

ESSENTIAL HEALTH SERVICES DURING AND AFTER COVID-19:

A sprint analysis of disruptions and responses across six countries

December 2020



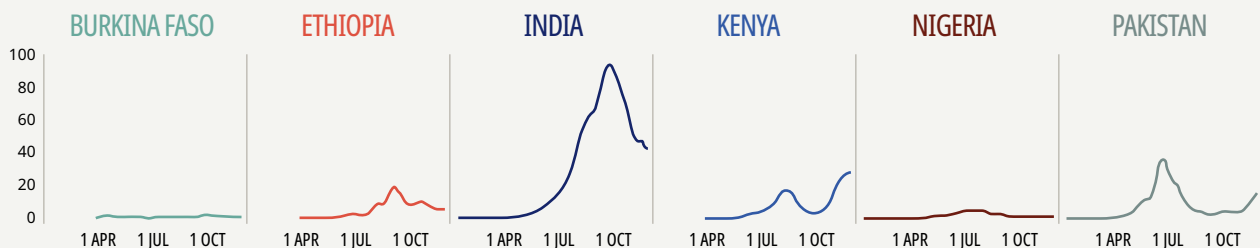
Photos: PATH

Countries included in this analysis are:

- | | |
|----------------|------------|
| 1 BURKINA FASO | 4 KENYA |
| 2 ETHIOPIA | 5 NIGERIA |
| 3 INDIA | 6 PAKISTAN |

This analysis is centered around four questions, with brief answers and illustrative data. Substantially more detailed information – including important caveats about data limitations – can be found in the full report, which is attached in the [Appendix](#).

COVID-19 cases per 100,000 in focus countries

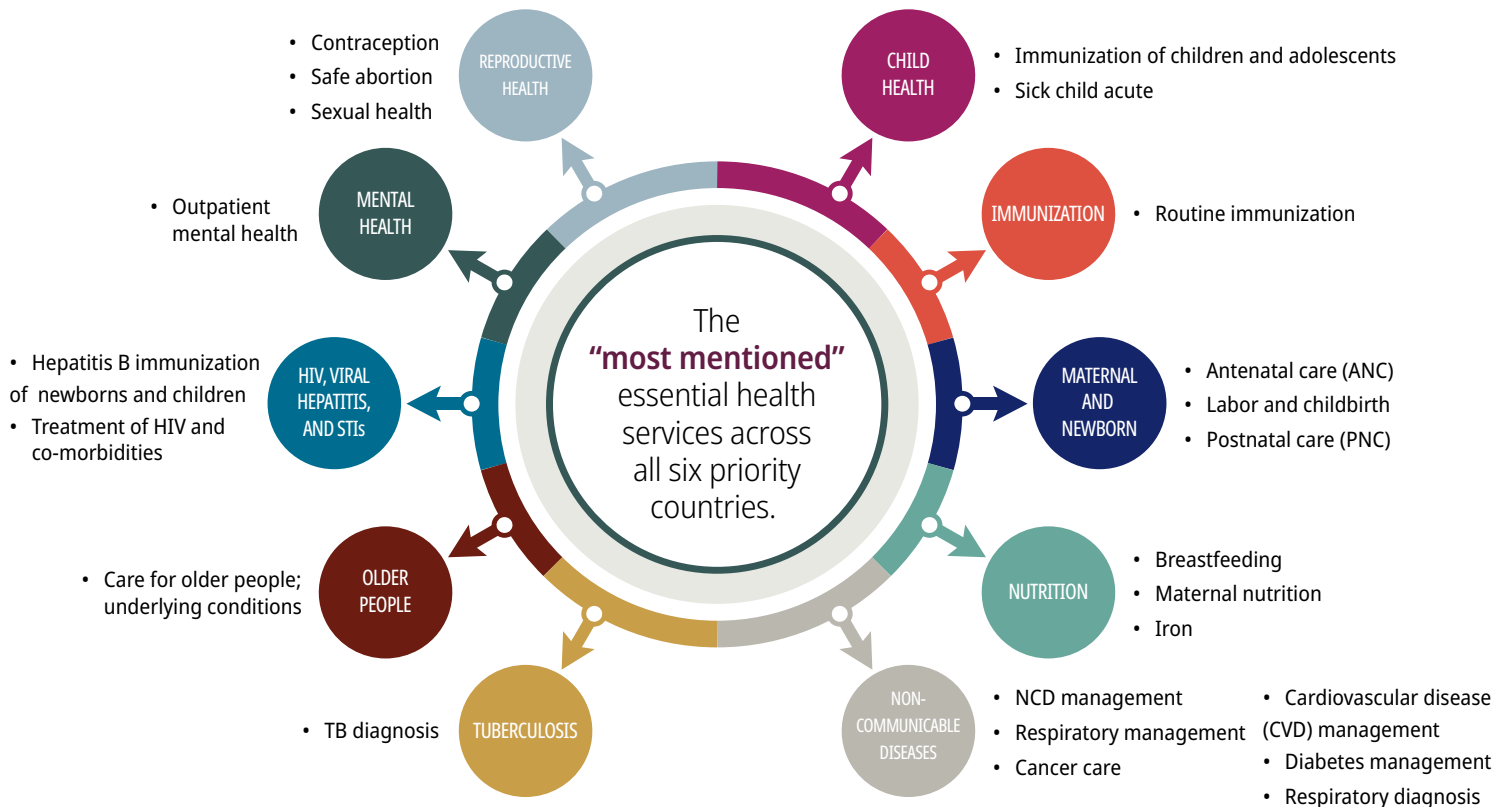


1

What do we mean by essential health services?

Essential Health Services are defined by each country and are typically selected by several parameters, including cost-effectiveness, total health impact, feasibility, and contribution to equitable health outcomes but are also of a vital nature in the shorter-term that should be prioritized and protected from disruptions during COVID. WHO lists 115 services which should be maintained; national guidelines generally conform to the WHO guidelines for maintaining EHS. There are no major differences across countries regarding which services receive more attention.

Source: *Maintaining essential health services: Operational guidance for the COVID-19 context interim guidance. WHO; 2020.*



Source: *Review of national guidelines to maintain EHS/COVID-19 EHS Policy Tracker*

Even before COVID-19, it is not uncommon for countries to define prioritized packages of health services which are aspirational, but financing and delivery constraints implied a reduced set of actual prioritized services.

Communicable Diseases:

HIV/AIDS
HPV
TB
Malaria

RMNCAH:

Maternal and Newborn Health
Reproductive health
ANC, L&D, PNC

Child health:

Sick child acute
Child and maternal nutrition

Routine immunization

2

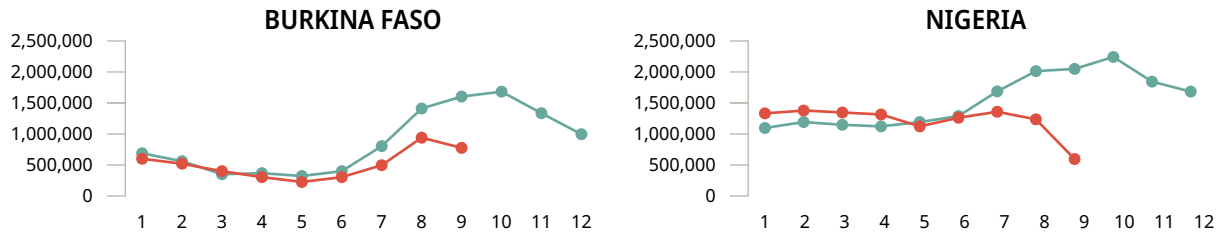
Which services are most disrupted? How does this vary by country?

Essential health service utilization has decreased during the pandemic, particularly during lockdowns.

Coverage changes reported in Q3 2020 compared to Q3 2019

Monthly trends in all-cause outpatient attendances, World Malaria Report 2020. Seasonal variation is driven by malaria transmission during rainy season.

● 2019 ● 2020



Declines tended to be most significant for immunization and other preventative services, although this varied by country.

SERVICE

SERVICE	BURKINA FASO	INDIA	KENYA	NIGERIA	PAKISTAN
MATERNAL HEALTH SERVICES	↓ <10% drop	↓ 25-49% drop	↓ <10% drop	↓ 10-24% drop	↓ 25-49% drop
NEWBORN CARE SERVICES	↓ <10% drop	↓ 25-49% drop	↓ <10% drop	↓ 10-24% drop	↓ 25-49% drop
ROUTINE VACCINATIONS	↓ 10-24% drop	↓ 10-24% drop	↓ 10-24% drop	↓ 10-24% drop	↓ 25-49% drop
SICK CHILD CARE	↓ <10% drop	↓ 25-49% drop	↓ 50-74% drop	↓ 10-24% drop	↓ 25-49% drop
FAMILY PLANNING SERVICES	↓ <10% drop	Do not know	↓ <10% drop	↓ 10-24% drop	↓ 50-74% drop
NCD TREATMENT SERVICES	Do not know	Do not know	↓ <10% drop	↓ 10-24% drop	↓ 25-49% drop

Source: UNICEF

Administrative data suggest that family planning and NCD services – preventive services with known gender dimensions – have been hit hard.

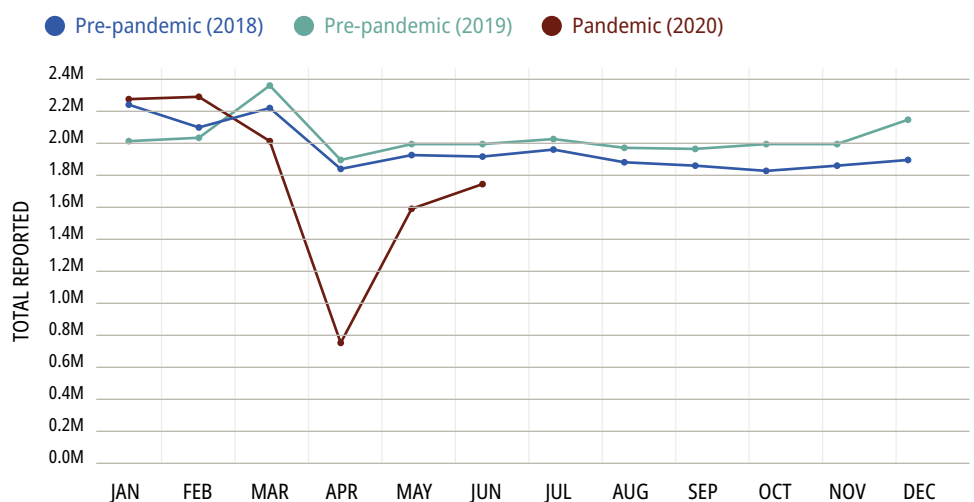
Data note: These data are reported by national Unicef representatives, drawing on the best data source available (typically administrative data). Reliable data were not available for Ethiopia.

Administrative data on patient visits suggest that immunization services are beginning to bounce back.

DESCRIPTIVE TRENDS IN EPI – PENTA3 (#) IN INDIA

All facilities included.

Data note: HMIS data presented here is from publicly available reports and analyses. India HMIS data is available from Government of India reports at https://nrhm-mis.nic.in/hmisreports/frmstandard_reports.aspx, and Nigeria HMIS data analysis is available through GFF.



3

What are the reasons for the declines and what have been the mitigating actions?

Declines in service utilization are caused by supply, access, and demand-side factors. Lockdowns and intentional service closures were primary causes of early declines in utilization, but causes have changed over time.

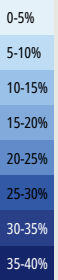
REASONS REPORTED FOR NOT ACCESSING NEEDED HEALTH SERVICES.

Source: Premise and Ipsos rapid surveys.

Declines in service utilization are caused by supply, access, and demand-side factors.

***Data note:**
These questions were only asked of respondents who said they did not utilize vaccination services when needed.

