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Commentary

Reproductive, maternal and child health services in the wake of COVID-19: insights from India

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INTRODUCTION

The United Nations Development Programme has designated severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2), or coronavirus disease 2019 (COVID-19) pandemic as a 'systematic human development crisis'.[1] In the span of a few short months, this pandemic has upended and overrun healthcare systems in countries across the world.[2,3] The worst afflicted have been low- and middle-income countries,[4-6] which had already been straining hard to meet their population's health needs and achieve the targets outlined under the Sustainable Development Goals (SDGs) by 2030.

Medical infrastructure, human resources, drugs, and equipment have all been diverted towards addressing the COVID-19 crisis.[2,4] While regular out-patient departments (OPDs) at both public and private facilities have been curtailed and elective surgeries are put on hold,[6,7] the delivery of even routine critical services including reproductive, maternal, newborn and child health (RMNCH) is believed to have been undermined,[8,9] putting the lives of millions of children and young women at further risk.

In India too, the situation is becoming increasingly acute. India bears one-sixth of the global under-5 mortality burden with an estimated 882 thousand under-5 deaths in 2018.[10] Of them, nearly 550 thousand newborns died within the first 28 days after birth. Over 290 thousand women across the world died due to complications arising from pregnancy and childbirth in 2017, with an estimated 35 thousand maternal deaths occurring only in India.[11] This high burden of largely preventable mortality continues to exist in India despite the country making substantial headway in the past few decades in reducing maternal, infant, and under-5 mortality levels.[12-16] As the state works to meet its commitment to improving the health status of women and children spelled out under the SDGs, the outbreak of COVID-19 threatens India's concerted efforts and progression made in this direction. As per the recent Global Nutrition Report, India is also not on track to meet the target for each maternal, infant and young child nutrition that would have further implications on maternal and child survival prospects.[17] Although the systematic evidence on the magnitude of the adverse effect of the COVID-19 crisis on the access to routine healthcare services are yet to be produced, overviewing the status of health outcomes and demand for health services, envisaging the potential threats and contemplating ways to immediately addressing them are the need of the hour.

This short report provides an overview of the coverage of RMNCH services, status of early childhood mortality with reference to the SDG-3, voluminous demand of select RMNCH services, and the availability of healthcare professionals across states in India. In addition, this provides a glimpse of evidences on considerable decline in the access to select RMNCH services during the lockdown period in the country, highlights the coverage of reports in the media on the deprivation engendered by COVID-19 on RMNCH, and offers suggestions to strengthen the existing system to address the present crisis in the long-run.

COVERAGE OF RMNCH SERVICES IN INDIA

For reducing maternal and child mortality, the Government of India (GoI) has been adopting and implementing different sectoral programmes and schemes since the 1950s.[18] In 2013, the government formally adopted the comprehensive approach of RMNCH+A (wherein for the first time, Adolescent Health was declared as a state priority). This was done to ensure that equitable focus was provided to women and children across the various stages of their lives and ensure action on a broad-ranging 'continuum of care', which would have the maximum possible impact on maternal and child health (MCH). There is adequate evidence that ascertains the positive impact of increasing coverage of a set of RMNCH services on reducing child mortality.[19-21]

The composite coverage index[20] of select RMNCH services based on estimates from the National Family Health Survey, 2015–16[16] (**Fig. 1A**) suggests that nearly one-third of the women of reproductive age (15–49 years) and children in India did not have access to RMNCH services. Coverage in some of the major states of India including Bihar, Uttar Pradesh, Jharkhand, Madhya Pradesh, and the 7 north-eastern states (except Sikkim) was found to be lower than the national average. Neonatal and under-5 mortality was also higher in these geographies (**Fig. 1B**). The GoI has designated several of these states as "High Focus States," based on their poor demographic (fertility and mortality) indicators. These comprise the 8 socio-economically backward Empowered Action Group states (Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttarakhand, Uttar Pradesh) and Assam.[22] Together, they comprise 48% of the Indian population, nearly 46% of the women of reproductive age (15–49 years) and 55% of the under-5 children of the country.[23] These states are also supposed to have a higher demand for RMNCH services in rural areas, as they comprise 53% of total reproductive age women and 62% of total under-5 children of rural India. The population-and-public facility (referral facilities) ratio is also higher in a majority of these states (**Fig. 1C**),[24] with a little contribution of private facilities in healthcare service delivery. Uninterrupted delivery of healthcare services, especially critical RMNCH services, is particularly vital in these High Focus States as they are substantially falling short of achieving the SDG target for neonatal and under-5 mortality (12 and 25 per 1,000 livebirths, respectively) by 2030[25] (**Fig. 1B**).

PROVISION OF RMNCH SERVICES IN INDIA

The National Health Mission, which governs the delivery of RMNCH+A services in India, consists of 2 sub-missions—the National Rural Health Mission and the National Urban Health Mission.[26] Based on their varying needs, the structure of services differs slightly for rural and urban geographies.

The public healthcare infrastructure in rural areas is developed as a hierarchical 3-tier system based on population norms—the primary level (Sub Centres [SCs], Primary Health Centres); the secondary level (Community Health Centres [CHCs], Sub-District Hospitals); and the tertiary level (First Referral Units—District Hospitals, Sub-Divisional Hospitals, and Medical Colleges).[27] In addition, periodic outreach services are organised at the community level—mainly the Village Health and Nutrition Day (VHND). Auxiliary Nurse Midwives (ANMs) who work at SCs preside over VHNDs, which cater to a population of roughly 1,000 persons and are organised once in every month.[28] In present times, VHNDs have become critical mechanisms through which essential RMNCH and nutrition services are provided to rural populations as initial contact primary care.

