FEDERAL MINISTRY OF HEALTH

NIGERIA ESSENTIAL HEALTH SERVICES WORKSHOP

2-3 March 2022

Nigeria EHS Practice Comm

WhatsApp group

GLOBAL FINANCING FACILITY

SUPPORTED BY WORLD BANK GROUP

DEVELOPMENT RESEARCH

Background

- The SARS-CoV-2 (COVID-19) pandemic threatens to **reverse years of progress** in reducing maternal and child deaths
- Nigeria has experienced **substantial and persistent disruptions to service utilization** since the beginning of the pandemic
- There are important **subnational variations in COVID-19 burden, service disruptions and their causes**
- This workshop aims to:
  - Review and validate national and state-wide estimates of essential health service disruption throughout the COVID-19 pandemic;
  - Identify and prioritize barriers and interventions to ensure equitable continuity of essential health services; and
  - Propose action plans for strengthening health systems

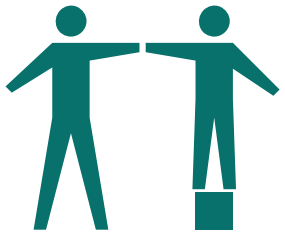
Monitoring service delivery aims to prevent increases in morbidity and mortality due to shocks

Support resilient health systems

Health system awareness

Mobilization and adaptation

Equity



Policy questions

- Is there a substantial impact on service utilization?
- Are there specific services which are impacted?
- What are the main barriers to service utilization?

- What measures are effective in reducing service disruptions?
- How can interventions be scaled to maintain essential health services?
- What are characteristics of resilient health systems?

- Are some populations disproportionally affected?
- Who should be prioritized?
- How can health systems help vulnerable groups?

GFF supported activities to monitor essential health services

A

Leverage in-country HMIS data reported by health facilities to determine the magnitude of change in utilization levels since first cases of COVID-19 were detected

B

Implement rapid assessments through frequent phone calls to a representative sample of facilities to gain more timely data and accurate data, and provide additional qualitative context on supply side challenges and disruptions

C

Triangulate with supplementary data, promote discussion, learning, and action through country dialogue and platforms, SLDP engagement, and linkages to demand-side surveys and other complementary efforts in country

D

Contribute to global knowledge by developing a multi-country analysis of service disruption and share best practices at mitigating disruptions to improve future resilience to crises

Analytical approach of administrative data

Step 1: Measure the actual volume of services supplied each month in the country

- *Processing* facility level data from DHIS2
- *Selecting* indicators
- *Cleaning* outlier values and zero-reporting facilities

Step 2: Estimate the volume of services which should have been delivered each month in the country

- *Predicting* service volume during the pandemic based on trends in pre-pandemic data from January 2018 to February 2020
  - Relies on the assumption that trends observed prior to March 2020 would remain consistent in the absence of the pandemic
  - Includes all facilities for which any data is reported

Step 3: Calculate the percent difference between the actual volume and expected volume

Estimating expected service volume

OLS regression with the following specification

$$Y_{tf} = \beta_0 + \beta_1 T + \beta_{2..13} Month + \beta_{14..t} PandemicMonth + \alpha_f + \varepsilon_{tf}$$

T = time in months since January 2018 to account for secular trend (β_1)

$Month$ = calendar month (January, February,…) to account for seasonality ($\beta_{2..13}$)

$\beta_{14..t}$= the monthly disruption for each month since the pandemic

α_f = facility-level fixed effect to account for time-invariant facility characteristics

ε_{tf} = error for each facility and timepoint, clustered by the second administrative unit

Analytical approach of administrative data

Data completeness for most indicators ranges from 60% to 80%.

- A drop in data completeness is observed in May 2018 for all indicators but is not expected to alter the findings.
- Hypertension, diarrhea, PNC1 and EBF have the lowest completeness, and some disruptions may not be captured (indicators reported by 50% or fewer facilities)

Changes in indicator definitions in late 2020 may impact the estimation of disruptions

- Changes in definition heavily impacted maternal and reproductive indicators. For PNC, a large change in overall volume reported under the new indicator definition prevents the measurement of disruption past July 2020

Overall, the disruptions estimates in Nigeria are reliable at the national level, and are consistent with estimates in other countries in the region

The impact of COVID on Nigeria's EHS

Nigeria experienced substantial disruptions during the pandemic considering pre-pandemic trends and seasonality.

- During April through July 2020 all measured services were affected

Patterns of disruptions differed between services:

- Outpatient consultations have consistently experienced disruptions since March 2020 **(max in July 2020, -23%)**
- Reproductive and maternal health services are substantially and persistently affected since the start of the pandemic
  - The volume of delivery services was significantly lower than expected since April 2020. The largest disruption occurred in October 2021 **(-28%)**
  - 4th Antenatal visits were consistently lower than the expected levels through out the pandemic **(max in July 2021, –33%)**
  - ANC1 was intermittently affected. The largest disruption occurred in July 2021 **(-27%)**
- Disruption in child vaccination services are intermittent and in line with the increase in COVID-19 burden
  - Overall, the magnitude of disruptions in childhood vaccination services seems to decrease since July 2021

Most recent status of EHS

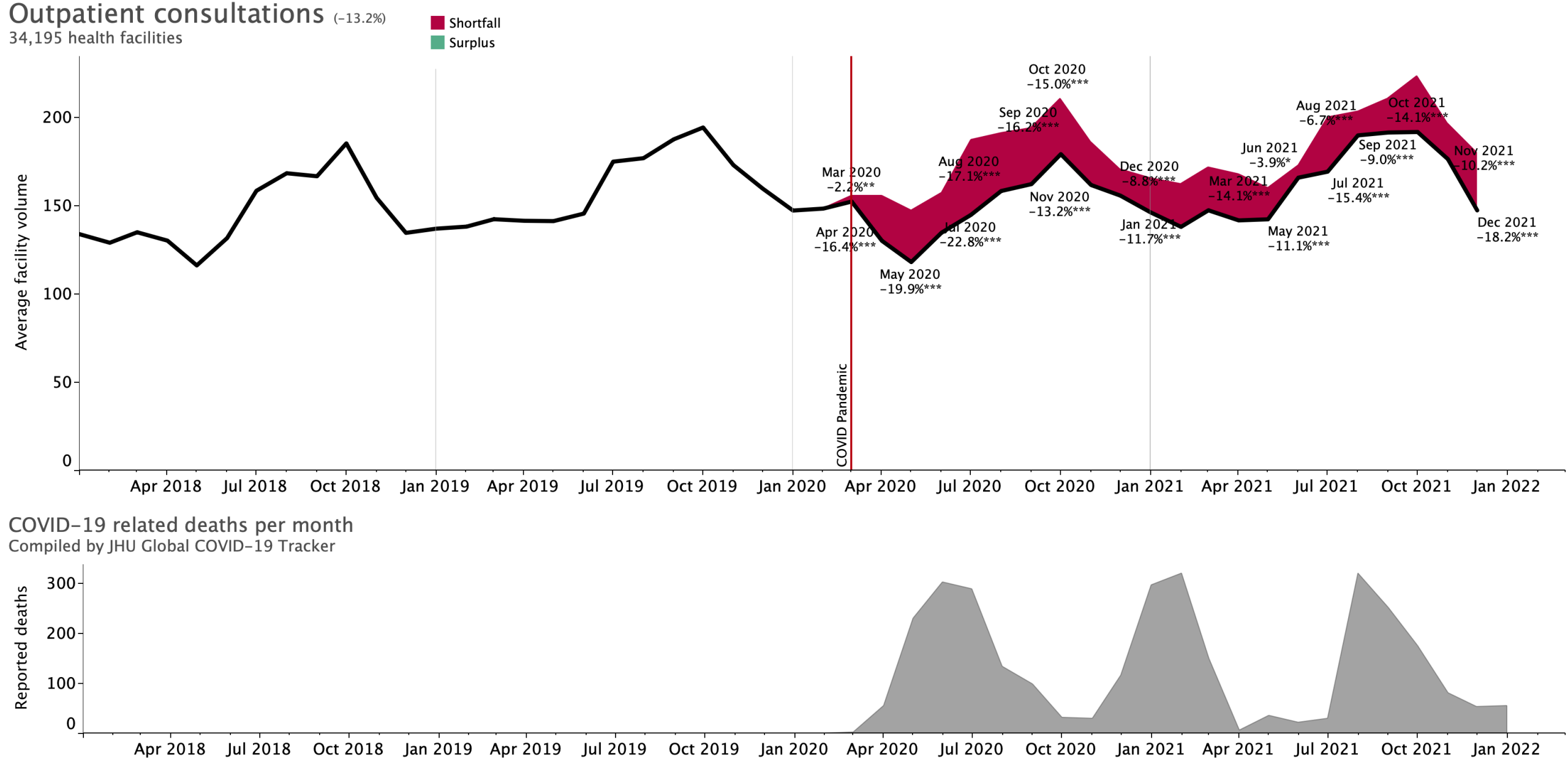
As of **December 2021**, outpatient visits, reproductive and maternal related volumes of service are lower than expected based on pre-pandemic trends and seasonality:

- Outpatient consultations **(-18%)**
- Family planning **(-12%)**
- ANC1 **(-8%)**, ANC4 **(-18%)**
- Institutional delivery **(-24%)**

There are ongoing subnational disruptions in outpatient visits and Pentavalent 3 administration

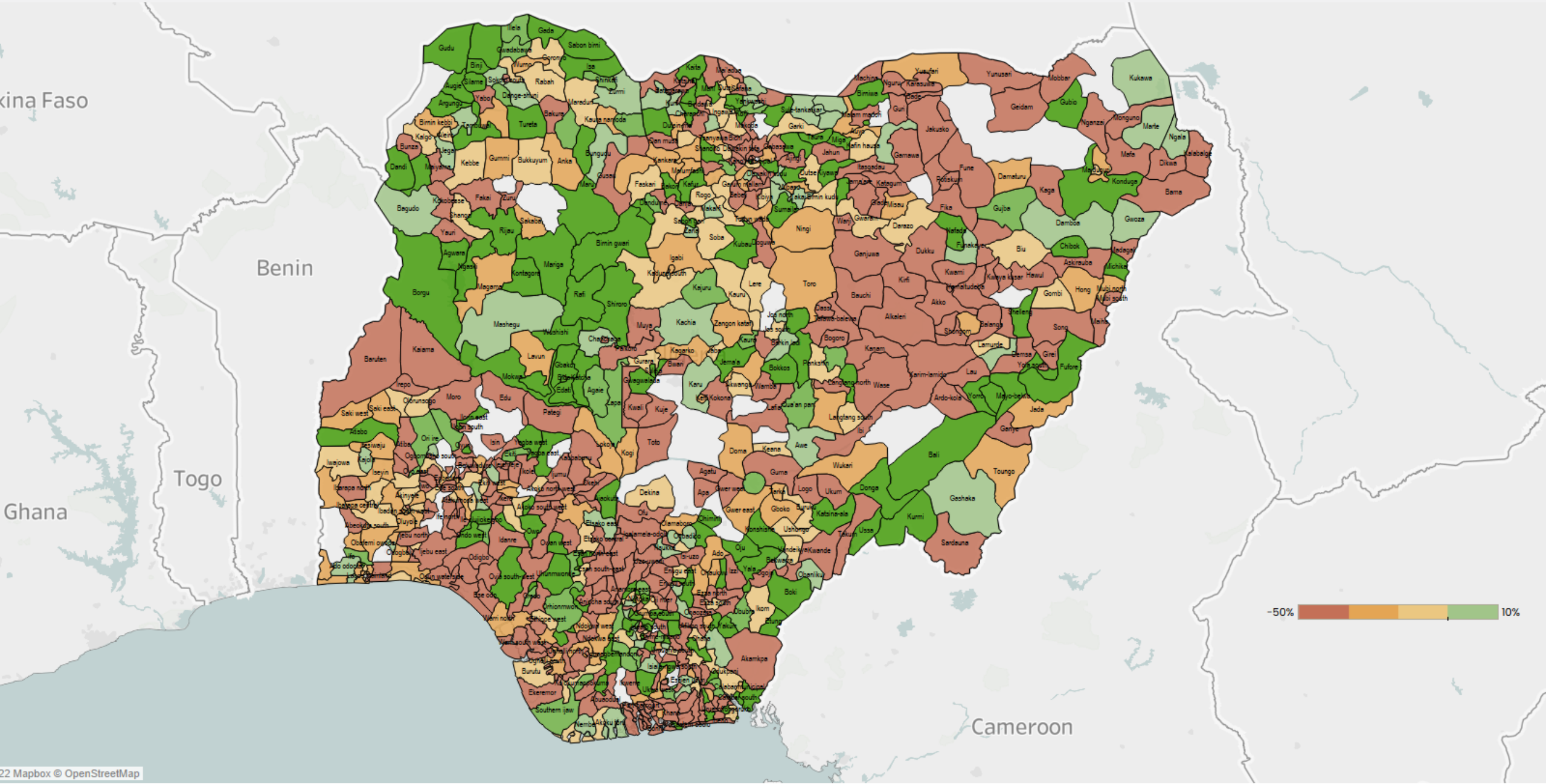
- As of December 2021, most states are still experiencing disruptions to outpatient services
  - Substantial and persistent disruptions mostly affect Yobe **(cum shortfall: -41.1%)** and Ebonyi **(-40.9%)**
- Disruptions in Pentavalent 3 administration are major and persistent, mostly in the West of the country