	BURKINA FASO	ETHIOPIA	INDIA	KENYA	NIGERIA
Health facility closed	38.4%	26.5%	37.7%	25.7%	26.4%
Turned away from health facility	20.1%	21.0%	20.1%	14.5%	12.3%
Treatment or tests unavailable	13.3%	16.0%	13.5%	21.7%	16.9%
Unable to access due to lockdown restrictions	0.9%	5.6%	7.0%	5.6%	6.4%
No transportation	3.5%	8.6%	5.7%	3.1%	7.5%
Lack of money	10.8%	8.6%	5.3%	9.7%	16.2%
Partner or family does not approve	1.2%	0.0%	0.4%	0.3%	0.7%
Fear of being infected with COVID-19	0.7%	3.7%	3.3%	9.2%	5.2%
I did not want my child to be vaccinated*	16.4%	28.0%	9.0%	6.2%	16.4%
I was sick and could not take my child*	0.0%	0.0%	1.1%	1.2%	0.0%
My child was sick*	1.6%	0.0%	1.1%	2.5%	1.5%
Other	2.6%	2.5%	2.5%	3.1%	3.2%
Decline to respond	3.0%	3.1%	0.4%	1.3%	2.5%



Proposed service delivery adaptations are promising, but face constraints to effective implementation.

	INTEGRATION AT POINT OF-CARE	HOME- AND COMMUNITY-BASED DELIVERY OF MEDICINES & COMMODITIES	MULTI-MONTH PRESCRIBING AND DOSING	EXPANDING HOME-BASED VISITS BY CHWS AND CHVS	TELEMED
Effectiveness	High	High	High	Variable	Variable
Feasibility	Moderate	Low	Moderate	Moderate	Low
Acceptability	High	High	High	High	Moderate
Sustainability	Moderate	Low	Moderate	Moderate	Moderate

SERVICE DELIVERY ADAPTATIONS

REDUCING OVERCROWDING

- Reconfiguration and triage of patient intake
- Appointment scheduling
- Extended service hours

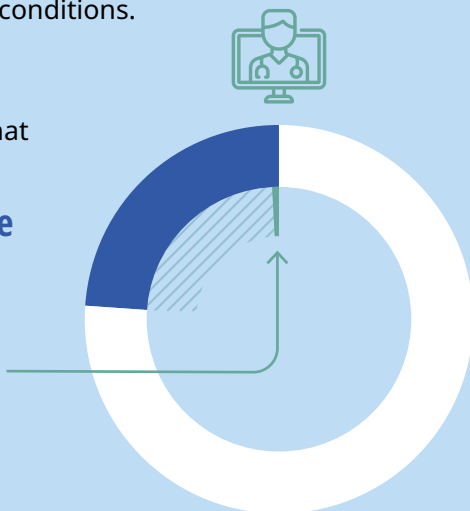
REDUCE NEED FOR FACILITY VISITS

- Delivery of medicine
- Telehealth consultations
- Multi-month prescribing
- Home visits, self-care
- Adapted ITN distribution

TELEMEDICINE CASE STUDY: Promise for impact but important obstacles to uptake.

Most national guidelines, even in low-income settings, have recommended that maternal and newborn health professionals use telemedicine to maintain ANC, birth preparedness, PNC, and breastfeeding support during COVID-19. Telemedicine can be effective and safe under certain conditions.

A recent survey of more than 1,000 maternal and newborn health professionals indicated that **24% of respondents from LICs were using telemedicine before COVID-19, and only 1% of LIC respondents initiated telemedicine during COVID-19.**



The maternal and newborn professionals reported that they lack specific operational guidelines, training, equipment, and reimbursement for connectivity.

Other challenges in introducing telemedicine during COVID-19 included technological barriers, lack of technological literacy, financial and language barriers, lack of nonverbal feedback, and mistrust by patients.

Providers reported being unable to reach substantial numbers of their patients and worried about unequal access to or trust in telemedicine, particularly for the most vulnerable women and families.

Source: Galle A, et al. A double-edged sword - Telemedicine for maternal care during COVID-10: findings from a global mixed methods study of healthcare providers. medRxiv preprint doi: 10.1101/2020.11.25.20238535.

CONSEQUENCES OF UNADDRESSED GAPS IN ESSENTIAL SERVICES

IMMUNIZATION

Pools of unvaccinated children could contribute to disease transmission, illness, and death. Risk depends on community-level immunization coverage.

FAMILY PLANNING

Gaps in access to contraception will increase unintended pregnancies, which could contribute to increased rates of maternal, neonatal, and infant mortality. Unplanned pregnancies increase household risks of poor health and food and economic insecurity.

NUTRITION SERVICES AND GROWTH MONITORING

Gaps in growth monitoring and/or nutrition services during COVID-19 are estimated to contribute to 18-23% of preventable deaths.

HIV PREVENTION AND TREATMENT

Gaps in HIV prevention and testing could contribute to growing pools of PLHIV who do not know their status, leading to increased HIV transmission now, and increased morbidity and mortality into the future. The same is true for treatment gaps.

MALARIA PREVENTION AND TREATMENT

Gaps in malaria prevention and treatment have clear short-term effects of increased morbidity and mortality. Longer-term consequences include lost progress against eliminating malaria in low-burden geographies.

NCD MANAGEMENT





In the short-term, gaps in NCD management could directly contribute to increased mortality due to COVID-19. In the longer term, gaps in NCD testing and management will accelerate progression to severe disease, disability, and death.

4

What can we expect EHS coverage to look like once lockdowns are lifted/vaccines rolled out?"

Some service disruptions may leave lasting gaps. Gaps in coverage of certain services – including immunization, HIV prevention and treatment, malaria prevention, and family planning – have the potential to leave pools of unprotected individuals and communities at greater short- or long-term risk of morbidity and mortality. If left unaddressed, these prevention or treatment gaps have the potential to cause negative health outcomes over many years or decades.

We identified routine immunization, family planning, nutrition services, HIV prevention, malaria diagnosis and treatment, and NCD management to be services at greatest risk of prolonged disruption and severe health impacts if concerted action is not taken. Vulnerable individuals and communities will be most negatively affected by disruptions and lost progress in these services; apparent return-to-baseline may mask a different trajectory for patients most at-risk.

RECOVERY ARCHETYPES	WHAT IT LOOKS LIKE, AND WHY	SERVICES AND COUNTRIES WHERE WE EXPECT TO SEE THIS
<p>SHORT-TERM BLIP</p> 	<p>Service coverage drops immediately at the start of the pandemic then rebounds in the next month or two.</p>	<p>In many countries, women have returned to facilities for ANC, deliveries, and immunization services. Malaria services have been largely maintained, including an emphasis on ITNs for prevention.</p>
<p>PROLONGED DISRUPTION</p> 	<p>Service coverage drops immediately at the start of the pandemic and takes longer to recover. L-shaped curves never return to baseline coverage. These services tend to be preventive and are highly elastic to demand-side perceptions of need, or service availability never returns.</p>	<p>Many services in Ethiopia are at-risk of prolonged disruption due to internal conflict. Population-level vaccination coverage will remain sub-optimal until (if) all children can be caught up. FP has been hard-hit, particularly for adolescents and particularly in countries where movement restrictions are greater and/or where perceived or real risk of COVID-19 infection is greater.</p>
<p>DIFFERENT TRAJECTORIES FOR SUB-GROUPS</p> 	<p>For some communities or population groups, the services rebound quickly. For others, they remain at lower-levels, stagnating or declining over time.</p>	<p>HIV testing and ART coverage has been maintained for populations who have access to self/home- or community-based testing and drug delivery. Gaps in access to testing and treatment are likely to affect vulnerable populations most.</p>
<p>UPWARD TRAJECTORY</p> 	<p>Service coverage increases to beyond pre-COVID-19 levels.</p>	<p>Testing for NCDs may increase in some countries with high COVID-19 burdens where NCD testing is incorporated into COVID-19 testing and management. Without investment in NCD continuity of care, increased testing will not necessarily result in increased case management or NCD control.</p>

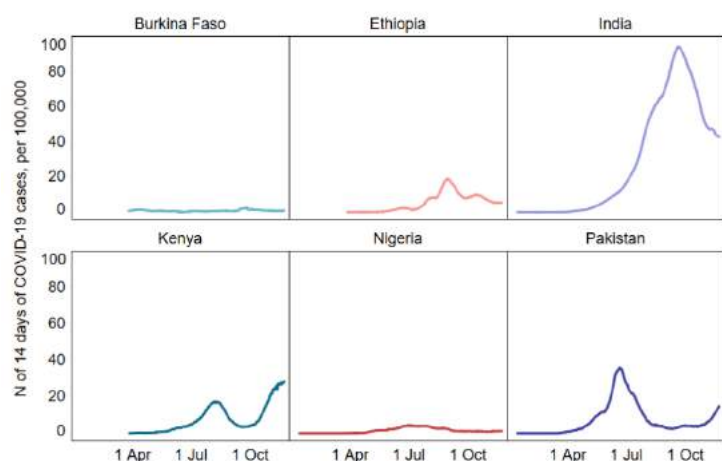
ESSENTIAL HEALTH SERVICES DURING AND AFTER COVID-19:

A SPRINT ANALYSIS OF DISRUPTIONS AND RESPONSES TO INFORM GDP STRATEGY

NOTE TO READER: This sprint analysis was prepared by PATH at the request of the Global Delivery Program within the Bill & Melinda Gates Foundation. Originally intended for internal use, this report is being shared publicly in the event that our analyses and conclusions are insightful to others. The following report was submitted in early December. Data limitations are acknowledged throughout, and some data has been redacted due to public sharing limitations. Countries highlighted include Burkina Faso, Ethiopia, India, Kenya, Nigeria, and Pakistan. The analysis is centered around four questions:

1. [What do we mean by essential health services?](#)
2. [Which services are most disrupted?](#)
3. [What are the reasons for the declines and what have been the mitigating actions?](#)
4. [What can we expect coverage to look like once lockdowns are lifted/vaccine rollout?](#)

FIGURE 1. COVID-19 CASES PER 100,000 ACROSS SIX PRIORITY COUNTRIES. *Source: [European Centre for Disease Prevention and Control](#).*



WHAT DO WE MEAN BY ESSENTIAL HEALTH SERVICES?

The World Health Organization (WHO) lists 115 essential health services in their June 1, 2020, guidance to maintain essential health services (EHS) during COVID-19.¹ Table 1 shows the services that are most frequently addressed in national guidelines to maintain EHS during COVID-19. National guidelines to maintain EHS during COVID-19 generally conform to WHO's guidance; few mention existing Essential Health Service Packages (which are typically selected by several parameters, including cost-effectiveness, total health impact, feasibility, and contribution to equitable health outcomes). There are no major differences across countries regarding which services receive more attention. Compared to the Bill & Melinda Gates Foundation focus on services that reduce under-five mortality rate (U5MR), maternal mortality ratio (MMR), and infectious disease burden, countries have also prioritized noncommunicable disease (NCD) services as 70 percent of global deaths are due to NCDs and they are a risk factor for severe COVID-19 disease.²

TABLE 1. THE "MOST-MENTIONED" ESSENTIAL HEALTH SERVICES ACROSS SIX PRIORITY COUNTRIES' NATIONAL GUIDANCE TO MAINTAIN EHS.

Health area	Service
Child health	<ul style="list-style-type: none"> • Immunization of children and adolescents • Sick child acute
Immunization	<ul style="list-style-type: none"> • Routine immunization
Maternal and newborn	<ul style="list-style-type: none"> • Antenatal care • Labor and childbirth • Postnatal care

Nutrition	<ul style="list-style-type: none"> • Breastfeeding • Maternal nutrition • Iron
Noncommunicable diseases	<ul style="list-style-type: none"> • NCD management • Respiratory management • Cancer care • Cardiovascular disease management • Diabetes management • Respiratory diagnosis
Tuberculosis	<ul style="list-style-type: none"> • TB diagnosis
Older people	<ul style="list-style-type: none"> • Care for underlying conditions
HIV, viral hepatitis, and STIs	<ul style="list-style-type: none"> • HBV immunization of newborns and children • Treatment of HIV and co-morbidities
Mental health	<ul style="list-style-type: none"> • Outpatient services
Reproductive health	<ul style="list-style-type: none"> • Contraception • Safe abortion • Sexual health services

Note: Health areas and services are in alignment with the service areas outlined in WHO’s guidance on maintenance of essential health services during COVID-19; services are ordered alphabetically.

WHICH SERVICES ARE MOST DISRUPTED?

SERVICE UTILIZATION DECREASED, PARTICULARLY DURING LOCKDOWNS.

Figure 2 shows changes in all-cause outpatient attendance for Burkina Faso and Nigeria (seasonal variation in both countries is driven by malaria transmission during the rainy season).

FIGURE 2. MONTHLY TRENDS IN ALL-CAUSE OUTPATIENT ATTENDANCES IN 2019 (GREEN) AND 2020 (ORANGE) IN BURKINA FASO AND NIGERIA. Source: [World Malaria Report 2020](#).