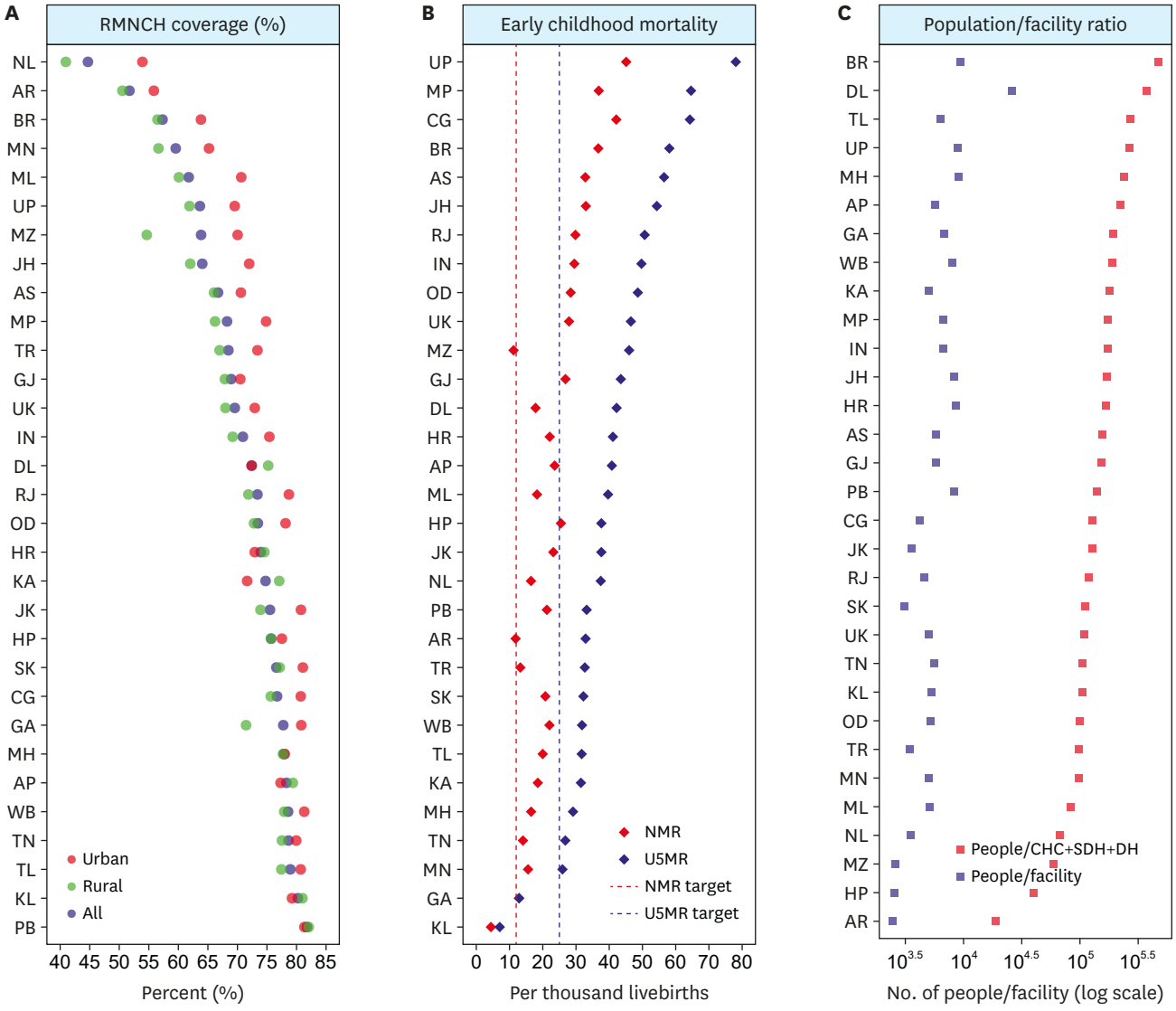

Fig. 1. RMNCH coverage, early childhood mortality and population facility ratio across states in India with the country estimates. (A) RMNCH coverage index (%) for urban, rural and all population, NFHS (2015–16).[16] (B) NMR (per 1,000 livebirths) and UNMR (per 1,000 livebirths), NFHS (2015–16), along with their Sustainable Development Goal targets for 2030. (C) Number of people per facility and number of people per higher-level facility including CHC, SDH, and DH in the state, 2018–19.[24] RMNCH = reproductive, maternal, newborn and child health; NFHS = National Family Health Survey; NMR = neonatal mortality rate; UNMR = under-5 mortality rate; CHC = Community Health Centre; SDH = Sub-District Hospital; DH = District Hospital; AP = Andhra Pradesh; AR = Arunachal Pradesh; AS = Assam; BR = Bihar; CG = Chhattisgarh; DL = Delhi; GA = Goa; GJ = Gujarat; HR = Haryana; HP = Himachal Pradesh; IN = India; JK = Jammu and Kashmir; JH = Jharkhand; KA = Karnataka; KL = Kerala; MP = Madhya Pradesh; MH = Maharashtra; MN = Manipur; ML = Meghalaya; MZ = Mizoram; NL = Nagaland; OD = Odisha; PB = Punjab; RJ = Rajasthan; SK = Sikkim; TN = Tamil Nadu; TL = Telangana; TR = Tripura; UP = Uttar Pradesh; UK = Uttarakhand; WB = West Bengal.

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However, the mainstay of RMNCH service coverage in rural India is the Accredited Social Health Activist (ASHA). This all-female cadre of nearly 900,000 voluntary community health workers (CHWs) acts as an interface between the community and the public healthcare delivery system.[29] Belonging to the community itself, each ASHA is accountable for catering to health services for 1,000 persons. Important RMNCH interventions are routed through ASHAs.[30] In addition, they are involved in almost all government healthcare programmes in rural India, including being responsible for documenting all tasks performed under the different programmes, which has been noted to have compromised their performance on key roles. Studies suggest that excessive workload, vast coverage area, lack of quality training, inadequate supply of drugs and equipment, poor and irregular monetary incentives influence ASHAs' performance.[31,32]

In urban areas, service delivery is primarily mediated by the private sector, which extends from individual practitioners, small-scale maternity clinics to super-speciality hospitals. While the urban middle and upper classes are largely reliant upon the private healthcare centres/clinics for their RMNCH needs, for the urban poor, the public healthcare system forms an important recourse. A similar multi-tiered structure, with the Urban Social Health Activist (USHA) at the base and the Urban-CHC at the secondary level is devised for meeting the needs of the urban poor.[33] Unlike their rural counterpart, USHAs play a minimal role in community mobilisation and facilitating service access.

