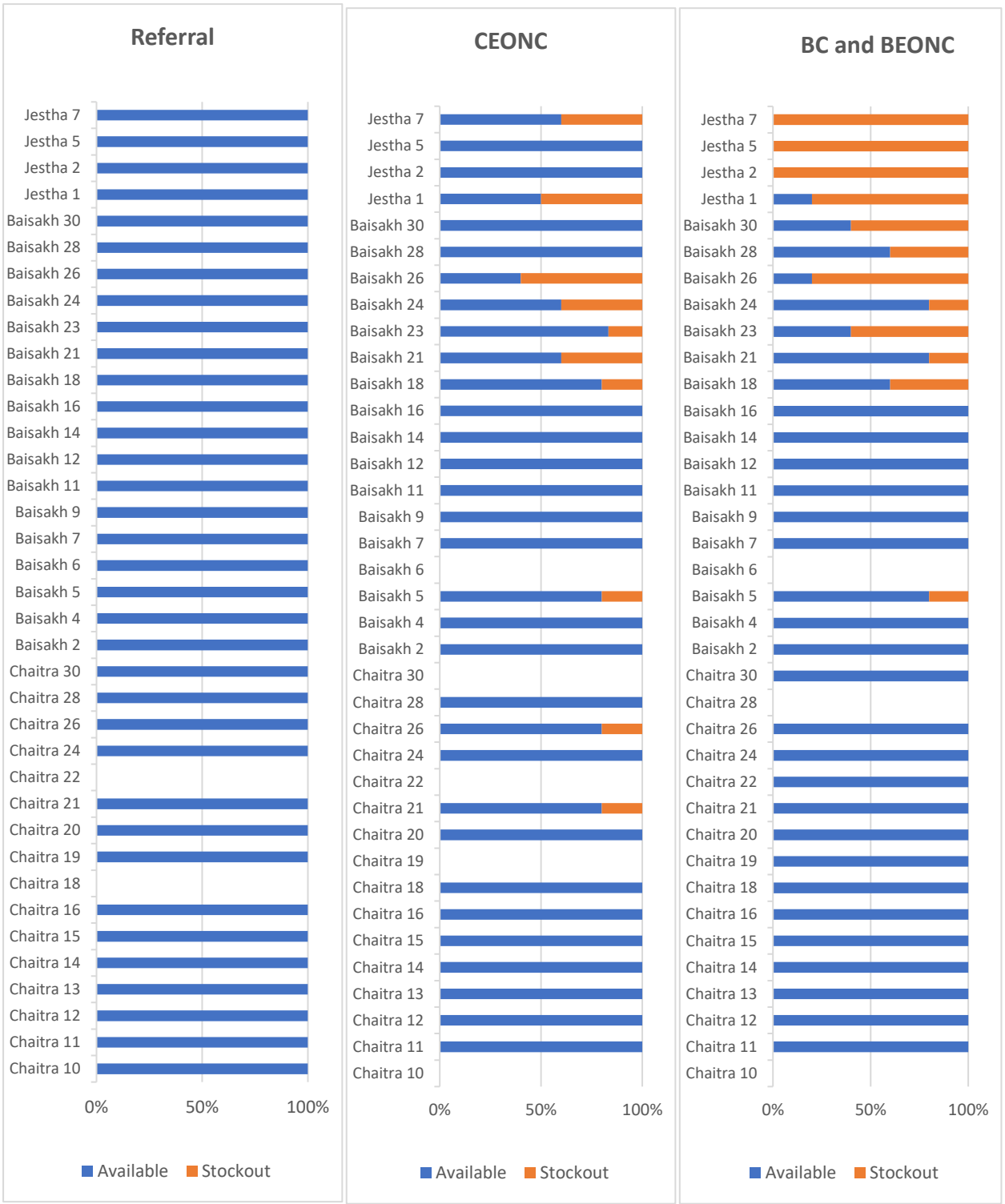
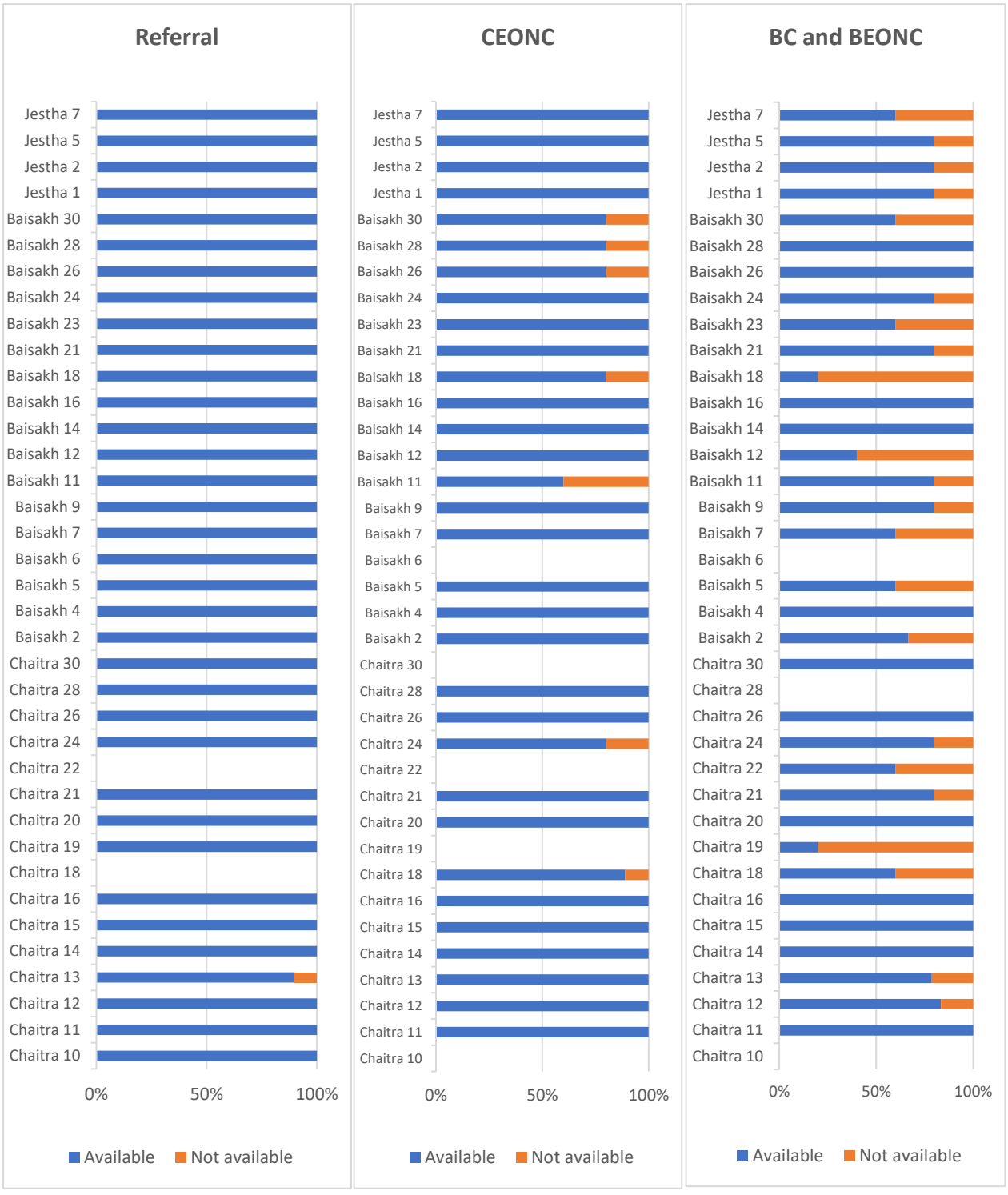


Figure A.5: Availability of ambulance services by level of facility



Antenatal Care

Table B. 1: Number of 4ANC visits as per protocol in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

Months	Provinces							HF Type		National
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	
Falgun 2075	4903	4358	5392	2813	5146	1976	2950	5035	22503	**27538**
Chaitra 2076	4856	3880	4975	3052	4580	1867	2587	4765	21032	**25797**
Baishak 2076	5179	3884	4823	3235	4839	1872	2595	4880	21547	**26427**
Jestha 2076	6399	4092	5428	3643	5904	2380	3036	5825	25057	**30882**
Asar 2076	6084	4804	5758	4323	7556	2713	3605	5654	29189	**34843**
Shrawan 2076	6601	5819	7484	3419	6836	2448	3642	7844	28405	**36249**
Bhadra 2076	6339	5260	6815	3176	6807	2019	3110	6859	26667	**33526**
Ashoj 2076	4926	4355	6636	2915	5821	1562	2759	6439	22535	**28974**
Kartik 2076	5270	4161	6273	2253	6011	1625	2712	6345	21960	**28305**
Mangsir 2076	5315	4367	6632	2988	6292	1875	3075	6368	24176	**30544**
Poush 2076	5336	4591	5607	2794	6236	2302	3514	5382	24998	**30380**
Magh 2076	5703	4092	5555	2679	5932	2276	3213	5641	23809	**29450**
Falgun 2076	5540	3584	4894	2988	5264	2350	2900	5603	21917	**27520**
Chaitra 2076	3675	3299	3090	1474	3682	1660	2092	3404	15568	**18972**
Baishak 2077	3617	3685	3406	1650	3795	1908	2331	3915	16477	**20392**
Jestha 2077	3811	3581	4019	2273	4711	2356	3079	4302	19528	**23830**
Asar 2077	4851	4519	4433	2613	5827	2647	3355	5021	23224	**28245**
Shrawan 2077	3976	4164	3849	2737	6074	2472	3683	4595	22360	**26955**
Bhadra 2077	3542	3812	2944	2408	5080	1763	3120	3339	19330	**22669**

Table B. 2: Difference of number of 4ANC visits between COVID-19 months and same months of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

Months	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	13.0	-17.8	-9.2	6.2	2.3	18.9	-1.7	11.3	-2.6	-0.1
Chaitra 2076	-24.3	-15.0	-37.9	-51.7	-19.6	-11.1	-19.1	-28.6	-26.0	-26.5
Baishak 2077	-30.2	-5.1	-29.4	-49.0	-21.6	1.9	-10.2	-19.8	-23.5	-22.8
Jestha 2077	-40.4	-12.5	-26.0	-37.6	-20.2	-1.0	1.4	-26.1	-22.1	-22.8
Asar 2077	-20.3	-5.9	-23.0	-39.6	-22.9	-2.4	-6.9	-11.2	-20.4	-18.9
Shrwan 2077	-39.8	-28.4	-48.6	-19.9	-11.1	1.0	1.1	-41.4	-21.3	-25.6
Bhadra 2077	-44.1	-27.5	-56.8	-24.2	-25.4	-12.7	0.3	-51.3	-27.5	-32.4
Falgun 76-Bhadra 77	-28.1	-17.0	-34.5	-31.8	-17.4	-0.8	-4.5	-26.1	-20.6	-21.7

Table B. 3: Monthly rate of change of number of 4ANC visits between successive months all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun-Chaitra 2075	-1.0	-11.0	-7.7	8.5	-11.0	-5.5	-12.3	-5.4	-6.5	-6.3
Chaitra 2076-Baishak 2076	6.7	0.1	-3.1	6.0	5.7	0.3	0.3	2.4	2.4	2.4
Baishak-Jestha 2076	23.6	5.4	12.5	12.6	22.0	27.1	17.0	19.4	16.3	16.9
Jestha-Asar 2076	-4.9	17.4	6.1	18.7	28.0	14.0	18.7	-2.9	16.5	12.8
Asar-Shrawan 2076	8.5	21.1	30.0	-20.9	-9.5	-9.8	1.0	38.7	-2.7	4.0
Shrawan-Bhadra 2076	-4.0	-9.6	-8.9	-7.1	-0.4	-17.5	-14.6	-12.6	-6.1	-7.5
Bhadra-Ashoj 2076	-22.3	-17.2	-2.6	-8.2	-14.5	-22.6	-11.3	-6.1	-15.5	-13.6
Ashoj-Kartik 2076	7.0	-4.5	-5.5	-22.7	3.3	4.0	-1.7	-1.5	-2.6	-2.3
Kartik-Mangsir 2076	0.9	5.0	5.7	32.6	4.7	15.4	13.4	0.4	10.1	7.9
Mangsir-Poush 2076	0.4	5.1	-15.5	-6.5	-0.9	22.8	14.3	-15.5	3.4	-0.5
Poush-Magh 2076	6.9	-10.9	-0.9	-4.1	-4.9	-1.1	-8.6	4.8	-4.8	-3.1
Magh-Falgun 2076	-2.9	-12.4	-11.9	11.5	-11.3	3.3	-9.7	-0.7	-7.9	-6.6
Falgun-Chaitra 2076	-33.7	-8.0	-36.9	-50.7	-30.1	-29.4	-27.9	-39.2	-29.0	-31.1
Chaitra 2076-Baishak 2077	-1.6	11.7	10.2	11.9	3.1	14.9	11.4	15.0	5.8	7.5
Baishak-Jestha 2077	5.4	-2.8	18.0	37.8	24.1	23.5	32.1	9.9	18.5	16.9
Jestha-Asar 2077	27.3	26.2	10.3	15.0	23.7	12.4	9.0	16.7	18.9	18.5
Asar-Shrawan 2077	-18.0	-7.9	-13.2	4.7	4.2	-6.6	9.8	-8.5	-3.7	-4.6
Shrawan-Bhadra 2077	-10.9	-8.5	-23.5	-12.0	-16.4	-28.7	-15.3	-27.3	-13.6	-15.9

Table B. 4: Number of 4ANC visits as per protocol in selected health facilities by province and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	1601	1291	1332	1125	2827	1057	2162	1758	9637	**11395**
Chaitra 2076	1411	1165	1457	1226	2622	952	1916	1968	8781	**10749**
Baishak 2076	1485	1069	1285	1221	2894	901	1899	1759	8995	**10754**
Jestha 2076	1667	1176	1494	1292	3255	1124	2116	1959	10165	**12124**
Asar 2076	1822	1406	1541	1535	4188	1312	2542	1959	12387	**14346**
Shrawan 2076	1931	1520	1604	1444	3932	1169	2527	2021	12106	**14127**
Bhadra 2076	1831	1509	1502	1348	3739	967	2237	1843	11290	**13133**
Ashoj 2076	1601	1362	1448	1161	3171	765	2042	1682	9868	**11550**
Kartik 2076	1636	1362	1410	1207	3208	779	1963	1662	9903	**11565**
Mangsir 2076	1602	1367	1650	1305	3280	867	2143	1887	10327	**12214**
Poush 2076	1574	1266	1272	1167	3264	1096	2434	1591	10482	**12073**
Magh 2076	1514	1216	1228	1188	2866	1156	2214	1722	9660	**11382**
Falgun 2076	1439	1149	1206	1159	2613	1044	1980	1676	8914	**10590**
Chaitra 2076	1003	918	859	649	2038	802	1396	766	6899	**7665**
Baishak 2077	1069	1142	881	762	2163	905	1513	1022	7413	**8435**
Jestha 2077	1307	1069	1048	1087	2728	1213	2084	1573	8963	**10536**
Asar 2077	1525	1203	1168	1172	3329	1302	2206	1568	10337	**11905**
Shrawan 2077	1626	1391	1176	1192	3315	1298	2451	1685	10764	**12449**
Bhadra 2077	1439	1349	1031	1078	3021	902	2088	1270	9638	**10908**

Figure B. 2: Number of 4ANC visits as per protocol in selected health facilities with smoothing trend (Falgun 2075 – Bhadra 2077)

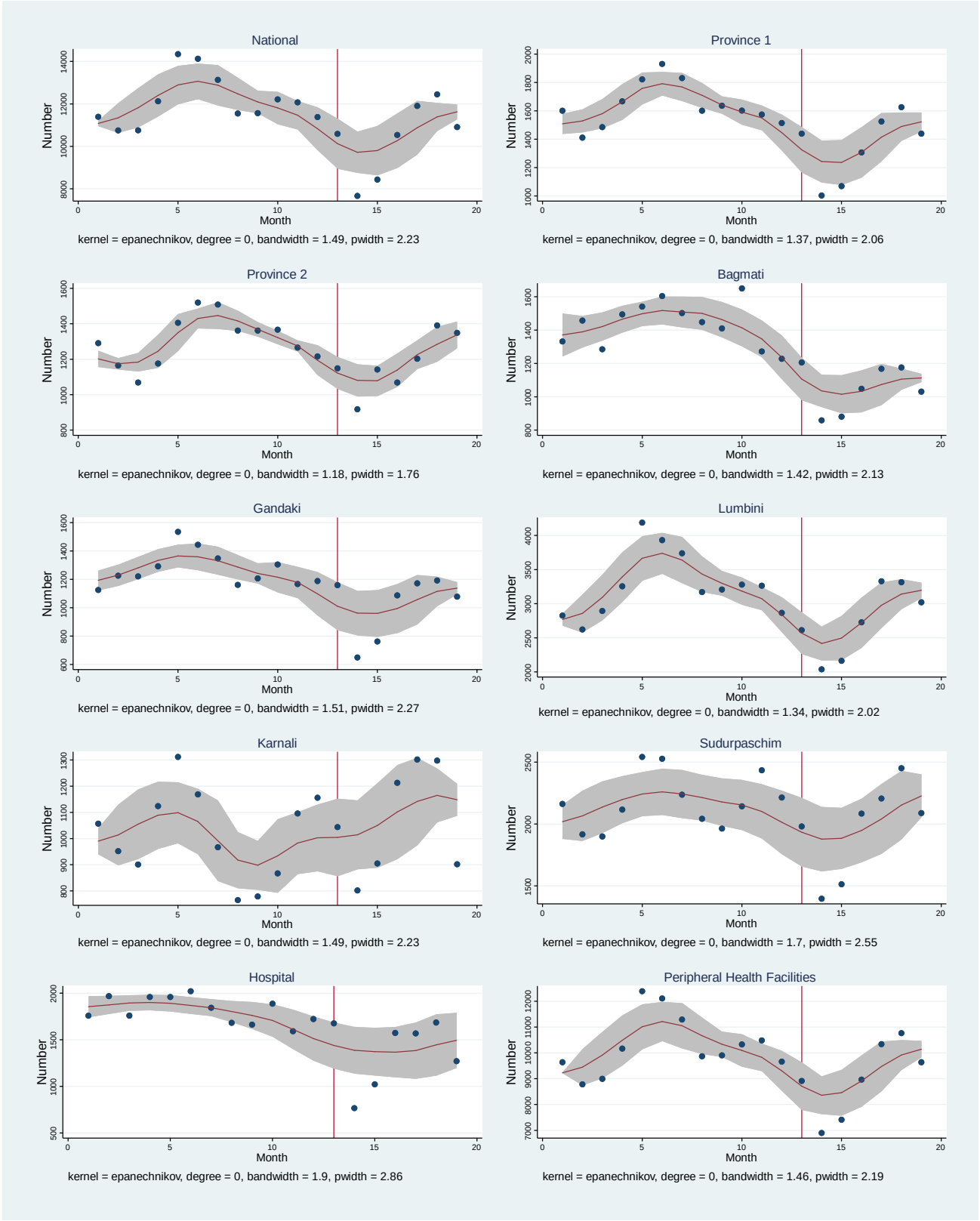


Table B. 5: Difference of number of 4ANC visits between COVID-19 months and same months of last year in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2076	-10.1	-11.0	-9.5	3.0	-7.6	-1.2	-8.4	-4.7	-7.5	-7.1
Chaitra 2076	-28.9	-21.2	-41.0	-47.1	-22.3	-15.8	-27.1	-61.1	-21.4	-28.7
Baishak 2077	-28.0	6.8	-31.4	-37.6	-25.3	0.4	-20.3	-41.9	-17.6	-21.6
Jestha 2077	-21.6	-9.1	-29.9	-15.9	-16.2	7.9	-1.5	-19.7	-11.8	-13.1
Asar 2077	-16.3	-14.4	-24.2	-23.6	-20.5	-0.8	-13.2	-20.0	-16.5	-17.0
Shrwan 2077	-15.8	-8.5	-26.7	-17.5	-15.7	11.0	-3.0	-16.6	-11.1	-11.9
Bhadra 2077	-21.4	-10.6	-31.4	-20.0	-19.2	-6.7	-6.7	-31.1	-14.6	-16.9
Falgun 76-Bhadra 77	-19.9	-10.0	-27.9	-22.8	-18.1	-0.2	-10.9	-27.9	-14.2	-16.3

Table B. 6: Monthly rate of change of number of 4ANC visits between successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun-Chaitra 2075	-11.9	-9.8	9.4	9.0	-7.3	-9.9	-11.4	11.9	-8.9	-5.7
Chaitra 2076-Baishak 2076	5.2	-8.2	-11.8	-0.4	10.4	-5.4	-0.9	-10.6	2.4	0.0
Baishak-Jestha 2076	12.3	10.0	16.3	5.8	12.5	24.8	11.4	11.4	13.0	12.7
Jestha-Asar 2076	9.3	19.6	3.1	18.8	28.7	16.7	20.1	0.0	21.9	18.3
Asar-Shrawan 2076	6.0	8.1	4.1	-5.9	-6.1	-10.9	-0.6	3.2	-2.3	-1.5
Shrawan-Bhadra 2076	-5.2	-0.7	-6.4	-6.6	-4.9	-17.3	-11.5	-8.8	-6.7	-7.0
Bhadra-Ashoj 2076	-12.6	-9.7	-3.6	-13.9	-15.2	-20.9	-8.7	-8.7	-12.6	-12.1
Ashoj-Kartik 2076	2.2	0.0	-2.6	4.0	1.2	1.8	-3.9	-1.2	0.4	0.1
Kartik-Mangsir 2076	-2.1	0.4	17.0	8.1	2.2	11.3	9.2	13.5	4.3	5.6
Mangsir-Poush 2076	-1.7	-7.4	-22.9	-10.6	-0.5	26.4	13.6	-15.7	1.5	-1.2
Poush-Magh 2076	-3.8	-3.9	-3.5	1.8	-12.2	5.5	-9.0	8.2	-7.8	-5.7
Magh-Falgun 2076	-5.0	-5.5	-1.8	-2.4	-8.8	-9.7	-10.6	-2.7	-7.7	-7.0
Falgun-Chaitra 2076	-30.3	-20.1	-28.8	-44.0	-22.0	-23.2	-29.5	-54.3	-22.6	-27.6
Chaitra 2076-Baishak 2077	6.6	24.4	2.6	17.4	6.1	12.8	8.4	33.4	7.5	10.0
Baishak-Jestha 2077	22.3	-6.4	19.0	42.7	26.1	34.0	37.7	53.9	20.9	24.9
Jestha-Asar 2077	16.7	12.5	11.5	7.8	22.0	7.3	5.9	-0.3	15.3	13.0
Asar-Shrawan 2077	6.6	15.6	0.7	1.7	-0.4	-0.3	11.1	7.5	4.1	4.6
Shrawan-Bhadra 2077	-11.5	-3.0	-12.3	-9.6	-8.9	-30.5	-14.8	-24.6	-10.5	-12.4