SURVEY AND ADMINISTRATION DATA SUGGEST THAT DECLINES TENDED TO BE MOST SIGNIFICANT FOR IMMUNIZATION AND OTHER PREVENTATIVE SERVICES, ALTHOUGH THIS VARIED BY COUNTRY.

Data sources include:

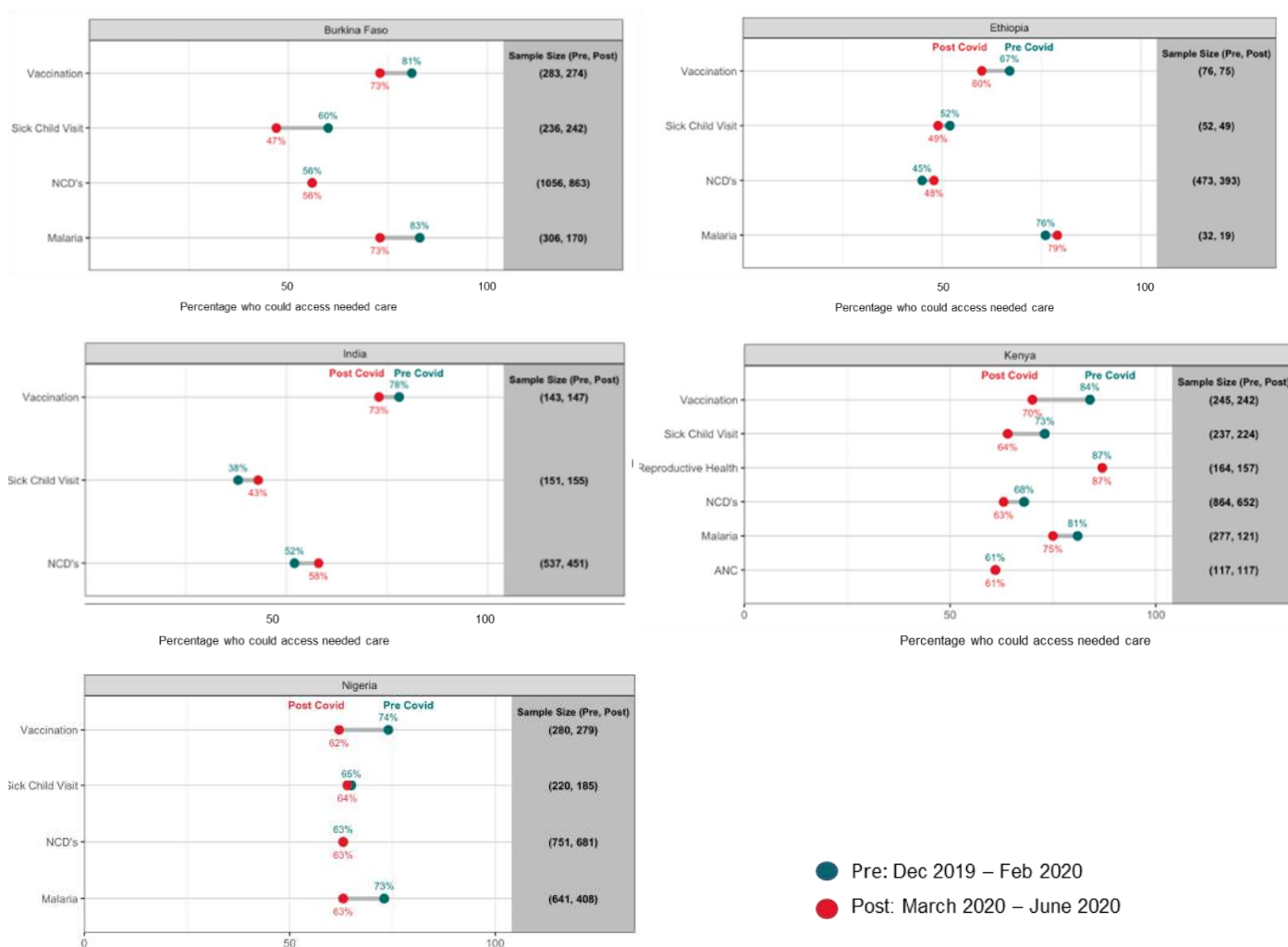
- Premise and Ipsos rapid phone surveys reporting on care-seeking and access from March–June 2020 (may be a nonrepresentative sample).
- Health management information system (HMIS)/District Health Information Software 2 (DHIS2) data showing monthly trends. Due to data quality concerns, we only show certain reference indicators.
- UNICEF “Pulse” survey of national UNICEF stakeholders reporting from their country’s administrative reporting during July to September 2020.

Based on all three data sources, Kenya seemed to be the least affected, with vaccination as the exception (the exception in all countries) and sick child visits. Kenya was not unaffected by COVID-19; rather, it developed the greatest number of guidelines to maintain EHS during this time.

Appendix | Full Report

Across the other countries, Premise/Ipsos data, pulse polls, and administrative data on service access from March to June suggest vaccination utilization was negatively affected. Administrative data—consistent with WHO and UNICEF pulse polls (Table 2) more than the Premise/Ipsos survey—suggest that antenatal care (ANC) first visits were delayed, and that family planning consultations and contraceptive utilization have declined. Since March, national malaria programs are reporting reductions in both all-cause and malaria outpatient attendance.³ However, some countries are showing an increase in cases, which could be due to changes in diagnostic practices, reporting of presumptive malaria cases instead of confirmed, or an increase in malaria transmission. The extent to which these services were affected and have recovered varies by country.

FIGURE 3. CHANGES IN UTILIZATION OF HEALTH SERVICES FROM DECEMBER 2019–FEBRUARY 2020 TO MARCH–JUNE 2020. *Source: Premise/Ipsos rapid phone surveys.*



**Methods note: Circles reflect the percentage of survey respondents who were able to access or utilize needed services during each period in question. Source: Premise/Ipsos survey. Survey weights were used to address representativeness of the sample.*

TABLE 2. COVERAGE CHANGES REPORTED IN Q3 2020 COMPARED TO Q3 2019. *Source: UNICEF.*

Service	Burkina Faso	India	Kenya	Nigeria	Pakistan
Maternal health services	<10% drop	25-49% drop	<10% drop	10-24% drop	25-49% drop
Newborn care services	<10% drop	25-49% drop	<10% drop	10-24% drop	25-49% drop
Routine vaccinations	10-24% drop	10-24% drop	10-24% drop	10-24% drop	25-49% drop
Sick child care	<10% drop	25-49% drop	50-74% drop	10-24% drop	25-49% drop
Family planning services	<10% drop	Do not know	<10% drop	10-24% drop	50-74% drop
NCD treatment services	Do not know	Do not know	<10% drop	10-24% drop	25-49% drop

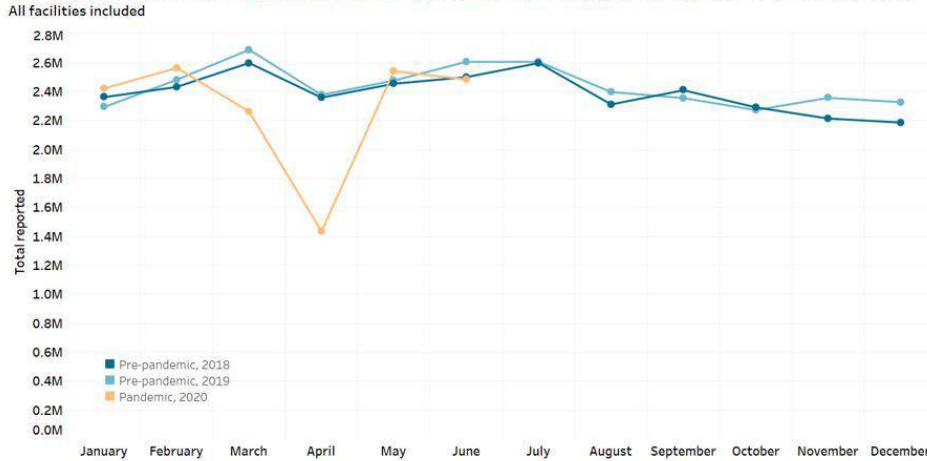
**Data note: These data are reported by national UNICEF representatives, drawing on the best data source available (typically administrative data). Reliable data were not available for Ethiopia.*

ADMINISTRATIVE DATA ON ANC SUGGESTS THAT PATIENTS DELAYED FIRST VISITS.

Data from HMIS/DHIS2 systems suggest that ANC first visits dropped during lockdown months in India and Nigeria. Increased utilization documented in later months may reflect delays in the ANC first visit, although we note that the increase (e.g., in India) does not appear adequate to capture the entire cohort of newly pregnant women.

FIGURE 4. DESCRIPTIVE TRENDS IN ANC VISITS IN INDIA AND NIGERIA FROM 2018 THROUGH 2020. *Source: HMIS/DHIS2.*

Descriptive trends in Pregnant women registered for ANC (#) in India, Jan 2018 to June 2020



Descriptive trends in RMNCAH - ANC 1st visit (#) in Nigeria, Jan 2018 to July 2020, (3,929 health facilities)



Methods note: DHIS2 data have multiple known data quality limitations. We were not able to access facility-level data to identify and remove severe outliers or limit to facilities only with complete reporting. Because of the utility of looking at trends over time, we opted to display diphtheria-tetanus-pertussis (DTP3) (number of doses administered) from DHIS2 as it tends to be reported more consistently and accurately than many other indicators. During COVID-19, the Global Financing Facility’s (GFF) cleaning procedure on Nigeria’s DHIS2 data confirmed that DTP3 was the indicator with the highest level of reporting completeness and internal consistency.

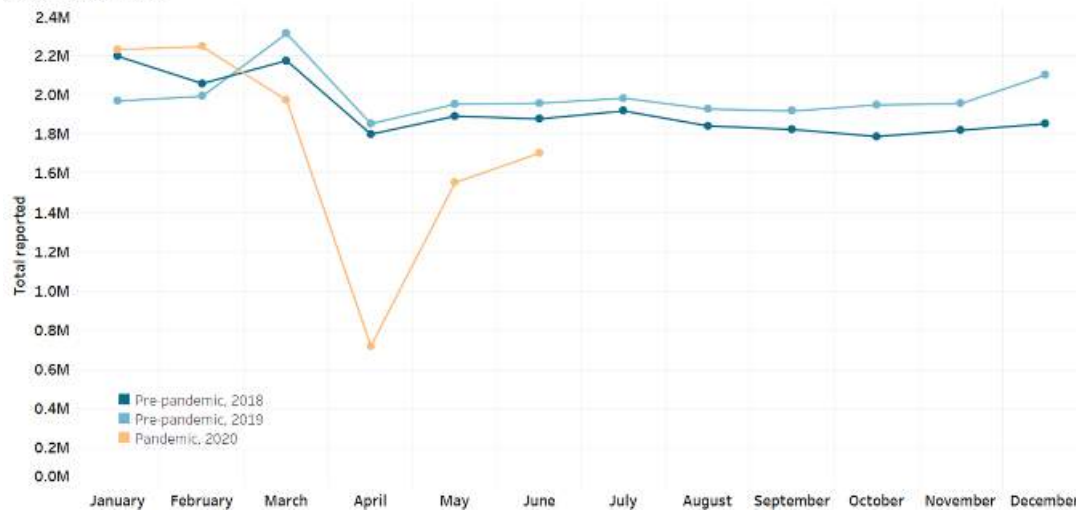
Data note: HMIS data presented here is from publicly available reports and analyses. India HMIS data is available from Government of India reports at https://nrhm-mis.nic.in/hmisreports/frmstandard_reports.aspx, and Nigeria HMIS data analysis is available through GFF.

ADMINISTRATIVE DATA ON PATIENT VISITS SUGGEST THAT IMMUNIZATION SERVICES ARE BEGINNING TO BOUNCE BACK.

