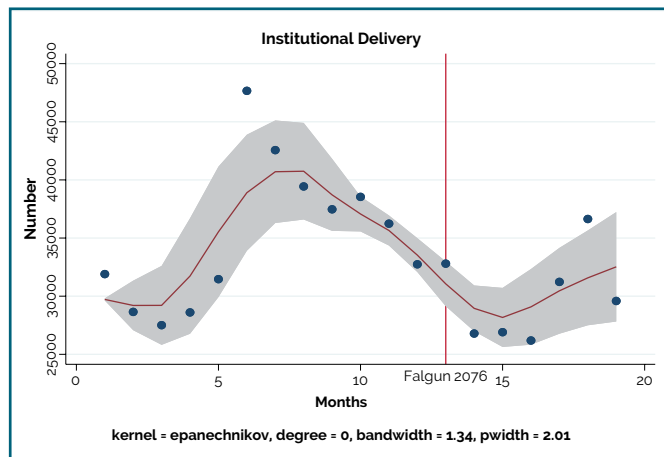


# Initial impact of COVID-19 on routine health information system, availability, and utilisation of selected health services

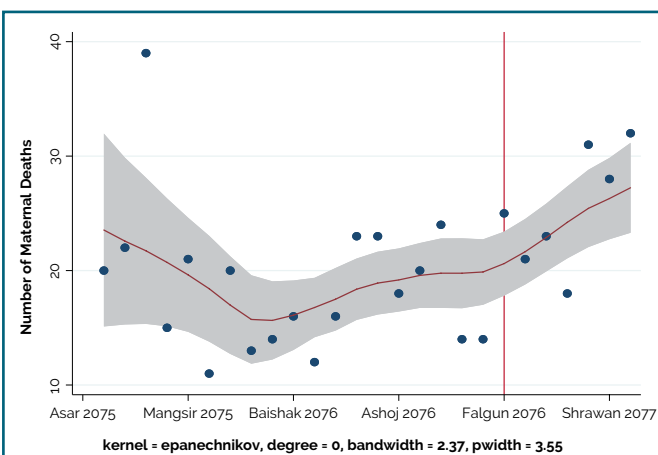
## Introduction

The complete lockdown strategy implemented to contain and curb the spread of the Coronavirus Disease 2019 (COVID-19) pandemic from 24 March 2020 to 21 July 2020 led to closures of outpatient departments and widespread fear of COVID-19 transmission in institutional settings, threatening the progress made by Nepal in health care over the last three decades. Early evidence suggests reduced coverage of institutional births, low utilisation of reproductive health services and increased institutional stillbirth and neonatal mortality rates. This study aimed to understand the initial impact of COVID-19 on the routine reporting system, availability and utilisation of services on selected key indicators and excess maternal deaths so as to help the government to plan actions that can strengthen its response strategy and evaluate its response for the future.

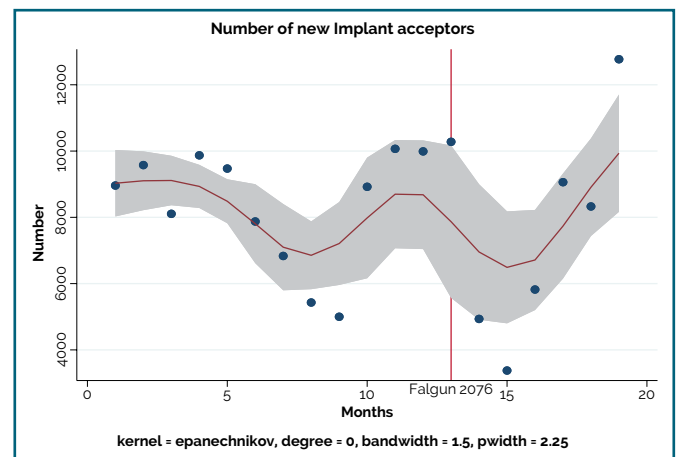


## Method

A mixed-method approach was used with secondary analysis of routine health information systems (Health Management Information System (HMIS), Maternal and Perinatal Death Surveillance and Response (MPDSR) and One-stop Crisis Management Centres), 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

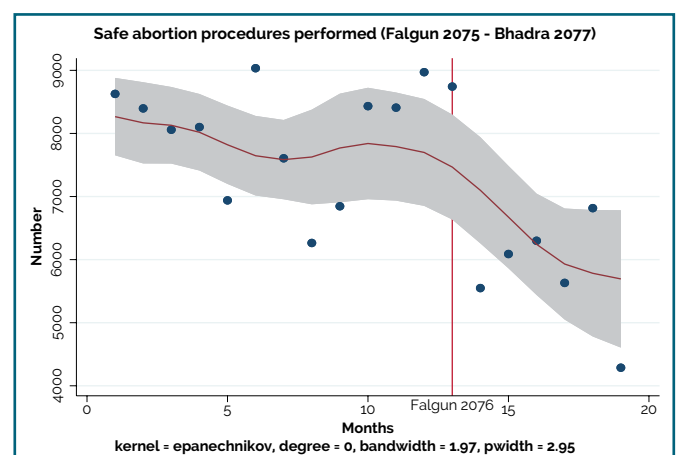


2076 taken as the cut-off point to distinguish the pre-COVID-19 and COVID-19 periods. Descriptive statistics were used to examine the change, i.e. difference from the same month of previous year and monthly rate of change. A local polynomial regression with smoothing curve was used to examine the trend. The Auto Regressive Integrated Moving Average model was used to estimate the excess maternal deaths by forecasting maternal deaths after Falgun 2076 in the absence of pandemic. Key results are summarised below by themes.



## Key Results

- Delivery services were unavailable, drugs were stocked out and ambulance services were unavailable for several days in a high proportion of the monitored peripheral facilities.
- Fifty percent or more of birth centres and basic emergency obstetric and newborn care facilities were closed for child delivery services, while all referral hospitals remained open for institutional delivery except for a couple of days in the early lockdown period.
- 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% to 7% and by provinces and type of health facility, with a greater decline in peripheral health facilities.



- There was strong rebound in the next couple of months (Baisakh 2077 to Asar 2077) as the average returned to pre-COVID-19 levels or higher.
- Institutional delivery services declined by 18% between Falgun to Chaitra 2076 but increased by 19% from Jestha to Asar 2077.
- There was lesser impact on postnatal care services with the average returning above pre-COVID-19 levels by Bhadra 2077.
- A total of 153 maternal deaths were reported in COVID-19 months (Chaitra 2076 to Bhadra 2077), which was 47 deaths more than the equivalent period of last year (Chaitra 2075 to Bhadra 2076).
- Preliminary estimates from modelling suggest that there were 47 excess maternal deaths in COVID-19 months, i.e. an additional seven deaths per month from Chaitra 2076 to Bhadra 2077.
- 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).
- Qualitative findings suggested that despite initial difficulties, alternative approaches (virtual communication) were used for normal functioning of HMIS.
- Overall, 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 Integrated Health Information Management Section to the provincial, local and hospital focal persons.
- A gradual increase in the number of One Stop Crisis Management Centre reporting sites over the years was observed.
- The functionality of MPDSR systems in peripheral hospitals was more adversely affected by COVID-19 (e.g. no separate discussion of maternal deaths, inability to conduct verbal autopsy owing 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.
- The number of permanent sterilisation procedures had the biggest decline of all the family planning methods, with a 56% decline in the number of procedures.
- New users of long-acting reversible contraceptives also 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 the pre-COVID-19 level in subsequent months.

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. The health care system has shown signs of resilience as some 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.