VOLUMINOUS DEMAND OF ROUTINE RMNCH SERVICES IN INDIA

Fig. 2 illustrates the average monthly cases of MCH services across the Indian states, reported under the Health Management Information System (HMIS) during 2018–19.[34] An estimated 2.5 million women are pregnant every month in India. These women, and subsequently their newborn children require healthcare attention for nearly 10–11 months, spanning the entire duration of their pregnancy until 42 days post-delivery. In addition to the recommended number of routine antenatal care (ANC) check-ups during the 3 trimesters, nearly 30% of pregnancies are identified as belonging to the high-risk category and require additional care. During 2018–19, nearly 1.9 million pregnant women (PW) were diagnosed as anaemic, with their haemoglobin (Hb) level below 11 g/dL (**Fig. 2A**); almost 88 thousand PW were further identified as being severely anaemic (Hb < 7 g/dL). More than four-fifth of the severely anaemic PW were from rural areas.

Of the nearly 2.3 million deliveries estimated to take place monthly in India, about 10% end in pregnancy wastage. During 2018–19, almost 78% of deliveries—amounting to 1.8 million deliveries a month—were conducted in health facilities (**Fig. 2B**). Concurrently more than one-fifth deliveries, amounting to 500 thousand deliveries per month, were held at home. Among institutional deliveries, nearly a third were reported to have returned home within 48 hours of delivery. In order to ensure continuity of care to the mother and newborn during the vulnerable postnatal period, the GoI introduced the Home Based Newborn Care (HBNC) programme in 2011.[35] As per its guidelines, ASHAs are advised to undertake 6 and 7 home visits to households within 42 days of birth in case of institutional and home deliveries, respectively. Services provided herein include early detection of neonatal illnesses and appropriate referral to a newborn care health facility to ensure specialised care to the ailing newborn.[35]