FIGURE 5. DESCRIPTIVE TRENDS IN DTP3 FROM 2018 THROUGH 2020 IN INDIA AND NIGERIA. *Source: HMIS/DHIS2.*

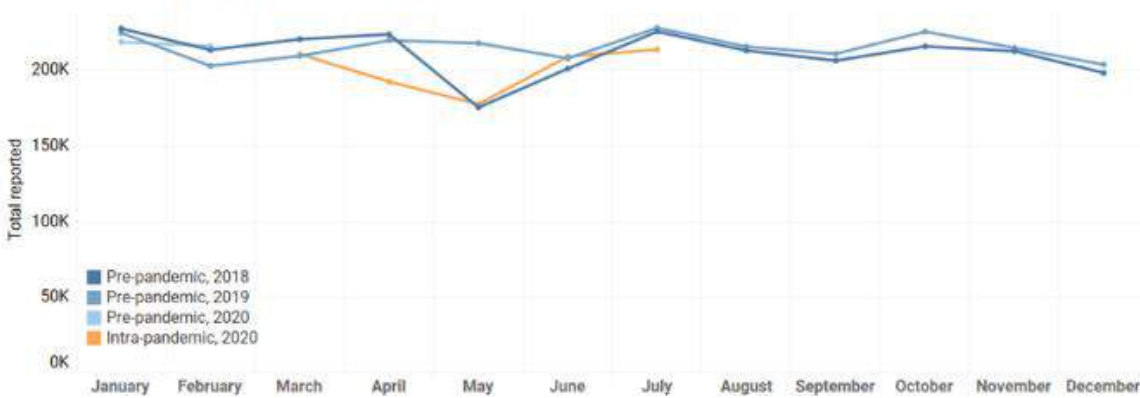
Descriptive trends in EPI - Penta3 (#) in India, Jan 2018 to Oct 2020

All facilities included



Descriptive trends in EPI - DTP3+Penta3 (#) in Nigeria, Jan 2018 to July 2020, (6,974 health facilities)

Restricted to facilities with complete data for January 2018 to March 2020

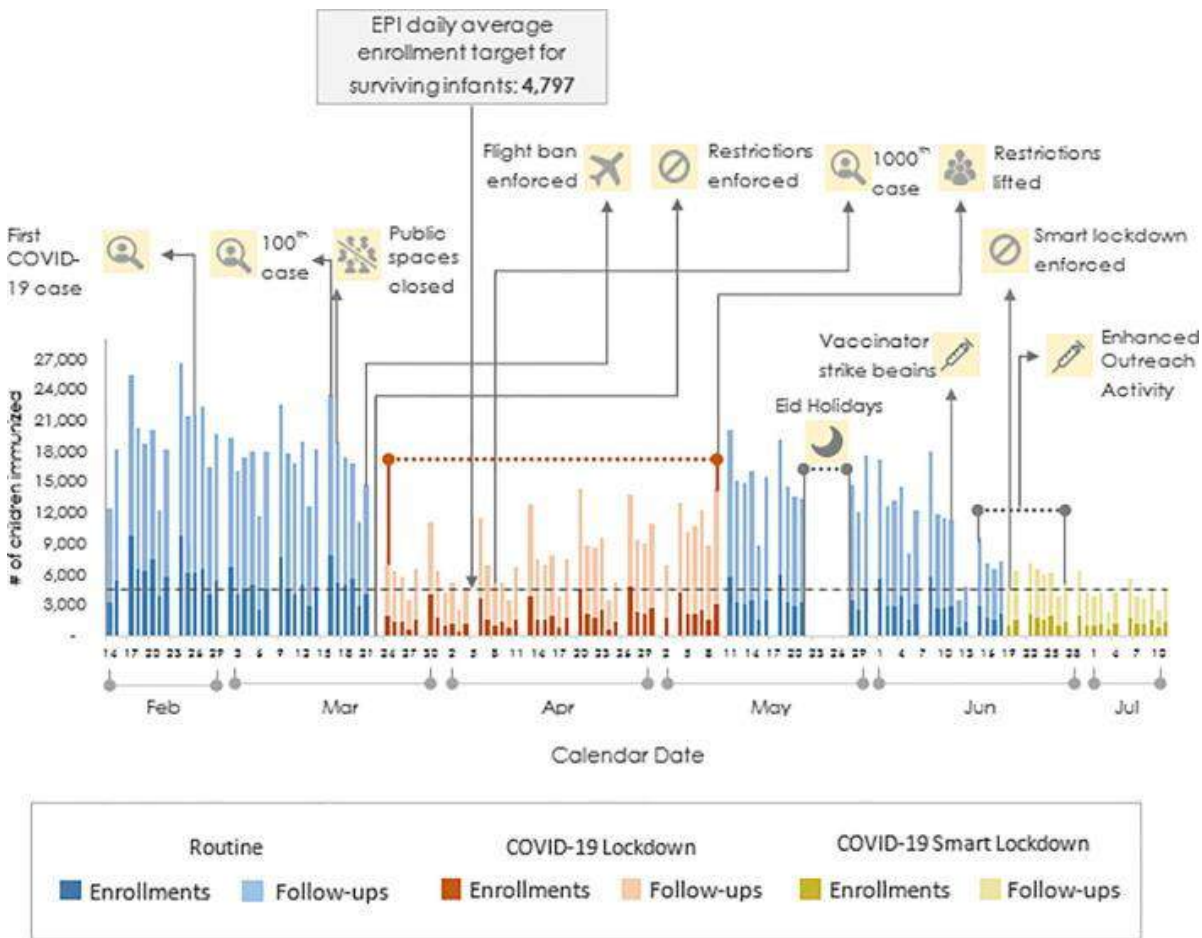


Data note: HMIS data presented here is from publicly available reports and analyses. India HMIS data is available from Government of India reports at https://nrhm-mis.nic.in/hmisreports/frmstandard_reports.aspx, and Nigeria HMIS data analysis is available through GFF.

In Pakistan, data from Sindh province’s electronic immunization registry (EIR) provides more granular detail of the number of children registered and vaccinated each day. Compared to the pre-COVID-19 baseline, the number of vaccines administered decreased by 52 percent during the first lockdown. Analysis of patient-level data show that children vaccinated during lockdown were more likely to have been born in facilities, had provided contact numbers, and have mothers with more education.⁴ More female than male vaccinators ceased work during lockdowns, consistent with other evidence that female health workers face more transportation and household-related barriers during COVID-19 than men.

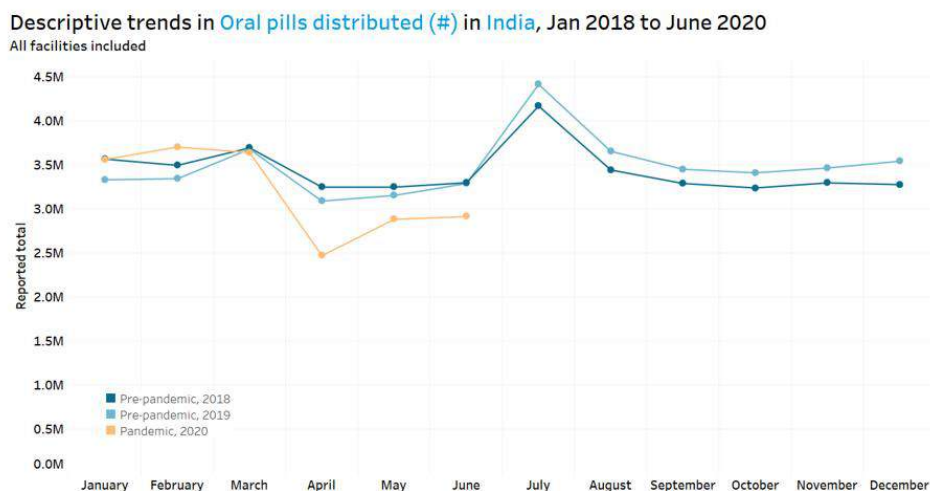
FIGURE 6. DAILY NUMBER OF INFANTS AND CHILDREN VACCINATED IN SINDH PROVINCE, PAKISTAN, FEBRUARY–NOVEMBER 2020.

Source: Interactive Research & Development (IRD), Pakistan.

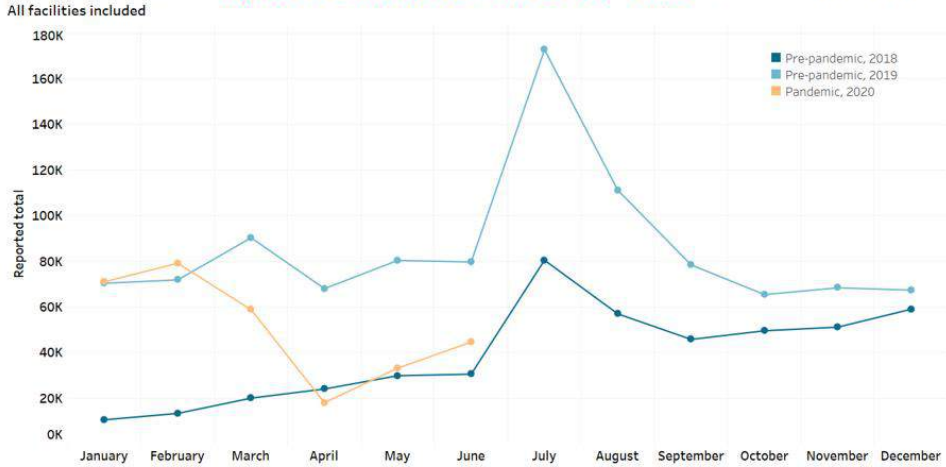


ADMINISTRATIVE DATA SUGGEST THAT FAMILY PLANNING AND NCD SERVICES—PREVENTIVE SERVICES WITH KNOWN GENDER DIMENSIONS—HAVE BEEN HARD-HIT. Nigeria recorded more family planning counseling visits at the start of 2020 than in previous years but declined around the time of lockdowns. Utilization of hypertension services in India has still not returned to baseline, although DHIS2 data suggests it has in Kenya (not shown).

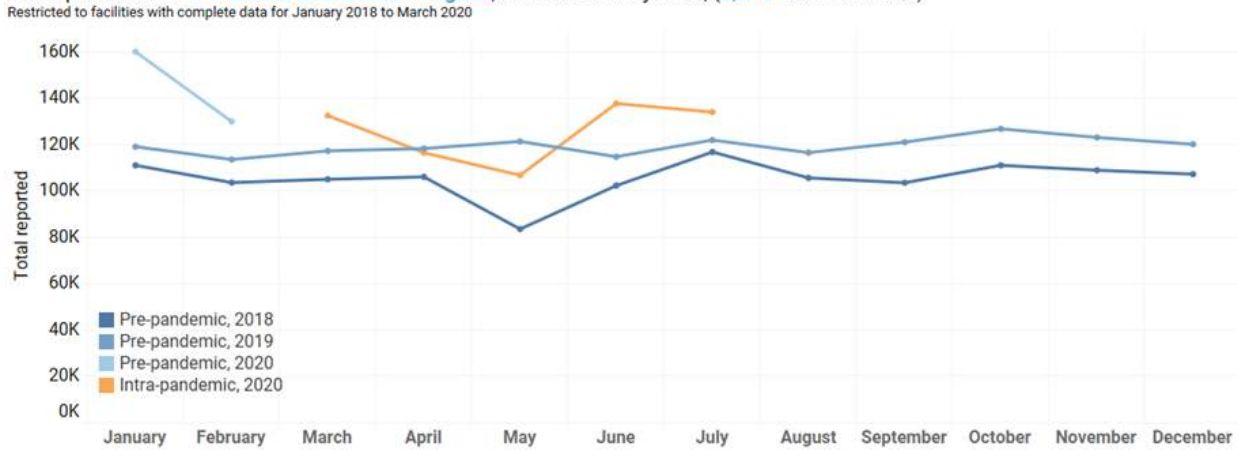
FIGURE 7. DESCRIPTIVE TRENDS IN FAMILY PLANNING AND HYPERTENSION SERVICE UTILIZATION IN INDIA AND NIGERIA, AND FROM 2018 THROUGH 2020. Source: HMIS/DHIS2.