Outpatient disruptions and COVID-19 mortality in Nigeria

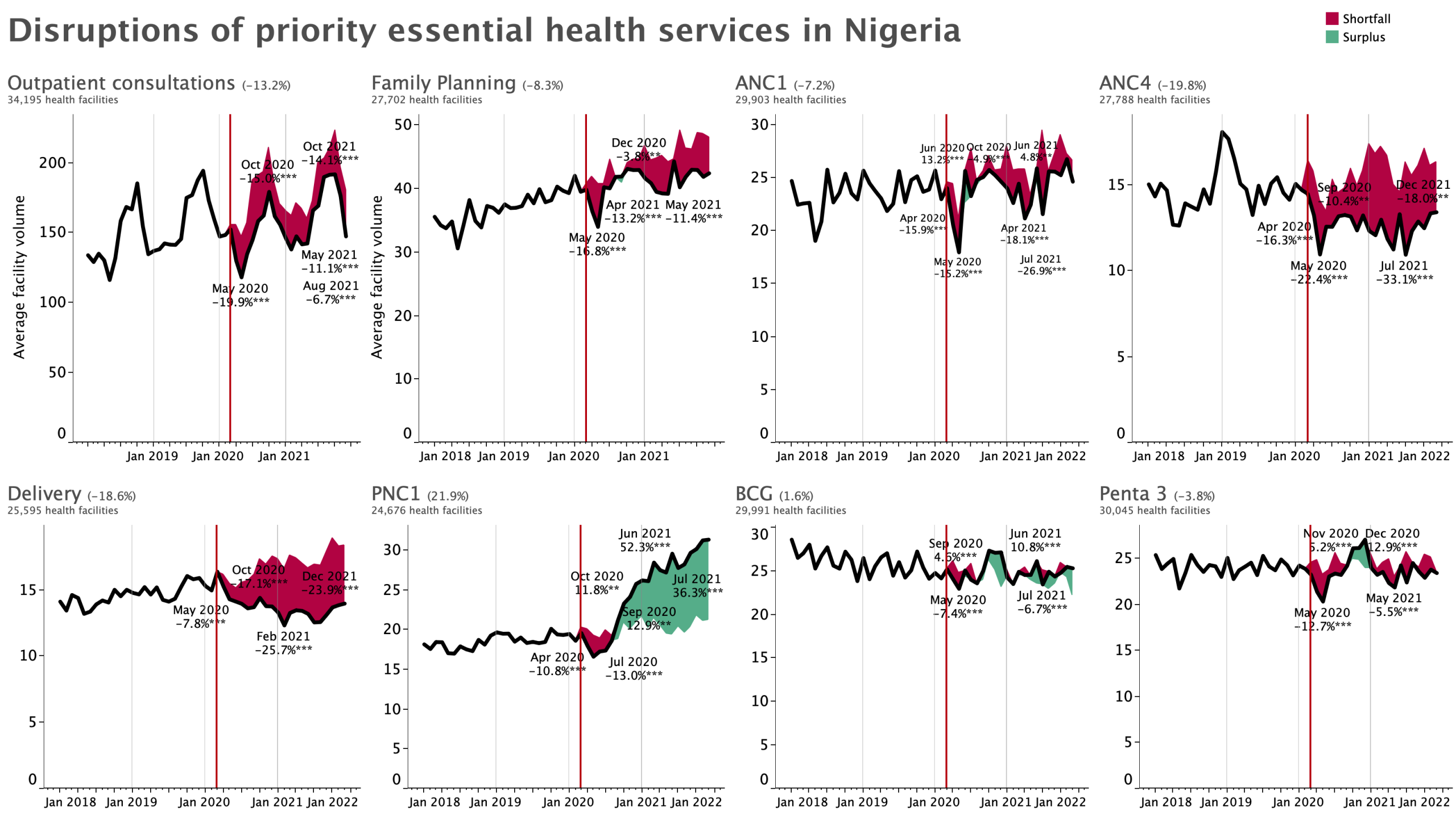


* p < 0.1, ** p < 0.05, *** p < 0.01

NIGERIA OPD DISRUPTIONS



Disruptions of priority essential health services in Nigeria



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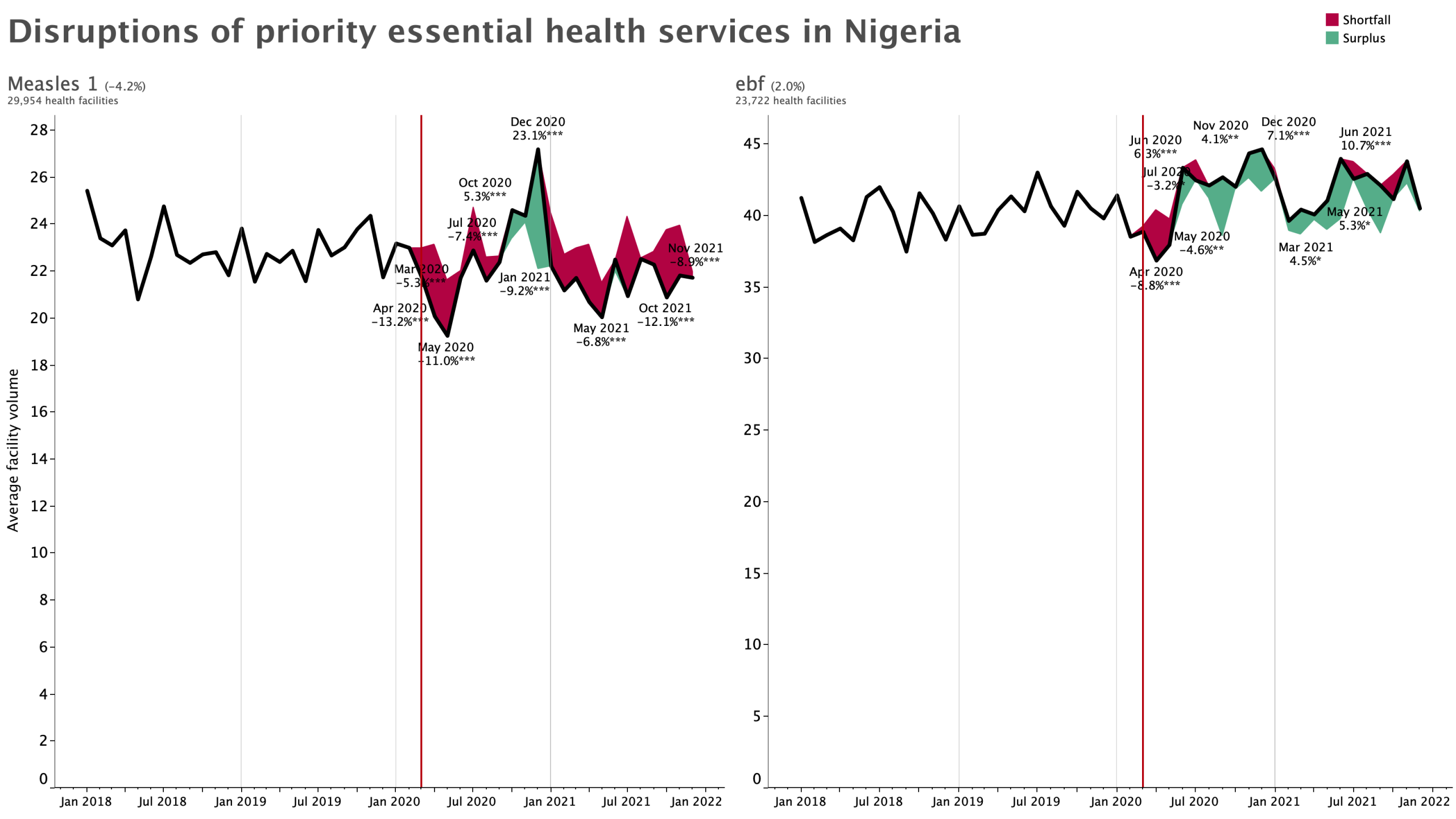
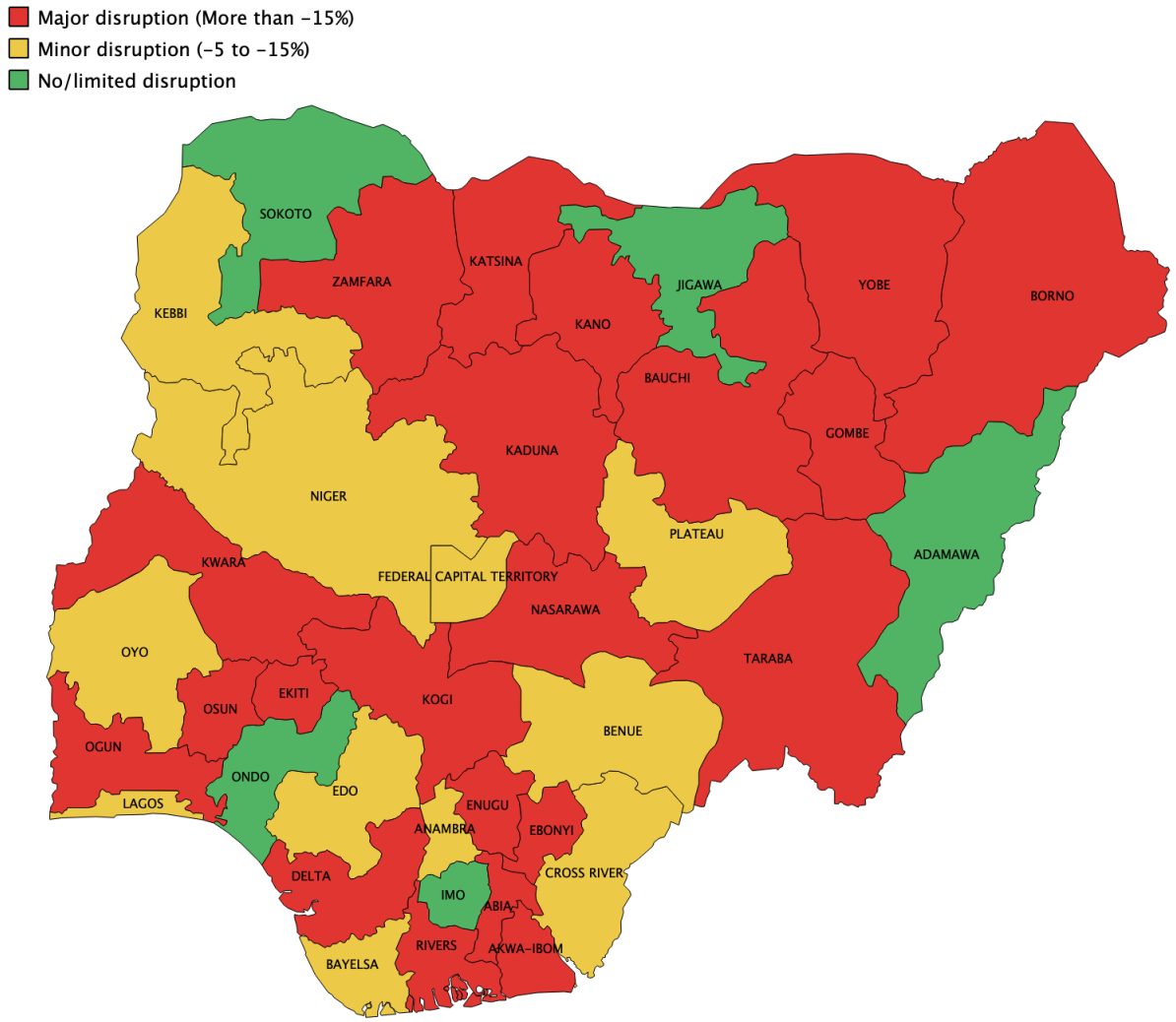