Table C. 1: Number of institutional deliveries in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	5596	5986	6005	1970	6415	2260	3669	17070	14831	31901
Chaitra 2076	4238	4950	5957	1910	5901	2330	3363	15606	13043	28649
Baishak 2076	4453	4278	6385	1951	5232	2129	3081	15186	12323	27509
Jestha 2076	4382	4177	6646	1993	5801	2387	3219	15735	12870	28605
Asar 2076	5048	4571	6413	2283	6882	2678	3590	17114	14351	31465
Shrawan 2076	7144	7870	10002	3051	10361	3659	5574	25018	22643	47661
Bhadra 2076	6623	7603	9333	2509	9663	2527	4304	23599	18963	42562
Ashoj 2076	6444	6859	8869	2305	8860	2267	3834	21672	17766	39438
Kartik 2076	5631	7199	8441	2281	8321	2043	3555	20607	16864	37471
Mangsir 2076	6319	6689	8886	2393	8260	2265	3730	21301	17241	38542
Poush 2076	6081	6309	7649	2190	7642	2412	3955	18895	17343	36238
Magh 2076	6012	5652	5287	2099	7219	2477	3996	16990	15752	32742
Falgun 2076	5638	5115	6894	2030	6849	2506	3768	17736	15064	32800
Chaitra 2076	4416	3759	5831	1785	5716	2134	3147	14584	12204	26788
Baishak 2077	4405	4203	6013	1811	5524	2061	2889	13983	12923	26906
Jestha 2077	4230	3335	5856	1925	5378	2296	3170	13408	12782	26190
Asar 2077	5103	4266	6499	2265	6771	2877	3449	17017	14213	31230
Shrawan 2077	5412	5294	6626	2677	7689	3263	5678	18054	18585	36639
Bhadra 2077	4409	4511	5900	2387	5291	2361	4731	14729	14861	29590

Table C. 2: Difference of number of institutional deliveries between COVID-19 months and same months of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	0.8	-14.6	14.8	3.0	6.8	10.9	2.7	3.9	1.6	2.8
Chaitra 2076	4.2	-24.1	-2.1	-6.5	-3.1	-8.4	-6.4	-6.5	-6.4	-6.5
Baishak 2077	-1.1	-1.8	-5.8	-7.2	5.6	-3.2	-6.2	-7.9	4.9	-2.2
Jestha 2077	-3.5	-20.2	-11.9	-3.4	-7.3	-3.8	-1.5	-14.8	-0.7	-8.4
Asar 2077	1.1	-6.7	1.3	-0.8	-1.6	7.4	-3.9	-0.6	-1.0	-0.7
Shrwan 2077	-24.2	-32.7	-33.8	-12.3	-25.8	-10.8	1.9	-27.8	-17.9	-23.1
Bhadra 2077	-33.4	-40.7	-36.8	-4.9	-45.2	-6.6	9.9	-37.6	-21.6	-30.5
Falgun 76-Bhadra 77	-10.3	-22.7	-14.0	-5.0	-14.0	-2.6	0.1	-15.3	-7.7	-11.8

Table C. 3: Monthly rate of change of number of institutional deliveries between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-24.3	-17.3	-0.8	-3.0	-8.0	3.1	-8.3	-8.6	-12.1	-10.2
Chaitra 2076-Baishak 2076	5.1	-13.6	7.2	2.1	-11.3	-8.6	-8.4	-2.7	-5.5	-4.0
Baishak-Jestha 2076	-1.6	-2.4	4.1	2.2	10.9	12.1	4.5	3.6	4.4	4.0
Jestha-Asar 2076	15.2	9.4	-3.5	14.6	18.6	12.2	11.5	8.8	11.5	10.0
Asar-Shrawan 2076	41.5	72.2	56.0	33.6	50.6	36.6	55.3	46.2	57.8	51.5
Shrawan-Bhadra 2076	-7.3	-3.4	-6.7	-17.8	-6.7	-30.9	-22.8	-5.7	-16.3	-10.7
Bhadra-Ashoj 2076	-2.7	-9.8	-5.0	-8.1	-8.3	-10.3	-10.9	-8.2	-6.3	-7.3
Ashoj-Kartik 2076	-12.6	5.0	-4.8	-1.0	-6.1	-9.9	-7.3	-4.9	-5.1	-5.0
Kartik-Mangsir 2076	12.2	-7.1	5.3	4.9	-0.7	10.9	4.9	3.4	2.2	2.9
Mangsir-Poush 2076	-3.8	-5.7	-13.9	-8.5	-7.5	6.5	6.0	-11.3	0.6	-6.0
Poush-Magh 2076	-1.1	-10.4	-30.9	-4.2	-5.5	2.7	1.0	-10.1	-9.2	-9.6
Magh-Falgun 2076	-6.2	-9.5	30.4	-3.3	-5.1	1.2	-5.7	4.4	-4.4	0.2
Falgun-Chaitra 2076	-21.7	-26.5	-15.4	-12.1	-16.5	-14.8	-16.5	-17.8	-19.0	-18.3
Chaitra 2076-Baishak 2077	-0.2	11.8	3.1	1.5	-3.4	-3.4	-8.2	-4.1	5.9	0.4
Baishak-Jestha 2077	-4.0	-20.7	-2.6	6.3	-2.6	11.4	9.7	-4.1	-1.1	-2.7
Jestha-Asar 2077	20.6	27.9	11.0	17.7	25.9	25.3	8.8	26.9	11.2	19.2
Asar-Shrawan 2077	6.1	24.1	2.0	18.2	13.6	13.4	64.6	6.1	30.8	17.3
Shrawan-Bhadra 2077	-18.5	-14.8	-11.0	-10.8	-31.2	-27.6	-16.7	-18.4	-20.0	-19.2

Table C. 4: Number of institutional deliveries in selected health facilities by province and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	1831	2041	2144	1538	2138	1500	2876	7124	6944	14068
Chaitra 2076	1499	1425	2088	1418	2091	1565	2618	6580	6124	12704
Baishak 2076	1499	1313	2161	1425	1820	1493	2423	6451	5683	12134
Jestha 2076	1265	1306	2213	1438	1981	1627	2498	6416	5912	12328
Asar 2076	1493	1403	2075	1683	2331	1787	2844	7268	6348	13616
Shrawan 2076	2113	2204	3281	2057	3646	2493	4212	9953	10053	20006
Bhadra 2076	1993	2236	2871	1771	3032	1742	3286	8771	8160	16931
Ashoj 2076	1796	2025	2657	1646	3123	1605	3031	8191	7692	15883
Kartik 2076	1907	2022	2641	1628	2717	1420	2789	7868	7256	15124
Mangsir 2076	2017	2109	2930	1741	2579	1551	2889	8401	7415	15816
Poush 2076	1933	1779	2617	1604	2428	1654	3008	7762	7261	15023
Magh 2076	1882	1638	2394	1501	2325	1663	3070	7550	6923	14473
Falgun 2076	1799	1592	2342	1487	2254	1694	2900	7370	6698	14068
Chaitra 2076	1461	1121	1998	1286	1833	1459	2437	6065	5530	11595
Baishak 2077	1434	1167	2127	1272	1800	1346	2154	5885	5415	11300
Jestha 2077	1323	1163	1985	1324	1626	1531	2339	5937	5354	11291
Asar 2077	1697	1333	2373	1455	1975	1935	2514	7513	5769	13282
Shrawan 2077	1978	2386	2921	1675	3429	2336	4286	9117	9894	19011
Bhadra 2077	2039	2261	2384	1587	2861	1798	3521	8222	8229	16451

Figure C. 1: Number of institutional deliveries in selected facilities by province with smoothing trend (Falgun 2075 – Bhadra 2077)

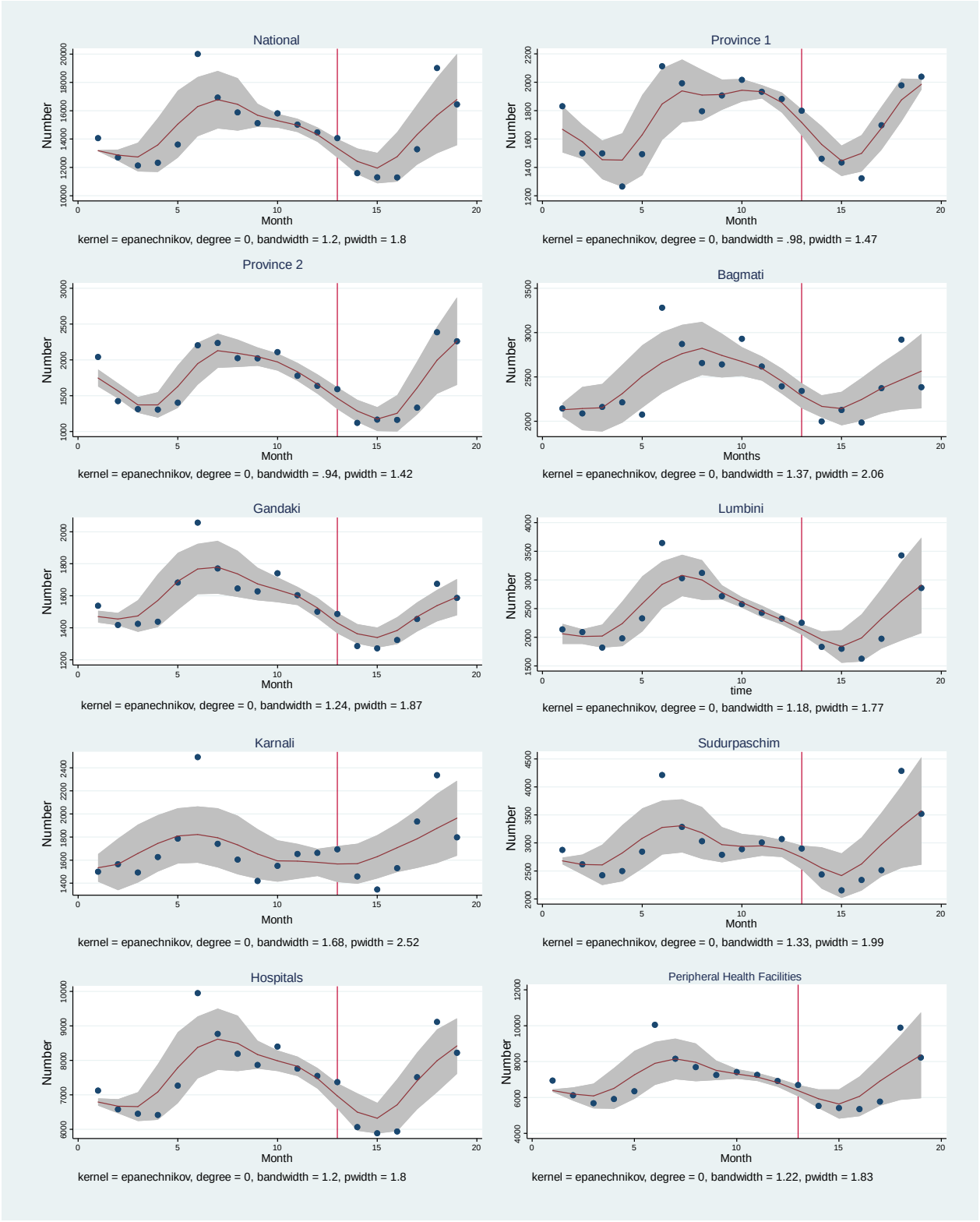


Table C. 5: Difference of number of institutional deliveries between COVID-19 months and same month of last year in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-1.7	-22.0	9.2	-3.3	5.4	12.9	0.8	3.5	-3.5	0.0
Chaitra 2076	-2.5	-21.3	-4.3	-9.3	-12.3	-6.8	-6.9	-7.8	-9.7	-8.7
Baishak 2077	-4.3	-11.1	-1.6	-10.7	-1.1	-9.8	-11.1	-8.8	-4.7	-6.9
Jestha 2077	4.6	-10.9	-10.3	-7.9	-17.9	-5.9	-6.4	-7.5	-9.4	-8.4
Asar 2077	13.7	-5.0	14.4	-13.5	-15.3	8.3	-11.6	3.4	-9.1	-2.5
Shrwan 2077	-6.4	8.3	-11.0	-18.6	-6.0	-6.3	1.8	-8.4	-1.6	-5.0
Bhadra 2077	2.3	1.1	-17.0	-10.4	-5.6	3.2	7.2	-6.3	0.8	-2.8
Falgun 76-Bhadra 77	0.3	-7.6	-4.2	-11.0	-7.4	-0.9	-2.9	-4.7	-4.7	-4.7

Table C. 6: Monthly rate of change of number of institutional deliveries between successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-18.1	-30.2	-2.6	-7.8	-2.2	4.3	-9.0	-7.6	-11.8	-9.7
Chaitra 2076-Baishak 2076	0.0	-7.9	3.5	0.5	-13.0	-4.6	-7.4	-2.0	-7.2	-4.5
Baishak-Jestha 2076	-15.6	-0.5	2.4	0.9	8.8	9.0	3.1	-0.5	4.0	1.6
Jestha-Asar 2076	18.0	7.4	-6.2	17.0	17.7	9.8	13.9	13.3	7.4	10.4
Asar-Shrawan 2076	41.5	57.1	58.1	22.2	56.4	39.5	48.1	36.9	58.4	46.9
Shrawan-Bhadra 2076	-5.7	1.5	-12.5	-13.9	-16.8	-30.1	-22.0	-11.9	-18.8	-15.4
Bhadra-Ashoj 2076	-9.9	-9.4	-7.5	-7.1	3.0	-7.9	-7.8	-6.6	-5.7	-6.2
Ashoj-Kartik 2076	6.2	-0.1	-0.6	-1.1	-13.0	-11.5	-8.0	-3.9	-5.7	-4.8
Kartik-Mangsir 2076	5.8	4.3	10.9	6.9	-5.1	9.2	3.6	6.8	2.2	4.6
Mangsir-Poush 2076	-4.2	-15.6	-10.7	-7.9	-5.9	6.6	4.1	-7.6	-2.1	-5.0
Poush-Magh 2076	-2.6	-7.9	-8.5	-6.4	-4.2	0.5	2.1	-2.7	-4.7	-3.7
Magh-Falgun 2076	-4.4	-2.8	-2.2	-0.9	-3.1	1.9	-5.5	-2.4	-3.3	-2.8
Falgun-Chaitra 2076	-18.8	-29.6	-14.7	-13.5	-18.7	-13.9	-16.0	-17.7	-17.4	-17.6
Chaitra 2076-Baishak 2077	-1.8	4.1	6.5	-1.1	-1.8	-7.7	-11.6	-3.0	-2.1	-2.5
Baishak-Jestha 2077	-7.7	-0.3	-6.7	4.1	-9.7	13.7	8.6	0.9	-1.1	-0.1
Jestha-Asar 2077	28.3	14.6	19.5	9.9	21.5	26.4	7.5	26.5	7.8	17.6
Asar-Shrawan 2077	16.6	79.0	23.1	15.1	73.6	20.7	70.5	21.3	71.5	43.1
Shrawan-Bhadra 2077	3.1	-5.2	-18.4	-5.3	-16.6	-23.0	-17.8	-9.8	-16.8	-13.5

Table D. 1: Number of PNC visits in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	623	1666	1170	422	1601	765	1638	1392	6493	7885
Chaitra 2076	681	1590	1480	456	1354	851	1673	1916	6169	8085
Baishak 2076	558	1109	1373	461	1190	740	1391	1493	5329	6822
Jestha 2076	537	1231	1220	586	1816	810	1503	1593	6110	7703
Asar 2076	539	1170	1493	666	1484	940	1599	1759	6132	7891
Shrawan 2076	1382	1661	2415	986	2656	1256	2664	3125	9895	13020
Bhadra 2076	1699	2225	2190	672	2374	876	2002	3482	8556	12038
Ashoj 2076	1620	1526	1615	630	2248	778	1767	2594	7590	10184
Kartik 2076	763	1485	1624	619	2187	775	1588	1830	7211	9041
Mangsir 2076	1137	1851	1707	603	2246	860	1706	2326	7784	10110
Poush 2076	930	1645	2215	589	2098	947	1918	2641	7701	10342
Magh 2076	1957	1098	1861	575	2351	959	1899	2760	7940	10700
Falgun 2076	1643	1202	2076	553	1970	962	1956	3308	7054	10362
Chaitra 2076	1420	772	1474	453	1500	814	1463	2516	5380	7896
Baishak 2077	1380	1129	1707	481	1378	805	1354	2451	5783	8234
Jestha 2077	1275	989	1560	624	1440	941	1403	2285	5947	8232
Asar 2077	1367	1160	1843	763	1733	1200	1611	2681	6996	9677
Shrawan 2077	2485	1532	1697	1035	3139	1241	2651	3490	10290	13780
Bhadra 2077	2209	1326	1544	871	2242	942	2409	2718	8825	11543

Table D. 2: Difference of number of PNC visits between COVID-19 months and same months of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	163.7	-27.9	77.4	31.0	23.0	25.8	19.4	137.6	8.6	31.4
Chaitra 2076	108.5	-51.4	-0.4	-0.7	10.8	-4.3	-12.6	31.3	-12.8	-2.3
Baishak 2077	147.3	1.8	24.3	4.3	15.8	8.8	-2.7	64.2	8.5	20.7
Jestha 2077	137.4	-19.7	27.9	6.5	-20.7	16.2	-6.7	43.4	-2.7	6.9
Asar 2077	153.6	-0.9	23.4	14.6	16.8	27.7	0.8	52.4	14.1	22.6
Shrwan 2077	79.8	-7.8	-29.7	5.0	18.2	-1.2	-0.5	11.7	4.0	5.8
Bhadra 2077	30.0	-40.4	-29.5	29.6	-5.6	7.5	20.3	-21.9	3.1	-4.1
Falgun 76-Bhadra 77	95.7	-23.9	4.9	12.5	7.4	10.7	3.0	31.8	3.3	9.9

Table D. 3: Monthly rate of change of number of PNC visits in successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	9.3	-4.6	26.5	8.1	-15.4	11.2	2.1	37.6	-5.0	2.5
Chaitra 2076-Baishak 2076	-18.1	-30.3	-7.2	1.1	-12.1	-13.0	-16.9	-22.1	-13.6	-15.6
Baishak-Jestha 2076	-3.8	11.0	-11.1	27.1	52.6	9.5	8.1	6.7	14.7	12.9
Jestha-Asar 2076	0.4	-5.0	22.4	13.7	-18.3	16.0	6.4	10.4	0.4	2.4
Asar-Shrawan 2076	156.4	42.0	61.8	48.0	79.0	33.6	66.6	77.7	61.4	65.0
Shrawan-Bhadra 2076	22.9	34.0	-9.3	-31.8	-10.6	-30.3	-24.8	11.4	-13.5	-7.5
Bhadra-Ashoj 2076	-4.6	-31.4	-26.3	-6.3	-5.3	-11.2	-11.7	-25.5	-11.3	-15.4
Ashoj-Kartik 2076	-52.9	-2.7	0.6	-1.7	-2.7	-0.4	-10.1	-29.5	-5.0	-11.2
Kartik-Mangsir 2076	49.0	24.6	5.1	-2.6	2.7	11.0	7.4	27.1	7.9	11.8
Mangsir-Poush 2076	-18.2	-11.1	29.8	-2.3	-6.6	10.1	12.4	13.5	-1.1	2.3
Poush-Magh 2076	110.4	-33.3	-16.0	-2.4	12.1	1.3	-1.0	4.5	3.1	3.5
Magh-Falgun 2076	-16.0	9.5	11.6	-3.8	-16.2	0.3	3.0	19.9	-11.2	-3.2
Falgun-Chaitra 2076	-13.6	-35.8	-29.0	-18.1	-23.9	-15.4	-25.2	-23.9	-23.7	-23.8
Chaitra 2076-Baishak 2077	-2.8	46.2	15.8	6.2	-8.1	-1.1	-7.5	-2.6	7.5	4.3
Baishak-Jestha 2077	-7.6	-12.4	-8.6	29.7	4.5	16.9	3.6	-6.8	2.8	0.0
Jestha-Asar 2077	7.2	17.3	18.1	22.3	20.3	27.5	14.8	17.3	17.6	17.6
Asar-Shrawan 2077	81.8	32.1	-7.9	35.6	81.1	3.4	64.6	30.2	47.1	42.4
Shrawan-Bhadra 2077	-11.1	-13.4	-9.0	-15.8	-28.6	-24.1	-9.1	-22.1	-14.2	-16.2

Table D. 4: Number of PNC visits in selected health facilities by province and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	45	149	119	64	426	173	753	247	1482	1729
Chaitra 2076	59	104	116	64	350	191	674	296	1262	1558
Baishak 2076	47	95	116	69	330	202	561	286	1134	1420
Jestha 2076	49	91	96	115	339	177	587	304	1150	1454
Asar 2076	56	92	107	125	369	258	616	369	1254	1623
Shrawan 2076	75	152	115	155	631	307	1114	388	2161	2549
Bhadra 2076	66	174	105	127	506	209	832	336	1683	2019
Ashoj 2076	52	134	92	124	560	200	776	292	1646	1938
Kartik 2076	59	120	113	151	523	202	681	337	1512	1849
Mangsir 2076	59	170	113	131	481	216	741	349	1562	1911
Poush 2076	89	175	127	123	424	228	733	342	1557	1899
Magh 2076	52	114	130	119	391	234	746	329	1457	1786
Falgun 2076	56	140	124	104	377	250	763	344	1470	1814
Chaitra 2076	48	96	117	92	287	198	599	274	1163	1437
Baishak 2077	46	111	159	91	286	177	549	345	1074	1419
Jestha 2077	47	90	150	117	255	240	563	392	1070	1462
Asar 2077	56	88	192	185	331	295	584	500	1231	1731
Shrawan 2077	63	160	218	197	655	304	1090	516	2171	2687
Bhadra 2077	58	168	179	161	478	227	958	437	1792	2229

Figure D.1: Number of PNC visits as per protocol in all reporting facilities by province with smoothing trend (Falgun 2075 to Bhadra 2077)

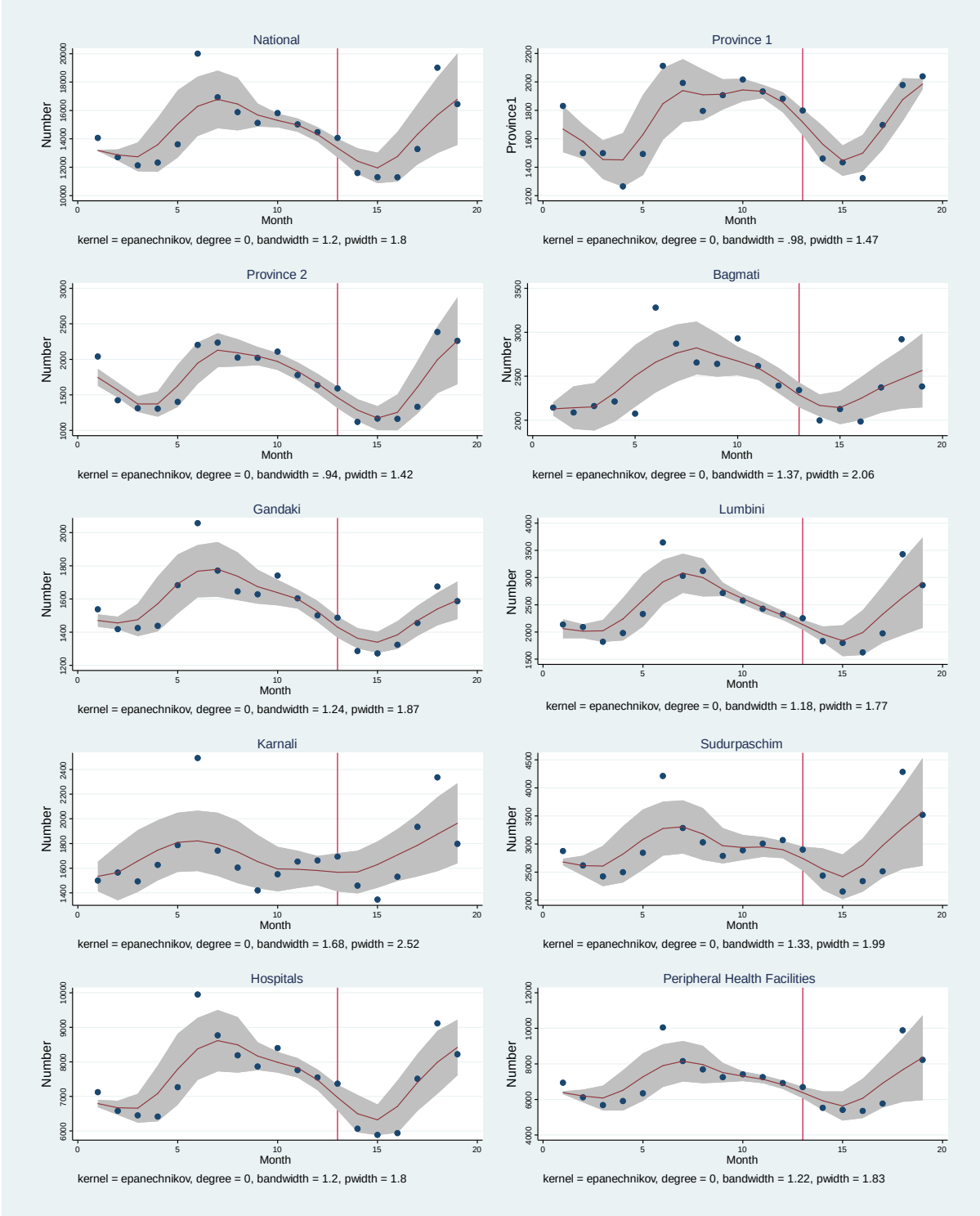


Figure D. 2: Number of PNC visits as per protocol in selected facilities by province with smoothing trend (Falgun 2075 – Bhadra 2077)