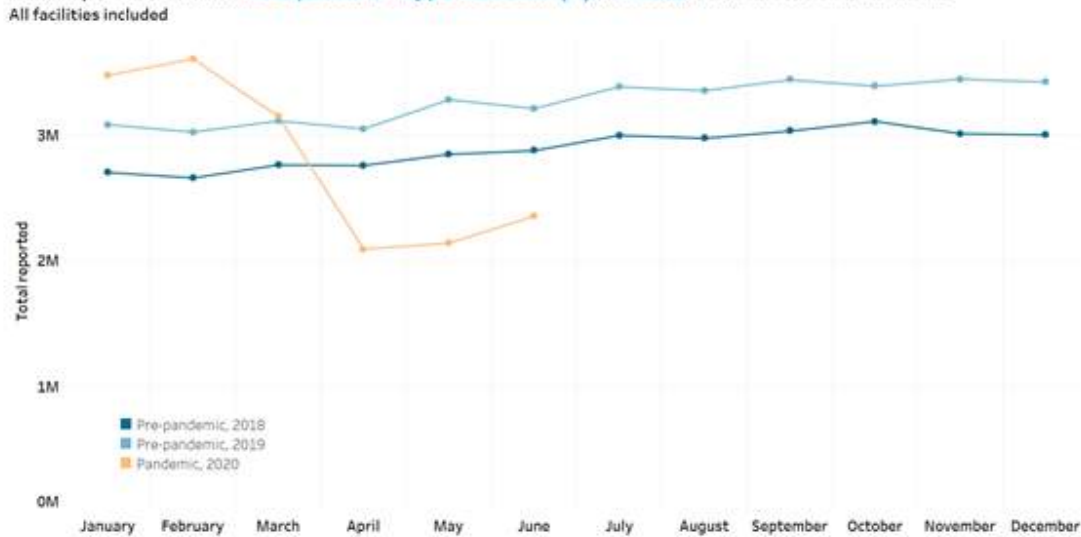
Descriptive trends in **Injectable contraceptive - first dose (#)** in India, Jan 2018 to June 2020



Descriptive trends in **FP clients counselled in Nigeria**, Jan 2018 to July 2020, (2,078 health facilities)



Descriptive trends in **Outpatient - hypertension (#)** in India, Jan 2018 to June 2020



Data note: HMIS data presented here is from publicly available reports and analyses. India HMIS data is available from Government of India reports at https://nrhm-mis.nic.in/hmisreports/frmstandard_reports.aspx, and Nigeria HMIS data analysis is available through GFF.

LIMITATIONS IN AVAILABLE DATA HAVE IMPORTANT IMPLICATIONS FOR INTERPRETATION AND THE WAY FORWARD.

- Longitudinal data from HMIS/DHIS2 can show us monthly changes in service coverage and differences across subnational units or facilities, but its quality is often suboptimal and/or requires cleaning by someone with knowledge of the local context. HMIS/DHIS2 data are owned by governments and are rarely available in the public domain. Multiple partners are currently providing technical assistance to analyze and use HMIS/DHIS2 data, but these efforts are often not coordinated, and attention is also required on collecting better data.
- Electronic immunization registries and other patient-level registries enable up to daily tracking of individual patients; patient characteristics enable real-time equity analyses.
- Representative population-based surveys have fewer data quality issues but are often available only for a single time-point. Panel and repeat cross sectional surveys offer promise.
- Of the dozens of survey efforts launched during the COVID-19 pandemic to answer questions raised in this report, differences in their design and inquiries limit triangulation. Data are disproportionately collected in some countries over others. Efforts to coordinate and harmonize survey efforts will increase the value of the information and reduce resources required.
- Rapid telephone surveys offer promise when the samples are representative of the general population as is the case for the World Bank rapid poverty surveys. Rapid facility telephone surveys also offer promise. Telephone survey samples may be biased due to access to a telephone, even at health facilities.
- Numerous trackers and dashboards have been developed to monitor disruptions in EHS due to COVID-19 but the data face limitations in accuracy and timeliness. Moving forward, ensuring health information systems capture data related to service disruptions in addition to bolstering sentinel surveillance and rapid community surveys would improve real-time understanding.

WHAT ARE THE REASONS FOR THE DECLINES AND WHAT HAVE BEEN THE MITIGATING ACTIONS?

DECLINES IN SERVICE UTILIZATION ARE CAUSED BY SUPPLY, ACCESS, AND DEMAND-SIDE FACTORS.

Lockdowns and intentional service closures were primary causes of early declines in utilization, but causes have changed over time. The World Bank began rapid household phone surveys in May and those results suggest relatively few respondents were unable to access needed care. In Burkina Faso⁵, 96.8 percent of respondents were able to access needed health care in May and in Ethiopia⁶, 95 percent of respondents were able to access needed health care in July. In Burkina Faso, more urban respondents faced challenges in accessing care than their rural counterparts; there were no differences between poor and non-poor. Multiple time points from Nigeria⁷ show an increase in ability to access needed health care since April, coinciding with lifting of lockdowns. Table 3 describes reasons for not being able to access care in Nigeria and Burkina Faso. Over time, financial barriers have increased in Nigeria and is a significant barrier in Burkina Faso.

FIGURE 8. PERCENT OF RESPONDENTS ABLE TO ACCESS NEEDED CARE IN NIGERIA, APRIL TO JUNE 2020. *Source: World Bank.*

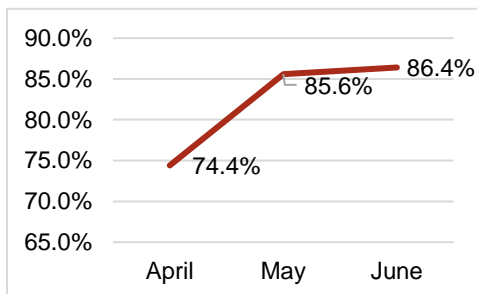


TABLE 3. REASONS RESPONDENTS WERE NOT ABLE TO ACCESS NEEDED CARE. *Source: World Bank.*

Reason Reported (all)	Nigeria	Nigeria	Nigeria	Burkina Faso
	Apr/May	May	June	May
Turned away from health facility	1.3%	0.0%	0.0%	22.0%
Lack of staff	3.6%	9.4%	4.5%	21.0%
On suspicion of having COVID-19			4.7%	
Lack of money	55.4%	70.0%	78.4%	56.2%
Unable to access due to lockdown restrictions	23.8%	5.6%	0.0%	
Other	15.9%	14.9%	10.8%	

Table 4 shows similar data from the Premise/Ipsos surveys conducted in June, inquiring about health services needed and accessed from March to June, as compared to December 2019 to February 2020. Reflecting on the period in question, a smaller proportion of respondents reported being able to access needed care: 63.3 percent in Burkina Faso, 51.5 percent in Ethiopia, 56.3 percent in India, 71.5 percent in Kenya, and 65.9 percent in Nigeria. Among respondents who were unable to access care, supply-side barriers posed larger constraints than access to demand-side barriers (Table 4).

TABLE 4. REASONS RESPONDENTS WERE NOT ABLE TO ACCESS NEEDED CARE FROM MARCH TO JUNE 2020. *Source: Premise/Ipsos.*

Reason	Burkina Faso	Ethiopia	India	Kenya	Nigeria
Health facility closed	38.4%	26.5%	37.7%	25.7%	26.4%
Turned away from health facility	20.1%	21.0%	20.1%	14.5%	12.3%
Treatment or tests unavailable	13.3%	16.0%	13.5%	21.7%	16.9%
Unable to access due to lockdown restrictions	0.9%	5.6%	7.0%	5.6%	6.4%
No transportation	3.5%	8.6%	5.7%	3.1%	7.5%
Lack of money	10.8%	8.6%	5.3%	9.7%	16.2%
Partner or family does not approve	1.2%	0.0%	0.4%	0.3%	0.7%
Fear of being infected with COVID-19	0.7%	3.7%	3.3%	9.2%	5.2%
I did not want my child to be vaccinated*	16.4%	28.0%	9.0%	6.2%	16.4%
I was sick and could not take my child*	0.0%	0.0%	1.1%	1.2%	0.0%
My child was sick*	1.6%	0.0%	1.1%	2.5%	1.5%
Other	2.6%	2.5%	2.5%	3.1%	3.2%
Decline to respond	3.0%	3.1%	0.4%	1.3%	2.5%

*Data note: These questions were only asked of respondents who said they did not utilize vaccination services when needed.

TABLE 5. REASONS RESPONDENTS WERE NOT ABLE TO ACCESS NEEDED CARE FROM MARCH TO JUNE 2020, BY SEX. *Source: Premise/Ipsos.*

Reason	Burkina Faso		Ethiopia		India		Kenya		Nigeria	
	Female (F)	Male (M)	F	M	F	M	F	M	F	M
Health facility closed	58.3%	37.5%	38.1%	23.3%	47.8%	36.1%	20.6%	28.6%	16.9%	28.1%
Turned away from health facility	16.7%	20.5%	14.3%	23.3%	17.4%	20.9%	14.2%	14.7%	13.0%	12.3%
Treatment or tests unavailable	12.5%	13.0%	14.3%	16.5%	10.9%	13.1%	11.6%	26.6%	11.7%	18.1%
Unable to access due to lockdown restrictions	0.0%	1.0%	0.0%	4.5%	6.5%	7.3%	6.4%	5.2%	7.8%	6.1%
No transportation	8.3%	3.2%	4.8%	9.8%	2.2%	6.8%	4.3%	2.4%	0.0%	9.2%
Lack of money	4.2%	11.2%	9.5%	9.0%	2.2%	6.3%	9.9%	9.5%	20.8%	15.0%
Partner or family does not approve	0.0%	1.2%	0.0%	0.0%	0.0%	0.5%	0.7%	0.0%	1.3%	0.6%

Fear of being infected with COVID-19	0.0%	0.8%	9.5%	3.0%	8.7%	2.1%	12.8%	7.1%	10.4%	4.2%
Other	0.0%	2.8%	4.8%	2.3%	0.0%	2.1%	4.3%	2.4%	7.8%	2.2%
Decline to respond	0.0%	3.2%	0.0%	3.8%	2.2%	0.0%	1.4%	1.2%	7.8%	1.4%

Table 5 reports sex differences in reasons not being able to access needed care between March and July. In Burkina Faso, Ethiopia, and India, women reported being unable to access care because the facility was closed, whereas more men reported that they were turned away. Men in these surveys needed NCD-related care more than other health services, consistent with documented gender-related barriers to men's control of NCDs. In Kenya and Nigeria, more men than women reported that facility closure prevented them from accessing care. Across both genders, this was a primary reason for not being able to access services. In all countries except Burkina Faso, more women than men cited the fear of being infected with COVID-19 as a reason for not seeking needed care.

QUALITATIVE SYNTHESIS OF REASONS FOR DECLINES IN DEMAND, ACCESS, AND UTILIZATION OF EHS.

Following early WHO guidance to minimize non-urgent, facility-based care, several services or levels of care were suspended, some to be later reinstated. In some instances, this was done to divert space and staff to COVID-19 care, while in other cases, it was done to limit community contact. Where and when countries did establish guidance to maintain EHS, this guidance was not always disseminated to managers and staff, causing confusion. Patients experienced similar confusion, at times not seeking care because they perceived a service as having been discontinued.

"In Kenya, initial government directives issued in March (curfew, schools closed, work from home, no public gatherings, etc.) affected availability of and access to essential health services. Many facilities, clinics, and doctors' offices did not fully understand the government directives and closed/stopped services except for emergency services. This was mainly due to lack of clear guidelines on what services should remain available. It took about four weeks for the government to develop prescriptive guidelines, at which point facilities started opening again for routine and essential services." – Senior Advocacy and Policy Officer, PATH, Kenya

"We heard from a mother outside her homestead who had not taken her child for their immunizations because she understood the directives to mean that all health services had been stopped." – Senior Advocacy and Policy Officer, PATH, Kenya

Movement restrictions were noted as a cause of service disruptions in the majority of focus countries.^{8, 9, 10} Restrictions on public transport¹¹ were imposed in all six countries beginning in March–April with closures or prohibitions on citizens using public transport; the duration of suspension of public transport varied, with some countries using targeted or phased approaches to limit public transit. In addition, many countries imposed stay-at-home orders or curfews that required citizens to stay home except for "essential" trips. However, it was not always evident to citizens (or to the police who enforce these regulations) whether accessing health services was considered essential travel; in Kenya, cancer patients were given letters¹² to permit them to travel in public. Other downstream implications of movement restrictions may also hinder access: longer wait times for transportation, increased transport costs, or diminished ability to leave the home to seek services discretely.¹³ People who live far from a facility, people who do not have financial resources to afford alternate means of transportation, and women or adolescents who may require household members' consent to leave the home are likely to be disproportionately impacted. Movement restrictions also poses challenges to health providers, restricting their ability to come and go from the facility with ease and convenience, particularly for female health providers.⁴ Movement restrictions also negatively impacted supply chains through distribution of production materials, final products, and limiting quality assurance activities.