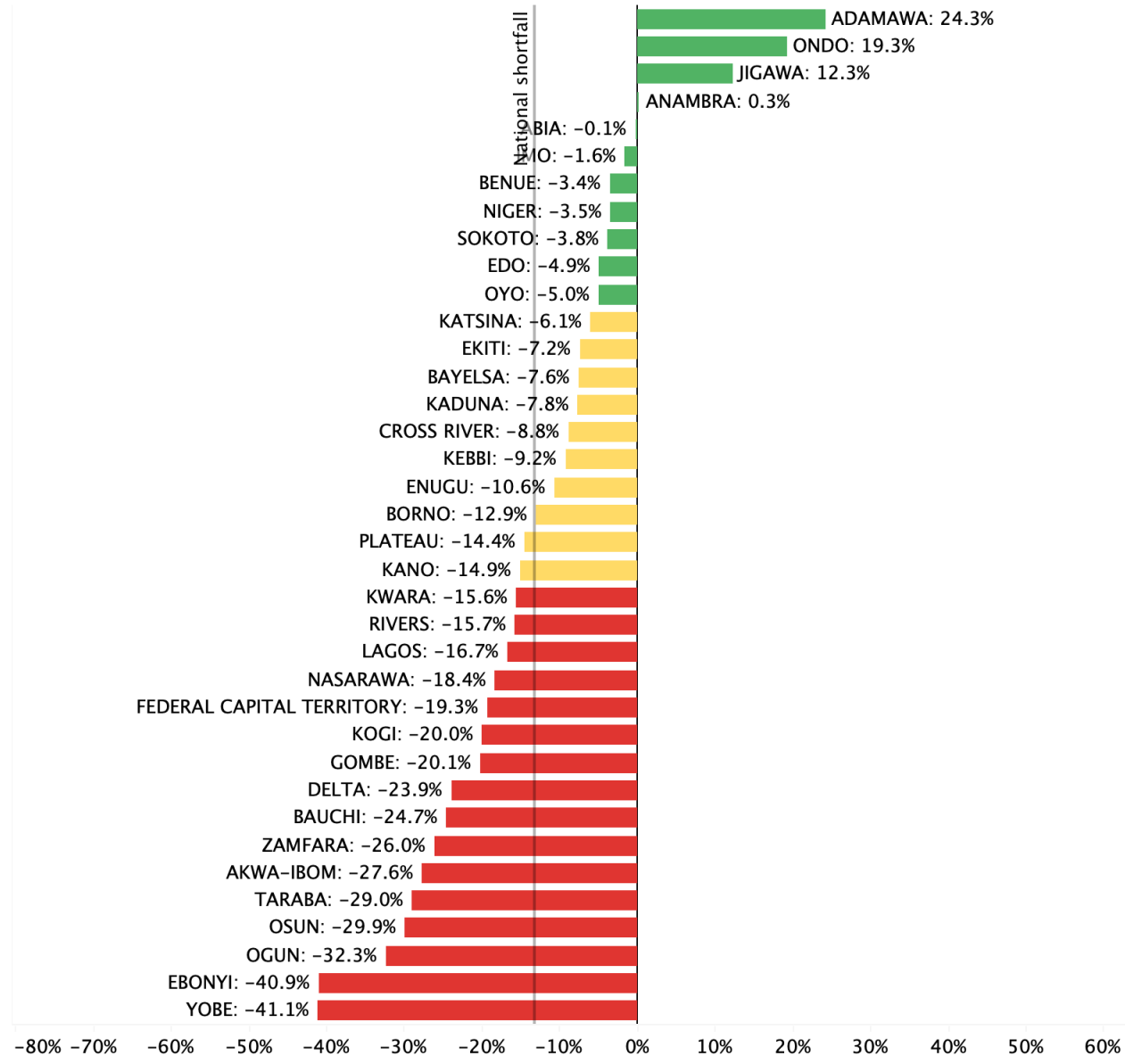
Subnational outpatient disruptions in Nigeria

Disruptions as of December 2021

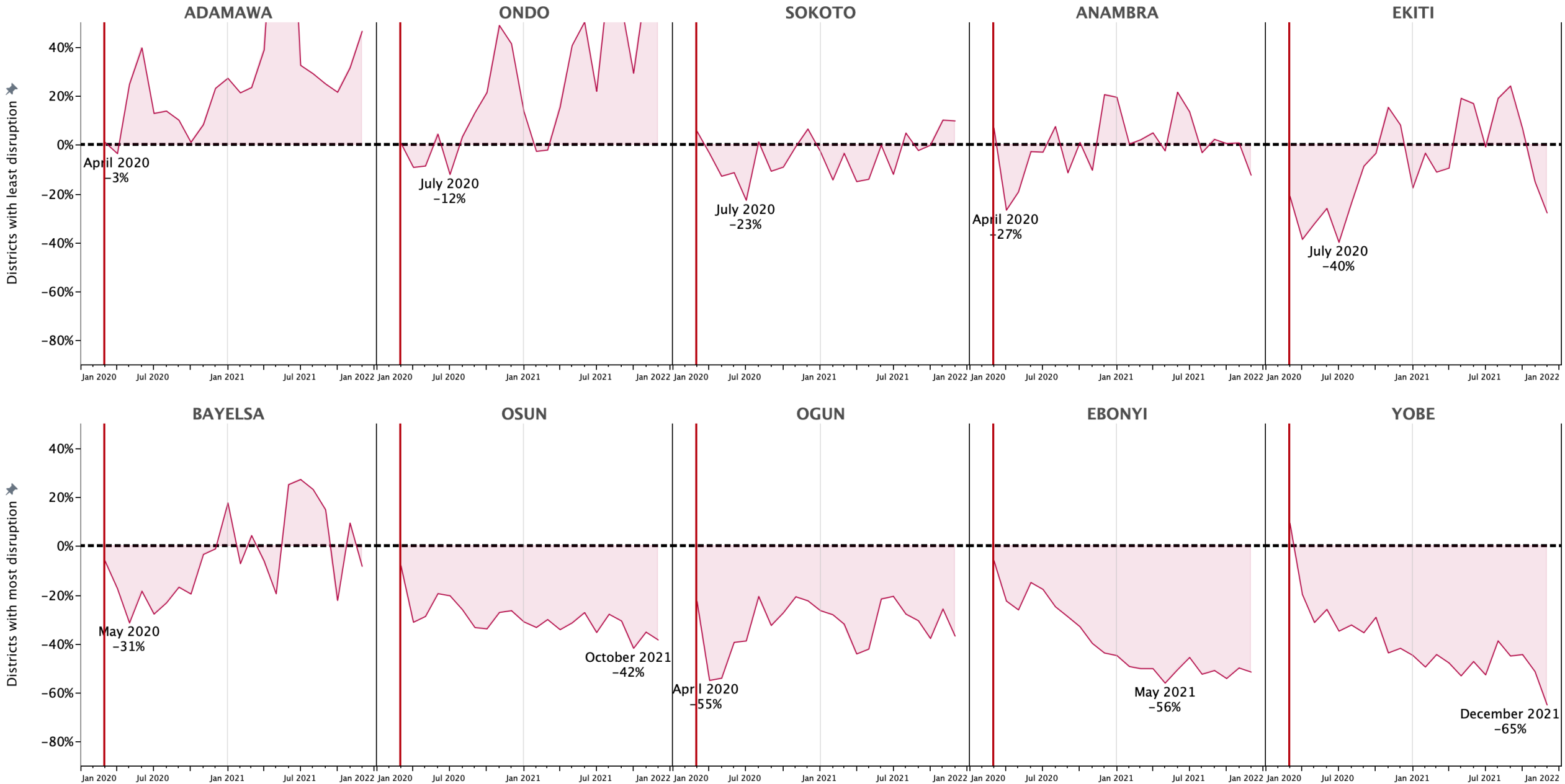
34,195 health facilities. Subnational disruptions should be interpreted with knowledge of the context.