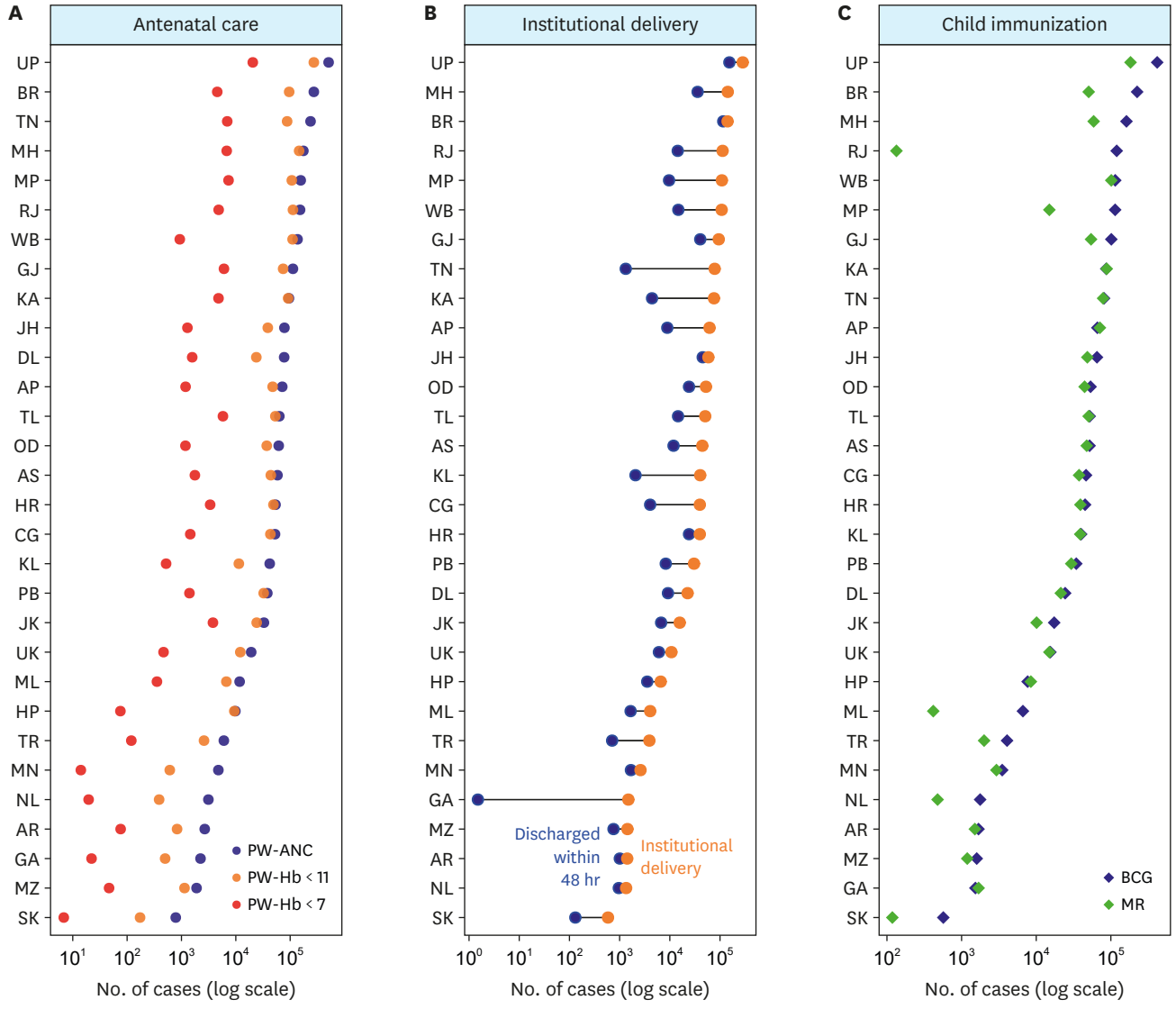

Fig. 2. Average monthly volume of select routine maternal and child healthcare services across states in India, Health Management Information System, 2018–19.[34] (A) Number of PW registered for ANC, number of PW diagnosed anemic (Hb < 11 g/dL), and number of PW diagnosed severely anemic (Hb < 7 g/dL). (B) Number of institutional delivery conducted and those discharged within 48 hours. (C) Number of children (aged up to 1 year) receiving BCG vaccination, and the first dose of MR vaccination.
PW = pregnant women; ANC = antenatal care; Hb = haemoglobin; BCG = Bacillus Calmette-Guérin; MR = Measles-Rubella; AP = Andhra Pradesh; AR = Arunachal Pradesh; AS = Assam; BR = Bihar; CG = Chhattisgarh; DL = Delhi; GA = Goa; GJ = Gujarat; HR = Haryana; HP = Himachal Pradesh; IN = India; JK = Jammu and Kashmir; JH = Jharkhand; KA = Karnataka; KL = Kerala; MP = Madhya Pradesh; MH = Maharashtra; MN = Manipur; ML = Meghalaya; MZ = Mizoram; NL = Nagaland; OD = Odisha; PB = Punjab; RJ = Rajasthan; SK = Sikkim; TN = Tamil Nadu; TL = Telangana; TR = Tripura; UP = Uttar Pradesh; UK = Uttarakhand; WB = West Bengal.

Another intervention adopted by GoI for reducing under-5 mortality and childhood undernutrition is immunisation. Vaccines available under the Universal Immunisation Programme include one dose each of Bacillus Calmette-Guérin (BCG) and measles and 3 doses each of Diphtheria, Pertussis and Tetanus (DPT) and Polio vaccines, to be administered to all infants by 9 months.[36] In 2013, the Rubella vaccine was also added to immunisation bucket in the form of a Measles-Rubella (MR) vaccine, with the intent of eliminating measles and controlling rubella/congenital rubella syndrome within the population by 2020.[37] However, nearly two-fifth of children aged 12–23 months were reported as lacking full immunisation coverage in India during 2015–16.[16] In the absence of vaccination, children are at a heightened risk for vaccine-preventable morbidity (including paralysis of limbs, hearing

loss, convulsions, amputation of an arm or leg, brain damage) and mortality.[38] Diseases such as measles, mumps, whooping cough, and childhood tuberculous meningitis can be avoided through vaccination but continue being a threat globally as well as in India. Although the administration of birth doses of vaccines such as BCG, polio, and hepatitis-B is almost universal in case of institutional births, coverage is less so among home deliveries. The monthly coverage of MR vaccine too is nearly one million children aged 9–11 months—less than half of the birth cohort (**Fig. 2C**).

The volume of the RMNCH services is also higher in the High Focus States along with other major states such as Maharashtra, Gujarat, Karnataka, and Tamil Nadu (**Fig. 2**). Addressing such a high volume of demand for healthcare services is particularly challenging in the High Focus States due to the high population-facility (referral facilities) ratio (**Fig. 1C**), especially as there is a little contribution from the profit-oriented private facilities in this regard. The majority of the rural population in these states depends upon state-subsidised services from public healthcare facilities.[39]

COVID-19 OUTBREAK IN INDIA AND CONTAINMENT MEASURES

The World Health Organization declared COVID-19 as a pandemic on 11th March, 2020. The first COVID-19 case in India was reported on 30th January, 2020 and by 24th March, 2020, the total number of confirmed cases of the disease crossed 500. Armed with little medical technology to stave off increasing population penetration of COVID-19, the GoI adopted strict lockdown measures for almost 68 days (25th March–31st May, 2020), spread across 5 stages. The goal was to limit human-to-human contact to break the transmission chain of infectious disease and flatten the pandemic curve early so that the healthcare system could get some time to prepare[40] and enable itself to address the potential rise in the COVID-19 cases in the country. The lockdown was levied under the aegis of the Disaster Management Act, 2005, which empowered the GoI to act in a manner deemed feasible to contain or control the outbreak.[41] For the management of COVID-19 cases, the federal government directed the states to identify and develop 3 types of dedicated COVID facilities, where patients would be housed based on the severity of their condition—akin to a risk-stratified system of hospitalisation.[42] In this process, there was a large-scale diversion of health system resources, including health personnel and infrastructure, towards the management of COVID-19 cases. Although India has started gradually unlocking its economic activities whilst issuing precautionary guidelines to its citizens, yet the confirmed cases have been continuously increasing and have started spreading across the entire country (**Fig. 3**).[43] The large-scale migration of workers with their families from big urban centres to the rural areas have played pertinent role in spreading the infection in all corners of the country, especially in rural areas, which are already vulnerable in terms of availability of adequate healthcare services.[44-46] India has yet to encounter the peak of the COVID-19 cases and is on the verge of stage 3 of the pandemic—when the contagion starts to spread within the community. However, the strain on the public healthcare delivery system is already visible, as the reports on shortage of beds, health personnel and other treatment facilities in numerous cities have begun to emerge in the national media, including in the country's capital city—New Delhi.[47,48]