"In our investigations, we found out that people could not move at night and they would bring the children to the facility in the morning when they are already in critical condition. The motorcycle (boda-boda) means of transport which is popular in the villages was not functioning because of curfew. So, we experienced an increased rate of deaths for children under five." – Midwife, Eastern Region, Uganda.

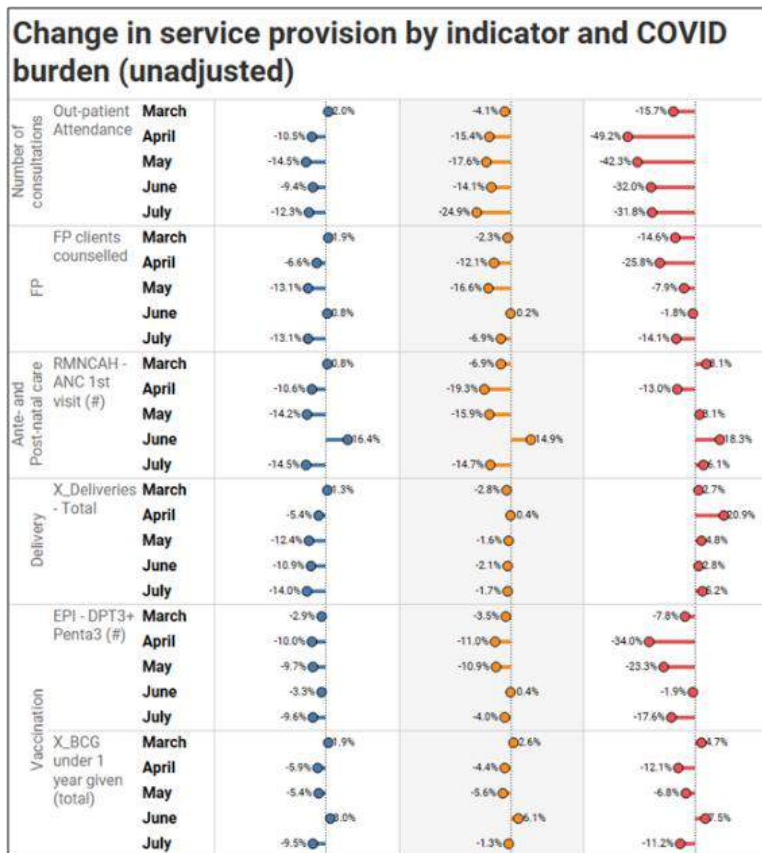
Concerns about COVID-19 exposure and transmission while seeking health services were cited in the Premise/Ipsos survey. In Nigeria¹⁰, Kenya⁹, and Ethiopia⁸, when surveyed about why they had delayed or skipped care, nearly a third of respondents replied they were worried about a risk of COVID-19; nearly a third of women¹⁴ who delayed seeking reproductive health services in India cited the same. Coupled with a fear of contracting COVID-19 is a concern that while attending health services, patients may be compelled to take a COVID-19 test or will be quarantined if they exhibit symptoms.¹³ Particularly in Kenya, a fear of quarantine

centers, which were cited as both expensive and having grotesque conditions, deterred people from seeking care.¹⁵ The fear of contracting COVID-19 or being detained at a health center is compounded by the stigma faced by those patients who test positive for COVID-19, particularly in Africa.¹⁶ As a result, patients are cognizant of care-seeking behavior that may present a risk of COVID-19 infection, or even the perception of COVID-19 infection.

“SRH/family planning centres are mostly in hospitals. So fewer people are going, because they think, wrongly, that if they go to the hospital, they’ll be forced to take a COVID-19 test, and if it’s positive, they risk discrimination.” -Woman in Côte d’Ivoire.¹³

HMIS data from Nigeria suggest that certain services are more sensitive to COVID-19 burden. Figure 9 disaggregates changes in service provision by the COVID-19 burden in each local government area (LGA). Outpatient, family planning, and immunization services decreased most substantially in Lagos and Abuja LGAs where the COVID-19 burden was higher. ANC and facility deliveries did not appear to conform to this trend. Few national guidance documents on maintaining EHS tailor guidance to local COVID-19 burden.

FIGURE 9. CHANGE IN SERVICE PROVISION BY INDICATOR AND COVID-19 BURDEN AT LGA LEVEL. *Source: Global Financing Facility HMIS analysis.*



GOVERNMENTS ARE PRIORITIZING ESSENTIAL HEALTH SERVICES.

Analysis note: Analyses in this section treat any recommendation to maintain or adapt the service as government prioritization of that service. We note these recommendations are largely suboptimally implemented and do not reflect differential financing or implementation support across the services.

Beginning in March, countries began developing guidance on maintaining EHS during COVID-19. To date, we have identified more than 200 national guidance documents from more than 40 low- and middle-income countries (LMICs). Early guidance recommended pausing or discontinuing certain services (including immunization campaigns and outreach, as well as school-based services), although these recommendations were updated as the pandemic continued. Most recommendations are to maintain EHS with additional infection, prevention, and control (IPC) procedures. Thirty-three percent of documents from the focus countries suggest specific adaptations to services. Maternal, newborn, and child health services are discussed most frequently, with NCDs coming

second. The prioritization of these services in policy is generally aligned to country and global burden of disease and the potential secondary health impacts of COVID-19 if those core services were not maintained. Considering the equity implications of the indirect effects of COVID-19 on the most vulnerable, government attention could be further directed to adolescent health, reproductive health, and gender-based violence.

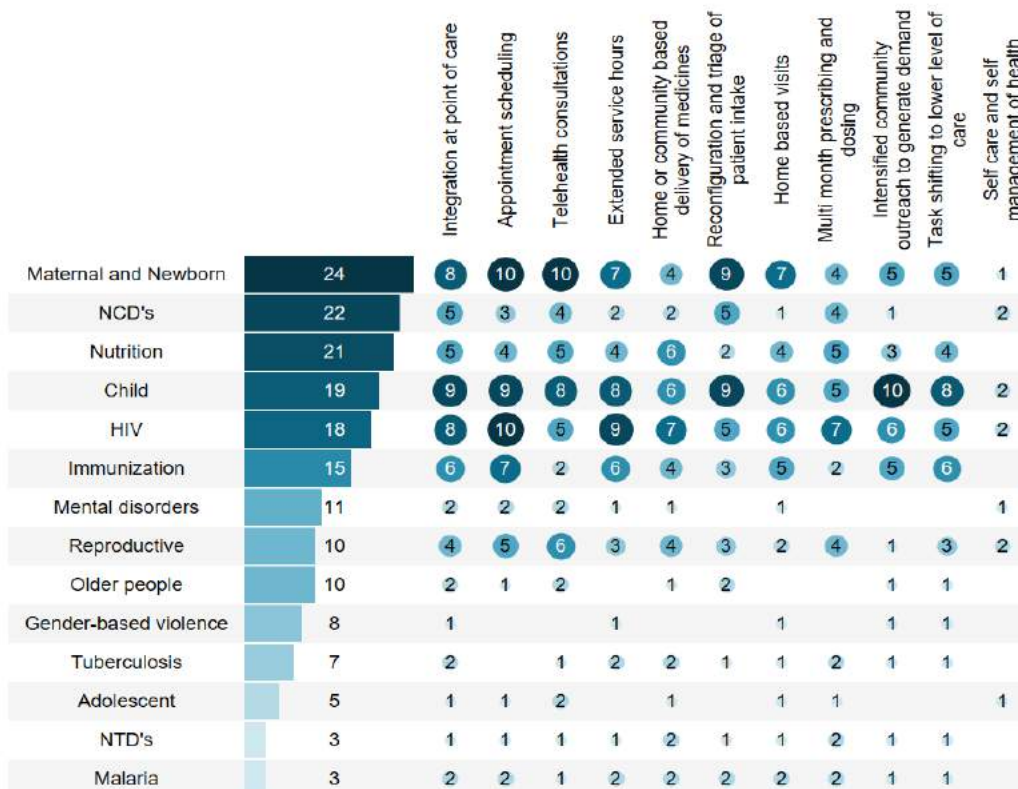
Earlier in the pandemic, PATH country staff heard frequently from frontline workers that they were unaware or unfamiliar with new operational guidelines, creating confusion about which services should be maintained. Pausing in-person supportive supervision meant that frontline workers had fewer touchpoints with supervisors to receive and learn new protocols. Digital tools have since been used to disseminate guidance, although we expect that a large gap exists between what is on paper, and what is implemented at the point of service. In September, Kenyan health care workers largely reported that they were implementing new government guidelines (although the specific guidelines were not provided in the survey). The most common reason (70 percent) for not implementing new guidelines was lack of sensitization to the guidelines.

“In Kenya, it is too early to tell exactly how these key adaptations are going, but they have started to hear that adaptations around immunization, especially in urban rural areas, seem to be bearing fruit (immunization services going to the communities e.g., at community centres, in school compounds now that they are closed, etc.).” – Senior Advocacy and Policy Officer, PATH, Kenya

PROPOSED SERVICE DELIVERY ADAPTATIONS ARE PROMISING, BUT FACE CONSTRAINTS TO EFFECTIVE IMPLEMENTATION.

We identified 11 main types of service delivery adaptations across national policies and guidelines in the COVID-19 EHS Policy Tracker [database](#) (Figure 10). Service delivery adaptations during COVID-19 are designed to reduce overcrowding (e.g., reconfiguration and triage of patient intake, appointment scheduling, extended service hours) and to reduce the need for patients to come to facilities (e.g., delivery of medicines/commodities, telehealth consultations, multi-month prescribing, home visits, self-care, insecticide-treated net (ITN) distribution). In addition to these adaptations to *how* services are delivered, we identified multiple innovations to generate demand for services, improve access to services, and support health workers. Despite early global recommendations to remove financial barriers to access, we have seen few examples of these recommendations being implemented—despite this now being one of the greatest barriers to service access.

FIGURE 10. NUMBER OF DOCUMENTS THAT RECOMMEND MAINTENANCE OF SERVICES AND/OR ADAPTATION IN FOCUS COUNTRIES, BY HEALTH AREA. *Source: PATH COVID-19 EHS Policy Tracker.*



Data note: Each bar represents the number of documents recommending maintenance or adaptation of services in each health area. Each bubble represents the number of documents that mention the use of a specific adaptation.

The most recommended adaptations are potentially promising, but guidance rarely cites evidence of effectiveness nor specifies operational or implementation details. We identified key considerations to effectively implement these potentially high-impact adaptations during COVID-19, and considerations for improving their implementation post-COVID-19. There has been a lack of real-time monitoring and evaluation of whether these adaptations are being implemented, and whether and how they are working.

TABLE 6. SUMMARY OF POTENTIAL IMPACT OF SERVICE DELIVERY ADAPTATIONS.

	Integration at point-of-care	Home- and community-based delivery of medicines and commodities	Multi-month prescribing and dosing	Expanding home-based visits by CHWs and CHVs	Telemedicine
Effectiveness	High	High	High	Variable	Variable
Feasibility	Moderate	Low	Moderate	Moderate	Low
Acceptability	High	High	High	High	Moderate
Sustainability	Moderate	Low	Moderate	Moderate	Moderate

INTEGRATION AT POINT-OF-CARE:

- **Effectiveness:** High, if targeted to most disrupted services, using a one-stop-shop model (either with the same provider providing integrated services or referrals within the same facility), and implemented effectively.
- **Feasibility:** Moderate, considering COVID-19-related constraints on training and supportive supervision. Identify 'easy' integration opportunities and use high-frequency, low-contact supportive supervision for health care providers.
- **Acceptability:** High for patients. During COVID-19, providers may hesitate to add additional responsibilities. Framing it as beneficial for patients and providers, and providing ample support, are necessary.
- **Sustainability:** Moderate. Progress made on integration during COVID-19 could backslide to business-as-usual unless supportive policy and global-level coordination occurs to ensure it continues post-COVID-19.

Sources: [PERC 2020](#). [Watt 2017](#). [De Jongh 2016](#). [Legido-Quigley 2013](#). [Wallace 2012](#). [Sweeney 2012](#). [Haldane 2018](#). [Narasimhan 2019](#). [Lindegren 2012](#).