Cumulative shortfall by subnational area



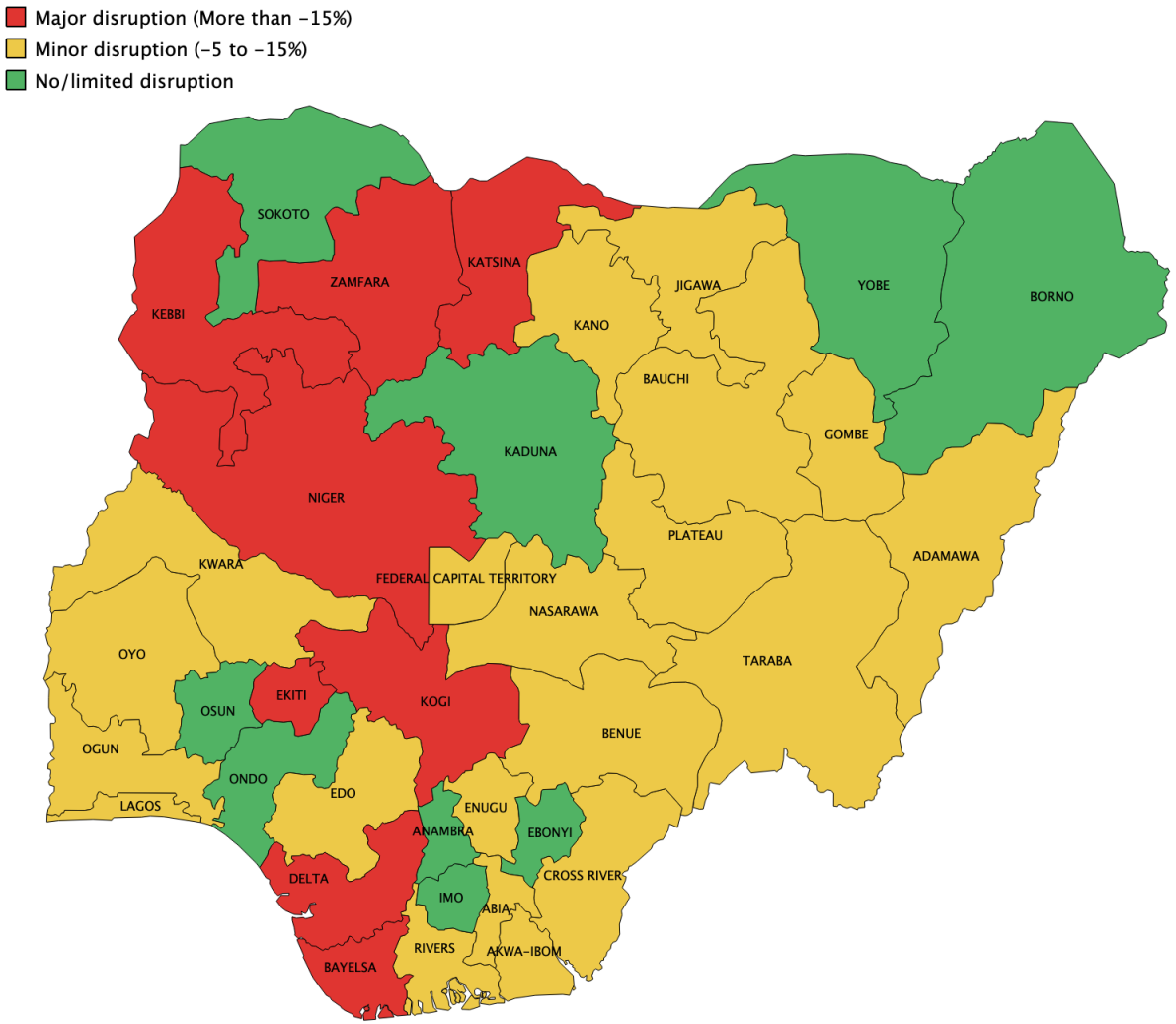
Subnational utilization of general outpatient consultations during COVID-19



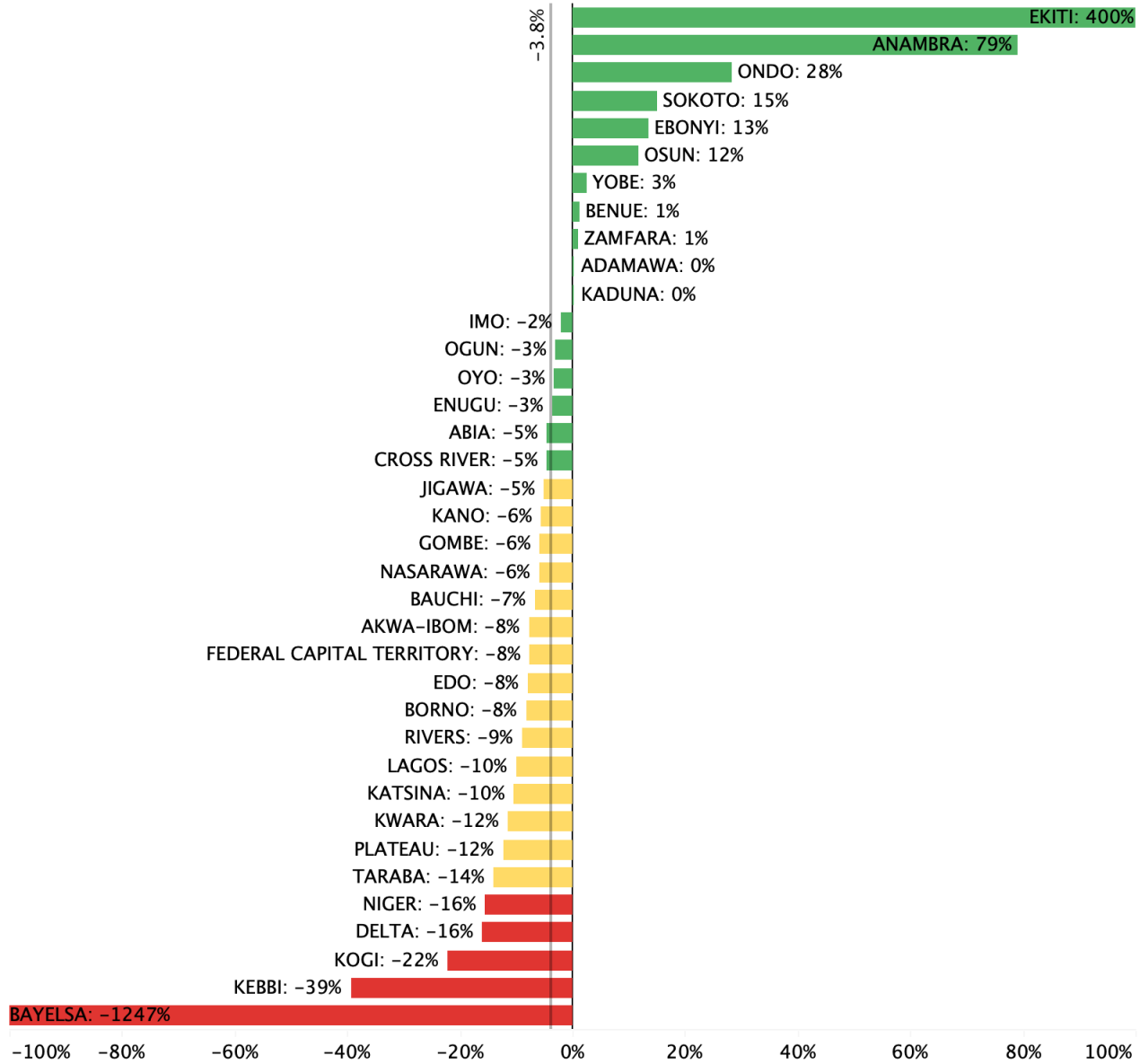
Subnational Penta3 disruptions in Nigeria

Disruptions as of December 2021

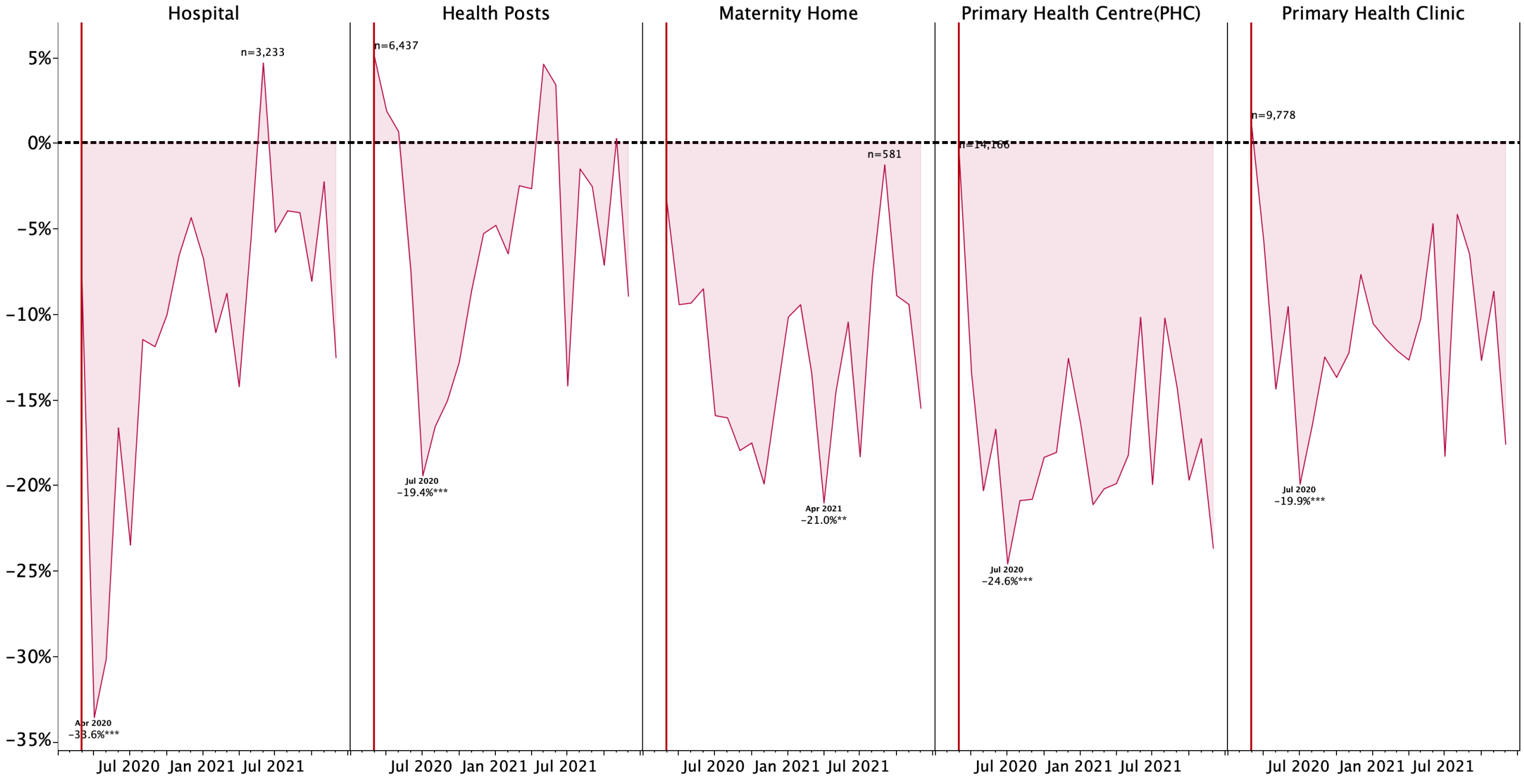
30,045 health facilities. Subnational disruptions should be interpreted with knowledge of the context.