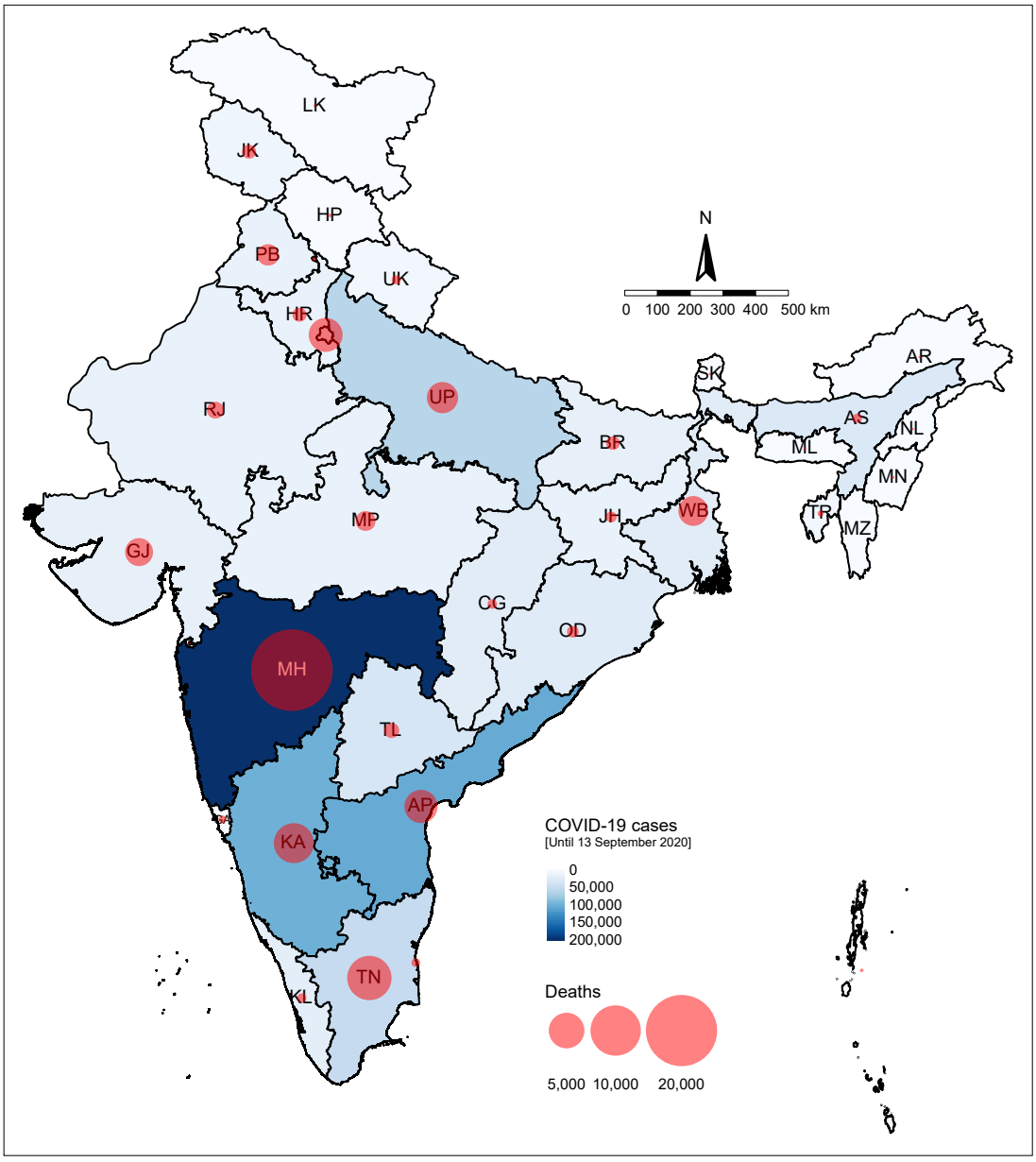

Fig. 3. Confirmed cases of COVID-19 (until 13 September 2020) across the states in India, MoHFW, 2020.[43]
COVID-19 = coronavirus disease 2019; MoHFW = Ministry of Health and Family Welfare, Government of India; LK = newly formed Union Territory of Ladakh; AR = Arunachal Pradesh; AS = Assam; BR = Bihar; CG = Chhattisgarh; GJ = Gujarat; HR = Haryana; HP = Himachal Pradesh; JH = Jharkhand; JK = Jammu and Kashmir; KA = Karnataka; KL = Kerala; MH = Maharashtra; ML = Meghalya; MN = Manipur; MP = Madhya Pradesh; MZ = Mizoram; NL = Nagaland; OD = Odisha; PB = Punjab; RJ = Rajasthan; TN = Tamil Nadu; TL = Telangana; TR = Tripura; UK = Uttarakhand; UP = Uttar Pradesh; WB = West Bengal.

RECEDING ROUTINE HEALTH SERVICES DURING COVID-19 CONTAINMENT

Although all states were directed to identify and prioritize the delivery of essential healthcare services, including services related to RMNCH,[49] there have been indications from the ground that the delivery of routine healthcare services was substantially affected. With several instances of healthcare staff including doctors and nurses being temporarily rendered

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out of service due to becoming infected with COVID-19,[50-53] services at OPDs at both public and private facilities have been curtailed.[54,55]

Since the beginning of April 2020, the focus of the CHWs, in particular, ASHAs, was directed towards COVID-19 operations.[56] They were assigned to visit each household in their area of operation,[57] generate awareness on this new disease, conduct surveillance operations, including screening migrant households, line-list confirmed and suspected cases and their contacts, and refer them to the healthcare system.[58]

As VHND services at the grassroots level too were disrupted,[59] another important link in the provisioning of primary-level healthcare was broken. With numerous secondary and tertiary healthcare facilities being designated as COVID-19 treatment centres, even the middle and upper rungs of service delivery were impacted.