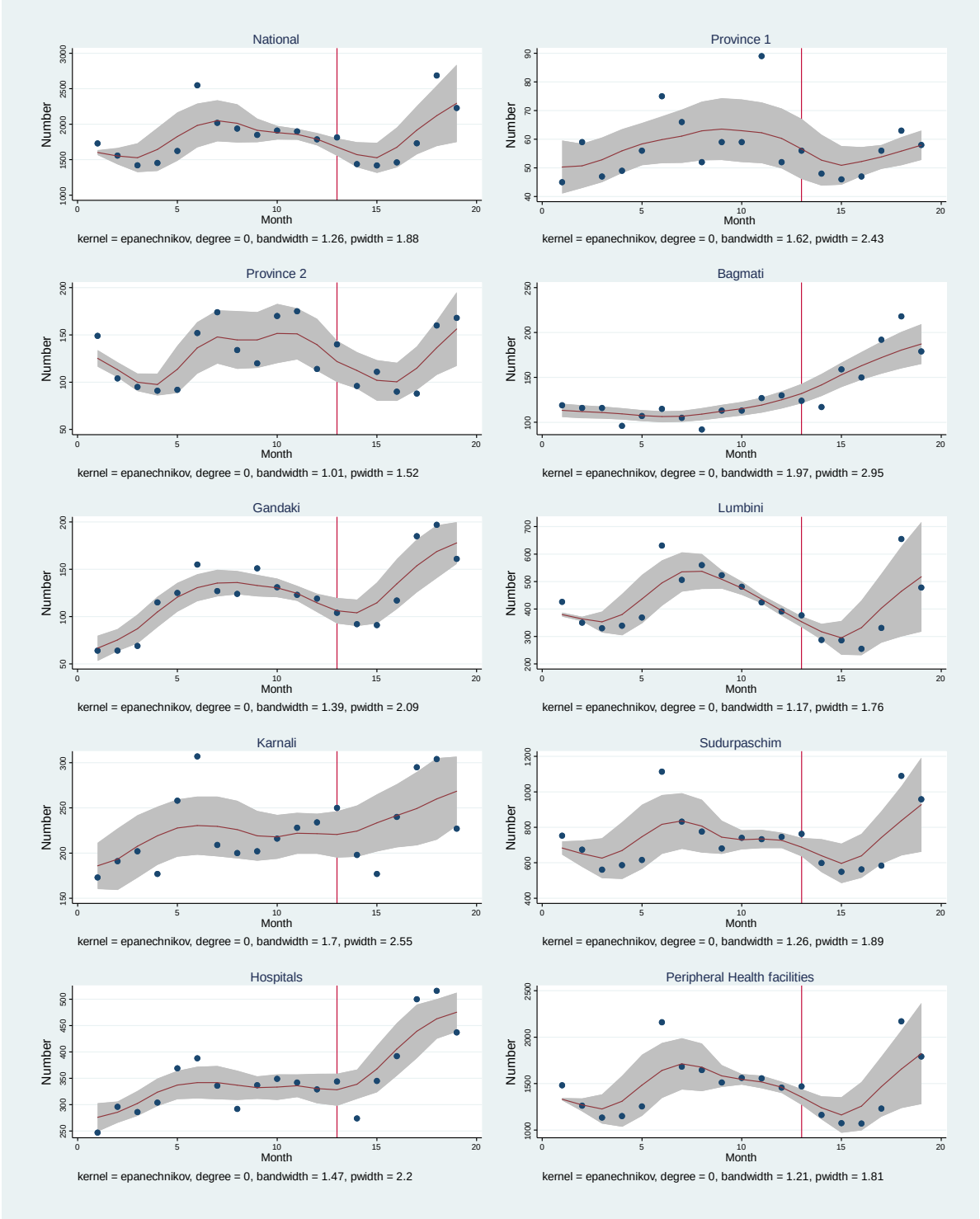


Table D. 5: Difference of number of institutional deliveries between COVID-19 months and same months of last year in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	24.4	-6.0	4.2	62.5	-11.5	44.5	1.3	39.3	-0.8	4.9
Chaitra 2076	-18.6	-7.7	0.9	43.8	-18.0	3.7	-11.1	-7.4	-7.8	-7.8
Baishak 2077	-2.1	16.8	37.1	31.9	-13.3	-12.4	-2.1	20.6	-5.3	-0.1
Jestha 2077	-4.1	-1.1	56.3	1.7	-24.8	35.6	-4.1	28.9	-7.0	0.6
Asar 2077	0.0	-4.3	79.4	48.0	-10.3	14.3	-5.2	35.5	-1.8	6.7
Shrwan 2077	-16.0	5.3	89.6	27.1	3.8	-1.0	-2.2	33.0	0.5	5.4
Bhadra 2077	-12.1	-3.4	70.5	26.8	-5.5	8.6	15.1	30.1	6.5	10.4
Falgun 76-Bhadra 77	-5.8	-0.5	47.2	31.7	-9.6	11.5	-0.6	26.1	-1.5	3.5

Table D. 6: Monthly rate of change of number of PNC visits in successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	31.1	-30.2	-2.5	0.0	-17.8	10.4	-10.5	19.8	-14.8	-9.9
Chaitra 2076-Baishak 2076	-20.3	-8.7	0.0	7.8	-5.7	5.8	-16.8	-3.4	-10.1	-8.9
Baishak-Jestha 2076	4.3	-4.2	-17.2	66.7	2.7	-12.4	4.6	6.3	1.4	2.4
Jestha-Asar 2076	14.3	1.1	11.5	8.7	8.8	45.8	4.9	21.4	9.0	11.6
Asar-Shrawan 2076	33.9	65.2	7.5	24.0	71.0	19.0	80.8	5.1	72.3	57.1
Shrawan-Bhadra 2076	-12.0	14.5	-8.7	-18.1	-19.8	-31.9	-25.3	-13.4	-22.1	-20.8
Bhadra-Ashoj 2076	-21.2	-23.0	-12.4	-2.4	10.7	-4.3	-6.7	-13.1	-2.2	-4.0
Ashoj-Kartik 2076	13.5	-10.4	22.8	21.8	-6.6	1.0	-12.2	15.4	-8.1	-4.6
Kartik-Mangsir 2076	0.0	41.7	0.0	-13.2	-8.0	6.9	8.8	3.6	3.3	3.4
Mangsir-Poush 2076	50.8	2.9	12.4	-6.1	-11.9	5.6	-1.1	-2.0	-0.3	-0.6
Poush-Magh 2076	-41.6	-34.9	2.4	-3.3	-7.8	2.6	1.8	-3.8	-6.4	-6.0
Magh-Falgun 2076	7.7	22.8	-4.6	-12.6	-3.6	6.8	2.3	4.6	0.9	1.6
Falgun-Chaitra 2076	-14.3	-31.4	-5.6	-11.5	-23.9	-20.8	-21.5	-20.3	-20.9	-20.8
Chaitra 2076-Baishak 2077	-4.2	15.6	35.9	-1.1	-0.3	-10.6	-8.3	25.9	-7.7	-1.3
Baishak-Jestha 2077	2.2	-18.9	-5.7	28.6	-10.8	35.6	2.6	13.6	-0.4	3.0
Jestha-Asar 2077	19.1	-2.2	28.0	58.1	29.8	22.9	3.7	27.6	15.0	18.4
Asar-Shrawan 2077	12.5	81.8	13.5	6.5	97.9	3.1	86.6	3.2	76.4	55.2
Shrawan-Bhadra 2077	-7.9	5.0	-17.9	-18.3	-27.0	-25.3	-12.1	-15.3	-17.5	-17.0

Table E. 1: Number of permanent sterilization procedures performed in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	155	455	757	147	484	27	312	752	1585	2337
Chaitra 2076	129	261	80	87	87	20	229	68	825	893
Baishak 2076	94	119	52	146	32	138	17	122	476	598
Jestha 2076	80	143	88	94	47	132	6	120	470	590
Asar 2076	3349	87	150	115	69	76	59	993	2912	3905
Shrawan 2076	144	122	128	56	42	32	194	121	597	718
Bhadra 2076	83	312	156	61	34	39	6	89	602	691
Ashoj 2076	119	101	158	133	11	31	4	97	460	557
Kartik 2076	138	73	64	39	10	21	6	69	282	351
Mangsir 2076	283	483	114	175	49	323	281	244	1464	1708
Poush 2076	1702	2703	98	136	608	57	638	215	5727	5942
Magh 2076	911	2151	323	96	1167	83	308	784	4255	5039
Falgun 2076	150	1191	215	498	204	50	68	538	1838	2376
Chaitra 2076	114	406	50	78	31	105	248	125	907	1032
Baishak 2077	76	114	6	125	28	9	32	50	340	390
Jestha 2077	63	149	8	88	16	34	15	73	300	373
Asar 2077	414	443	38	21	871	61	97	327	1618	1945
Shrawan 2077	148	6	14	6	34	21	33	89	173	262
Bhadra 2077	105	6	15	1	32	42	31	85	147	232

Figure E. 1: Number of permanent sterilization procedures performed in all reporting facilities with smoothing trend by province and health facility (Falgun 2075 – Bhadra 2077)

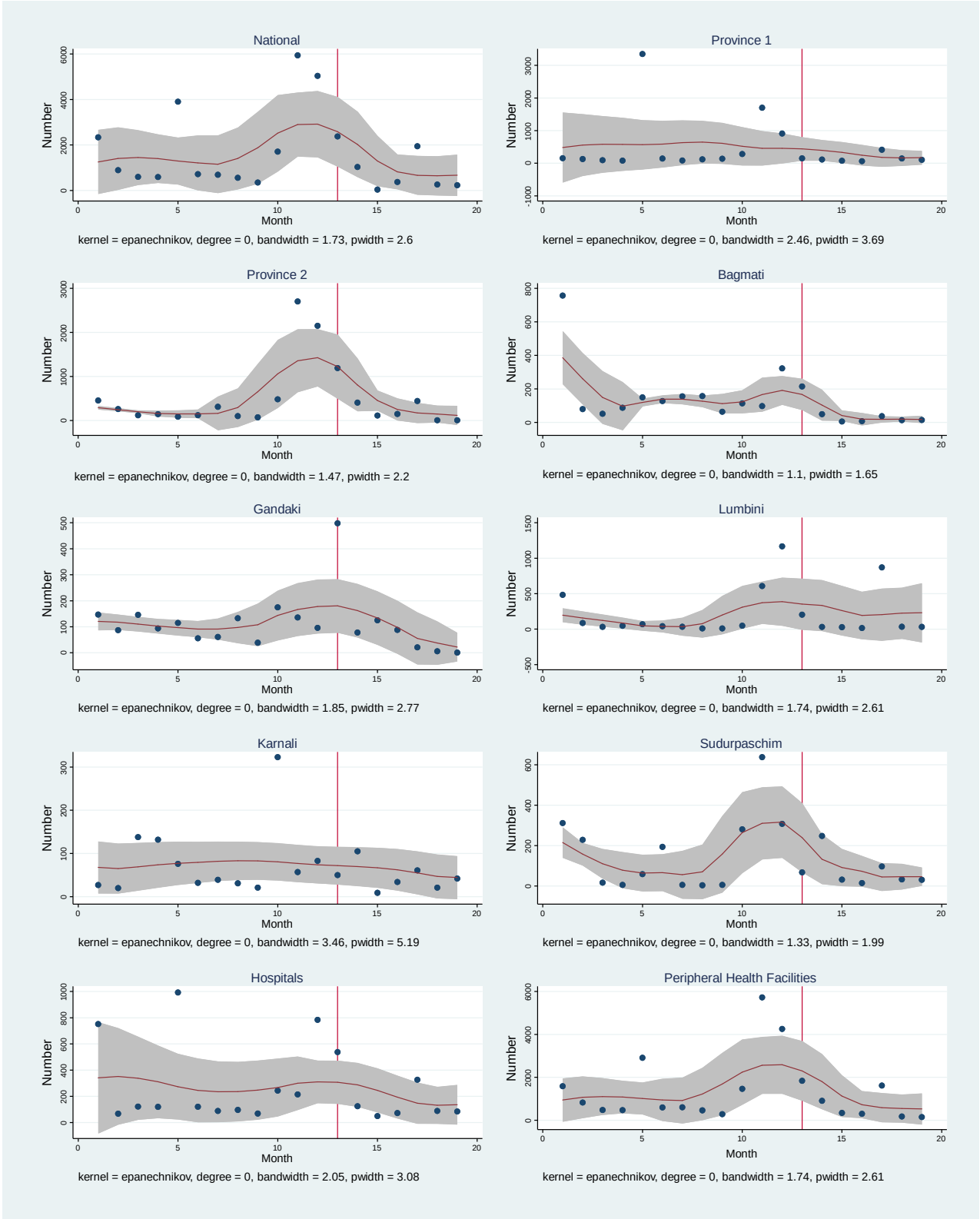


Table E. 2: Difference in number of permanent sterilization procedures performed between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-3.2	161.8	-71.6	238.8	-57.9	85.2	-78.2	-28.5	16.0	1.7
Chaitra 2076	-11.6	55.6	-37.5	-10.3	-64.4	425.0	8.3	83.8	9.9	15.6
Baishak 2077	-19.1	-4.2	-88.5	-14.4	-12.5	-93.5	88.2	-59.0	-28.6	-93.5
Jestha 2077	-21.3	4.2	-90.9	-6.4	-66.0	-74.2	150.0	-39.2	-36.2	-36.8
Asar 2077	-87.6	409.2	-74.7	-81.7	1162.3	-19.7	64.4	-67.1	-44.4	-50.2
Shrwan 2077	2.8	-95.1	-89.1	-89.3	-19.0	-34.4	-83.0	-26.4	-71.0	-63.5
Bhadra 2077	26.5	-98.1	-90.4	-98.4	-5.9	7.7	416.7	-4.5	-75.6	-66.4
Falgun 76-Bhadra 77	-73.5	54.4	-75.5	15.7	53.0	-30.6	-36.3	-43.2	-28.7	-35.7

Table E. 3: Monthly rate of change of number of permanent sterilization procedures performed between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-16.8	-42.6	-89.4	-40.8	-82.0	-25.9	-26.6	-91.0	-47.9	-61.8
Chaitra 2076-Baishak 2076	-27.1	-54.4	-35.0	67.8	-63.2	590.0	-92.6	79.4	-42.3	-33.0
Baishak-Jestha 2076	-14.9	20.2	69.2	-35.6	46.9	-4.3	-64.7	-1.6	-1.3	-1.3
Jestha-Asar 2076	4086.3	-39.2	70.5	22.3	46.8	-42.4	883.3	727.5	519.6	561.9
Asar-Shrawan 2076	-95.7	40.2	-14.7	-51.3	-39.1	-57.9	228.8	-87.8	-79.5	-81.6
Shrawan-Bhadra 2076	-42.4	155.7	21.9	8.9	-19.0	21.9	-96.9	-26.4	0.8	-3.8
Bhadra-Ashoj 2076	43.4	-67.6	1.3	118.0	-67.6	-20.5	-33.3	9.0	-23.6	-19.4
Ashoj-Kartik 2076	16.0	-27.7	-59.5	-70.7	-9.1	-32.3	50.0	-28.9	-38.7	-37.0
Kartik-Mangsir 2076	105.1	561.6	78.1	348.7	390.0	1438.1	4583.3	253.6	419.1	386.6
Mangsir-Poush 2076	501.4	459.6	-14.0	-22.3	1140.8	-82.4	127.0	-11.9	291.2	247.9
Poush-Magh 2076	-46.5	-20.4	229.6	-29.4	91.9	45.6	-51.7	264.7	-25.7	-15.2
Magh-Falgun 2076	-83.5	-44.6	-33.4	418.8	-82.5	-39.8	-77.9	-31.4	-56.8	-52.8
Falgun-Chaitra 2076	-24.0	-65.9	-76.7	-84.3	-84.8	110.0	264.7	-76.8	-50.7	-56.6
Chaitra 2076-Baishak 2077	-33.3	-71.9	-88.0	60.3	-9.7	-91.4	-87.1	-60.0	-62.5	-96.2
Baishak-Jestha 2077	-17.1	30.7	33.3	-29.6	-42.9	277.8	-53.1	46.0	-11.8	856.4
Jestha-Asar 2077	557.1	197.3	375.0	-76.1	5343.8	79.4	546.7	347.9	439.3	421.4
Asar-Shrawan 2077	-64.3	-98.6	-63.2	-71.4	-96.1	-65.6	-66.0	-72.8	-89.3	-86.5
Shrawan-Bhadra 2077	-29.1	0.0	7.1	-83.3	-5.9	100.0	-6.1	-4.5	-15.0	-11.5

Table E. 4: Number of new IUCD users in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Province							Type of HF		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2075	181	195	415	211	240	83	218	333	1210	1543
Chaitra 2076	192	159	372	236	474	50	147	341	1289	1630
Baishak 2076	243	276	251	177	607	70	181	396	1409	1805
Jestha 2076	248	218	519	219	420	66	176	441	1425	1866
Asar 2076	219	279	352	195	1636	72	162	452	2463	2915
Shrawan 2076	291	290	374	199	318	50	134	396	1260	1656
Bhadra 2076	285	148	347	222	357	47	230	452	1184	1636
Ashoj 2076	184	153	252	122	213	42	121	290	797	1087
Kartik 2076	158	301	389	222	290	51	127	527	1011	1538
Mangsir 2076	268	177	333	119	354	40	110	363	1038	1401
Poush 2076	139	159	368	127	260	45	144	355	887	1242
Magh 2076	175	149	223	123	278	151	97	323	873	1196
Falgun 2076	167	138	335	130	260	88	80	381	817	1198
Chaitra 2076	374	78	118	66	107	24	63	118	712	830
Baishak 2077	343	46	108	53	83	27	51	118	593	711
Jestha 2077	379	92	77	94	80	39	71	97	735	832
Asar 2077	110	403	173	122	248	21	111	255	933	1188
Shrawan 2077	144	117	193	247	146	62	137	362	684	1046
Bhadra 2077	104	361	6588	77	129	51	165	6598	877	7475

Figure E. 2: Number of new IUCD users in all reporting facilities with smoothing trend by province and health facility (Falgun 2075 – Bhadra 2077)

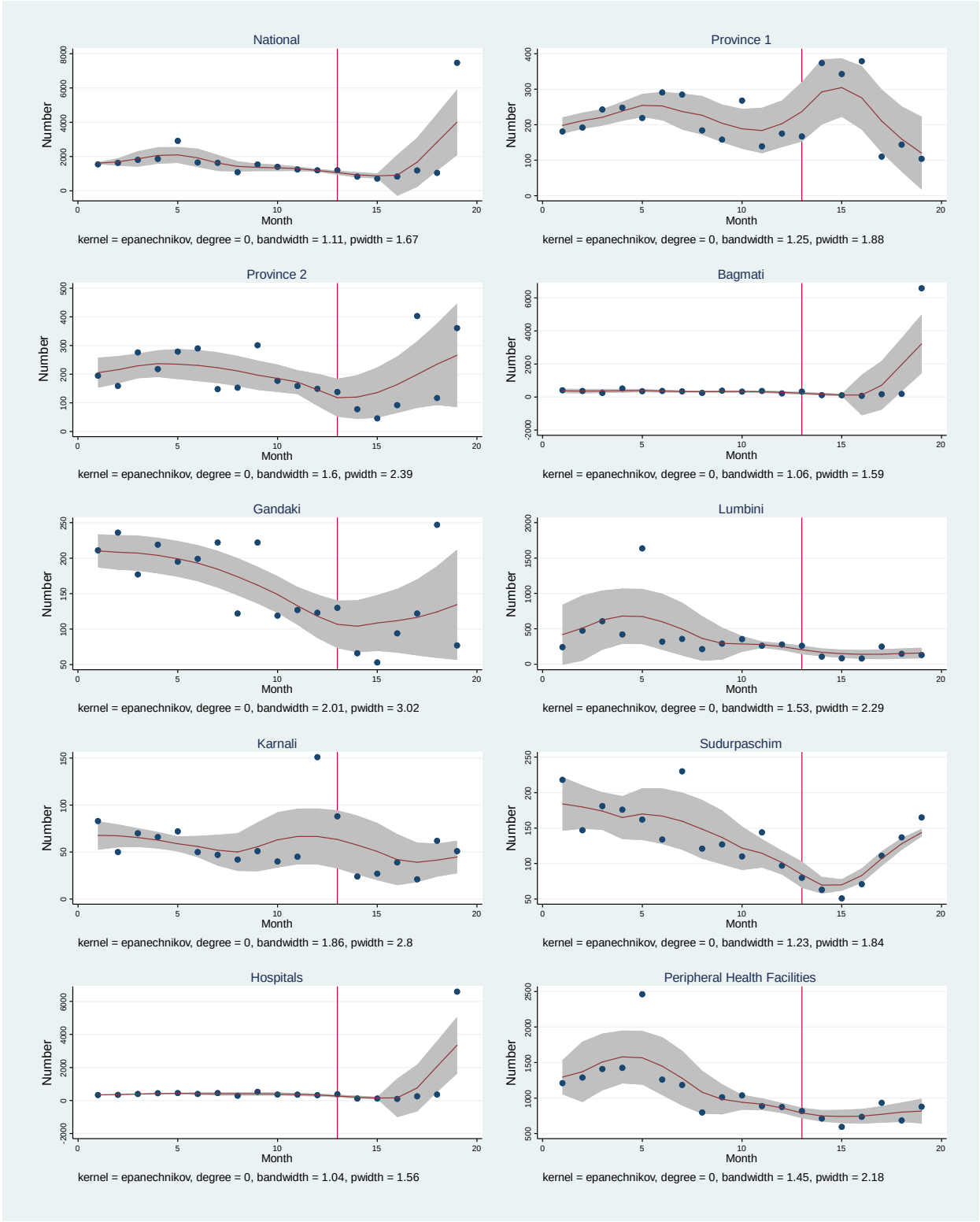


Table E. 5: Difference of new IUCD users between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-7.7	-29.2	-19.3	-38.4	8.3	6.0	-63.3	14.4	-32.5	-22.4
Chaitra 2076	94.8	-50.9	-68.3	-72.0	-77.4	-52.0	-57.1	-65.4	-44.8	-49.1
Baishak 2077	41.2	-83.3	-57.0	-70.1	-86.3	-61.4	-71.8	-70.2	-57.9	-60.6
Jestha 2077	52.8	-57.8	-85.2	-57.1	-81.0	-40.9	-59.7	-78.0	-48.4	-55.4
Asar 2077	-49.8	44.4	-50.9	-37.4	-84.8	-70.8	-31.5	-43.6	-62.1	-59.2
Shrwan 2077	-50.5	-59.7	-48.4	24.1	-54.1	24.0	2.2	-8.6	-45.7	-36.8
Bhadra 2077	-63.5	143.9	1798.6	-65.3	-63.9	8.5	-28.3	1359.7	-25.9	356.9
Falgun 76-Bhadra 77	-2.3	-21.1	188.7	-45.9	-74.0	-28.8	-45.7	182.1	-47.7	1.8