Cumulative shortfall by subnational area (−3.8%)

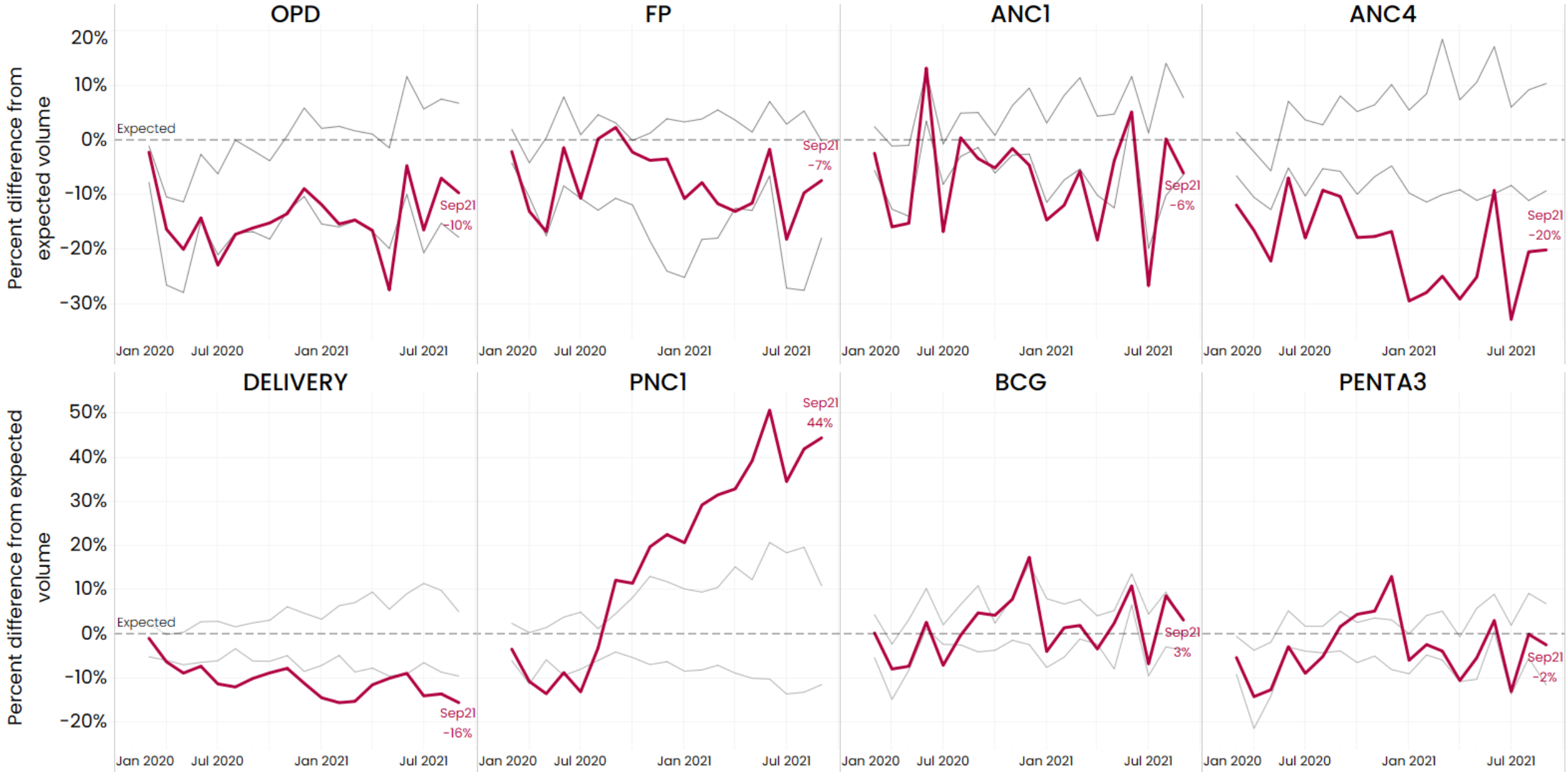


Change from expected service volume for outpatient consultations by facility type

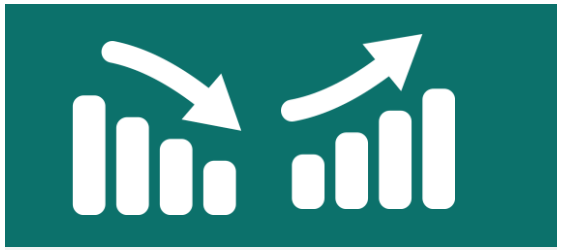


Indirect impact in Nigeria compared to other countries

Disruptions in priority indicators compared to 25% and 75% percentile of 22 GFF countries



GFF supported activities to monitor essential health services



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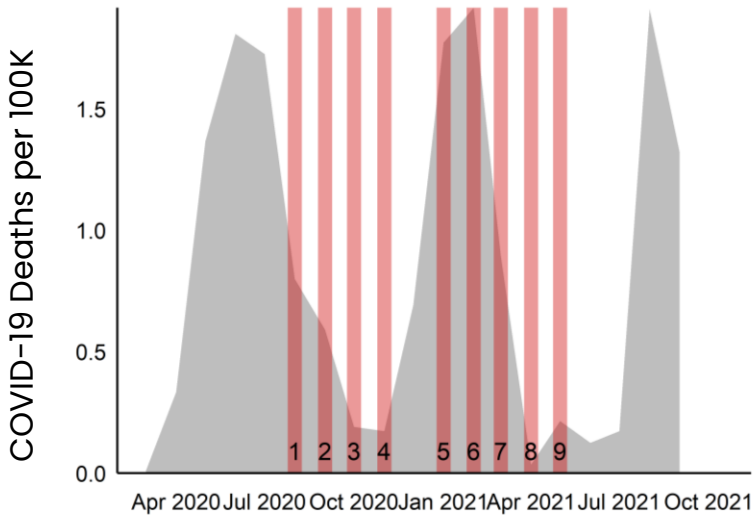
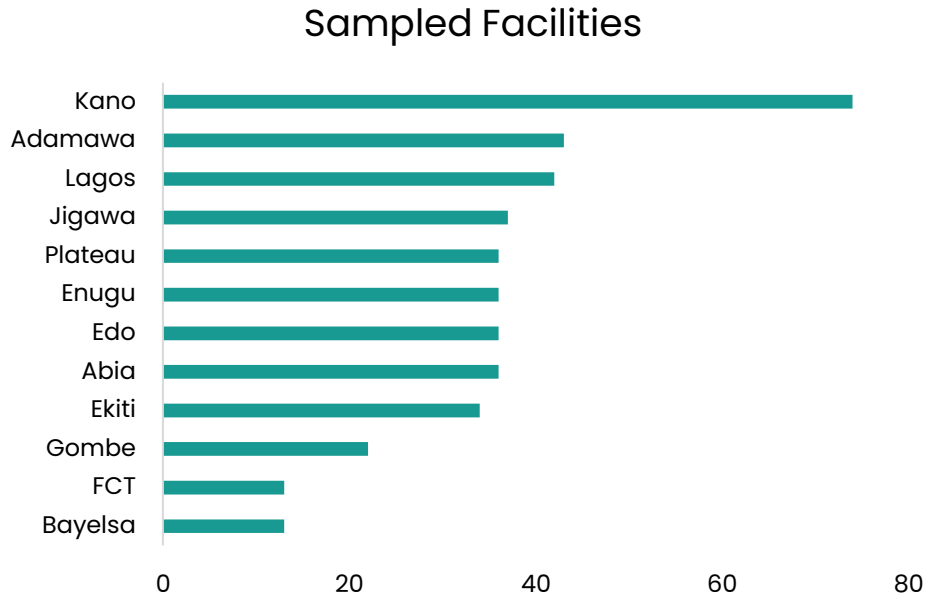
Nigeria's facility phone survey

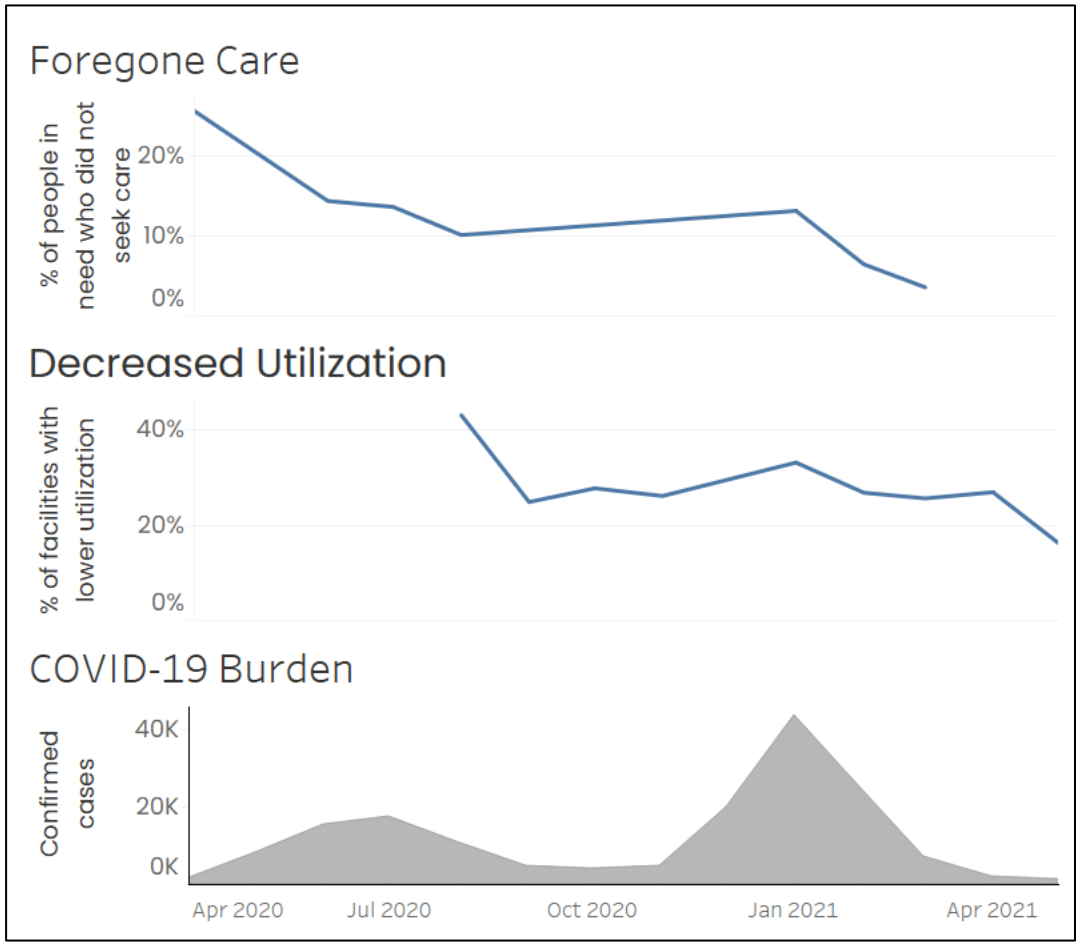
- Collaboration with FMoH to adapt tool, identify contact information, and notify facilities
- Sampling frame of facilities in 12 states
  - Purposive stratified sampling based on high- and low-COVID burden
  - Sample of public primary health care centers (55%), private primary health care centers (40%), and secondary health care facilities (5%)
  - Sample is majority rural (63%)
- Nine rounds of survey between August 2020 and May 2021
  1. Infrastructure
  2. Finances
  3. Supplies
  4. Human resources
  5. COVID-19
  6. Vaccine hesitancy
  7. PPE
  8. Service disruptions
  9. Qualitative response