HOME- AND COMMUNITY-BASED DELIVERY OF MEDICINES AND COMMODITIES:

- **Effectiveness:** High, particularly when targeted to chronic diseases (i.e., HIV, TB, or NCDs) or family planning. In addition, when coupled with interventions that improve medication information, such as medication reminders and personalized information, this method can facilitate treatment adherence.
- **Feasibility:** Low, considering constraints on provider workload, transportation, and need for protective measures for community delivery. There is a need to identify new models and partnerships to provide consistent delivery to communities.
- **Acceptability:** High for patients who have shown willingness to adapt to different pharmaceutical models. However, during COVID-19, providers may hesitate to add additional responsibilities.
- **Sustainability:** Low. While COVID-19 has fostered novel models of medication delivery, without supportive policy, guidance, and resources, it will be difficult to continue post-COVID-19.

Sources: [Elliott 2017](#). [Mdege 2012](#). [Sinnemäki 2013](#). [Wali 2016](#). [Fuller 2018](#). [Sunguya 2017](#). [Awucha 2020](#). [PSNet 2020](#). [Family Planning High Impact Practices 2015](#).

MULTI-MONTH PRESCRIBING AND DOSING:

- **Effectiveness:** High, particularly when targeted to chronic conditions that require consistent medication (i.e., HIV, TB, and some NCDs) or targeted to family planning and contraception services, if implemented effectively.
- **Feasibility:** Moderate for chronic conditions, considering constraints on supportive supervision, training, and patient education during COVID-19.
- **Acceptability:** High for patients and providers. For patients, it fosters efficiency and improved quality of service delivery. For providers, these efficiencies may help them more easily manage large numbers of patients seeking care.
- **Sustainability:** Moderate. COVID-19 has precipitated shifts in policy guidance which can be maintained with supportive guidance, forecasting, and resources. Without adequate support, prescribing practices may return to pre-COVID-19 norms.

Sources: [Bhaumik 2020](#), [Siekmans 2017](#), [Miller 2018](#), [Gilmore 2013](#).

EXPANDING HOME-BASED VISITS BY COMMUNITY HEALTH WORKERS (CHWS)/COMMUNITY HEALTH VOLUNTEERS (CHVS):

- **Effectiveness:** Depends on cadre and nature of new responsibility. Existing cadres and platforms are trusted by communities and do not face mobility restrictions.
- **Feasibility:** Moderate. New roles require training, clear guidance, and supportive supervision. Alternative strategies for supervision and drug/commodity replenishment are necessary.
- **Acceptability:** High for patients, as clients may prefer to consult a trusted CHW when they are afraid to visit health facilities. For CHWs, acceptability can be strengthened by remuneration and protection from infection. CHWs should receive specialized training on how to continue home-based care during COVID-19 (i.e., Liberian CHWs received updated “No touch integrated community case management guidelines” during Ebola outbreak).
- **Sustainability:** Moderate. Previous pandemics appropriated existing CHW cadres for contact tracing, which caused decline in routine services normally provided by CHWs. Additional investment may be required to sustain *regular* CHW programs during the pandemic and after the pandemic ends.

Sources: [Bhaumik 2020](#), [Siekmans 2017](#), [Miller 2018](#), [Gilmore 2013](#).

TELEMEDICINE: PROMISE FOR IMPACT BUT IMPORTANT OBSTACLES TO UPTAKE:

Most national guidelines, even in low-income settings, have recommended that maternal and newborn health professionals use telemedicine to maintain ANC, birth preparedness, postnatal care, and breastfeeding support during COVID-19. Telemedicine can be effective and safe under certain conditions. A recent survey of more than 1,000 maternal and newborn health professionals indicated that 24 percent of respondents from low-income countries were using telemedicine before COVID-19, and only 1 percent of respondents from low-income countries initiated telemedicine during COVID-19. The maternal and newborn professionals reported that they lack specific operational guidelines, training, equipment, and reimbursement for connectivity. Other challenges in introducing telemedicine during COVID-19 included technological barriers, lack of technological literacy, financial and language barriers, lack of nonverbal feedback, and mistrust by patients. Providers reported being unable to reach substantial numbers of their patients and worried about unequal access to or trust in telemedicine, particularly for the most vulnerable women and families.

Source: [Galle 2020](#).

WHAT CAN WE EXPECT COVERAGE TO LOOK LIKE AS LOCKDOWNS ARE LIFTED/VACCINE ROLLOUT BEGINS?

DISRUPTIONS OF CERTAIN SERVICES WILL DISPROPORTIONATELY DRIVE HEALTH LOSSES.

We identified services whose disruptions have the potential for long-term effects. Gaps in coverage of certain services—including immunization, family planning, nutrition services, HIV treatment, malaria prevention, diagnosis, treatment, and NCD management have the potential to leave pools of unprotected individuals and communities. Individuals who did not receive these services during COVID-19 will remain unprotected unless they are reached through special efforts. Leaving them unprotected has the potential to contribute to significant disease transmission, illness, and death over many years (Table 7).

TABLE 7. CONSEQUENCES OF UNADDRESSED GAPS IN ESSENTIAL SERVICES.

Service	Consequences of gaps
Immunization	Pools of unvaccinated children could contribute to disease transmission, illness, and death. Risk depends on community-level immunization coverage.
Family planning	Gaps in access to contraception has the potential to leave up to 49 million women with an unmet contraceptive need, increasing unintended pregnancies, which could contribute to increased rates of maternal, neonatal, and infant mortality. ¹⁷ Unplanned pregnancies increase household risks of poor health and food and economic insecurity.
Nutrition services and growth monitoring	Gaps in growth monitoring and/or nutrition services during COVID-19 are estimated to contribute to 18–23 percent of preventable deaths. ¹⁸

HIV prevention and treatment	Gaps in HIV prevention and testing could contribute to growing pools of people living with HIV/AIDS who do not know their status, leading to increased HIV transmission now, and increased morbidity and mortality into the future. ¹⁹ The same is true for treatment gaps.
Malaria prevention	Gaps in malaria prevention and treatment have clear short-term effects of increased morbidity and mortality, with the potential to nearly double malaria-mortality in 2020 ²⁰ . Longer-term consequences include lost progress against eliminating malaria in low-burden geographies.
NCD management	In the short-term, gaps in NCD management could directly contribute to increased mortality due to COVID-19. In the longer term, gaps in NCD testing and management will accelerate progression to severe disease, disability, and death.

RECOVERY ARCHETYPES HELP CHARACTERIZE EXPECTED TRENDS IN SERVICE ACCESS AND UTILIZATION.

FIGURE 11. RECOVERY ARCHETYPES.

Short term blip:

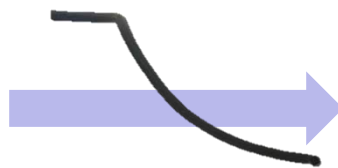
Service coverage drops immediately at the start of the pandemic then rebounds in the next month or two.



In many countries, women have returned to facilities for ANC, deliveries, and immunization services. Malaria prevention campaigns have been largely implemented.

Prolonged disruption:

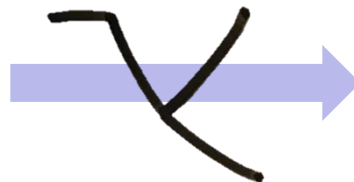
Declines in service coverage take longer to recover, or never recover. These services tend to be preventative and are highly elastic to demand-side perceptions of need, and/or service availability.



Vaccination coverage will remain suboptimal until all children can be caught up. Family planning has been hard-hit, particularly for adolescents and particularly in countries where movement restrictions are greater and/or where perceived or real risk of COVID-19 infection is greater. Many services in Ethiopia are at-risk of prolonged disruption due to internal conflict.

Different trajectories for sub-groups:

For some communities or population groups, the services rebound quickly. For others, they remain at lower levels, stagnating or declining over time.



HIV testing and antiretroviral therapy coverage has been maintained for populations who have access to self/home- or community-based testing and drug delivery. Gaps in access to testing and treatment are likely to affect vulnerable populations most.

Better than baseline:

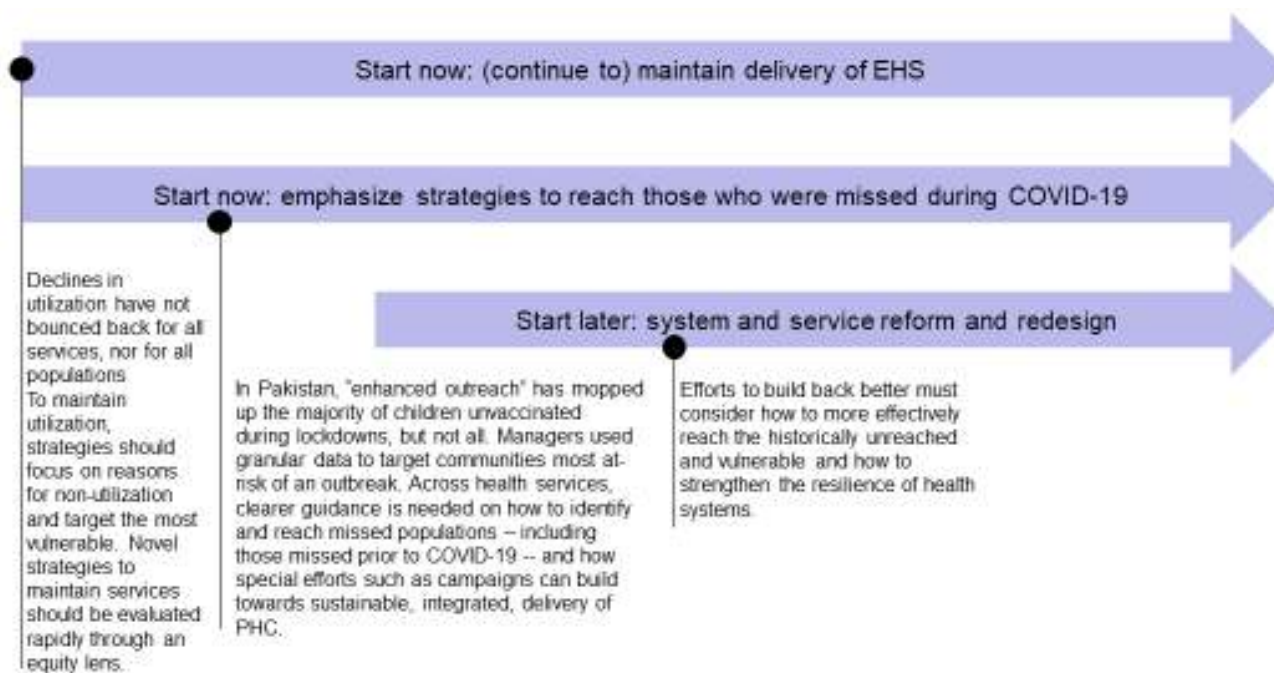
Service coverage increases beyond pre-COVID-19 levels.



Testing for NCDs may increase in some countries with high COVID-19 burdens where NCD testing is incorporated into COVID-19 testing and management. Without investment in NCD continuity of care, increased testing will not necessarily result in increased case management or NCD control.

WITHIN THESE SERVICES, CERTAIN VULNERABLE INDIVIDUALS AND COMMUNITIES ARE AT GREATER RISK OF REMAINING MISSED.

Efforts to recoup lost progress must focus on maintaining services now, reaching those who were missed as soon as possible, and building better services to reach communities perpetually missed before COVID-19 (e.g., zero-dose children).



THERE ARE WAYS TO RECOUP LOST PROGRESS, BUT FINANCIAL, OPERATIONAL, AND POLICY BARRIERS REMAIN.

In contrast to the substantial quantity of guidance available to maintain EHS during COVID-19, there is relatively little global or national guidance yet on how to identify and reach those missed during this period. In most of the service areas experiencing gaps in services, managers and providers have never had to contend with sudden, large pools of unprotected individuals.

Starting immediately, focused attention is needed on targeting and evaluating strategies to reach missed populations, particularly those most vulnerable to the negative health impacts of missing services. Despite the wealth of data available, information has been used suboptimally to identify the weak points in delivery cascades and populations most at risk and evaluate the effectiveness of strategies to recoup lost progress in real time. A notable example is Pakistan’s Sindh province where high-quality patient-level data on vaccination status has been used to tailor and target outreach and catch-up activities.⁴ Similarly, the global malaria community’s coordination and prioritization of resources is ensuring that all planned ITN campaigns—a critical malaria prevention mass strategy—for 2020 will be implemented, enabled by personal protective equipment mobilization, supply chain monitoring, and adapted delivery to reduce contact with recipients.