Table E. 6: Monthly rate of change of new IUCD users between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	6.1	-18.5	-10.4	11.8	97.5	-39.8	-32.6	2.4	6.5	5.6
Chaitra 2076-Baishak 2076	26.6	73.6	-32.5	-25.0	28.1	40.0	23.1	16.1	9.3	10.7
Baishak-Jestha 2076	2.1	-21.0	106.8	23.7	-30.8	-5.7	-2.8	11.4	1.1	3.4
Jestha-Asar 2076	-11.7	28.0	-32.2	-11.0	289.5	9.1	-8.0	2.5	72.8	56.2
Asar-Shrawan 2076	32.9	3.9	6.3	2.1	-80.6	-30.6	-17.3	-12.4	-48.8	-43.2
Shrawan-Bhadra 2076	-2.1	-49.0	-7.2	11.6	12.3	-6.0	71.6	14.1	-6.0	-1.2
Bhadra-Ashoj 2076	-35.4	3.4	-27.4	-45.0	-40.3	-10.6	-47.4	-35.8	-32.7	-33.6
Ashoj-Kartik 2076	-14.1	96.7	54.4	82.0	36.2	21.4	5.0	81.7	26.9	41.5
Kartik-Mangsir 2076	69.6	-41.2	-14.4	-46.4	22.1	-21.6	-13.4	-31.1	2.7	-8.9
Mangsir-Poush 2076	-48.1	-10.2	10.5	6.7	-26.6	12.5	30.9	-2.2	-14.5	-11.3
Poush-Magh 2076	25.9	-6.3	-39.4	-3.1	6.9	235.6	-32.6	-9.0	-1.6	-3.7
Magh-Falgun 2076	-4.6	-7.4	50.2	5.7	-6.5	-41.7	-17.5	18.0	-6.4	0.2
Falgun-Chaitra 2076	124.0	-43.5	-64.8	-49.2	-58.8	-72.7	-21.3	-69.0	-12.9	-30.7
Chaitra 2076-Baishak 2077	-8.3	-41.0	-8.5	-19.7	-22.4	12.5	-19.0	0.0	-16.7	-14.3
Baishak-Jestha 2077	10.5	100.0	-28.7	77.4	-3.6	44.4	39.2	-17.8	23.9	17.0
Jestha-Asar 2077	-71.0	338.0	124.7	29.8	210.0	-46.2	56.3	162.9	26.9	42.8
Asar-Shrawan 2077	30.9	-71.0	11.6	102.5	-41.1	195.2	23.4	42.0	-26.7	-12.0
Shrawan-Bhadra 2077	-27.8	208.5	3313.5	-68.8	-11.6	-17.7	20.4	1722.7	28.2	614.6

Table E. 7: Number of new implant users in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2075	1752	892	1792	546	1996	724	1258	864	8096	8960
Chaitra 2076	1907	876	2118	660	2102	764	1150	846	8731	9577
Baishak 2076	1402	961	1458	561	1725	1115	884	1130	6976	8106
Jestha 2076	2021	1019	1923	806	1954	888	1260	928	8943	9871
Asar 2076	2540	942	1704	666	2053	645	922	1305	8167	9472
Shrawan 2076	1432	1203	1488	717	1551	586	898	956	6919	7875
Bhadra 2076	1505	575	1465	597	1539	419	734	707	6127	6834
Ashoj 2076	943	511	1182	425	1319	393	657	523	4907	5430
Kartik 2076	899	532	1233	329	1125	336	546	661	4339	5000
Mangsir 2076	1609	1025	1781	583	2049	681	1194	1017	7905	8922
Poush 2076	1933	1120	2145	686	2178	815	1191	1079	8989	10068
Magh 2076	1727	1182	1955	783	2281	941	1121	971	9019	9990
Falgun 2076	1744	1027	1968	777	2370	895	1498	1073	9206	10279
Chaitra 2076	872	809	1050	375	835	474	519	388	4546	4934
Baishak 2077	846	270	680	361	504	339	377	417	2960	3377
Jestha 2077	1291	460	1381	618	847	337	888	473	5349	5822
Asar 2077	1411	841	2909	525	1536	860	979	1861	7200	9061
Shrawan 2077	1365	665	1896	659	1806	728	1209	795	7533	8328
Bhadra 2077	1070	409	7378	649	1290	723	1252	6591	6180	12771

Figure E. 3: Number of new implant users in all reporting facilities with smoothing trend by province and health facility (Falgun 2075 – Bhadra 2077)

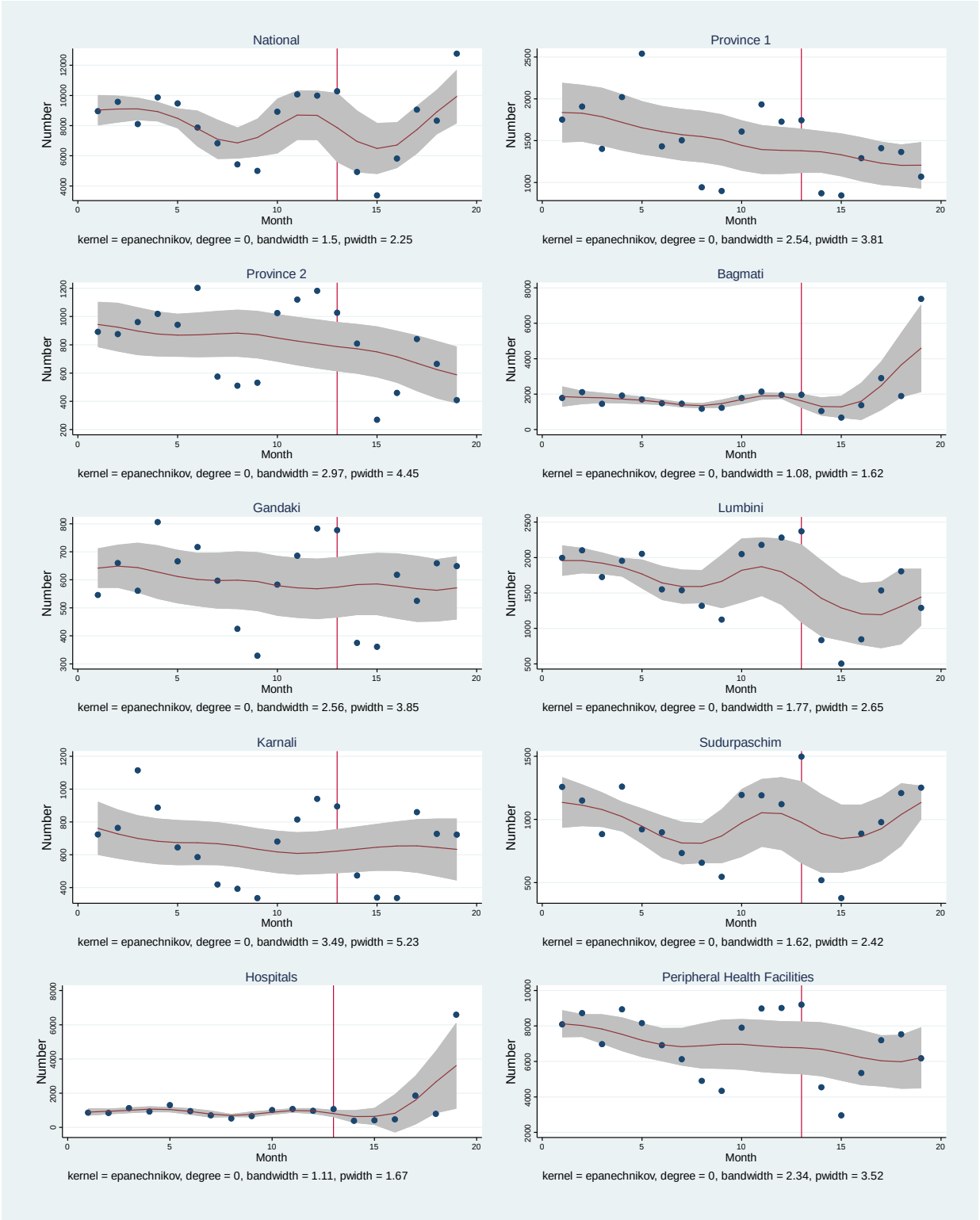


Table E. 8: Difference in new implant users between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-0.5	15.1	9.8	42.3	18.7	23.6	19.1	24.2	13.7	14.7
Chaitra 2076	-54.3	-7.6	-50.4	-43.2	-60.3	-38.0	-54.9	-54.1	-47.9	-48.5
Baishak 2077	-39.7	-71.9	-53.4	-35.7	-70.8	-69.6	-57.4	-63.1	-57.6	-58.3
Jestha 2077	-36.1	-54.9	-28.2	-23.3	-56.7	-62.0	-29.5	-49.0	-40.2	-41.0
Asar 2077	-44.4	-10.7	70.7	-21.2	-25.2	33.3	6.2	42.6	-11.8	-4.3
Shrwan 2077	-4.7	-44.7	27.4	-8.1	16.4	24.2	34.6	-16.8	8.9	5.8
Bhadra 2077	-28.9	-28.9	403.6	8.7	-16.2	72.6	70.6	832.2	0.9	86.9
Falgun 76-Bhadra 77	-31.5	-30.7	44.5	-12.9	-28.9	-15.3	-5.4	72.2	-20.4	-10.1

Table E. 9: Monthly rate of change of new implant users between successive months in all reporting facilities (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	8.8	-1.8	18.2	20.9	5.3	5.5	-8.6	-2.1	7.8	6.9
Chaitra 2076-Baishak 2076	-26.5	9.7	-31.2	-15.0	-17.9	45.9	-23.1	33.6	-20.1	-15.4
Baishak-Jestha 2076	44.2	6.0	31.9	43.7	13.3	-20.4	42.5	-17.9	28.2	21.8
Jestha-Asar 2076	25.7	-7.6	-11.4	-17.4	5.1	-27.4	-26.8	40.6	-8.7	-4.0
Asar-Shrawan 2076	-43.6	27.7	-12.7	7.7	-24.5	-9.1	-2.6	-26.7	-15.3	-16.9
Shrawan-Bhadra 2076	5.1	-52.2	-1.5	-16.7	-0.8	-28.5	-18.3	-26.0	-11.4	-13.2
Bhadra-Ashoj 2076	-37.3	-11.1	-19.3	-28.8	-14.3	-6.2	-10.5	-26.0	-19.9	-20.5
Ashoj-Kartik 2076	-4.7	4.1	4.3	-22.6	-14.7	-14.5	-16.9	26.4	-11.6	-7.9
Kartik-Mangsir 2076	79.0	92.7	44.4	77.2	82.1	102.7	118.7	53.9	82.2	78.4
Mangsir-Poush 2076	20.1	9.3	20.4	17.7	6.3	19.7	-0.3	6.1	13.7	12.8
Poush-Magh 2076	-10.7	5.5	-8.9	14.1	4.7	15.5	-5.9	-10.0	0.3	-0.8
Magh-Falgun 2076	1.0	-13.1	0.7	-0.8	3.9	-4.9	33.6	10.5	2.1	2.9
Falgun-Chaitra 2076	-50.0	-21.2	-46.6	-51.7	-64.8	-47.0	-65.4	-63.8	-50.6	-52.0
Chaitra 2076-Baishak 2077	-3.0	-66.6	-35.2	-3.7	-39.6	-28.5	-27.4	7.5	-34.9	-31.6
Baishak-Jestha 2077	52.6	70.4	103.1	71.2	68.1	-0.6	135.5	13.4	80.7	72.4
Jestha-Asar 2077	9.3	82.8	110.6	-15.0	81.3	155.2	10.2	293.4	34.6	55.6
Asar-Shrawan 2077	-3.3	-20.9	-34.8	25.5	17.6	-15.3	23.5	-57.3	4.6	-8.1
Shrawan-Bhadra 2077	-21.6	-38.5	289.1	-1.5	-28.6	-0.7	3.6	729.1	-18.0	53.4

Table E. 10: Number of new Depo users in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2075	11864	3552	3799	1375	3392	2218	2685	1319	27566	28885
Chaitra 2076	3664	3356	3659	1456	3714	2926	3618	1299	21094	22393
Baishak 2076	3299	3283	3404	1423	3417	2689	2905	1226	19194	20420
Jestha 2076	3571	3275	3716	1484	3922	2618	3157	1624	20119	21743
Asar 2076	3269	2862	3529	1390	34810	2349	2343	1273	49279	50552
Shrawan 2076	3557	3058	3817	1545	3596	2625	2762	1361	19599	20960
Bhadra 2076	3967	3385	4419	1646	4006	2563	2791	1413	21364	22777
Ashoj 2076	3437	2931	3648	1568	3919	2986	3130	1207	20412	21619
Kartik 2076	3226	2821	3633	1275	3559	2851	2910	1193	19082	20275
Mangsir 2076	3890	3812	4178	1587	4263	2804	3136	1364	22306	23670
Poush 2076	4009	3652	4496	1607	4004	2587	2812	1402	21765	23167
Magh 2076	3811	3673	4091	1545	3544	2562	2568	1248	20546	21794
Falgun 2076	3795	3740	4036	1423	4106	2773	2650	1310	21213	22523
Chaitra 2076	3714	2970	3256	1230	2635	2491	2487	805	17978	18783
Baishak 2077	2753	3059	4557	1445	2792	2891	2345	1011	18831	19842
Jestha 2077	3728	3300	5136	1766	3755	3732	3597	1078	23936	25014
Asar 2077	3301	2922	4305	1485	10154	3975	4918	1157	29903	31060
Shrawan 2077	3648	3380	3968	1674	4622	4057	4964	1311	25002	26313
Bhadra 2077	3139	2675	4389	1478	3939	3619	4518	1881	21876	23757

Figure E. 4: Number of new Depo users in all reporting facilities with smoothing trend by province and health facility (Falgun 2075 – Bhadra 2077)

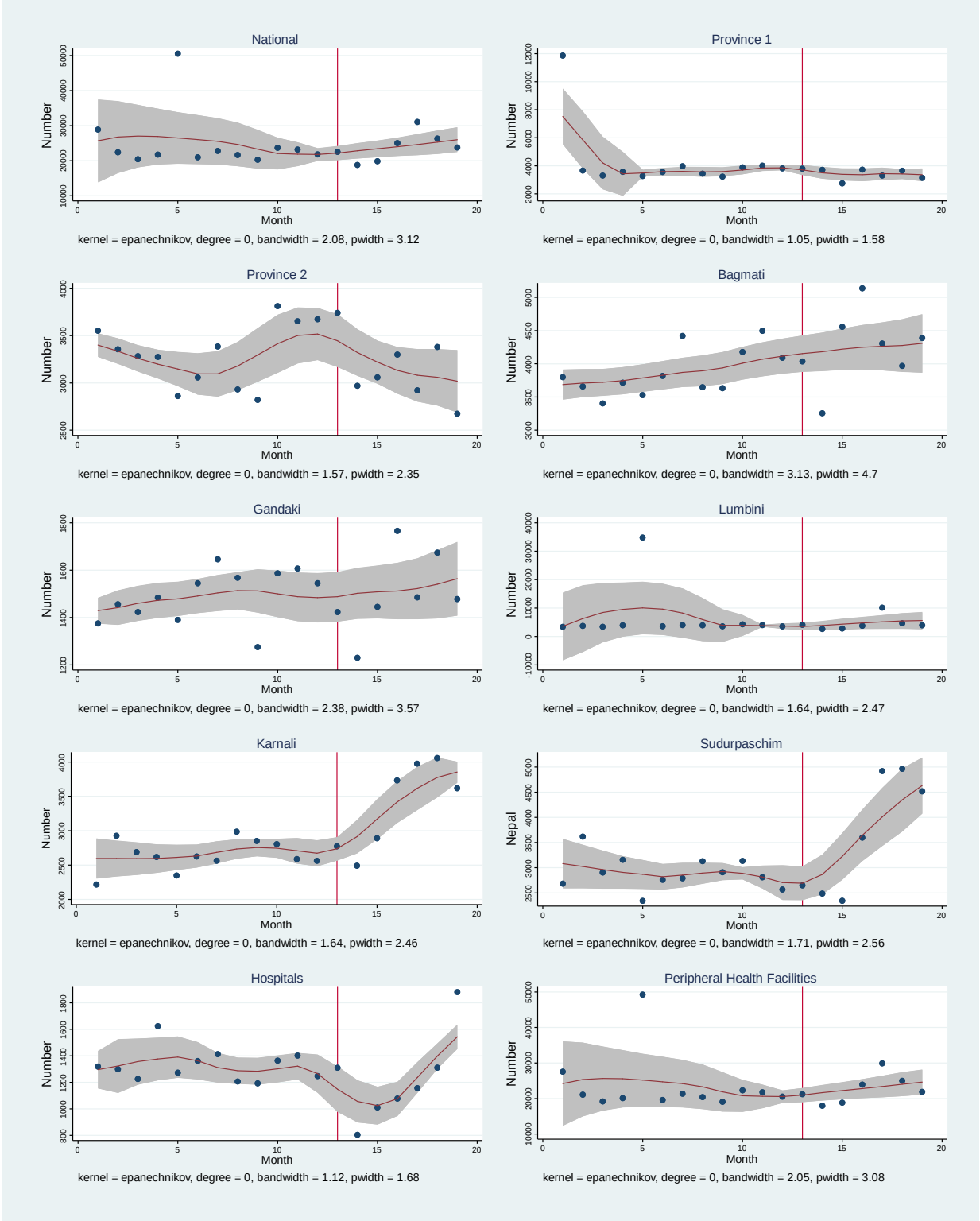


Table E. 11: Difference of new Depo users between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-68.0	5.3	6.2	3.5	21.0	25.0	-1.3	-0.7	-23.0	-22.0
Chaitra 2076	1.4	-11.5	-11.0	-15.5	-29.1	-14.9	-31.3	-38.0	-14.8	-16.1
Baishak 2077	-16.6	-6.8	33.9	1.5	-18.3	7.5	-19.3	-17.5	-1.9	-2.8
Jestha 2077	4.4	0.8	38.2	19.0	-4.3	42.6	13.9	-33.6	19.0	15.0
Asar 2077	1.0	2.1	22.0	6.8	-70.8	69.2	109.9	-9.1	-39.3	-38.6
Shrwan 2077	2.6	10.5	4.0	8.3	28.5	54.6	79.7	-3.7	27.6	25.5
Bhadra 2077	-20.9	-21.0	-0.7	-10.2	-1.7	41.2	61.9	33.1	2.4	4.3
Falgun 76-Bhadra 77	-27.5	-3.2	12.5	1.8	-43.7	30.9	25.8	-10.1	-10.9	-10.9

Table E. 12: Monthly rate of change of new Depo users between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-69.1	-5.5	-3.7	5.9	9.5	31.9	34.7	-1.5	-23.5	-22.5
Chaitra 2076-Baishak 2076	-10.0	-2.2	-7.0	-2.3	-8.0	-8.1	-19.7	-5.6	-9.0	-8.8
Baishak-Jestha 2076	8.2	-0.2	9.2	4.3	14.8	-2.6	8.7	32.5	4.8	6.5
Jestha-Asar 2076	-8.5	-12.6	-5.0	-6.3	787.6	-10.3	-25.8	-21.6	144.9	132.5
Asar-Shrawan 2076	8.8	6.8	8.2	11.2	-89.7	11.7	17.9	6.9	-60.2	-58.5
Shrawan-Bhadra 2076	11.5	10.7	15.8	6.5	11.4	-2.4	1.0	3.8	9.0	8.7
Bhadra-Ashoj 2076	-13.4	-13.4	-17.4	-4.7	-2.2	16.5	12.1	-14.6	-4.5	-5.1
Ashoj-Kartik 2076	-6.1	-3.8	-0.4	-18.7	-9.2	-4.5	-7.0	-1.2	-6.5	-6.2
Kartik-Mangsir 2076	20.6	35.1	15.0	24.5	19.8	-1.6	7.8	14.3	16.9	16.7
Mangsir-Poush 2076	3.1	-4.2	7.6	1.3	-6.1	-7.7	-10.3	2.8	-2.4	-2.1
Poush-Magh 2076	-4.9	0.6	-9.0	-3.9	-11.5	-1.0	-8.7	-11.0	-5.6	-5.9
Magh-Falgun 2076	-0.4	1.8	-1.3	-7.9	15.9	8.2	3.2	5.0	3.2	3.3
Falgun-Chaitra 2076	-2.1	-20.6	-19.3	-13.6	-35.8	-10.2	-6.2	-38.5	-15.3	-16.6
Chaitra 2076-Baishak 2077	-25.9	3.0	40.0	17.5	6.0	16.1	-5.7	25.6	4.7	5.6
Baishak-Jestha 2077	35.4	7.9	12.7	22.2	34.5	29.1	53.4	6.6	27.1	26.1
Jestha-Asar 2077	-11.5	-11.5	-16.2	-15.9	170.4	6.5	36.7	7.3	24.9	24.2
Asar-Shrawan 2077	10.5	15.7	-7.8	12.7	-54.5	2.1	0.9	13.3	-16.4	-15.3
Shrawan-Bhadra 2077	-14.0	-20.9	10.6	-11.7	-14.8	-10.8	-9.0	43.5	-12.5	-9.7

Table E. 13: Number of new pills users in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2075	1972	1936	2511	999	2266	1065	1284	493	11540	12033
Chaitra 2076	1695	1875	2051	969	2424	1322	1490	645	11181	11826
Baishak 2076	1689	1851	1245	949	2320	1245	1101	440	9960	10400
Jestha 2076	1745	2022	1459	923	2316	1042	1308	647	10168	10815
Asar 2076	1513	1437	1213	883	19246	1135	1022	583	25866	26449
Shrawan 2076	1743	1880	1641	1140	2290	1807	1219	641	11079	11720
Bhadra 2076	1877	1867	1624	1042	2266	1064	1433	570	10603	11173
Ashoj 2076	1619	1672	1632	989	2533	1067	1285	491	10306	10797
Kartik 2076	1559	1777	1563	890	2290	1251	1333	562	10101	10663
Mangsir 2076	1982	2320	1611	969	2615	1370	1522	577	11812	12389
Poush 2076	2086	2140	1608	978	2547	1360	1609	552	11776	12328
Magh 2076	1940	2132	1677	992	2577	1783	1214	504	11811	12315
Falgun 2076	2109	2127	1554	1012	2292	1141	1142	632	10745	11377
Chaitra 2076	1722	1767	1668	974	2079	1099	1246	397	10158	10555
Baishak 2077	2499	2263	2038	1012	2588	1424	1234	520	12538	13058
Jestha 2077	2425	2391	2170	1012	2775	1535	1191	532	12967	13499
Asar 2077	2084	2039	1626	847	6977	1590	1207	594	15776	16370
Shrawan 2077	2030	2127	1523	994	2429	1526	1350	612	11367	11979
Bhadra 2077	1848	1580	2090	848	2147	1233	1424	1061	10109	11170