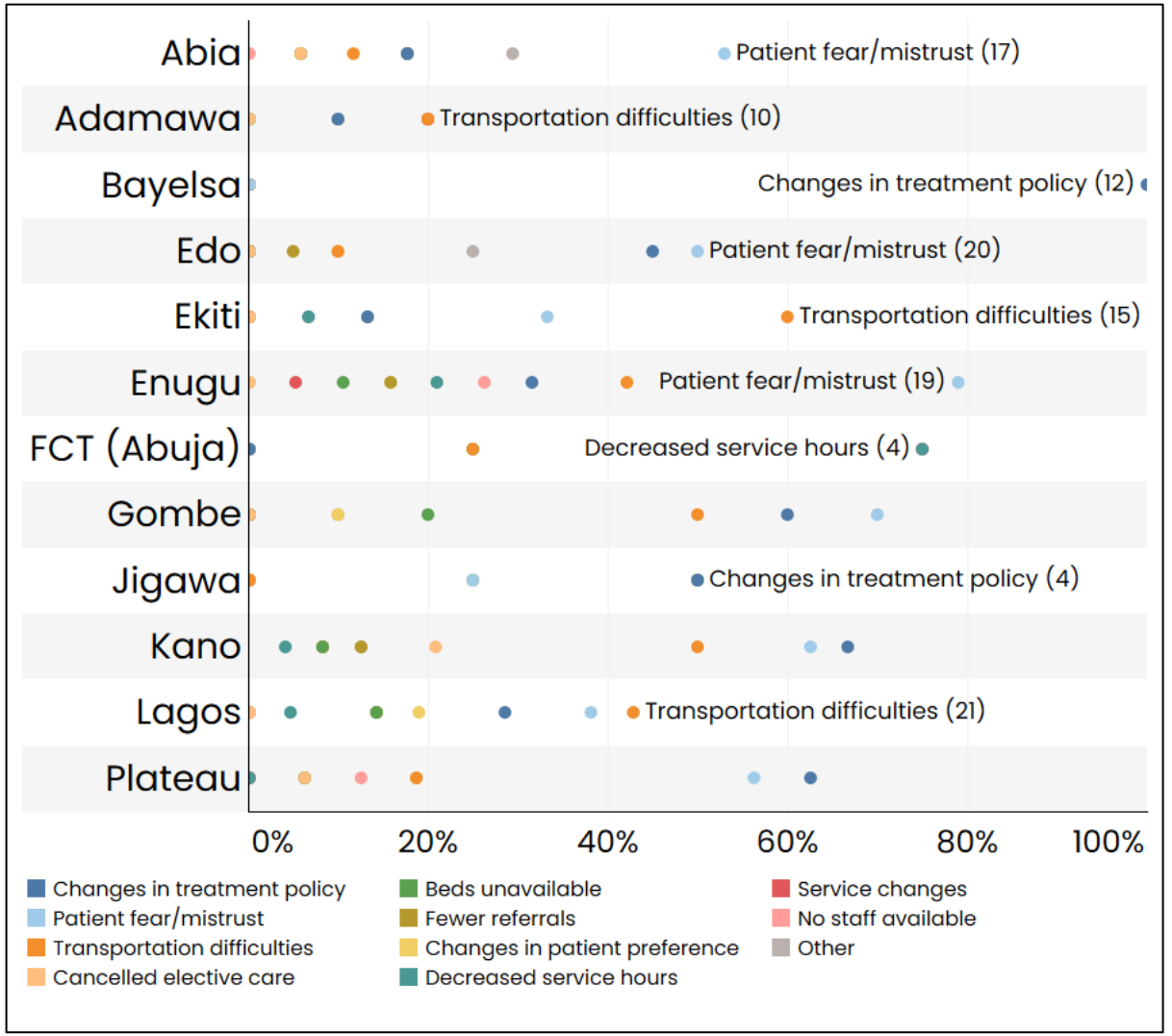
Service disruptions are ongoing

- During the most recent round of survey (May 2021), 16% of the 401 facilities sampled reported lower service volume
- The estimates of lower service utilization align with demand-side surveys and national HMIS results
- State-level variations in COVID-19 response exist



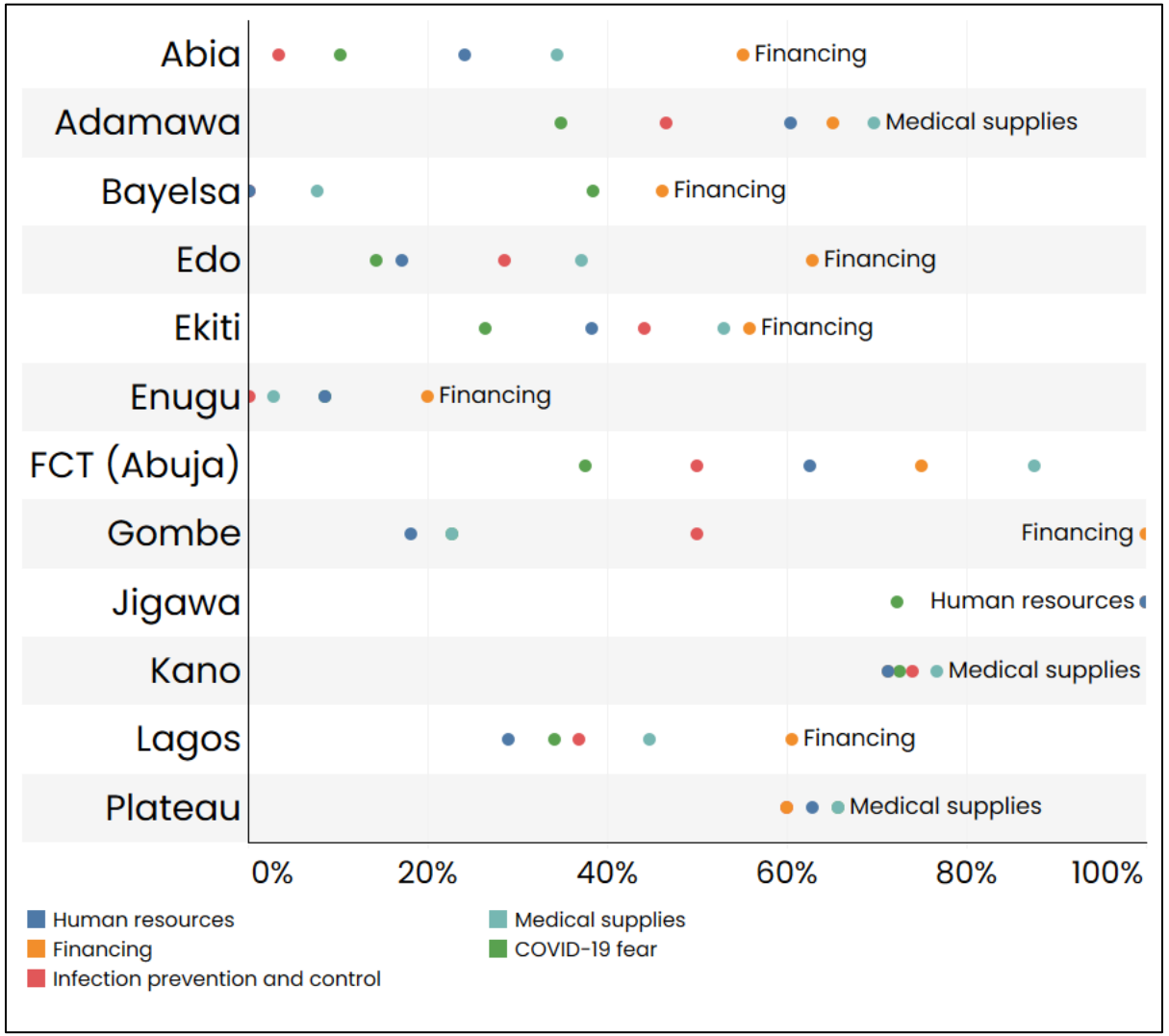
Reasons for service disruptions in 2020

- Changes in treatment policies, transportation difficulties, and patient fear of COVID-19 were the most frequently cited reasons for lower service utilization

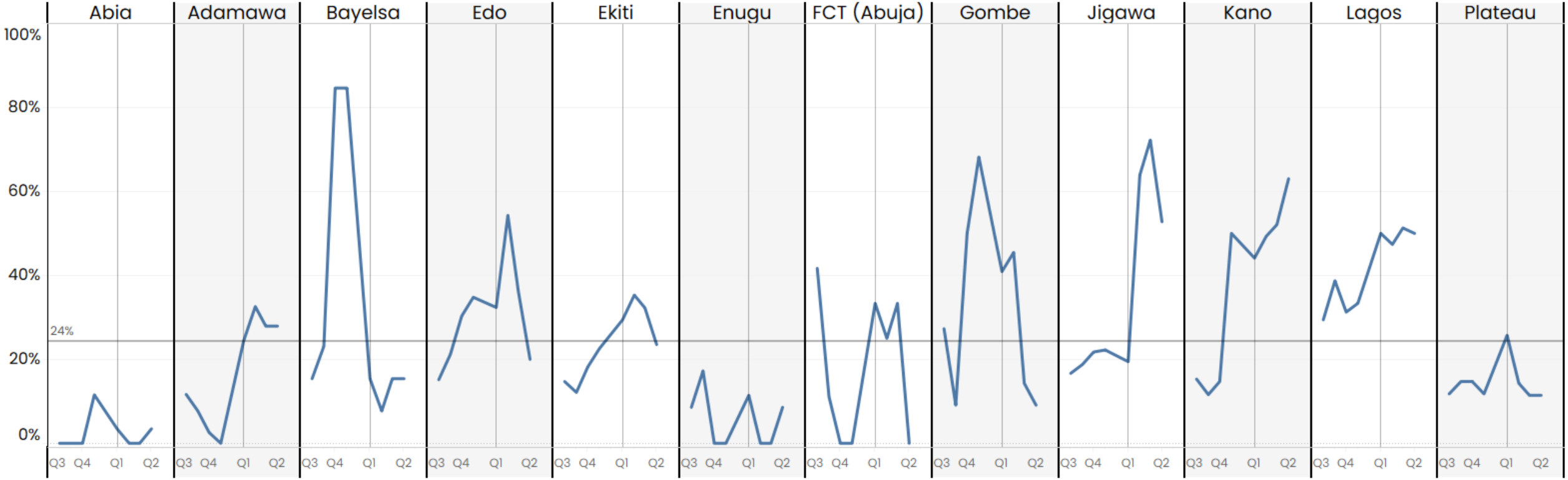


Health system barriers to maintaining health services

- Nationwide, financing and supply shortages are the largest reported challenges for maintaining essential health services
- Challenges with medical supply availability and Human Resources are also reported