Investments in human resources, supply chain, governance, and health information will be critical moving forward as they have in the past. In this rebuilding phase, an equity lens is critical to ensure that these health systems are built back better.

TABLE 8. PROMISING STRATEGIES TO RECOUP LOST PROGRESS AND REQUIREMENTS FOR IMPLEMENTATION.

Promising strategies to recoup lost progress	Requirements for implementation
Identifying missed individuals and populations and reaching them with catch-up activities.	<ul style="list-style-type: none"> Data are often not granular enough for individual or community-based targeting, but facility or district-level targeting may be sufficient. Clear operational guidelines for how to plan and implement novel catch-up activities are needed, as is adequate and timely financing.
Moving services closer to homes and communities.	<ul style="list-style-type: none"> Prescribing and other regulatory barriers for cadres or sites (e.g., pharmacies) may need to be reformed. Safe and effective means of training and supervising CHWs or other community-level cadres are required and require financial resources. Supply chain may need to be strengthened to deliver new medicines and commodities at this level in larger orders (e.g., multi-month prescribing).
Integration at point-of-care, including during campaigns.	<ul style="list-style-type: none"> Concerted coordination will be necessary across health areas. Expanding provider responsibilities will require investments in training, supervision, job-aids, etc.

“This last October we tried to do a catch-up of the last two missed opportunities, that is, for April when we were under total lockdown, and for October 2019, when we instead had a countrywide mass measles-rubella campaign. We tried but the finances came very late when the month was almost ending. It was difficult to mobilize for the comprehensive services without money, but overall, the response was not so bad.” - Abigail Kisoro Stella – Assistant District Health Officer, Maternal and Child Health Mbale District, Eastern Uganda.

TAKING A DEEPER LOOK INTO AT-RISK SERVICES REVEALS IMPORTANT CONSIDERATIONS.

Routine immunization:

- *Before COVID-19:* Coverage stagnated, declined in some countries.
- *Potential impact:* Entire cohorts of infants missing vaccines will remain under-immunized, contributing to transmission of vaccine-preventable diseases. Misinformation has exacerbated vaccine hesitancy in some communities.
- *During COVID-19:* EIR data from Pakistan estimates half of children in Sindh province went unvaccinated during lockdowns and 32 percent of the cohort remain unvaccinated as of November.⁴ A forthcoming paper from the Vaccine Impact Modeling Consortium warns Ethiopia and Nigeria are at risk of measles outbreaks between 2020–2030 due to vaccination campaign disruptions. Pakistan implemented targeted outreach activities and reached nearly 60 percent of children missed during lockdown.
- *Anticipated shape of recovery:* Prolonged disruption.
- *Ways to recoup:* Adapt defaulter tracing and enhanced outreach using data to target. Implement WHO-recommended “mass call backs” communications campaigns to encourage all missed children to come to facility and target selective mass campaigns. Appointment scheduling, integrating immunization services with other primary health care services, support existing EIRs to enable continuous data use and communication with clients. Focus on zero-dose and equity moving forward.

Family planning services:

- *Before COVID-19:* March 2020, an estimated 450 million women using modern contraceptive across 114 LMICs (note that this is a decrease from 2018, which was 840 million).
- *Potential impact:* 47 million women in 114 LMICs could be unable to use modern contraceptives if average lockdown/ COVID-19-related disruption continues with major disruptions to services.²¹ For every 3 months lockdown continues, up to 2 million additional women will be unable to access contraceptives. If lockdown continues for 6 months, an additional 7 million unintended pregnancies are expected; 15 million unintended pregnancies are expected if the lockdown continues for 12 months.
- *During COVID-19:* Decreased care-seeking; shift in contraceptive option. The range of options presents a range of service delivery disruptions seen between and within countries. Existing long-acting/permanent methods users may experience little or no disruption; new users directed to short-term services. Increased access to options requiring little to no contact with a health provider (i.e., condoms, pills). Injectables face the most disruption, particularly intramuscular injectables, and in places where the option of self-injection is not yet available.
- *Anticipated shape of recovery:* Prolonged disruption and different trajectories for sub-groups.
- *Ways to recoup:* Integrate contraceptive services that young people and adolescents might access; multi-month supplies of oral contraceptive pills and DMPA-SC; enable pharmacies to offer bigger range of options; increase access to options that do not require health care provider visit (e.g., condoms, EC, LAM, SDM, etc.); Digital platforms to train and support health workers on informed choice and a range of methods, and to screen, refer, and follow-up with clients (Nivi).

NCD screening and management:

- *During COVID-19:* 53 percent of the 163 responding countries reported partially or completely disrupted services for HTN treatment, 49 percent for treatment of diabetes or diabetes-related complications, and 31 percent for cardiovascular emergencies. Shortage of medicines, diagnostics, or other required technologies as main reason for discontinuity of services. Over 50 percent of countries reported screening program postponement, and in 94 percent of countries NCD MOH staff were reassigned to support COVID-19 efforts. Behavioral risk factors, such as decreased physical exercise, increase tobacco and alcohol use, are on the rise due to lockdowns. Telemedicine, multi-month prescriptions, prioritization of unwell

PLWNCDS, community distribution via task-sharing amongst CHWs. Last mile innovations utilization for other health areas are being successfully deployed to extend services for PLWNCDS.

- *Anticipated shape of recovery:* Potential for 'better than baseline'.
- *Ways to recoup:* Need to identify those with hypertension and diabetes, link to care, support through telemedicine, digital tools, and community-based peer groups, continue multi-month dispensing and home deliveries. We need to address: the paucity of NCD service delivery data, which makes allocation of resources inefficient; the lack of policies calling for integration of NCD care; the medication stockouts and observed cost mark-ups along the NCD supply chain; and the lack of capacity and equipment at lower levels of care for screening and management of basic HTN/diabetes. While data quality and use have been a challenge for NCDs, there is now an opportunistic data source: more than 70 percent of countries reported collecting data on the number of patients who also have an NCD.

Nutrition services:

- *Before COVID-19:* An estimated 47 million children under five (CU5) were moderately or severely wasted. One in ten deaths among CU5 in LMICs is attributable to severe wasting.²²
- *Potential impact:* The number of people facing acute food insecurity will double to 265 million by the end of 2020. A projected 14.3 percent increase in prevalence of moderate or severe wasting among CU5 is due to COVID-19-related losses in gross national income per capita. This was expected to translate to an additional 6.7 million children wasting—57.6 percent of these children are in South Asia and 21.8 percent are in sub-Saharan Africa. When projected increases in wasting are combined with a projected year of 25 percent average reduction in nutrition and health services (e.g., vitamin A supplementation, severe wasting treatment, promotion of young child feeding, micronutrient supplements for pregnant women), an additional 128,605 deaths in CU5 is projected in 2020. Due to economic instability, food insecurity, and disruption of programs, wasting prevalence could increase by 10–50 percent, resulting in an excess of 40,000 to 2 million child deaths.²³
- *During COVID-19:* Increased economic and food insecurity; widespread closure of schools and social programs.
- *Anticipated shape of recovery:* Prolonged disruption and different trajectories for sub-groups.
- *Ways to recoup:* Food and cash transfers (e.g., Ethiopia's Productive Safety Net Program), expand CHW networks to deliver nutritional supplements, utilize community and women's support groups for early feeding education, water, and sanitation hygiene.

Malaria prevention and treatment services:

- *Before COVID-19:* After two decades of steady declines in malaria cases and deaths, progress began plateauing in 2017, prompting the High Burden to High Impact response (modeling and subnational targeting of intervention packages) in 10 highest burden African countries.²⁴ Case incidence and mortality rate milestones from the Global Technical Strategy are not on track to be achieved.³
- *Potential impact:* A modelling analysis anticipated that in the worst-case scenario where all ITN campaigns were suspended and there was a 75 percent reduction in access to antimalarials, sub-Saharan Africa would see twice the deaths as in 2018.²⁰ Now that most prevention campaigns are on track to be completed by the end of 2020, attention has shifted back to ensuring access to antimalarials—disruption of 10 percent would lead to an estimated 19,000 additional deaths, and disruption of 50 percent would lead to an estimated 100,000 additional deaths.
- *During COVID-19:* According to the WHO Pulse survey, 48 percent of countries reported disruptions in malaria diagnosis and treatment services. WHO urged countries to deliver malaria services and released guidance on tailoring interventions to maintain the safety of health care workers, and clients.^{25,26} Many prevention campaigns were planned for before peak malaria transmission season, which coincided with anticipated peak COVID-19 cases. When leading rapid diagnostic test (RDT) suppliers announced plans to shift to production to COVID-19 tests, the malaria RDT taskforce (15 organizations) rapidly acted to avoid a potential shortfall of 100 million RDTs. When research suggested the use of chloroquine and hydroxychloroquine (typically used to treat *P. vivax* malaria) for COVID-19, prices and stockpiling led to concerns over availability for malaria. After learning there were no benefits of chloroquine and hydroxychloroquine for COVID-19, these medicines have been donated to countries with a high burden of *P. vivax* malaria. Supply chains for indoor residual spraying (IRS) and ITNs were impacted due to lockdowns in countries manufacturing materials used in ITNs and IRS, COVID-19 test requirements for drivers, closed laboratories delaying quality control activities, and additional personal protective

equipment needs for campaigns. A collaboration of more than 20 organizations helped stabilize the supply chain. For example, the Alliance for Malaria Prevention released guidance on modifying ITN campaigns.²⁷ Net distribution was adapted from mass campaigns to distribution through community structures and door-to-door delivery. Single-phase campaigns allowed registration and distribution to happen in the same trip, self-registration took place in digitally enabled contexts. Mobile and digital training platforms allow remote training and supervision of campaigns. Most countries in Africa's Sahel subregion with planned SMC campaigns are on track to be completed by the end of 2020. All 31 countries with planned ITN campaigns are on track to complete them this year (about half experiencing moderate delays). However, as of November 23, only 105 million of the expected 222 million long-lasting insecticide-treated nets have been distributed, signaling key populations may have been missed. Additionally, distributions were simplified resulting in less robust data collection. Thirty-six countries have completed or are on track to complete their IRS campaigns before the end of 2020; 11 countries are off-track or at risk of not completing this year.³

- *Anticipated shape of recovery*: Prolonged disruption and different trajectories for sub-groups.
- *Ways to recoup*: Find out who did not get a bed net, ensure access to antimalarials.

HIV prevention and treatment services:

- *Before COVID-19*: Only a few US President's Emergency Plan for AIDS Relief (PEPFAR) countries were on target to meet global HIV milestones, including UNAIDS 90-90-90 target.
- *Potential impact*: Low HIV testing uptake during COVID-19 will impact prevention and treatment cascade. ART supply disruption could result in increased morbidity and mortality.
- *During COVID-19*: Quarantine, social distancing, and lockdown measures have reduced access to routine HIV testing, specifically in hospital settings. PEPFAR and Global Fund have reported disruptions in supply chains for ARTs and rapid tests, and interruptions in care due to task-shifting of personnel to handle COVID-19 cases. Globally, 80 percent of HIV programs have reported disruptions to service delivery with 21 percent of them experiencing high or very high disruptions. Anti-retroviral treatment for HIV-positive pregnant women is down 4.46 percent. A 25 percent decline of HIV treatment initiation occurred in many age groups as well as a 25 percent decline in HIV case identification based on reduced testing across all age groups. These declines were similar to the latest Situation Report of the Global Fund from October 27, which indicates that three quarters of Global Fund supported HIV programs have experienced "moderate" to "very high" service disruption in the wake of COVID-19.²⁸ PEPFAR provided technical guidance around integration of services, maintenance of test, ARV, and provision of PrEP. Some policies were immediately put into place: multi-month dispensing of ARTs, mobile medicine dispensing, and digital platforms for training and outreach. These policies combined with the availability of HIV self-testing helped testing and treatment indicators rebound.
- *Anticipated shape of recovery*: Prolonged disruption (prevention) and different trajectories for sub-groups (prevention and treatment).
- *Ways to recoup*: Plan for additional health worker staffing needs, decentralization of services, concentrate on key populations (i.e., PWID) which are a major source of new infections, differentiated testing, expand access to unassisted HIV self-testing, multi-month dispensing.

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