Initial evidence suggested that access to safe contraceptive and abortion services, ANC check-ups, institutional delivery, and institutional care for maternal complications including intrapartum complications and newborn complications was hampered by the lockdown. The recent Global Financing Facility brief mentioned that almost 4.7 million women in India could be devoid of facility-based deliveries, 27.2 million fewer children would receive DPT vaccinations, and nearly 22.7 million fewer children would receive oral antibiotics for pneumonia.[60] The estimate further indicated that if the coverage of all essential MCH interventions reduced in a similar way, India might observe an increase of 40% in child mortality and 52% in maternal mortality over the next year.[60] Further, the difficulty in accessing transportation services[61] and diversion of medical facilities to COVID care exacerbated the situation. Studies estimate that approximately 25 million couples lacked access to contraceptive services during the lockdown, while access to safe abortion services of about 1.5 million women was compromised.[62,63] Ensuring access to safe maternal and childcare services to these women will have to be borne by the healthcare system in the coming year. Anecdotal evidence suggests that the supply of iron and folic acid (IFA) tablets at primary facilities has begun to exhaust, while numerous facilities are unable to conduct ultrasound and sonographies due to an overburdened staff and the necessity of adhering to social distancing and infection prevention norms.[64]

In High Focus States like Jharkhand, Bihar, MP, and Rajasthan, among others, field reports have also suggested that facility births declined by 20%–50% in March 2020 itself.[65-67] Simultaneously, there have also been reports of PW, even those displaying symptoms of COVID-19, being turned away from multiple healthcare facilities for delivery due to both facility overload and lack of preparedness on handling such cases.[68] This is true of not only rural areas, but also urban India.[67]

The observations from the recently available HMIS data reported for the period April to June, 2020, which includes the lockdown period in India, vindicate the initial findings from the field reports from across the country. **Fig. 4** presents the trend of monthly reported cases of select RMNCH services, including the number of laparoscopic (excluding post-abortion) and interval mini-lap (excluding post-partum and post-abortion) sterilizations conducted, number of PW tested anemic, number of institutional delivery, and number of children (aged up to 1 year) receiving the first dose of MR vaccination. **Fig. 4** clearly exhibits a considerable decline in the number of cases reported for the selected RMNCH services during April–June, 2020. A comparative reporting of cases during the period of April–June, 2020 and

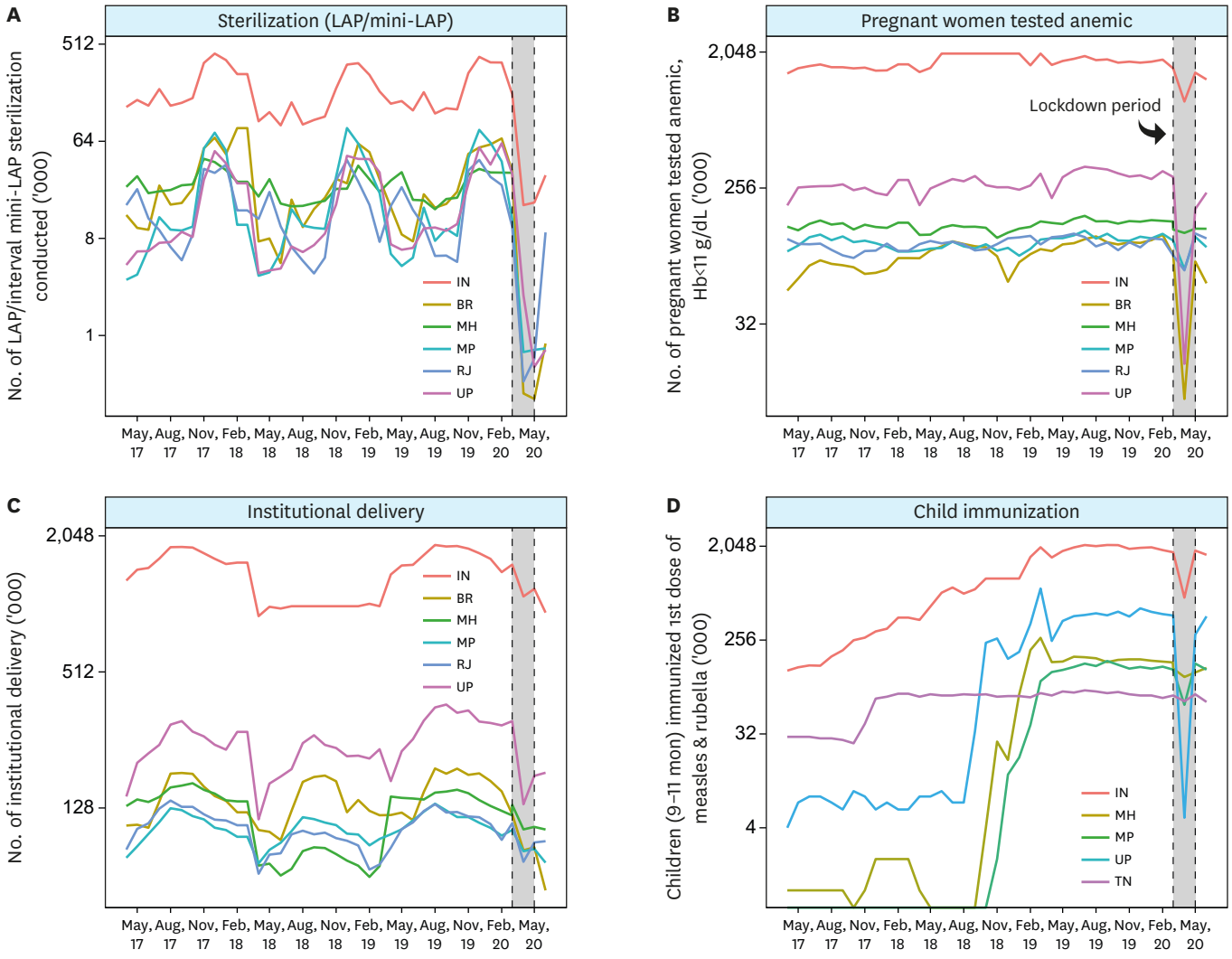

Fig. 4. Monthly trends of select routine reproductive, maternal and child healthcare services across select states in India with country estimates, Health Management Information System, 2018–19.[34] (A) Number of sterilizations conducted by LAP or interval mini-LAP procedure (other than post-partum and post-abortion sterilization). (B) Number of anemic (Hb < 11 g/dL) pregnant women. (C) Number of institutional delivery. (D) Number of children (aged up to 1 year) receiving the first dose of MR vaccination. Numbers are presented in thousands and in log scale.
LAP = laparoscopy; Hb = haemoglobin; MR = Measles-Rubella; IN = India; BR = Bihar; MH = Maharashtra; MP = Madhya Pradesh; RJ = Rajasthan; UP = Uttar Pradesh; TN = Tamil Nadu.