Figure E. 5: Number of new pill users in all reporting facilities with smoothing trend by province and health facility (Falgun 2075 – Bhadra 2077)

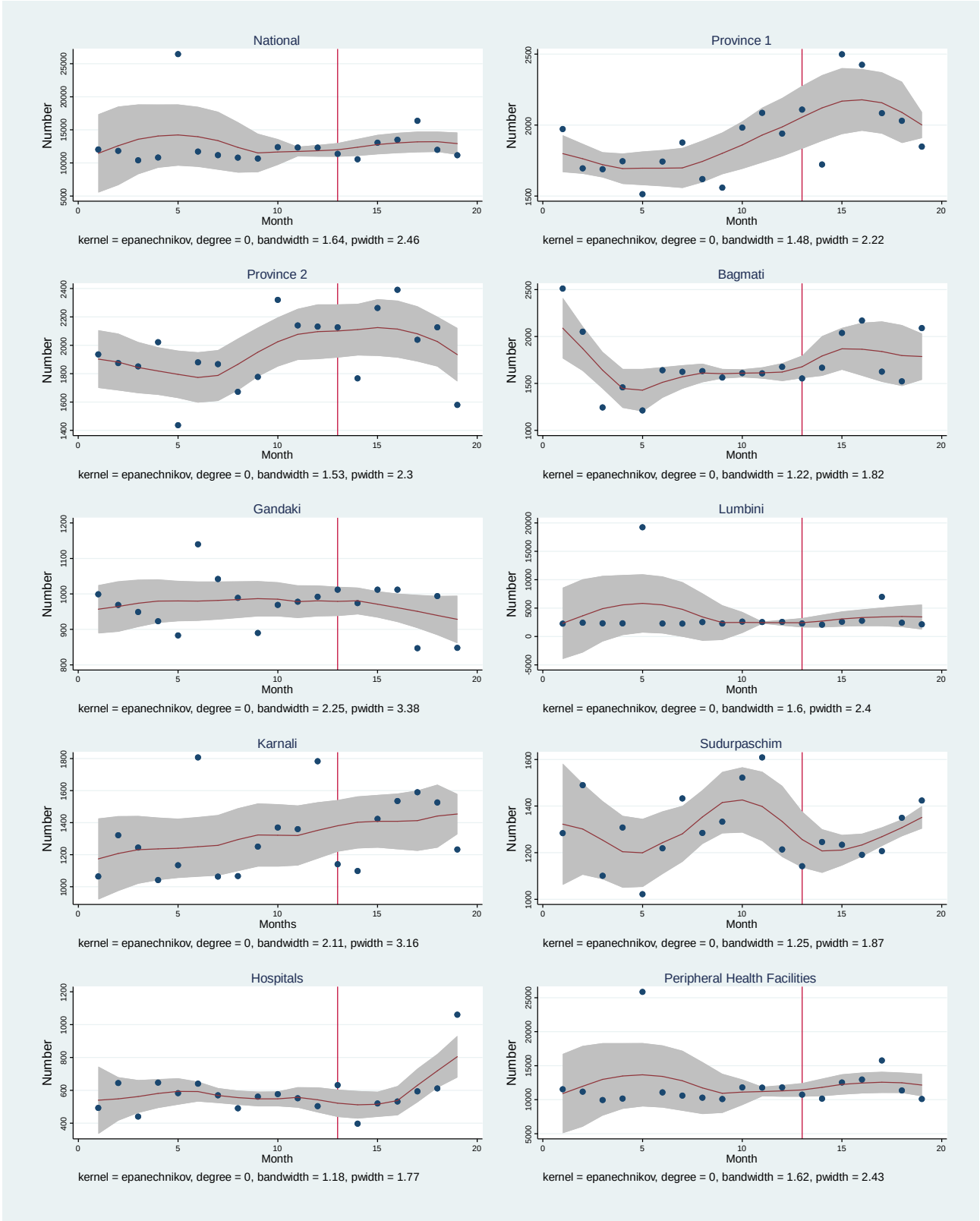


Table E. 14: Difference of new pills users between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	6.9	9.9	-38.1	1.3	1.1	7.1	-11.1	28.2	-6.9	-5.5
Chaitra 2076	1.6	-5.8	-18.7	0.5	-14.2	-16.9	-16.4	-38.4	-9.1	-10.7
Baishak 2077	48.0	22.3	63.7	6.6	11.6	14.4	12.1	18.2	25.9	25.6
Jestha 2077	39.0	18.2	48.7	9.6	19.8	47.3	-8.9	-17.8	27.5	24.8
Asar 2077	37.7	41.9	34.0	-4.1	-63.7	40.1	18.1	1.9	-39.0	-38.1
Shrwan 2077	16.5	13.1	-7.2	-12.8	6.1	-15.6	10.7	-4.5	2.6	2.2
Bhadra 2077	-1.5	-15.4	28.7	-18.6	-5.3	15.9	-0.6	86.1	-4.7	0.0
Falgun 76-Bhadra 77	20.3	11.1	7.9	-3.0	-35.7	10.0	-0.7	8.2	-7.5	-6.8

Table E. 15: Monthly rate of change of new pills users between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-14.0	-3.2	-18.3	-3.0	7.0	24.1	16.0	30.8	-3.1	-1.7
Chaitra 2076-Baishak 2076	-0.4	-1.3	-39.3	-2.1	-4.3	-5.8	-26.1	-31.8	-10.9	-12.1
Baishak-Jestha 2076	3.3	9.2	17.2	-2.7	-0.2	-16.3	18.8	47.0	2.1	4.0
Jestha-Asar 2076	-13.3	-28.9	-16.9	-4.3	731.0	8.9	-21.9	-9.9	154.4	144.6
Asar-Shrawan 2076	15.2	30.8	35.3	29.1	-88.1	59.2	19.3	9.9	-57.2	-55.7
Shrawan-Bhadra 2076	7.7	-0.7	-1.0	-8.6	-1.0	-41.1	17.6	-11.1	-4.3	-4.7
Bhadra-Ashoj 2076	-13.7	-10.4	0.5	-5.1	11.8	0.3	-10.3	-13.9	-2.8	-3.4
Ashoj-Kartik 2076	-3.7	6.3	-4.2	-10.0	-9.6	17.2	3.7	14.5	-2.0	-1.2
Kartik-Mangsir 2076	27.1	30.6	3.1	8.9	14.2	9.5	14.2	2.7	16.9	16.2
Mangsir-Poush 2076	5.2	-7.8	-0.2	0.9	-2.6	-0.7	5.7	-4.3	-0.3	-0.5
Poush-Magh 2076	-7.0	-0.4	4.3	1.4	1.2	31.1	-24.5	-8.7	0.3	-0.1
Magh-Falgun 2076	8.7	-0.2	-7.3	2.0	-11.1	-36.0	-5.9	25.4	-9.0	-7.6
Falgun-Chaitra 2076	-18.3	-16.9	7.3	-3.8	-9.3	-3.7	9.1	-37.2	-5.5	-7.2
Chaitra 2076-Baishak 2077	45.1	28.1	22.2	3.9	24.5	29.6	-1.0	31.0	23.4	23.7
Baishak-Jestha 2077	-3.0	5.7	6.5	0.0	7.2	7.8	-3.5	2.3	3.4	3.4
Jestha-Asar 2077	-14.1	-14.7	-25.1	-16.3	151.4	3.6	1.3	11.7	21.7	21.3
Asar-Shrawan 2077	-2.6	4.3	-6.3	17.4	-65.2	-4.0	11.8	3.0	-27.9	-26.8
Shrawan-Bhadra 2077	-9.0	-25.7	37.2	-14.7	-11.6	-19.2	5.5	73.4	-11.1	-6.8

Table E. 16: Number of condoms distributed in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2075	291160	260694	286765	221217	558678	170178	392857	131740	2049809	2181549
Chaitra 2076	344909	264825	277962	222443	610754	180769	382729	159808	2124583	2284391
Baishak 2076	276177	283405	270771	226811	549556	182614	424179	130963	2082550	2213513
Jestha 2076	279725	250332	288313	226795	552717	200188	415145	137425	2075790	2213215
Asar 2076	296072	250291	292592	229266	2158910	187497	436669	141996	3709301	3851297
Shrawan 2076	299910	246445	284216	223844	520025	195448	434281	122935	2081234	2204169
Bhadra 2076	274477	253501	272212	213872	529282	211839	412877	111057	2057003	2168060
Ashoj 2076	261371	235256	261247	201380	504100	190667	408144	95521	1966644	2062165
Kartik 2076	247810	256626	247506	187795	478822	186022	387355	102973	1888963	1991936
Mangsir 2076	252704	264838	247269	197412	494975	174678	390263	96188	1925951	2022139
Poush 2076	248346	252044	259503	191997	472399	171293	404081	98307	1901356	1999663
Magh 2076	228988	258869	258290	195980	477720	176386	416382	95654	1916961	2012615
Falgun 2076	248273	235450	248985	198565	462723	164524	402246	91629	1869137	1960766
Chaitra 2076	217022	219566	237975	183670	421899	154652	371119	71414	1734489	1805903
Baishak 2077	236206	210878	241129	194694	419622	157744	395728	69807	1786194	1856001
Jestha 2077	256251	229781	250715	209219	411187	159360	400159	89541	1827131	1916672
Asar 2077	264646	234749	248918	212051	763830	164062	485724	106516	2267464	2373980
Shrawan 2077	241878	210559	233473	204440	468807	170781	462634	93605	1898967	1992572
Bhadra 2077	232978	190227	222558	190517	439559	170639	469631	66421	1849688	1916109

Figure E. 6: Number of condoms distributed in all reporting facilities with smoothing trend by province and health facility (Falgun 2075 – Bhadra 2077)

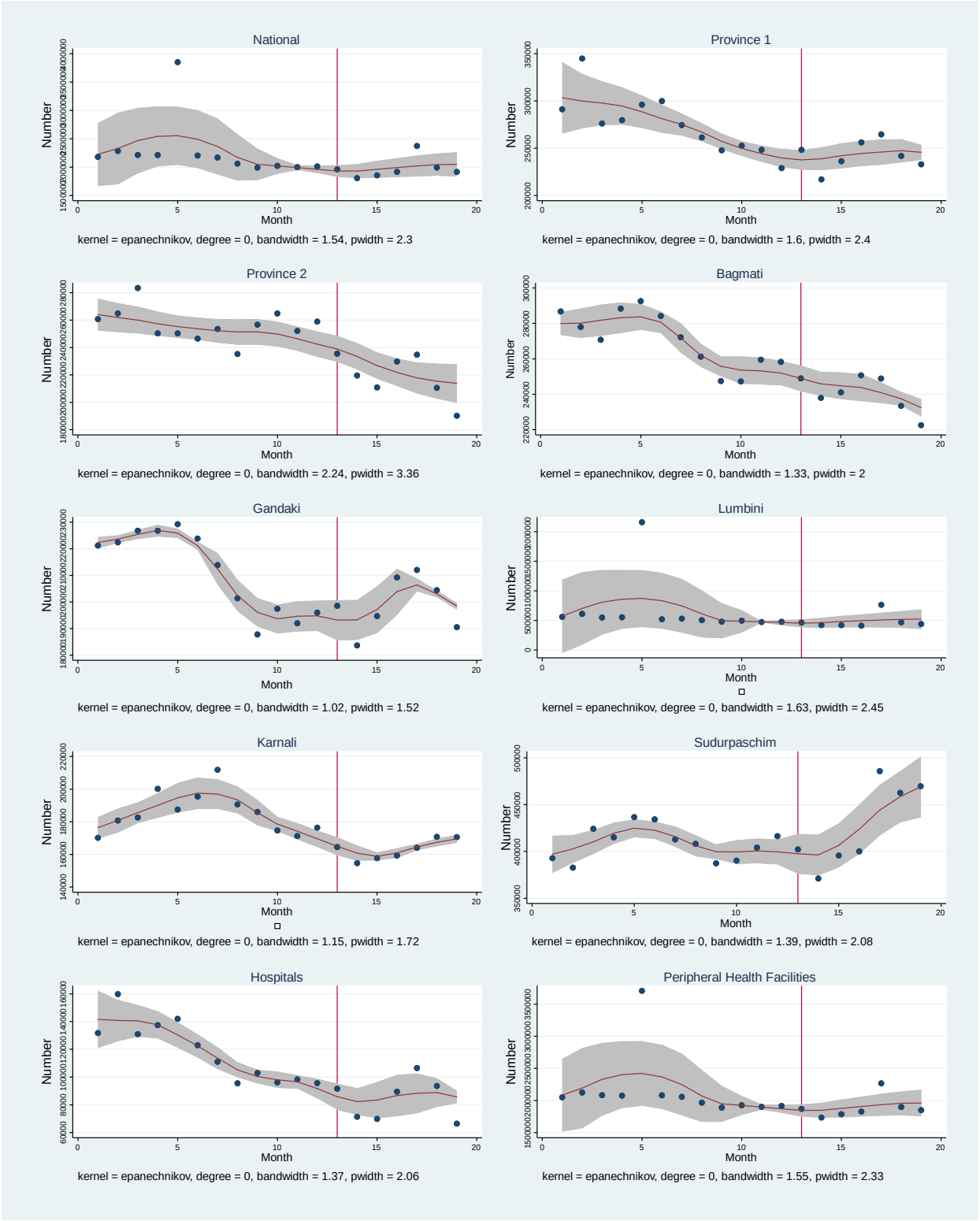


Table E. 17: Difference of condom distributed between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-14.7	-9.7	-13.2	-10.2	-17.2	-3.3	2.4	-30.4	-8.8	-10.1
Chaitra 2076	-37.1	-17.1	-14.4	-17.4	-30.9	-14.4	-3.0	-55.3	-18.4	-20.9
Baishak 2077	-14.5	-25.6	-10.9	-14.2	-23.6	-13.6	-6.7	-46.7	-14.2	-16.2
Jestha 2077	-8.4	-8.2	-13.0	-7.7	-25.6	-20.4	-3.6	-34.8	-12.0	-13.4
Asar 2077	-10.6	-6.2	-14.9	-7.5	-64.6	-12.5	11.2	-25.0	-38.9	-38.4
Shrwan 2077	-19.3	-14.6	-17.9	-8.7	-9.8	-12.6	6.5	-23.9	-8.8	-9.6
Bhadra 2077	-15.1	-25.0	-18.2	-10.9	-17.0	-19.4	13.7	-40.2	-10.1	-11.6
Falgun 76-Bhadra 77	-17.7	-15.4	-14.7	-10.9	-38.2	-14.1	3.1	-37.1	-18.2	-19.2

Table E. 18: Monthly rate of change of condom distributed between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							Type of HF		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	18.5	1.6	-3.1	0.6	9.3	6.2	-2.6	21.3	3.6	4.7
Chaitra 2076-Baishak 2076	-19.9	7.0	-2.6	2.0	-10.0	1.0	10.8	-18.0	-2.0	-3.1
Baishak-Jestha 2076	1.3	-11.7	6.5	0.0	0.6	9.6	-2.1	4.9	-0.3	0.0
Jestha-Asar 2076	5.8	0.0	1.5	1.1	290.6	-6.3	5.2	3.3	78.7	74.0
Asar-Shrawan 2076	1.3	-1.5	-2.9	-2.4	-75.9	4.2	-0.5	-13.4	-43.9	-42.8
Shrawan-Bhadra 2076	-8.5	2.9	-4.2	-4.5	1.8	8.4	-4.9	-9.7	-1.2	-1.6
Bhadra-Ashoj 2076	-4.8	-7.2	-4.0	-5.8	-4.8	-10.0	-1.1	-14.0	-4.4	-4.9
Ashoj-Kartik 2076	-5.2	9.1	-5.3	-6.7	-5.0	-2.4	-5.1	7.8	-3.9	-3.4
Kartik-Mangsir 2076	2.0	3.2	-0.1	5.1	3.4	-6.1	0.8	-6.6	2.0	1.5
Mangsir-Poush 2076	-1.7	-4.8	4.9	-2.7	-4.6	-1.9	3.5	2.2	-1.3	-1.1
Poush-Magh 2076	-7.8	2.7	-0.5	2.1	1.1	3.0	3.0	-2.7	0.8	0.6
Magh-Falgun 2076	8.4	-9.0	-3.6	1.3	-3.1	-6.7	-3.4	-4.2	-2.5	-2.6
Falgun-Chaitra 2076	-12.6	-6.7	-4.4	-7.5	-8.8	-6.0	-7.7	-22.1	-7.2	-7.9
Chaitra 2076-Baishak 2077	8.8	-4.0	1.3	6.0	-0.5	2.0	6.6	-2.3	3.0	2.8
Baishak-Jestha 2077	8.5	9.0	4.0	7.5	-2.0	1.0	1.1	28.3	2.3	3.3
Jestha-Asar 2077	3.3	2.2	-0.7	1.4	85.8	3.0	21.4	19.0	24.1	23.9
Asar-Shrawan 2077	-8.6	-10.3	-6.2	-3.6	-38.6	4.1	-4.8	-12.1	-16.3	-16.1
Shrawan-Bhadra 2077	-3.7	-9.7	-4.7	-6.8	-6.2	-0.1	1.5	-29.0	-2.6	-3.8

Table F. 1: Number of abortions performed in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	1720	847	1613	1317	1543	491	1096	2018	6609	8627
Chaitra 2076	1815	844	1545	1216	1497	517	963	2166	6231	8397
Baishak 2076	1639	919	1649	1028	1469	532	823	1927	6132	8059
Jestha 2076	1522	946	1599	938	1555	487	1054	1974	6127	8101
Asar 2076	1296	782	1538	878	1259	425	761	1783	5156	6939
Shrawan 2076	1634	718	2210	1175	1841	415	1041	2277	6757	9034
Bhadra 2076	1311	641	1879	1023	1549	397	806	1947	5659	7606
Ashoj 2076	1111	526	1663	826	1199	354	585	1644	4620	6264
Kartik 2076	1121	573	1660	925	1469	435	663	1876	4970	6846
Mangsir 2076	1403	661	1722	1264	1826	578	979	1915	6518	8433
Poush 2076	1585	656	1631	1207	1896	527	907	2066	6343	8409
Magh 2076	1585	664	1944	1323	1957	524	974	2214	6757	8971
Falgun 2076	1703	657	1749	1341	1876	527	890	2305	6438	8743
Chaitra 2076	1049	499	908	884	1294	354	561	1313	4236	5549
Baishak 2077	1179	440	1120	1005	1338	343	664	1750	4339	6089
Jestha 2077	1172	560	1151	916	1355	384	761	1706	4593	6299
Asar 2077	1104	539	895	795	1185	397	716	1519	4112	5631
Shrawan 2077	1185	412	1084	1072	1430	468	1165	1724	5092	6816
Bhadra 2077	855	258	635	679	795	259	806	1133	3154	4287

Table F. 2: Difference in number of abortions performed between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-1.0	-22.4	8.4	1.8	21.6	7.3	-18.8	14.2	-2.6	1.3
Chaitra 2076	-42.2	-40.9	-41.2	-27.3	-13.6	-31.5	-41.7	-39.4	-32.0	-33.9
Baishak 2077	-28.1	-52.1	-32.1	-2.2	-8.9	-35.5	-19.3	-9.2	-29.2	-24.4
Jestha 2077	-23.0	-40.8	-28.0	-2.3	-12.9	-21.1	-27.8	-13.6	-25.0	-22.2
Asar 2077	-14.8	-31.1	-41.8	-9.5	-5.9	-6.6	-5.9	-14.8	-20.2	-18.8
Shrwan 2077	-27.5	-42.6	-51.0	-8.8	-22.3	12.8	11.9	-24.3	-24.6	-24.6
Bhadra 2077	-34.8	-59.8	-66.2	-33.6	-48.7	-34.8	0.0	-41.8	-44.3	-43.6
Falgun 76-Bhadra 77	-24.6	-40.9	-37.3	-11.7	-13.4	-16.3	-15.0	-18.7	-25.1	-23.5

Table F. 3: Monthly rate of change in number of abortions performed between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	5.5	-0.4	-4.2	-7.7	-3.0	5.3	-12.1	7.3	-5.7	-2.7
Chaitra 2076-Baishak 2076	-9.7	8.9	6.7	-15.5	-1.9	2.9	-14.5	-11.0	-1.6	-4.0
Baishak-Jestha 2076	-7.1	2.9	-3.0	-8.8	5.9	-8.5	28.1	2.4	-0.1	0.5
Jestha-Asar 2076	-14.8	-17.3	-3.8	-6.4	-19.0	-12.7	-27.8	-9.7	-15.8	-14.3
Asar-Shrawan 2076	26.1	-8.2	43.7	33.8	46.2	-2.4	36.8	27.7	31.1	30.2
Shrawan-Bhadra 2076	-19.8	-10.7	-15.0	-12.9	-15.9	-4.3	-22.6	-14.5	-16.2	-15.8
Bhadra-Ashoj 2076	-15.3	-17.9	-11.5	-19.3	-22.6	-10.8	-27.4	-15.6	-18.4	-17.6
Ashoj-Kartik 2076	0.9	8.9	-0.2	12.0	22.5	22.9	13.3	14.1	7.6	9.3
Kartik-Mangsir 2076	25.2	15.4	3.7	36.6	24.3	32.9	47.7	2.1	31.1	23.2
Mangsir-Poush 2076	13.0	-0.8	-5.3	-4.5	3.8	-8.8	-7.4	7.9	-2.7	-0.3
Poush-Magh 2076	0.0	1.2	19.2	9.6	3.2	-0.6	7.4	7.2	6.5	6.7
Magh-Falgun 2076	7.4	-1.1	-10.0	1.4	-4.1	0.6	-8.6	4.1	-4.7	-2.5
Falgun-Chaitra 2076	-38.4	-24.0	-48.1	-34.1	-31.0	-32.8	-37.0	-43.0	-34.2	-36.5
Chaitra 2076-Baishak 2077	12.4	-11.8	23.3	13.7	3.4	-3.1	18.4	33.3	2.4	9.7
Baishak-Jestha 2077	-0.6	27.3	2.8	-8.9	1.3	12.0	14.6	-2.5	5.9	3.4
Jestha-Asar 2077	-5.8	-3.8	-22.2	-13.2	-12.5	3.4	-5.9	-11.0	-10.5	-10.6
Asar-Shrawan 2077	7.3	-23.6	21.1	34.8	20.7	17.9	62.7	13.5	23.8	21.0
Shrawan-Bhadra 2077	-27.8	-37.4	-41.4	-36.7	-44.4	-44.7	-30.8	-34.3	-38.1	-37.1

Table F. 4: Number of abortions performed in selected reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	419	207	301	409	380	67	416	815	1384	2199
Chaitra 2076	361	230	294	363	356	54	417	707	1368	2075
Baishak 2076	354	232	346	397	407	52	442	789	1441	2230
Jestha 2076	372	210	330	370	410	73	495	803	1457	2260
Asar 2076	303	220	278	317	321	53	396	705	1183	1888
Shrawan 2076	361	177	330	371	362	64	552	838	1379	2217
Bhadra 2076	295	173	263	295	293	33	378	647	1083	1730
Ashoj 2076	226	128	229	278	240	28	277	496	910	1406
Kartik 2076	285	129	251	283	335	36	377	651	1045	1696
Mangsir 2076	398	218	331	405	405	73	477	785	1522	2307
Poush 2076	404	226	346	407	426	48	479	864	1472	2336
Magh 2076	434	287	369	391	405	53	466	915	1490	2405
Falgun 2076	481	245	325	453	379	53	401	863	1474	2337
Chaitra 2076	374	155	251	336	250	35	267	558	1110	1668
Baishak 2077	431	150	322	397	298	45	311	669	1285	1954
Jestha 2077	375	165	275	387	275	53	349	669	1210	1879
Asar 2077	306	174	176	308	241	38	347	575	1015	1590
Shrawan 2077	407	201	237	445	375	86	570	820	1501	2321
Bhadra 2077	325	95	173	328	223	52	380	597	979	1576