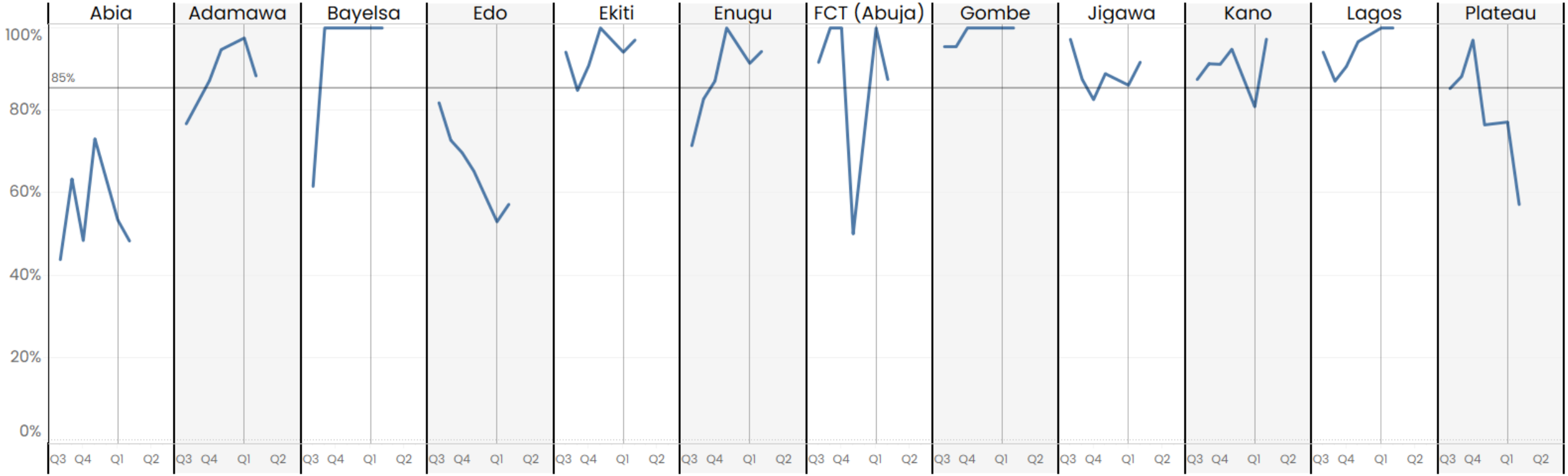


Percent of facilities reporting sufficient financing



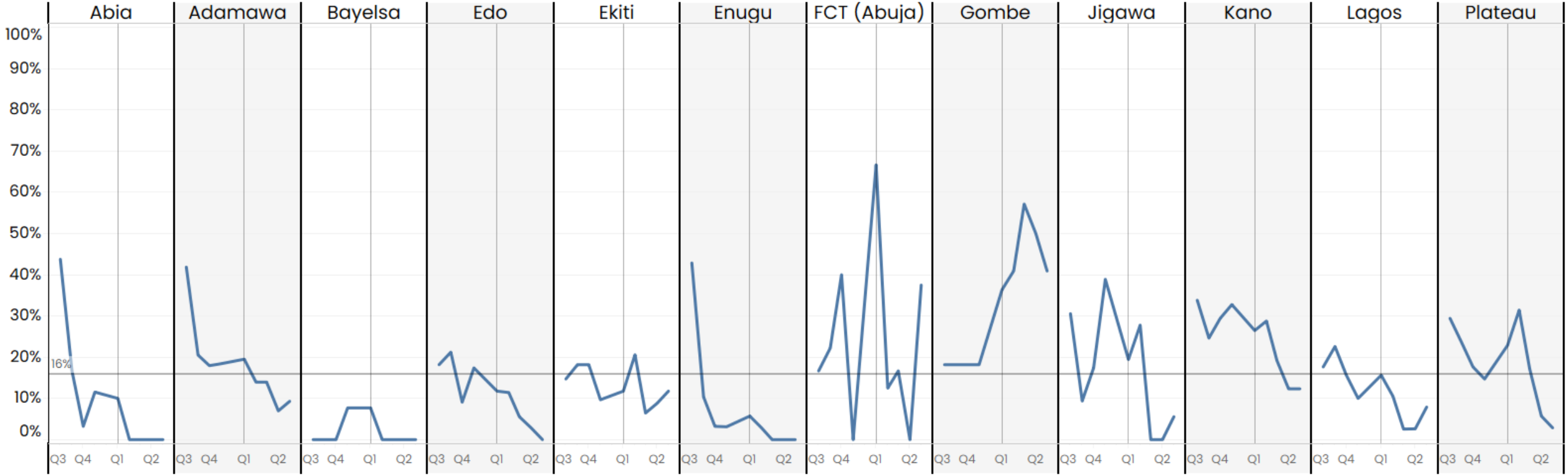
- Across states, financing has largely improved between 2020 and 2021
- Twice as many facilities reported having sufficient financing to carry out activities by April 2021

Percent of facilities able to maintain timely staff payments



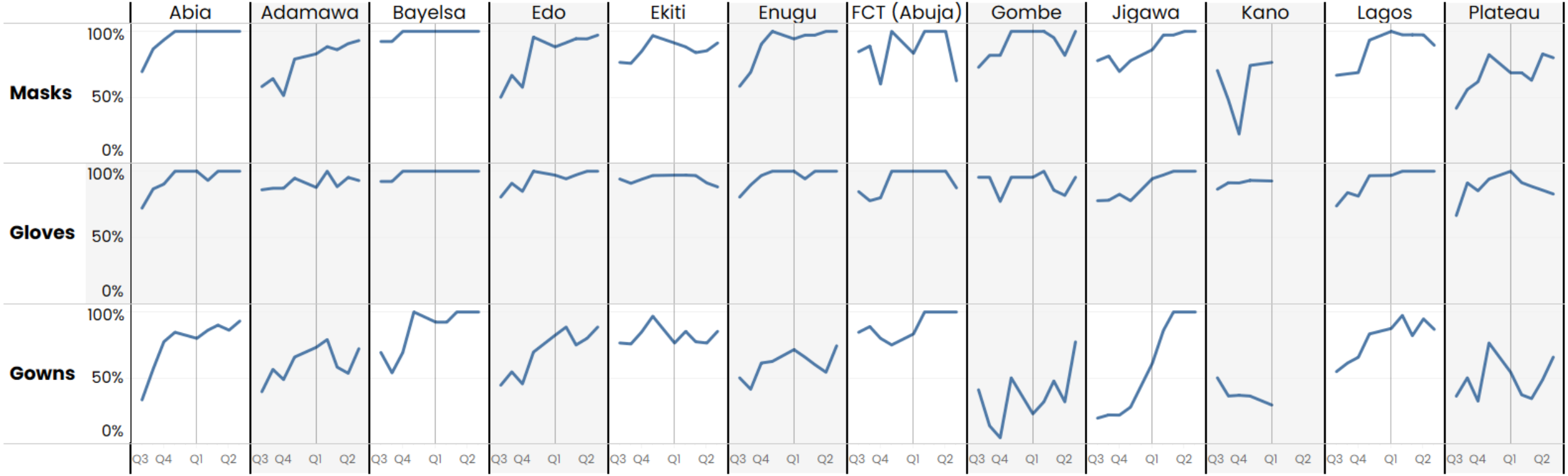
- Facilities in most states were able to maintain timely staff payments in the first year of the pandemic
  - Sustained disruptions in Abia and Edo
  - Temporary disruptions in FCT and Plateau

Percent of facilities where stockouts disrupted service delivery



- Since August 2020, stockouts have decreased nationwide
  - From 29% of facilities to 9% of facilities reporting stockouts
- Availability of medicines seems to change frequently

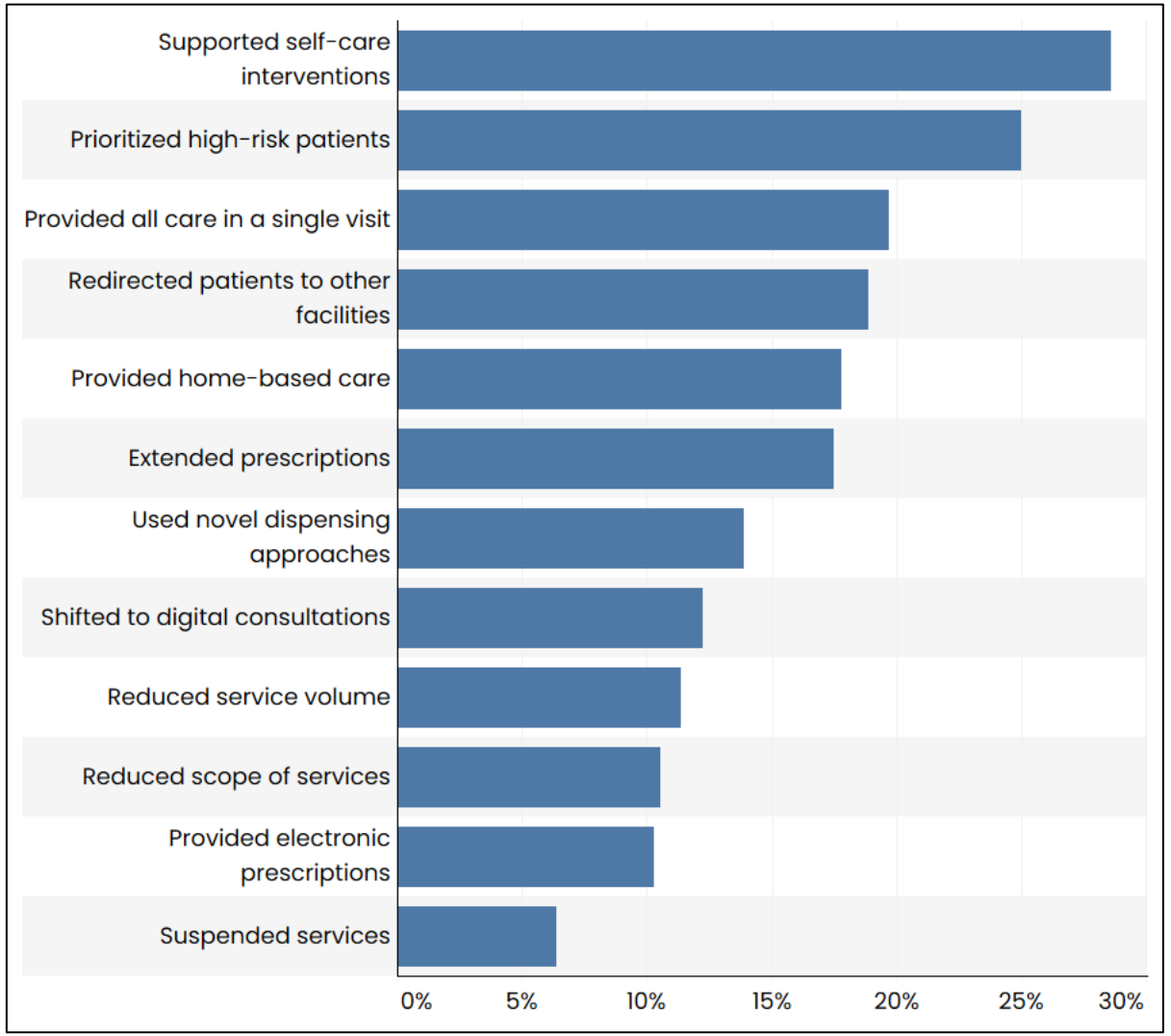
Availability of any PPE within the facility