the April–June, 2019 across the states of India for the number of sterilization conducted, number of institutional delivery, and number of children (aged up to 1 year) immunized for BCG is presented in **Fig. 5**. Almost 17 states recorded more than 80% reduction in the cases of sterilization conducted during the period of April–June, 2020 compared to the period of April–June, 2019. On average, a reduction of more than one-fifth was observed in the number of institutional delivery and the number of children (aged up to 1 year) immunized for BCG during the same period. More than 40% reduction in the number of institutional delivery was observed in 4 states including Jharkhand, West Bengal, Gujarat, and Andhra Pradesh. The states including Jharkhand, Manipur, West Bengal, and Delhi recorded more than two-fifth reduction in the number of children receiving BCG vaccination. Similar observations were documented based on the preliminary reports of HMIS for the month of March 2020 in terms of newborns and infants missing their BCG, Pentavalent and Rotavirus vaccines.[69]

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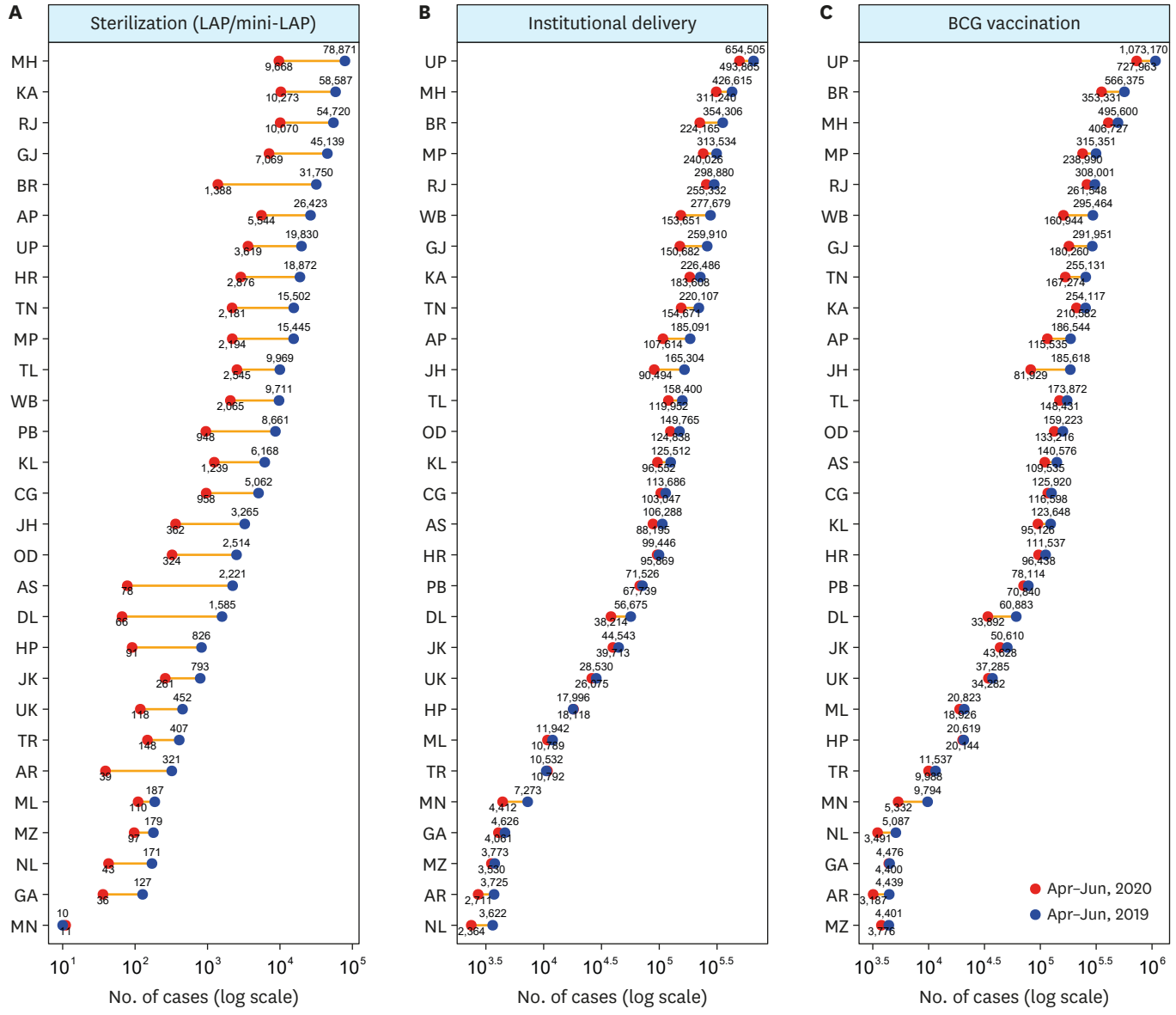

Fig. 5. Decline in select RMNCH services across the states in India during April–June 2020 compared to the period April–June 2019, Health Management Information System, 2019–20.[34] (A) Number of sterilizations conducted by LAP or interval mini-LAP procedure (other than post-partum and post-abortion sterilization). (B) Number of institutional delivery. (C) Number of children (aged up to 1 year) receiving BCG vaccination. Numbers are presented in log scale.
RMNCH = reproductive, maternal, newborn and child health; LAP = laparoscopy; BCG = Bacillus Calmette-Guérin; AP = Andhra Pradesh; AR = Arunachal Pradesh; AS = Assam; BR = Bihar; CG = Chhattisgarh; DL = Delhi; GA = Goa; GJ = Gujarat; HR = Haryana; HP = Himachal Pradesh; IN = India; JK = Jammu and Kashmir; JH = Jharkhand; KA = Karnataka; KL = Kerala; MP = Madhya Pradesh; MH = Maharashtra; MN = Manipur; ML = Meghalaya; MZ = Mizoram; NL = Nagaland; OD = Odisha; PB = Punjab; RJ = Rajasthan; SK = Sikkim; TN = Tamil Nadu; TL = Telangana; TR = Tripura; UP = Uttar Pradesh; UK = Uttarakhand; WB = West Bengal.