Figure F. 1: Number of abortions performed in all reporting facilities by province with smoothing trend (Falgun 2075 to Bhadra 2077)

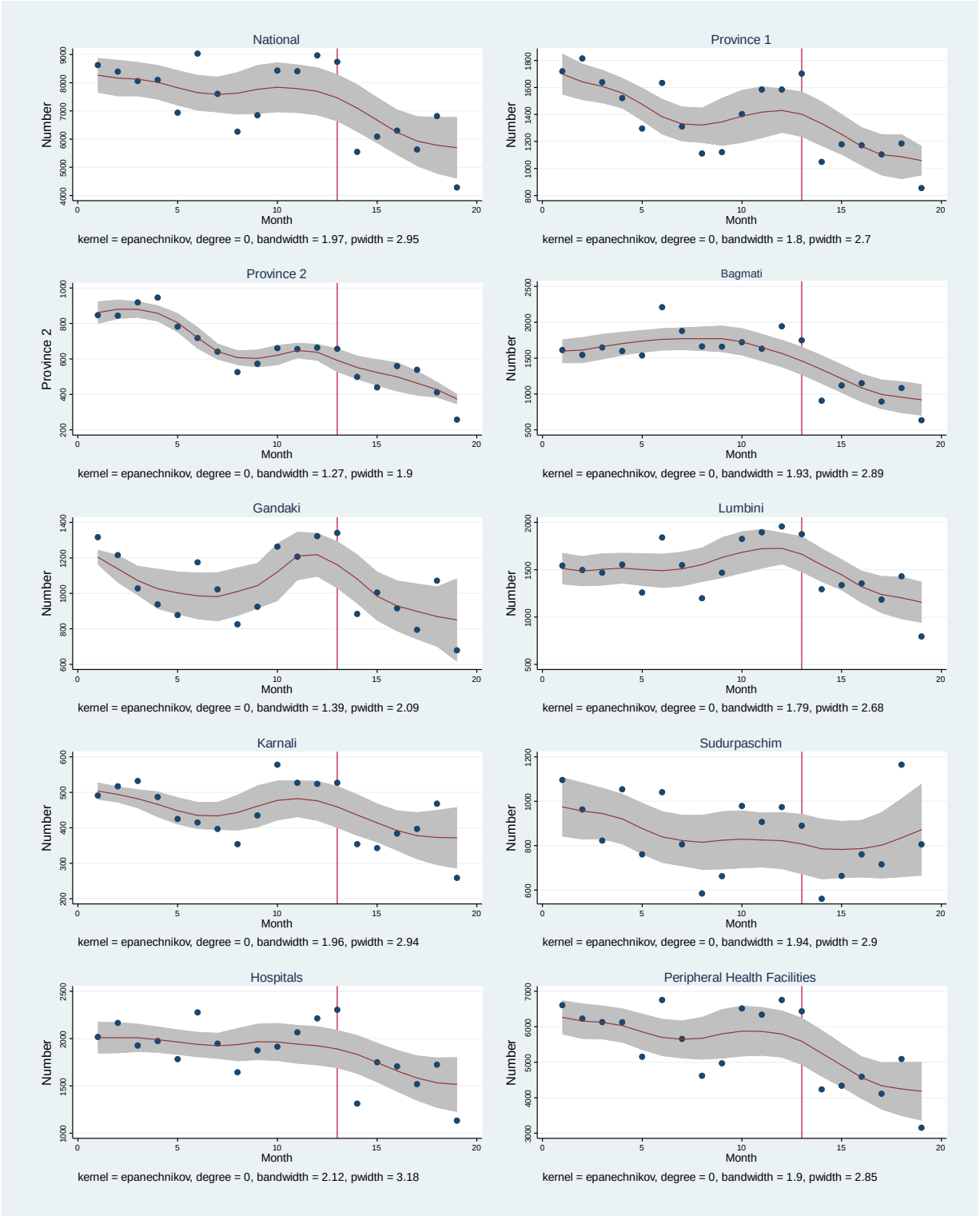


Figure F. 2: Number of abortions performed in selected health facilities by province with smoothing trend (Falgun 2075 – Bhadra 2077)

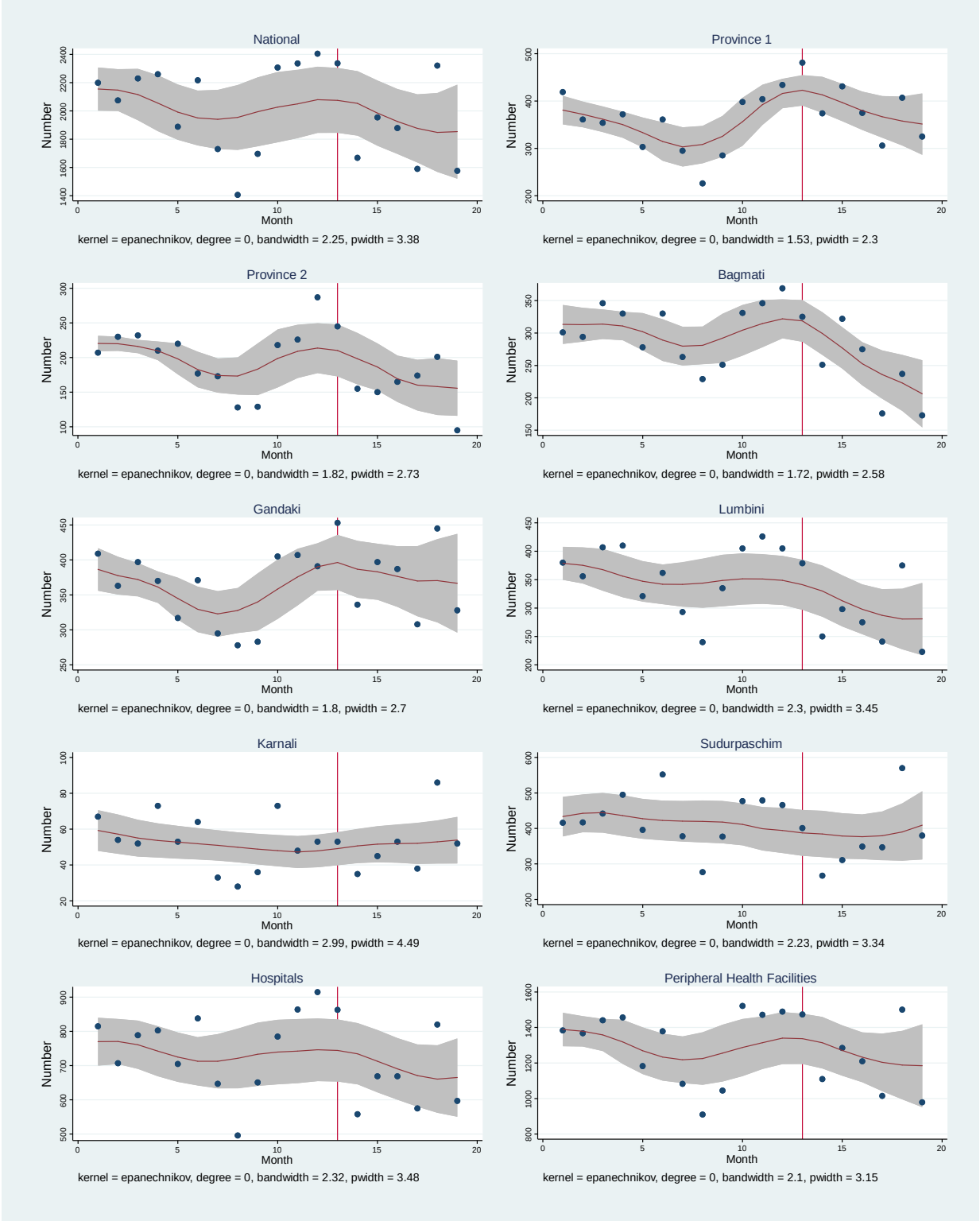


Table F. 5: Difference in number of abortions performed between COVID-19 months and same month of last year in selected reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	14.8	18.4	8.0	10.8	-0.3	-20.9	-3.6	5.9	6.5	6.3
Chaitra 2076	3.6	-32.6	-14.6	-7.4	-29.8	-35.2	-36.0	-21.1	-18.9	-19.6
Baishak 2077	21.8	-35.3	-6.9	0.0	-26.8	-13.5	-29.6	-15.2	-10.8	-12.4
Jestha 2077	0.8	-21.4	-16.7	4.6	-32.9	-27.4	-29.5	-16.7	-17.0	-16.9
Asar 2077	1.0	-20.9	-36.7	-2.8	-24.9	-28.3	-12.4	-18.4	-14.2	-15.8
Shrwan 2077	12.7	13.6	-28.2	19.9	3.6	34.4	3.3	-2.1	8.8	4.7
Bhadra 2077	10.2	-45.1	-34.2	11.2	-23.9	57.6	0.5	-7.7	-9.6	-8.9
Falgun 76-Bhadra 77	9.5	-18.2	-17.9	5.2	-19.3	-8.6	-15.2	-10.4	-7.8	-8.7

Table F. 6: Monthly rate of change in number of abortions performed between successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-13.8	11.1	-2.3	-11.2	-6.3	-19.4	0.2	-13.3	-1.2	-5.6
Chaitra 2076-Baishak 2076	-1.9	0.9	17.7	9.4	14.3	-3.7	6.0	11.6	5.3	7.5
Baishak-Jestha 2076	5.1	-9.5	-4.6	-6.8	0.7	40.4	12.0	1.8	1.1	1.3
Jestha-Asar 2076	-18.5	4.8	-15.8	-14.3	-21.7	-27.4	-20.0	-12.2	-18.8	-16.5
Asar-Shrawan 2076	19.1	-19.5	18.7	17.0	12.8	20.8	39.4	18.9	16.6	17.4
Shrawan-Bhadra 2076	-18.3	-2.3	-20.3	-20.5	-19.1	-48.4	-31.5	-22.8	-21.5	-22.0
Bhadra-Ashoj 2076	-23.4	-26.0	-12.9	-5.8	-18.1	-15.2	-26.7	-23.3	-16.0	-18.7
Ashoj-Kartik 2076	26.1	0.8	9.6	1.8	39.6	28.6	36.1	31.3	14.8	20.6
Kartik-Mangsir 2076	39.6	69.0	31.9	43.1	20.9	102.8	26.5	20.6	45.6	36.0
Mangsir-Poush 2076	1.5	3.7	4.5	0.5	5.2	-34.2	0.4	10.1	-3.3	1.3
Poush-Magh 2076	7.4	27.0	6.6	-3.9	-4.9	10.4	-2.7	5.9	1.2	3.0
Magh-Falgun 2076	10.8	-14.6	-11.9	15.9	-6.4	0.0	-13.9	-5.7	-1.1	-2.8
Falgun-Chaitra 2076	-22.2	-36.7	-22.8	-25.8	-34.0	-34.0	-33.4	-35.3	-24.7	-28.6
Chaitra 2076-Baishak 2077	15.2	-3.2	28.3	18.2	19.2	28.6	16.5	19.9	15.8	17.1
Baishak-Jestha 2077	-13.0	10.0	-14.6	-2.5	-7.7	17.8	12.2	0.0	-5.8	-3.8
Jestha-Asar 2077	-18.4	5.5	-36.0	-20.4	-12.4	-28.3	-0.6	-14.1	-16.1	-15.4
Asar-Shrawan 2077	33.0	15.5	34.7	44.5	55.6	126.3	64.3	42.6	47.9	46.0
Shrawan-Bhadra 2077	-20.1	-52.7	-27.0	-26.3	-40.5	-39.5	-33.3	-27.2	-34.8	-32.1

Table G. 1: Number of children presenting with diarrhoea in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	4063	7696	3770	1726	4279	2878	3883	1137	27158	28295
Chaitra 2076	5012	10007	4300	2147	7201	3899	5580	1390	36756	38146
Baishak 2076	5107	9533	4914	2597	8667	5722	8705	1711	43534	45245
Jestha 2076	5304	8748	4955	2472	7998	6179	8119	1696	42079	43775
Asar 2076	4428	7639	3920	1951	7106	5318	5774	1406	34730	36136
Shrawan 2076	3966	8286	3161	1774	6115	4664	4829	1351	31444	32795
Bhadra 2076	4180	10729	2990	1518	7325	3467	3745	1189	32765	33954
Ashoj 2076	2837	6108	2004	904	3463	1897	2462	795	18880	19675
Kartik 2076	2987	5871	1934	978	3347	2014	2144	899	18376	19275
Mangsir 2076	3700	6818	2426	1150	4299	3319	3562	1070	24204	25274
Poush 2076	3340	6008	2481	1222	3743	3030	3030	873	21981	22854
Magh 2076	3639	5971	3334	1649	4753	3352	3419	987	25130	26117
Falgun 2076	4360	6033	3709	2166	4680	3609	4248	1408	27397	28805
Chaitra 2076	3271	6812	3327	1812	3936	2994	3476	570	25058	25628
Baishak 2077	2364	7196	3252	1501	4855	4288	4957	315	28098	28413
Jestha 2077	2772	5740	3575	1673	4021	4655	3956	383	26009	26392
Asar 2077	2788	5418	3228	1572	4574	4372	3706	468	25190	25658
Shrawan 2077	2768	5153	2564	1251	4377	3934	3483	608	22922	23530
Bhadra 2077	2374	5729	1898	1122	3607	2633	2904	384	19883	20267

Table G. 2: Difference in number of children presenting with diarrhoea between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	7.3	-21.6	-1.6	25.5	9.4	25.4	9.4	23.8	0.9	1.8
Chaitra 2076	-34.7	-31.9	-22.6	-15.6	-45.3	-23.2	-37.7	-59.0	-31.8	-32.8
Baishak 2077	-53.7	-24.5	-33.8	-42.2	-44.0	-25.1	-43.1	-81.6	-35.5	-37.2
Jestha 2077	-47.7	-34.4	-27.9	-32.3	-49.7	-24.7	-51.3	-77.4	-38.2	-39.7
Asar 2077	-37.0	-29.1	-17.7	-19.4	-35.6	-17.8	-35.8	-66.7	-27.5	-29.0
Shrwan 2077	-30.2	-37.8	-18.9	-29.5	-28.4	-15.7	-27.9	-55.0	-27.1	-28.3
Bhadra 2077	-43.2	-46.6	-36.5	-26.1	-50.8	-24.1	-22.5	-67.7	-39.3	-40.3
Falgun 76-Bhadra 77	-35.4	-32.8	-23.1	-21.8	-38.3	-17.6	-34.2	-58.1	-29.7	-30.8

Table G. 3: Monthly rate of change in number of children presenting with diarrhoea between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	23.4	30.0	14.1	24.4	68.3	35.5	43.7	22.3	35.3	34.8
Chaitra 2076-Baishak 2076	1.9	-4.7	14.3	21.0	20.4	46.8	56.0	23.1	18.4	18.6
Baishak-Jestha 2076	3.9	-8.2	0.8	-4.8	-7.7	8.0	-6.7	-0.9	-3.3	-3.2
Jestha-Asar 2076	-16.5	-12.7	-20.9	-21.1	-11.2	-13.9	-28.9	-17.1	-17.5	-17.5
Asar-Shrawan 2076	-10.4	8.5	-19.4	-9.1	-13.9	-12.3	-16.4	-3.9	-9.5	-9.2
Shrawan-Bhadra 2076	5.4	29.5	-5.4	-14.4	19.8	-25.7	-22.4	-12.0	4.2	3.5
Bhadra-Ashoj 2076	-32.1	-43.1	-33.0	-40.4	-52.7	-45.3	-34.3	-33.1	-42.4	-42.1
Ashoj-Kartik 2076	5.3	-3.9	-3.5	8.2	-3.3	6.2	-12.9	13.1	-2.7	-2.0
Kartik-Mangsir 2076	23.9	16.1	25.4	17.6	28.4	64.8	66.1	19.0	31.7	31.1
Mangsir-Poush 2076	-9.7	-11.9	2.3	6.3	-12.9	-8.7	-14.9	-18.4	-9.2	-9.6
Poush-Magh 2076	9.0	-0.6	34.4	34.9	27.0	10.6	12.8	13.1	14.3	14.3
Magh-Falgun 2076	19.8	1.0	11.2	31.4	-1.5	7.7	24.2	42.7	9.0	10.3
Falgun-Chaitra 2076	-25.0	12.9	-10.3	-16.3	-15.9	-17.0	-18.2	-59.5	-8.5	-11.0
Chaitra 2076-Baishak 2077	-27.7	5.6	-2.3	-17.2	23.3	43.2	42.6	-44.7	12.1	10.9
Baishak-Jestha 2077	17.3	-20.2	9.9	11.5	-17.2	8.6	-20.2	21.6	-7.4	-7.1
Jestha-Asar 2077	0.6	-5.6	-9.7	-6.0	13.8	-6.1	-6.3	22.2	-3.1	-2.8
Asar-Shrawan 2077	-0.7	-4.9	-20.6	-20.4	-4.3	-10.0	-6.0	29.9	-9.0	-8.3
Shrawan-Bhadra 2077	-14.2	11.2	-26.0	-10.3	-17.6	-33.1	-16.6	-36.8	-13.3	-13.9

Table G. 4: Number of children presenting with diarrhoea in selected reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	914	2838	774	362	1435	1477	2062	329	9533	9862
Chaitra 2076	1102	3741	819	502	2074	2064	2971	364	12909	13273
Baishak 2076	1169	3487	926	539	2729	2879	4394	591	15532	16123
Jestha 2076	1213	3192	945	590	2613	3150	3672	427	14948	15375
Asar 2076	1102	2864	860	510	2254	2693	2872	293	12862	13155
Shrawan 2076	1012	3251	596	448	1965	2352	2582	399	11807	12206
Bhadra 2076	1070	4112	641	385	1827	1763	2034	468	11364	11832
Ashoj 2076	701	2487	473	225	1078	1045	1377	246	7140	7386
Kartik 2076	736	2306	455	243	1090	1045	1170	339	6706	7045
Mangsir 2076	860	2563	520	297	1438	1620	1952	492	8758	9250
Poush 2076	734	2193	508	273	1206	1422	1742	333	7745	8078
Magh 2076	894	2181	662	381	1301	1661	1856	362	8574	8936
Falgun 2076	917	2297	726	425	1343	1802	2394	609	9295	9904
Chaitra 2076	661	2649	677	375	1308	1457	1718	188	8657	8845
Baishak 2077	524	2723	620	332	1828	1887	2291	94	10111	10205
Jestha 2077	593	2240	655	408	1430	1960	1802	115	8973	9088
Asar 2077	600	1998	631	401	1527	1921	1674	137	8615	8752
Shrawan 2077	760	2149	562	369	1548	1637	1508	157	8376	8533
Bhadra 2077	576	2303	489	320	1278	1184	1356	146	7360	7506

Figure G.1: Number of children presenting with diarrhoea in all reporting facilities by province (Falgun 2075 to Bhadra 2077)

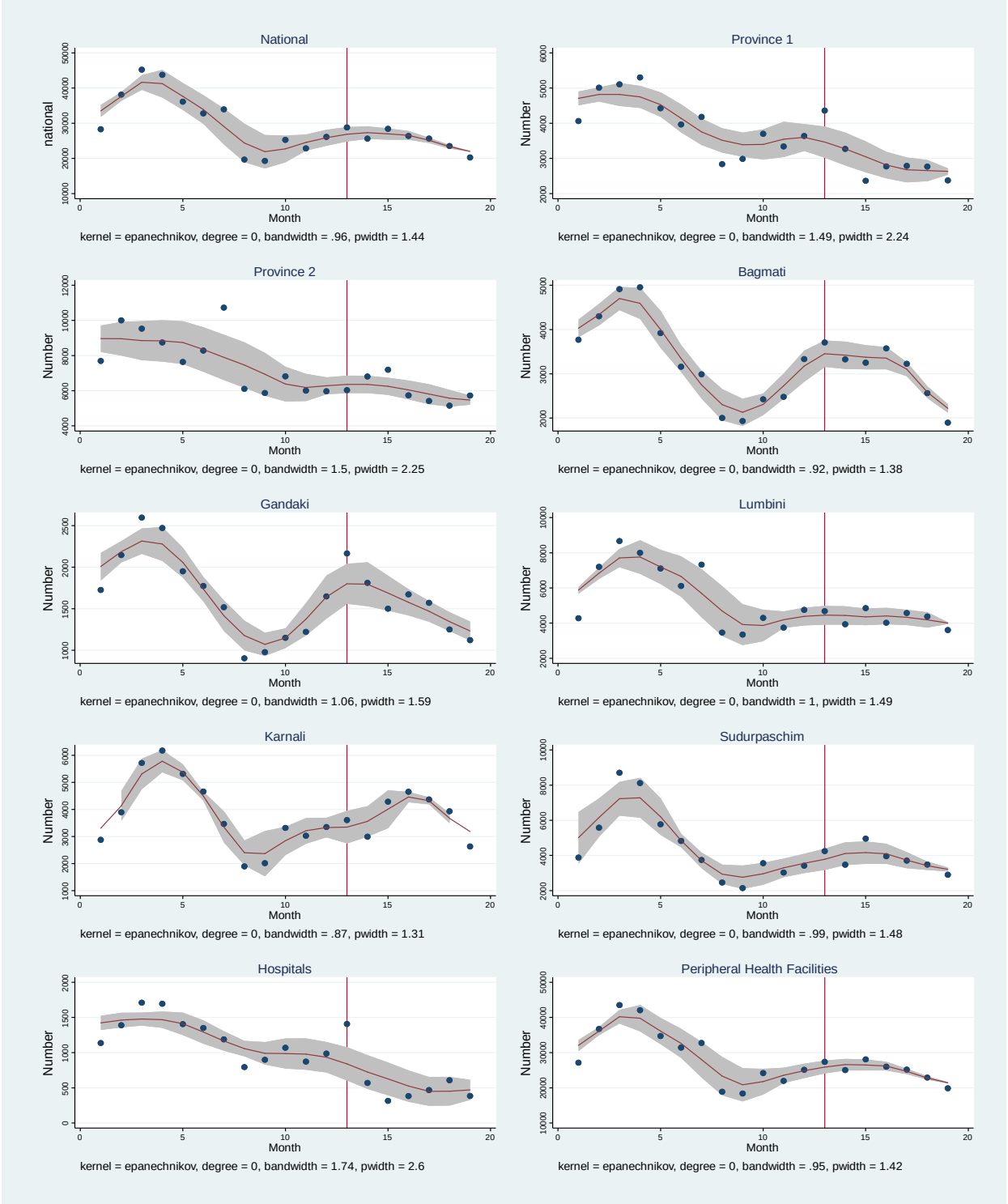


Figure G. 2: Number of children presenting with diarrhoea in selected facilities by province (Falgun 2075 – Bhadra 2077)

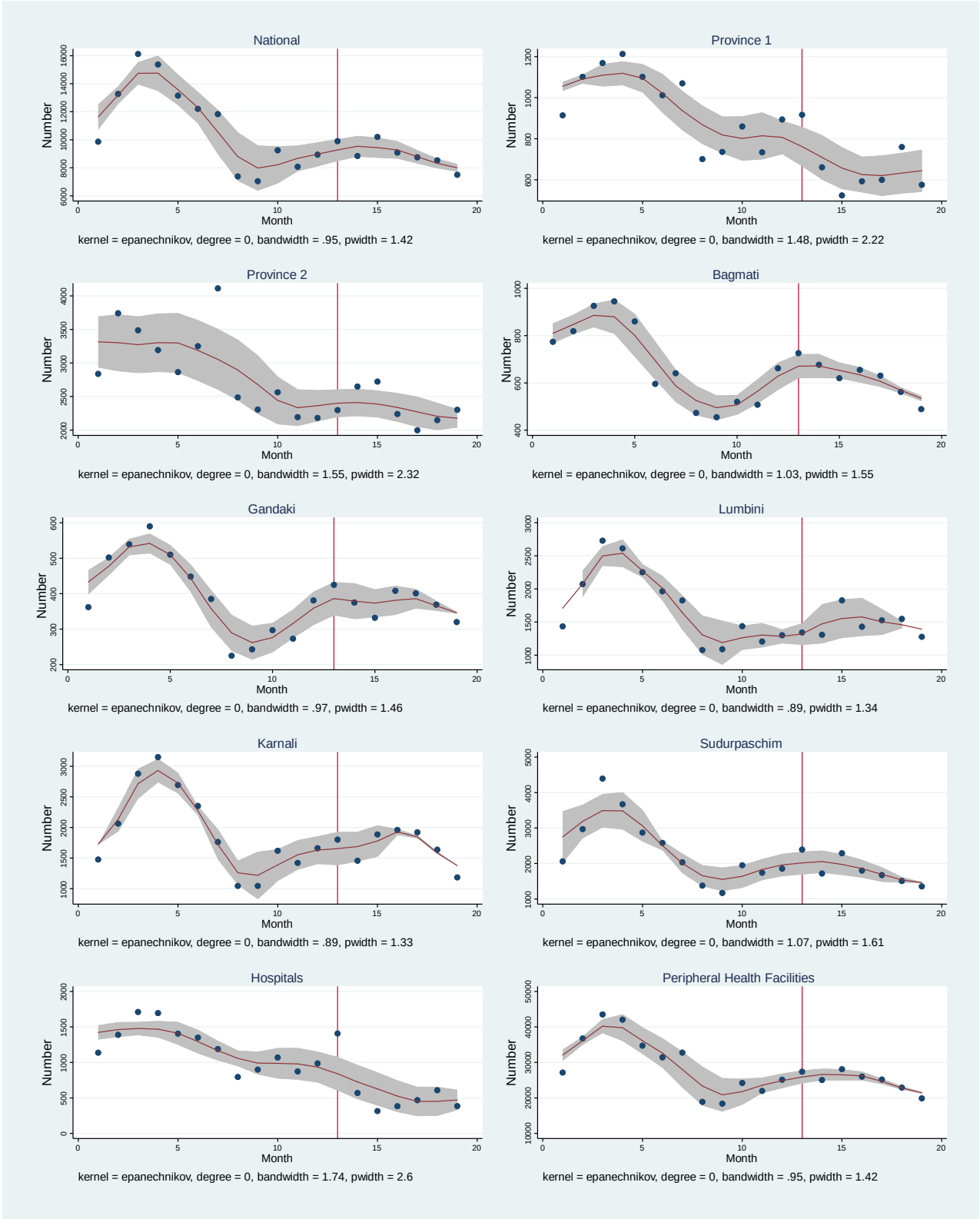


Table G. 5: Difference in number of children presenting with diarrhoea between COVID-19 months and same month of last year in selected reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	0.3	-19.1	-6.2	17.4	-6.4	22.0	16.1	85.1	-2.5	0.4
Chaitra 2076	-40.0	-29.2	-17.3	-25.3	-36.9	-29.4	-42.2	-48.4	-32.9	-33.4
Baishak 2077	-55.2	-21.9	-33.0	-38.4	-33.0	-34.5	-47.9	-84.1	-34.9	-36.7
Jestha 2077	-51.1	-29.8	-30.7	-30.8	-45.3	-37.8	-50.9	-73.1	-40.0	-40.9
Asar 2077	-45.6	-30.2	-26.6	-21.4	-32.3	-28.7	-41.7	-53.2	-33.0	-33.5
Shrwan 2077	-24.9	-33.9	-5.7	-17.6	-21.2	-30.4	-41.6	-60.7	-29.1	-30.1
Bhadra 2077	-46.2	-44.0	-23.7	-16.9	-30.0	-32.8	-33.3	-68.8	-35.2	-36.6
Falgun 76-Bhadra 77	-38.9	-30.3	-21.6	-21.2	-31.1	-27.7	-38.1	-49.6	-31.0	-31.6

Table G. 6: Monthly rate of change in number of children presenting with diarrhoea between successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	20.6	31.8	5.8	38.7	44.5	39.7	44.1	10.6	35.4	34.6
Chaitra 2076-Baishak 2076	6.1	-6.8	13.1	7.4	31.6	39.5	47.9	62.4	20.3	21.5
Baishak-Jestha 2076	3.8	-8.5	2.1	9.5	-4.3	9.4	-16.4	-27.7	-3.8	-4.6
Jestha-Asar 2076	-9.2	-10.3	-9.0	-13.6	-13.7	-14.5	-21.8	-31.4	-14.0	-14.4
Asar-Shrawan 2076	-8.2	13.5	-30.7	-12.2	-12.8	-12.7	-10.1	36.2	-8.2	-7.2
Shrawan-Bhadra 2076	5.7	26.5	7.6	-14.1	-7.0	-25.0	-21.2	17.3	-3.8	-3.1
Bhadra-Ashoj 2076	-34.5	-39.5	-26.2	-41.6	-41.0	-40.7	-32.3	-47.4	-37.2	-37.6
Ashoj-Kartik 2076	5.0	-7.3	-3.8	8.0	1.1	0.0	-15.0	37.8	-6.1	-4.6
Kartik-Mangsir 2076	16.8	11.1	14.3	22.2	31.9	55.0	66.8	45.1	30.6	31.3
Mangsir-Poush 2076	-14.7	-14.4	-2.3	-8.1	-16.1	-12.2	-10.8	-32.3	-11.6	-12.7
Poush-Magh 2076	21.8	-0.5	30.3	39.6	7.9	16.8	6.5	8.7	10.7	10.6
Magh-Falgun 2076	2.6	5.3	9.7	11.5	3.2	8.5	29.0	68.2	8.4	10.8
Falgun-Chaitra 2076	-27.9	15.3	-6.7	-11.8	-2.6	-19.1	-28.2	-69.1	-6.9	-10.7
Chaitra 2076-Baishak 2077	-20.7	2.8	-8.4	-11.5	39.8	29.5	33.4	-50.0	16.8	15.4
Baishak-Jestha 2077	13.2	-17.7	5.6	22.9	-21.8	3.9	-21.3	22.3	-11.3	-10.9
Jestha-Asar 2077	1.2	-10.8	-3.7	-1.7	6.8	-2.0	-7.1	19.1	-4.0	-3.7
Asar-Shrawan 2077	26.7	7.6	-10.9	-8.0	1.4	-14.8	-9.9	14.6	-2.8	-2.5
Shrawan-Bhadra 2077	-24.2	7.2	-13.0	-13.3	-17.4	-27.7	-10.1	-7.0	-12.1	-12.0

Table H. 1: Number of children immunized with DPT3 in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	8421	12841	8327	3887	9328	2842	4547	4082	46111	50193
Chaitra 2076	8196	12684	8441	3793	8987	2897	4148	4337	44809	49146
Baishak 2076	7701	11332	8175	3436	8310	3025	4518	3891	42606	46497
Jestha 2076	7673	11050	7708	3401	8360	2941	4578	4095	41616	45711
Asar 2076	7000	10623	7228	2930	7725	2978	4331	3727	39088	42815
Shrawan 2076	6585	9241	7558	2946	6893	2886	3853	3590	36372	39962
Bhadra 2076	5892	8597	7463	2769	6606	2649	3370	3533	33813	37346
Ashoj 2076	4177	6679	5635	2509	5526	1836	3236	2987	26611	29598
Kartik 2076	4784	6657	6822	3086	6325	2646	3813	3504	30629	34133
Mangsir 2076	6977	9512	8016	3804	8853	3534	4870	4274	41292	45566
Poush 2076	8607	12238	9303	4027	10532	3632	4680	4416	48603	53019
Magh 2076	9033	13415	9231	4084	10526	3484	4511	4409	49875	54284
Falgun 2076	7577	10424	8139	3553	8439	3033	4167	3853	41479	45332
Chaitra 2076	3485	5525	3212	1608	2596	1171	2523	1628	18492	20120
Baishak 2077	4468	6976	5829	2420	5596	1637	2460	2909	26477	29386
Jestha 2077	7556	10714	7674	3466	6031	2611	4180	3212	39020	42232
Asar 2077	8341	13109	9543	3929	8918	3568	4827	3659	48576	52235
Shrawan 2077	7436	10342	8266	3773	8542	3630	5132	2670	44451	47121
Bhadra 2077	5754	7216	5167	2815	6424	2711	4302	2174	32215	34389

Table H. 2: Difference in number of children immunized with DPT3 between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	-10.0	-18.8	-2.3	-8.6	-9.5	6.7	-8.4	-5.6	-10.0	-9.7
Chaitra 2076	-57.5	-56.4	-61.9	-57.6	-71.1	-59.6	-39.2	-62.5	-58.7	-59.1
Baishak 2077	-42.0	-38.4	-28.7	-29.6	-32.7	-45.9	-45.6	-25.2	-37.9	-36.8
Jestha 2077	-1.5	-3.0	-0.4	1.9	-27.9	-11.2	-8.7	-21.6	-6.2	-7.6
Asar 2077	19.2	23.4	32.0	34.1	15.4	19.8	11.5	-1.8	24.3	22.0
Shrwan 2077	12.9	11.9	9.4	28.1	23.9	25.8	33.2	-25.6	22.2	17.9
Bhadra 2077	-2.3	-16.1	-30.8	1.7	-2.8	2.3	27.7	-38.5	-4.7	-7.9
Falgun 76-Bhadra 77	-13.3	-15.8	-12.9	-6.9	-17.2	-9.2	-6.0	-26.2	-11.9	-13.1

Table H. 3: Monthly rate of change in number of children immunized with DPT3 with diarrhoea between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
Months	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	-2.7	-1.2	1.4	-2.4	-3.7	1.9	-8.8	6.2	-2.8	-2.1
Chaitra 2076-Baishak 2076	-6.0	-10.7	-3.2	-9.4	-7.5	4.4	8.9	-10.3	-4.9	-5.4
Baishak-Jestha 2076	-0.4	-2.5	-5.7	-1.0	0.6	-2.8	1.3	5.2	-2.3	-1.7
Jestha-Asar 2076	-8.8	-3.9	-6.2	-13.8	-7.6	1.3	-5.4	-9.0	-6.1	-6.3
Asar-Shrawan 2076	-5.9	-13.0	4.6	0.5	-10.8	-3.1	-11.0	-3.7	-6.9	-6.7
Shrawan-Bhadra 2076	-10.5	-7.0	-1.3	-6.0	-4.2	-8.2	-12.5	-1.6	-7.0	-6.5
Bhadra-Ashoj 2076	-29.1	-22.3	-24.5	-9.4	-16.3	-30.7	-4.0	-15.5	-21.3	-20.7
Ashoj-Kartik 2076	14.5	-0.3	21.1	23.0	14.5	44.1	17.8	17.3	15.1	15.3
Kartik-Mangsir 2076	45.8	42.9	17.5	23.3	40.0	33.6	27.7	22.0	34.8	33.5
Mangsir-Poush 2076	23.4	28.7	16.1	5.9	19.0	2.8	-3.9	3.3	17.7	16.4
Poush-Magh 2076	4.9	9.6	-0.8	1.4	-0.1	-4.1	-3.6	-0.2	2.6	2.4
Magh-Falgun 2076	-16.1	-22.3	-11.8	-13.0	-19.8	-12.9	-7.6	-12.6	-16.8	-16.5
Falgun-Chaitra 2076	-54.0	-47.0	-60.5	-54.7	-69.2	-61.4	-39.5	-57.7	-55.4	-55.6
Chaitra 2076-Baishak 2077	28.2	26.3	81.5	50.5	115.6	39.8	-2.5	78.7	43.2	46.1
Baishak-Jestha 2077	69.1	53.6	31.7	43.2	7.8	59.5	69.9	10.4	47.4	43.7
Jestha-Asar 2077	10.4	22.4	24.4	13.4	47.9	36.7	15.5	13.9	24.5	23.7
Asar-Shrawan 2077	-10.9	-21.1	-13.4	-4.0	-4.2	1.7	6.3	-27.0	-8.5	-9.8
Shrawan-Bhadra 2077	-22.6	-30.2	-37.5	-25.4	-24.8	-25.3	-16.2	-18.6	-27.5	-27.0

Table H. 4: Number of children immunized with DPT3 in selected reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	875	563	1562	995	723	128	1090	1569	4367	5936
Chaitra 2076	924	529	1650	862	780	125	1106	1587	4389	5976
Baishak 2076	891	538	1547	806	742	143	1161	1427	4401	5828
Jestha 2076	856	537	1459	850	920	126	1103	1591	4260	5851
Asar 2076	756	470	1399	689	555	120	969	1125	3833	4958
Shrawan 2076	798	452	1516	706	543	140	939	1254	3840	5094
Bhadra 2076	732	381	1473	681	520	129	866	1194	3588	4782
Ashoj 2076	658	349	1085	589	453	107	890	1079	3052	4131
Kartik 2076	700	353	1290	686	593	137	922	1295	3386	4681
Mangsir 2076	888	422	1491	839	742	195	1151	1562	4166	5728
Poush 2076	1143	546	1537	871	848	211	1188	1721	4623	6344
Magh 2076	1057	631	1612	886	798	170	1088	1583	4659	6242
Falgun 2076	943	549	1411	800	622	172	1018	1418	4097	5515
Chaitra 2076	481	291	629	337	255	73	682	559	2189	2748
Baishak 2077	790	560	1216	660	504	166	963	1288	3571	4859
Jestha 2077	894	502	1283	644	500	128	885	1105	3731	4836
Asar 2077	995	514	1759	767	701	149	996	1441	4440	5881
Shrawan 2077	776	472	1657	695	503	158	985	1232	4014	5246
Bhadra 2077	662	377	1297	557	470	126	805	1009	3285	4294

Figure H. 1: Number of children immunized for DPT3 in selected reporting facilities by province (Falgun 2075 – Bhadra 2077)

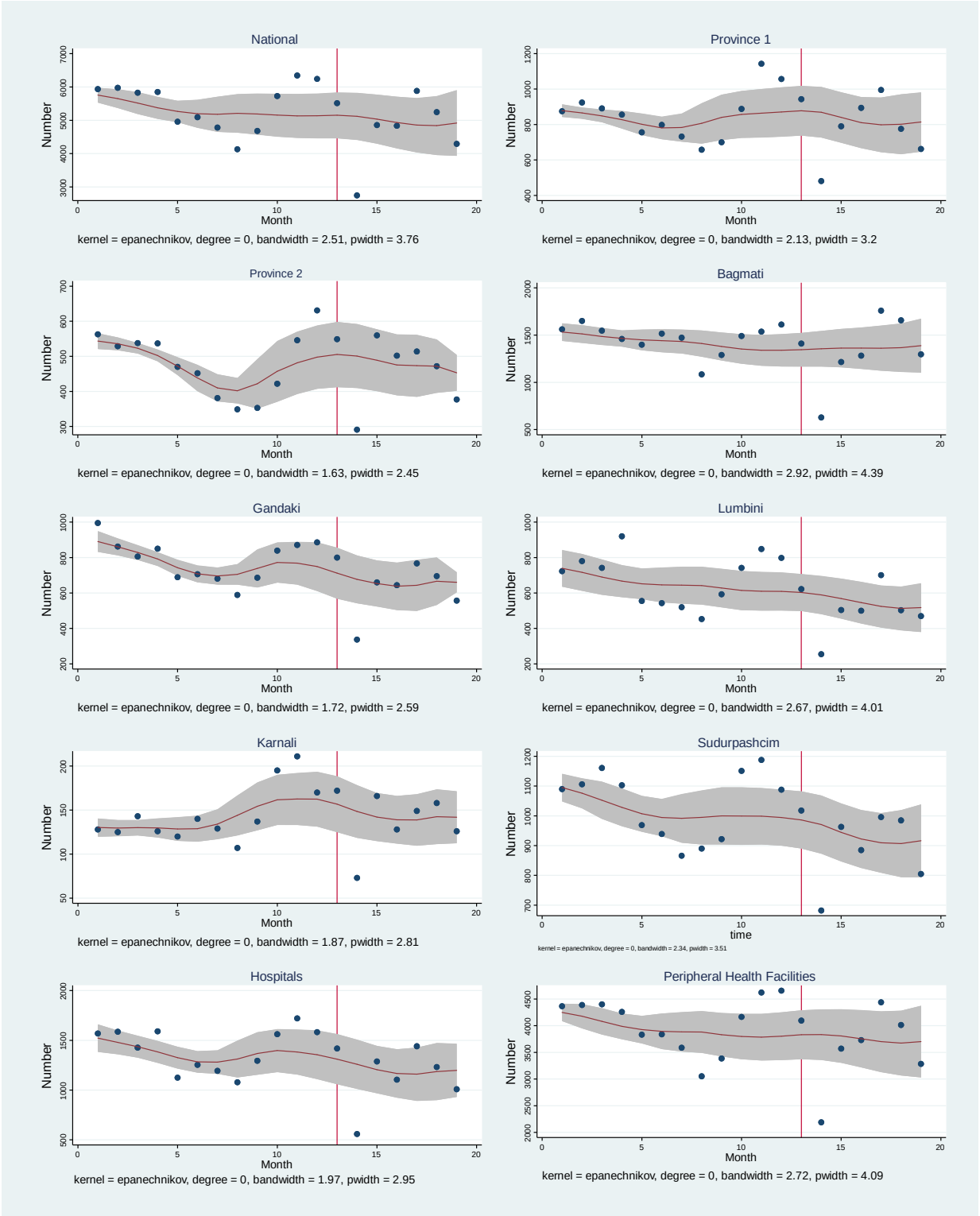


Table H. 5: Difference in number of children immunized with DPT3 between COVID-19 months and same month of last year in selected reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	7.8	-2.5	-9.7	-19.6	-14.0	34.4	-6.6	-9.6	-6.2	-7.1
Chaitra 2076	-47.9	-45.0	-61.9	-60.9	-67.3	-41.6	-38.3	-64.8	-50.1	-54.0
Baishak 2077	-11.3	4.1	-21.4	-18.1	-32.1	16.1	-17.1	-9.7	-18.9	-16.6
Jestha 2077	4.4	-6.5	-12.1	-24.2	-45.7	1.6	-19.8	-30.5	-12.4	-17.3
Asar 2077	31.6	9.4	25.7	11.3	26.3	24.2	2.8	28.1	15.8	18.6
Shrwan 2077	-2.8	4.4	9.3	-1.6	-7.4	12.9	4.9	-1.8	4.5	3.0
Bhadra 2077	-9.6	-1.0	-11.9	-18.2	-9.6	-2.3	-7.0	-15.5	-8.4	-10.2
Falgun 76-Bhadra 77	-5.0	-5.9	-12.8	-20.2	-25.7	6.7	-12.4	-17.4	-11.7	-13.1

Table H. 6: Monthly rate of change in number of children immunized with DPT3 between successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	5.6	-6.0	5.6	-13.4	7.9	-2.3	1.5	1.1	0.5	0.7
Chaitra 2076-Baishak 2076	-3.6	1.7	-6.2	-6.5	-4.9	14.4	5.0	-10.1	0.3	-2.5
Baishak-Jestha 2076	-3.9	-0.2	-5.7	5.5	24.0	-11.9	-5.0	11.5	-3.2	0.4
Jestha-Asar 2076	-11.7	-12.5	-4.1	-18.9	-39.7	-4.8	-12.1	-29.3	-10.0	-15.3
Asar-Shrawan 2076	5.6	-3.8	8.4	2.5	-2.2	16.7	-3.1	11.5	0.2	2.7
Shrawan-Bhadra 2076	-8.3	-15.7	-2.8	-3.5	-4.2	-7.9	-7.8	-4.8	-6.6	-6.1
Bhadra-Ashoj 2076	-10.1	-8.4	-26.3	-13.5	-12.9	-17.1	2.8	-9.6	-14.9	-13.6
Ashoj-Kartik 2076	6.4	1.1	18.9	16.5	30.9	28.0	3.6	20.0	10.9	13.3
Kartik-Mangsir 2076	26.9	19.5	15.6	22.3	25.1	42.3	24.8	20.6	23.0	22.4
Mangsir-Poush 2076	28.7	29.4	3.1	3.8	14.3	8.2	3.2	10.2	11.0	10.8
Poush-Magh 2076	-7.5	15.6	4.9	1.7	-5.9	-19.4	-8.4	-8.0	0.8	-1.6
Magh-Falgun 2076	-10.8	-13.0	-12.5	-9.7	-22.1	1.2	-6.4	-10.4	-12.1	-11.6
Falgun-Chaitra 2076	-49.0	-47.0	-55.4	-57.9	-59.0	-57.6	-33.0	-60.6	-46.6	-50.2
Chaitra 2076-Baishak 2077	64.2	92.4	93.3	95.8	97.6	127.4	41.2	130.4	63.1	76.8
Baishak-Jestha 2077	13.2	-10.4	5.5	-2.4	-0.8	-22.9	-8.1	-14.2	4.5	-0.5
Jestha-Asar 2077	11.3	2.4	37.1	19.1	40.2	16.4	12.5	30.4	19.0	21.6
Asar-Shrawan 2077	-22.0	-8.2	-5.8	-9.4	-28.2	6.0	-1.1	-14.5	-9.6	-10.8
Shrawan-Bhadra 2077	-14.7	-20.1	-21.7	-19.9	-6.6	-20.3	-18.3	-18.1	-18.2	-18.1

Table I. 1: Number of OPD visits in all reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	283813	273467	424098	208904	383370	136580	164452	359019	1515665	1874684
Chaitra 2076	301653	281058	415946	208733	313738	135081	172653	378630	1450232	1828862
Baishak 2076	307083	258865	423671	230622	303039	148429	182416	366793	1487332	1854125
Jestha 2076	350259	285672	476649	250653	348463	164361	187612	414204	1649465	2063669
Asar 2076	336432	281937	462459	239242	347000	158109	188205	413012	1600372	2013384
Shrawan 2076	434479	374071	577238	277258	467779	181840	244154	550319	2006500	2556819
Bhadra 2076	514228	487025	643989	312083	601352	206334	283139	603973	2444177	3048150
Ashoj 2076	369062	323511	513745	230396	405243	129163	175136	492360	1653896	2146256
Kartik 2076	390604	309217	461304	201683	350918	113846	135047	493052	1469567	1962619
Mangsir 2076	517461.7	439745.2	470761	213917	395247	144420	176400	473408	1884544	2357952
Poush 2076	351865	269123	417794	189913	321911	131444	146383	433001	1395432	1828433
Magh 2076	363124	285721	483170	210535	343018	137749	166854	479443	1510728	1990171
Falgun 2076	415301	293048	466542	244825	390638	160810	203452	499838	1674778	2174616
Chaitra 2076	266471	308540	330951	186102	292189	149825	169613	196593	1507098	1703691
Baishak 2077	222681	299773	294187	168625	261436	123400	154400	149476	1375026	1524502
Jestha 2077	297575	284053	339142	204978	265141	139147	157969	203821	1484184	1688005
Asar 2077	323715	271371	385510	207975	312194	147311	173775	276992	1544859	1821851
Shrawan 2077	324750	312010	388538	244912	417075	186244	239478	301889	1811118	2113007
Bhadra 2077	265187	328245	304424	207134	341108	161760	225313	227203	1605968	1833171