In addition, the closure of *Anganwadis* (rural child-care centres) providing free meals to children between the ages of 6 months and 6 years, has led to questions on the impact of the lockdown on the nutritional well-being[70] and survival of children under-5. Similarly, the closure of schools has impacted the provisioning of mid-day meals to children aged 6–14 years. *Anganwadi* workers were instructed to ensure that take-home rations were delivered to beneficiaries—PW, lactating women, and adolescent girls—at their doorstep, yet gaps remain. Field reports from Bhagalpur in Bihar suggested that in the absence of nutritional security, children from poor low-caste families were steeped into greater poverty and had to take recourse to rag-picking and scrap-dealing.[71] While the government has retrospectively

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ordered action including the delivery of rations to all school-going children in the state, the scenario across the country needs further scrutiny.

WAY FORWARD

While COVID-19 presents an immediate and emergency challenge to the healthcare system, the government should ensure that the provisioning of safe maternal and childcare services to women and children is not impaired during this period. A systematic and optimum balance of competing public health concerns is the need of the hour, which seeks to ensure that the health opportunity costs of mitigating the crisis posed by the spread of COVID-19 do not exceed its gains. As a part of this effort, the foremost priority should be to ensure the safety of CHWs—both from the infection,[72,73] and physical security from a fearful and suspicious populace.[74,75]

Through community mobilisation and awareness generation, CHWs have typically been at the forefront of enhancing service coverage in poor states. Their support to RMNCH is required even during the present times to ensure that coverage does not suffer a momentous drop during this period and services can be made available safely and equitably to all populations, based on their varying requirements. Even as they discharge their surveillance-related duties for COVID-19, CHWs should actively continue to line-list PW and newly eligible couples, among others, as a part of their RMNCH related work.

The number of ANC check-ups for each woman can be streamlined so as to reduce thronging at facilities and minimise the risk of infection; curbs on the number of persons accompanying women for check-ups too should be considered. Care should be taken to ensure that the minimum package of services to be availed during pregnancy is not curtailed, for example, tests for detecting anaemia and hypertensive disorders are conducted at least once in each trimester and 180+ IFA and calcium tablets are distributed to all women. The latter can probably be distributed in bulk to ensure that no woman is left out from the ambit of quality care. While the number of assessments may be reduced, ANC check-ups for PW in their final trimester and for high-risk pregnancies (HRPs) must be given precedence; few changes might be made to their schedule.[76]

Similarly, the number of HBNC assessments, which are a central part of the postnatal care (PNC) service delivery package, should be reduced in order to minimise risks to the newborns and their mothers. This can be considered if both the mother and child do not exhibit any risk factors that are detrimental to their health and well-being. During HBNC visits, CHWs must ensure that they follow all mandated infection-prevention protocols, including cleansing their hands with sanitiser or hand-wash before meeting with the mother and the newborn.

In order to meet the service gap foisted by the current circumstances, the government should consider integrating teleconsultation services, wherever possible, into the routine ANC and PNC package. This can help maintain continuity in the dispensation of care. The frequency of teleconsultations should be increased for both HRPs and low-birth-weight and/or preterm babies to enable early detection and timely referral of susceptible cases to higher facilities.

The outreach healthcare services provided at the village level, such as VHNDs could also be continued with certain limitations. In order to avoid a large gathering at the VHND sites, the

possibility of time-specific provision of services to a small group of line-listed beneficiaries could be explored by the local health personnel and administration.

Existing online health applications, such as ANM Online Application, which enable providers to track beneficiaries and assist in the timely delivery of maternal, newborn and child health (MNCH) services, should be promoted; currently they are under-utilised and such a move will help in maintaining existing service coverage and also help providers to streamline responsibilities.

The services of the vast network of traditional birth attendants (TBAs), both skilled and otherwise, should be gainfully used to aid in MNCH programme activities, particularly to ensure that women who decide to deliver at home in this time of concern have access to a basic minimum level of care.

Maintaining the supply chain of essential drugs and equipment to ASHAs and TBAs working at the primary level of the healthcare is essential for ensuring that beneficiaries are able to receive basic care for their essential health needs. With arranging safe transportation services to distant facilities turning out to be a challenging task, it becomes imperative to strengthen the supply chain of essential drugs and equipment to ASHAs and TBAs. In blocks wherein the primary or secondary healthcare facility has been designated as a dedicated COVID treatment facility, the need for bolstering primary level of care becomes even important. Special ambulatory care for such areas should be made available to enable people access institutional care in case of need.

Given the roving nature of their work and their interaction with vulnerable populations including neonates, CHWs should be periodically tested for COVID-19 for early detection of potential risks, which can help prevent the chance of widespread community transmission. Special training to ASHAs on ways to address stigma attached to COVID-19 must be extended.

In addition, the demand for a few reproductive and maternal health services including the delivery services is seasonal. In the present scenario, the public health system needs to be prepared well to address the increasing caseload in the coming winter months.

While a stronger health service system bodes well for population health in the long run, the error of focusing on particular health vertical at any given point in time should not be made. A generation of children and young mothers would suffer the life-long consequences of such an approach. The efforts of the government in the past decades to hasten the decline in maternal and child mortality through a multi-pronged approach would be wasted if the strength of our national efforts were not equitably distributed among critical health concerns.

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