Table I. 2: Difference in number of OPD visits between COVID-19 months and same month of last year in all reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	46.3	7.2	10.0	17.2	1.9	17.7	23.7	39.2	10.5	16.0
Chaitra 2076	-11.7	9.8	-20.4	-10.8	-6.9	10.9	-1.8	-48.1	3.9	-6.8
Baishak 2077	-27.5	15.8	-30.6	-26.9	-13.7	-16.9	-15.4	-59.2	-7.6	-17.8
Jestha 2077	-15.0	-0.6	-28.8	-18.2	-23.9	-15.3	-15.8	-50.8	-10.0	-18.2
Asar 2077	-3.8	-3.7	-16.6	-13.1	-10.0	-6.8	-7.7	-32.9	-3.5	-9.5
Shrwan 2077	-25.3	-16.6	-32.7	-11.7	-10.8	2.4	-1.9	-45.1	-9.7	-17.4
Bhadra 2077	-48.4	-32.6	-52.7	-33.6	-43.3	-21.6	-20.4	-62.4	-34.3	-39.9
Falgun 76-Bhadra 77	-16.3	-6.5	-26.7	-15.2	-17.5	-5.5	-6.9	-39.9	-9.5	-15.6

Table I. 3: Monthly rate of change in OPD visits with DPT3 with diarrhoea between successive months in all reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	6.3	2.8	-1.9	-0.1	-18.2	-1.1	5.0	5.5	-4.3	-2.4
Chaitra 2076-Baishak 2076	1.8	-7.9	1.9	10.5	-3.4	9.9	5.7	-3.1	2.6	1.4
Baishak-Jestha 2076	14.1	10.4	12.5	8.7	15.0	10.7	2.8	12.9	10.9	11.3
Jestha-Asar 2076	-3.9	-1.3	-3.0	-4.6	-0.4	-3.8	0.3	-0.3	-3.0	-2.4
Asar-Shrawan 2076	29.1	32.7	24.8	15.9	34.8	15.0	29.7	33.2	25.4	27.0
Shrawan-Bhadra 2076	18.4	30.2	11.6	12.6	28.6	13.5	16.0	9.7	21.8	19.2
Bhadra-Ashoj 2076	-28.2	-33.6	-20.2	-26.2	-32.6	-37.4	-38.1	-18.5	-32.3	-29.6
Ashoj-Kartik 2076	5.8	-4.4	-10.2	-12.5	-13.4	-11.9	-22.9	0.1	-11.1	-8.6
Kartik-Mangsir 2076	32.5	42.2	2.1	6.1	12.6	26.9	30.6	-4.0	28.2	20.1
Mangsir-Poush 2076	-32.0	-38.8	-11.3	-11.2	-18.6	-9.0	-17.0	-8.5	-26.0	-22.5
Poush-Magh 2076	3.2	6.2	15.6	10.9	6.6	4.8	14.0	10.7	8.3	8.8
Magh-Falgun 2076	14.4	2.6	-3.4	16.3	13.9	16.7	21.9	4.3	10.9	9.3
Falgun-Chaitra 2076	-35.8	5.3	-29.1	-24.0	-25.2	-6.8	-16.6	-60.7	-10.0	-21.7
Chaitra 2076-Baishak 2077	-16.4	-2.8	-11.1	-9.4	-10.5	-17.6	-9.0	-24.0	-8.8	-10.5
Baishak-Jestha 2077	33.6	-5.2	15.3	21.6	1.4	12.8	2.3	36.4	7.9	10.7
Jestha-Asar 2077	8.8	-4.5	13.7	1.5	17.7	5.9	10.0	35.9	4.1	7.9
Asar-Shrawan 2077	0.3	15.0	0.8	17.8	33.6	26.4	37.8	9.0	17.2	16.0
Shrawan-Bhadra 2077	-18.3	5.2	-21.6	-15.4	-18.2	-13.1	-5.9	-24.7	-11.3	-13.2

Table I. 4: Number of OPD visits in selected reporting facilities by provinces and health facility (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	**National**
Falgun 2075	182773	194286	245708	179155	298951	100234	144289	192604	1152792	1345396
Chaitra 2076	189794	193541	238641	173776	228752	100982	150331	194165	1081652	1275817
Baishak 2076	191029	180505	251526	189417	226926	107053	156250	196367	1106339	1302706
Jestha 2076	223994	197166	278107	209967	255507	115061	159633	219251	1220184	1439435
Asar 2076	214898	196819	258409	197600	261176	112973	163922	210935	1194862	1405797
Shrawan 2076	237414	250510	285749	218638	302335	134044	197098	237080	1388708	1625788
Bhadra 2076	283410	334087	318140	244150	389694	154103	240184	255841	1707927	1963768
Ashoj 2076	193327	202707	249124	177871	247139	92316	141225	201051	1102658	1303709
Kartik 2076	193727	196428	212762	162595	214459	79377	107794	183265	983877	1167142
Mangsir 2076	195187	214902	229175	168903	250110	103584	143465	190114	1115212	1305326
Poush 2076	170105	171669	220011	149761	196787	93943	113425	173324	942377	1115701
Magh 2076	171615	183380	227392	168385	218254	97418	129734	179525	1016653	1196178
Falgun 2076	203261	188500	273085	194993	248249	114839	160712	219854	1163785	1383639
Chaitra 2076	160084	201331	210780	147696	197827	109560	134180	93824	1067634	1161458
Baishak 2077	139651	188554	186170	138148	181898	83696	119338	68411	969044	1037455
Jestha 2077	169456	179108	213656	164104	188657	94823	121588	91682	1039710	1131392
Asar 2077	177563	164185	236194	162941	209807	98454	131634	114313	1066465	1180778
Shrawan 2077	202147	205051	257823	196734	286563	124822	176279	145065	1304354	1449419
Bhadra 2077	182596	220354	210502	169296	241660	109128	157036	109199	1181373	1290572

Figure I. 1: Number of OPD visits in all reporting facilities by province (Falgun 2075 to Bhadra 2077)

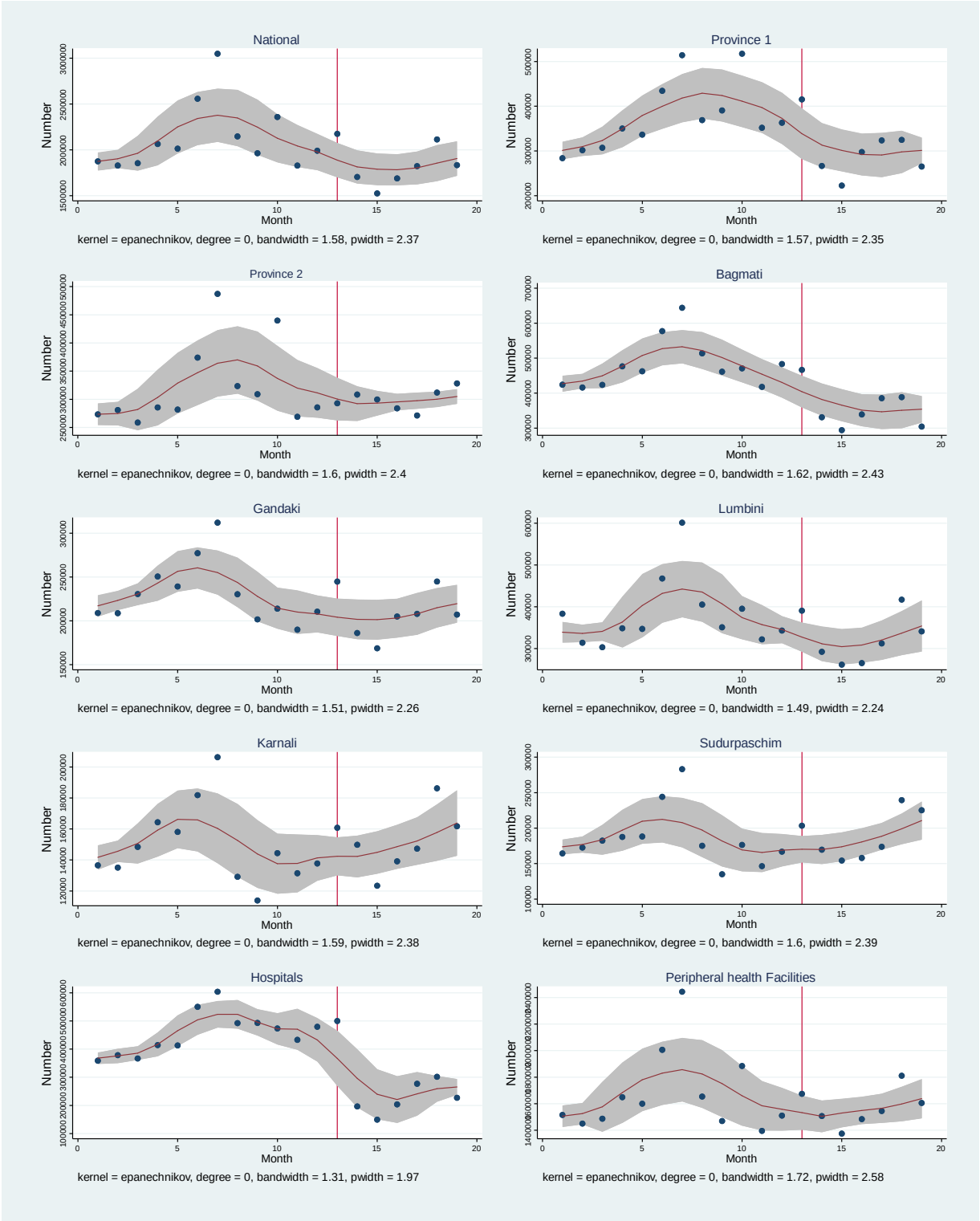


Figure I. 1: Number of OPD visits in selected reporting facilities by province (Falgun 2075 – Bhadra 2077)

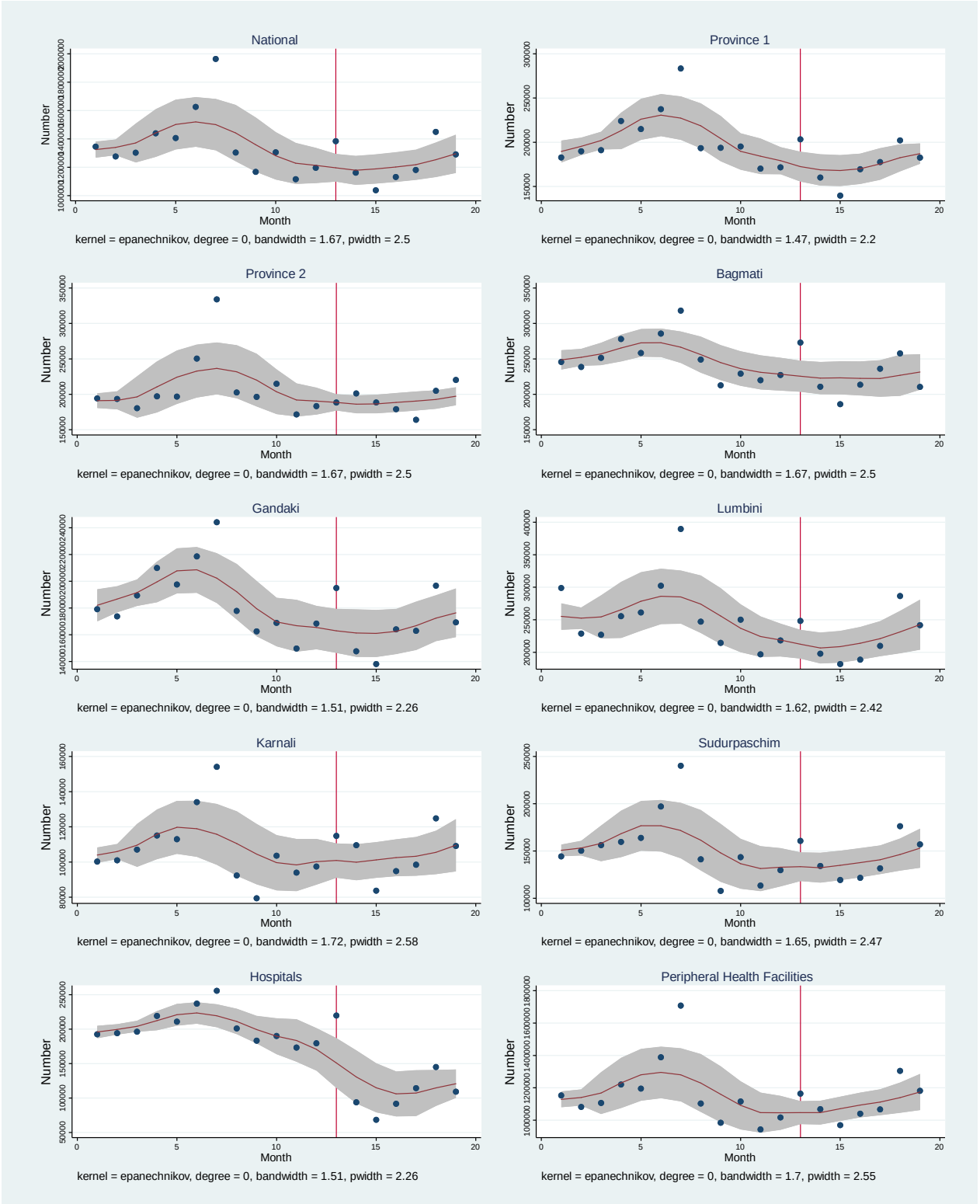


Table I. 5: Difference in OPD visits between COVID-19 months and same month of last year in selected reporting facilities in percentage (Falgun 2076-Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun 2076	11.2	-3.0	11.1	8.8	-17.0	14.6	11.4	14.1	1.0	2.8
Chaitra 2076	-15.7	4.0	-11.7	-15.0	-13.5	8.5	-10.7	-51.7	-1.3	-9.0
Baishak 2077	-26.9	4.5	-26.0	-27.1	-19.8	-21.8	-23.6	-65.2	-12.4	-20.4
Jestha 2077	-24.3	-9.2	-23.2	-21.8	-26.2	-17.6	-23.8	-58.2	-14.8	-21.4
Asar 2077	-17.4	-16.6	-8.6	-17.5	-19.7	-12.9	-19.7	-45.8	-10.7	-16.0
Shrwan 2077	-14.9	-18.1	-9.8	-10.0	-5.2	-6.9	-10.6	-38.8	-6.1	-10.8
Bhadra 2077	-35.6	-34.0	-33.8	-30.7	-38.0	-29.2	-34.6	-57.3	-30.8	-34.3
Falgun 76-Bhadra 77	-18.9	-12.9	-15.4	-16.9	-20.8	-10.8	-17.4	-44.1	-12.0	-16.6

Table I. 6: Monthly rate of change in OPD visits between successive months in selected reporting facilities in percentage (Falgun 2075- Bhadra 2077)

	Provinces							HF Type		
	Province 1	Province 2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpashchim	Hospital	Peripheral HF	National
Falgun-Chaitra 2075	3.8	-0.4	-2.9	-3.0	-23.5	0.7	4.2	0.8	-6.2	-5.2
Chaitra 2076-Baishak 2076	0.7	-6.7	5.4	9.0	-0.8	6.0	3.9	1.1	2.3	2.1
Baishak-Jestha 2076	17.3	9.2	10.6	10.8	12.6	7.5	2.2	11.7	10.3	10.5
Jestha-Asar 2076	-4.1	-0.2	-7.1	-5.9	2.2	-1.8	2.7	-3.8	-2.1	-2.3
Asar-Shrawan 2076	10.5	27.3	10.6	10.6	15.8	18.7	20.2	12.4	16.2	15.6
Shrawan-Bhadra 2076	19.4	33.4	11.3	11.7	28.9	15.0	21.9	7.9	23.0	20.8
Bhadra-Ashoj 2076	-31.8	-39.3	-21.7	-27.1	-36.6	-40.1	-41.2	-21.4	-35.4	-33.6
Ashoj-Kartik 2076	0.2	-3.1	-14.6	-8.6	-13.2	-14.0	-23.7	-8.8	-10.8	-10.5
Kartik-Mangsir 2076	0.8	9.4	7.7	3.9	16.6	30.5	33.1	3.7	13.3	11.8
Mangsir-Poush 2076	-12.9	-20.1	-4.0	-11.3	-21.3	-9.3	-20.9	-8.8	-15.5	-14.5
Poush-Magh 2076	0.9	6.8	3.4	12.4	10.9	3.7	14.4	3.6	7.9	7.2
Magh-Falgun 2076	18.4	2.8	20.1	15.8	13.7	17.9	23.9	22.5	14.5	15.7
Falgun-Chaitra 2076	-21.2	6.8	-22.8	-24.3	-20.3	-4.6	-16.5	-57.3	-8.3	-16.1
Chaitra 2076-Baishak 2077	-12.8	-6.3	-11.7	-6.5	-8.1	-23.6	-11.1	-27.1	-9.2	-10.7
Baishak-Jestha 2077	21.3	-5.0	14.8	18.8	3.7	13.3	1.9	34.0	7.3	9.1
Jestha-Asar 2077	4.8	-8.3	10.5	-0.7	11.2	3.8	8.3	24.7	2.6	4.4
Asar-Shrawan 2077	13.8	24.9	9.2	20.7	36.6	26.8	33.9	26.9	22.3	22.8
Shrawan-Bhadra 2077	-9.7	7.5	-18.4	-13.9	-15.7	-12.6	-10.9	-24.7	-9.4	-11.0

Figure J. 1: Effects of COVID-19 on MPDSR Process

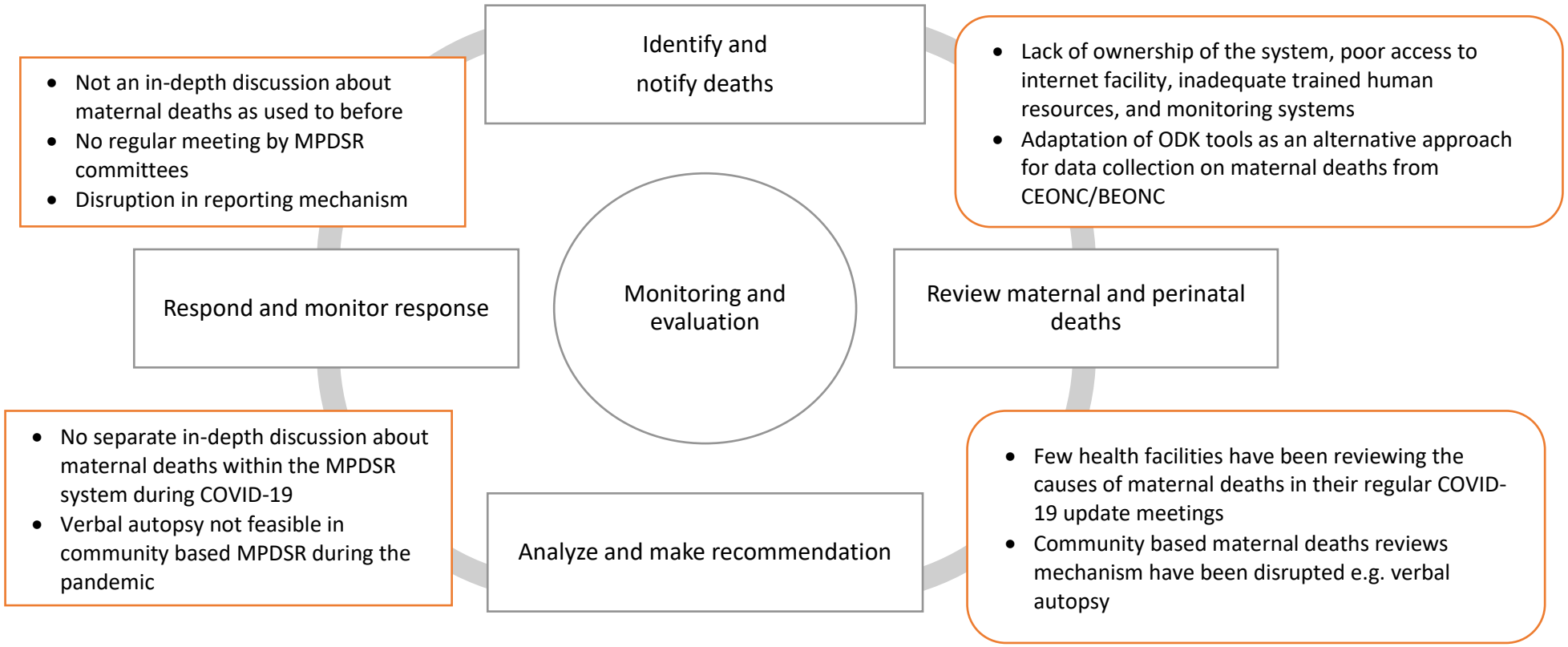


Table J. 1: Ministry of Health and Population response on COVID-19 crisis (2019/20 and 2020/21)

S.N.	Activity
1	Formulation of various committees', policies, plans, and guidelines
	• Establishment of COVID-19 Crisis Management center (CCMC) under the chairmanship of Deputy Prime minister • Establishment of Incident Command System within MoHP • Formulation of more than 50 plans, guidelines, protocols, standards including Health Sector Emergency Response Plan and the quarterly Rapid Action Plans.
2	• Activated the Health cluster, Reproductive health sub-cluster (RHSC), and Emergency nutrition cluster
3	HEOC/MoHP and EDCD regularly made COVID-19 19 epidemiological/Situation Updates
4	Airing of COVID-19 related health Public Service Announcements through radio and television channels, printing, and distribution of leaflets/ brochures in various local languages/dialects targeting a diverse group of people including people with disabilities.
5	Establishment of 77 RT-PCR testing laboratories for COVID-19 testing
6	Orientation on Interim guideline to more than 15,000 health workers
7	Dissemination of COVID-19 related IEC materials including risk communication messages, PPEs, hotline services, and essential commodities, kits, and supplies
8	Regular monitoring of availability and continuity of quality essential health services delivery and essential commodities including food supplements through phone calls, weekly monitoring of MNH services, monitoring of children with malnutrition, weekly monitoring of maternal and perinatal deaths, monitoring of essential commodities,
9	Monitoring of service utilization & HF readiness during COVID-19 19 crisis, Assessing effect of COVID-19 pandemic on functionality and utilization of RMNCAH services
10	Open Data Kit (ODK) application) as an alternative approach for monitoring of CEONC functionality that includes the collection of information on maternal and perinatal deaths during the COVID-19 pandemic.
11	COVID-19 Pandemic Reporting and service utilization in DHIS2
12	OCMC services data entry format on Microsoft excel (rapid electronic reporting system)

This ‘Assess impact of COVID-19 pandemic in selected health services with estimation of excess maternal deaths’ is a joint initiative of the Integrated Health Information Management Section, Management Division, Department of Health Services, Ministry of Health and Population and Nepal Health Sector Support Program (NHSSP) to lay down and strategic vision for Nepal’s progress on the initial health service disrubsion due to COVID-19 in Nepal. This document was developed on the basis of health information system data and qualitative interviews with key stakeholders. The comprehensive report was developed through teamwork of all contributors. Findings from the analysis may help for the programmers to response in the regular essential health service within the COVID-19 Pandemic for better health outcomes.

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Additional information about this may be obtained from the Integrated Health Information Management Section, Management Division, Department of Health Services, Ministry of Health and Population, Kathmandu.

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