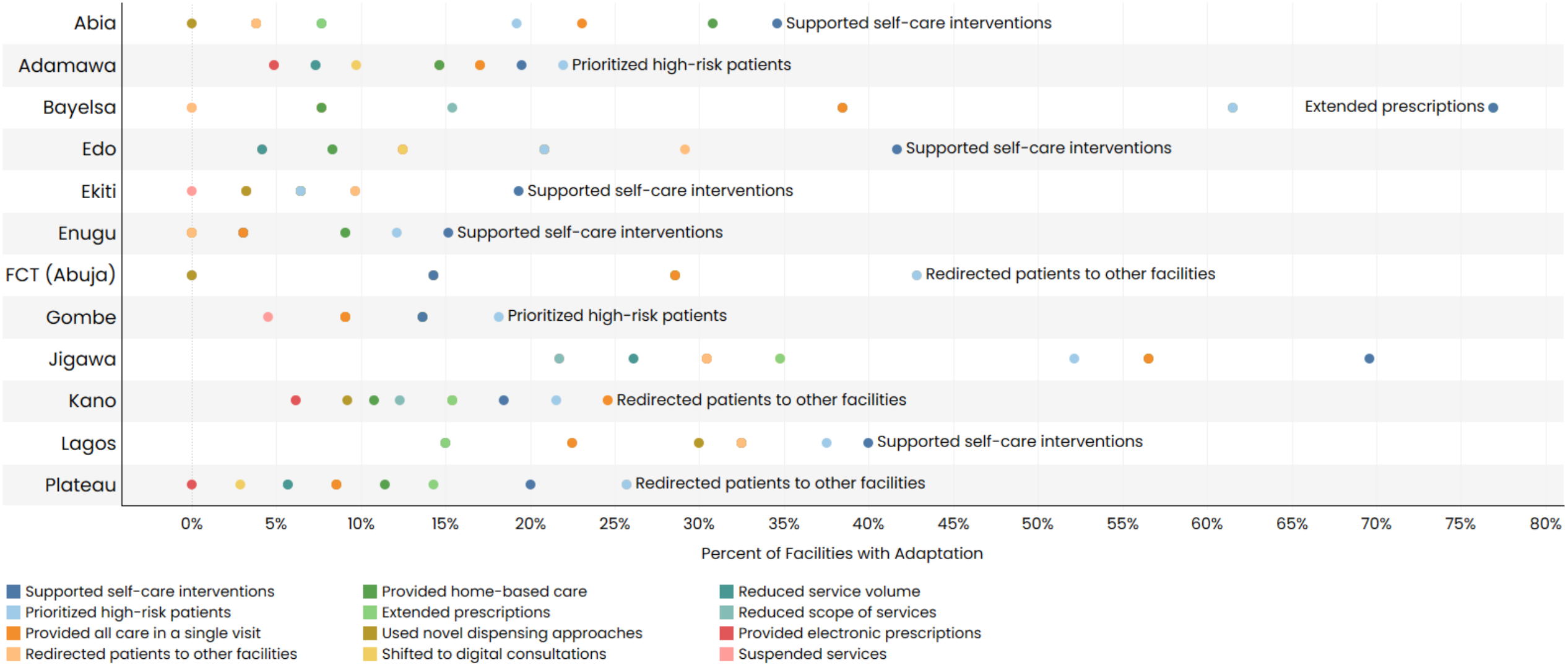
- Availability of key PPE has increased over the pandemic
- There are still major gaps in the availability of masks and gowns

Facility adaptations to COVID-19

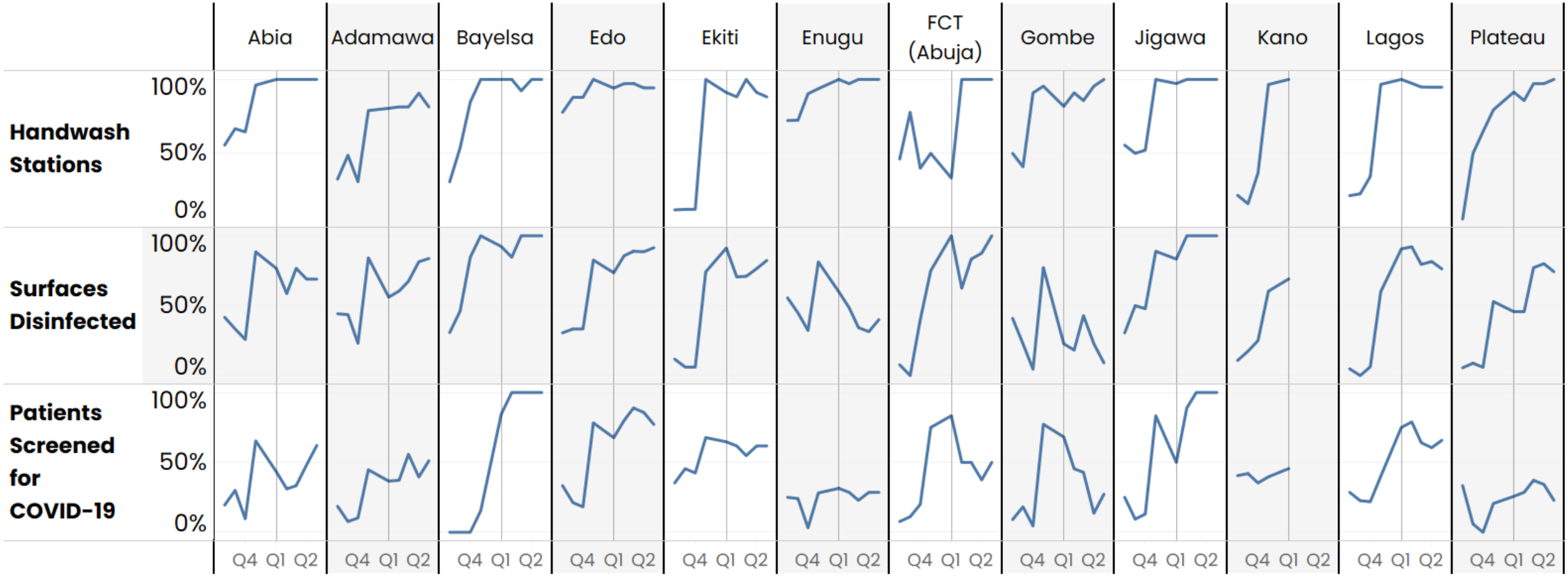
- Most adaptations were to make service delivery more efficient
- States made specific adaptations that were not reported nationally



State-specific facility adaptations

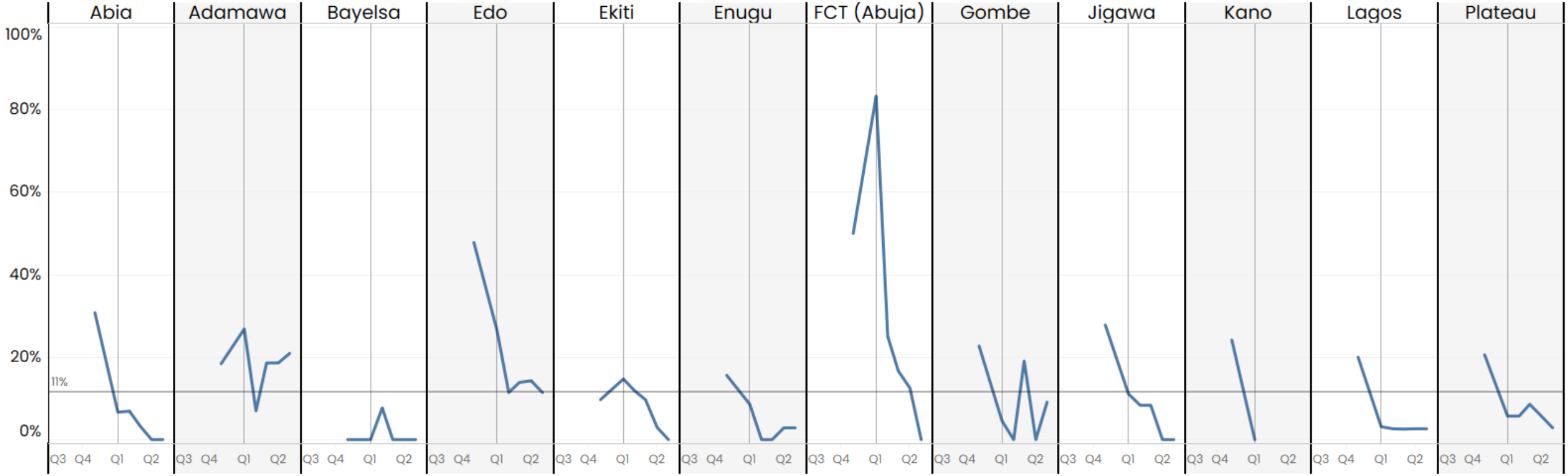


Infection prevention and control adaptations



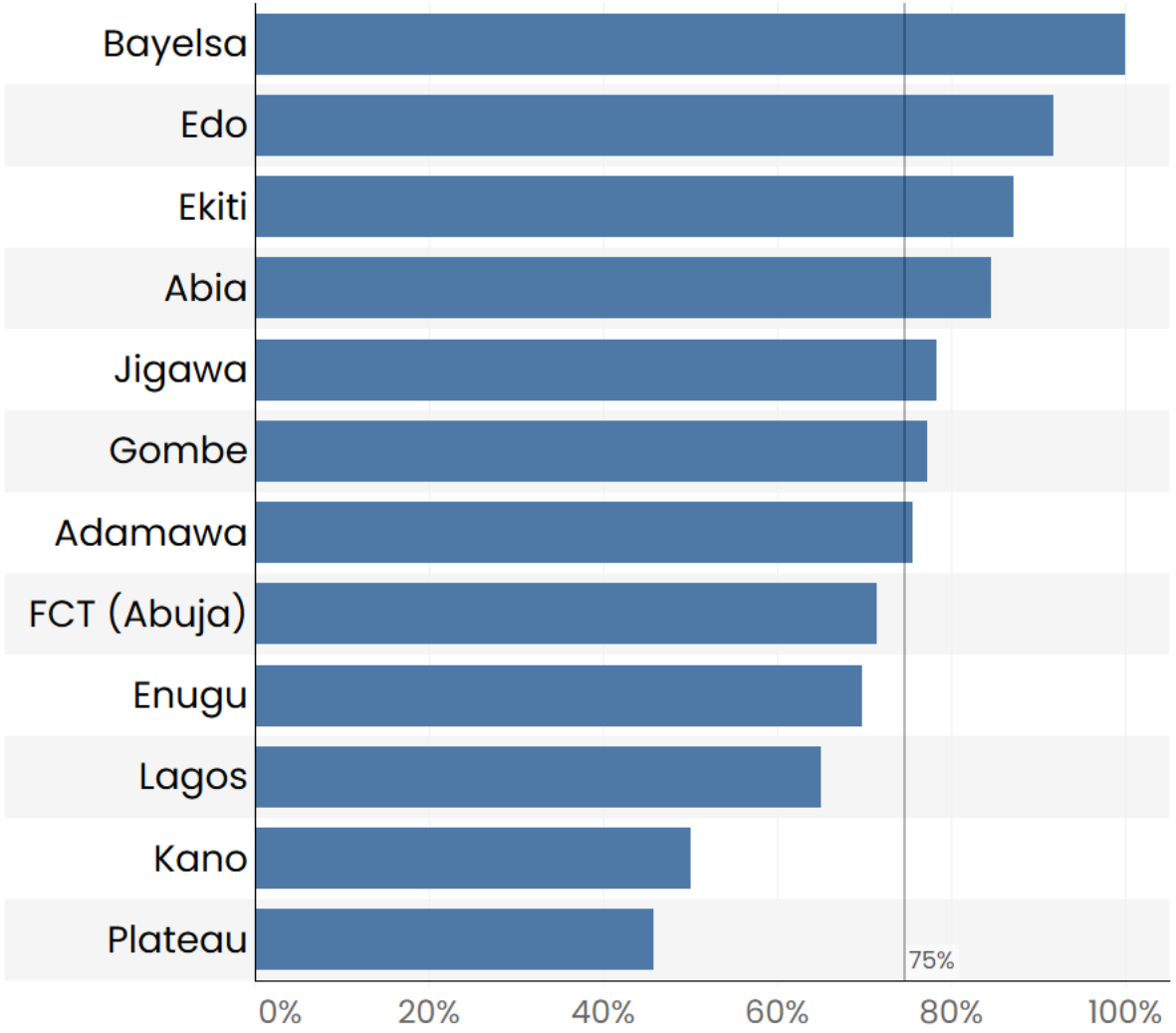
- Implementation of COVID-19 specific IPC measures generally improved over time

Facilities reporting challenges in maintaining health services

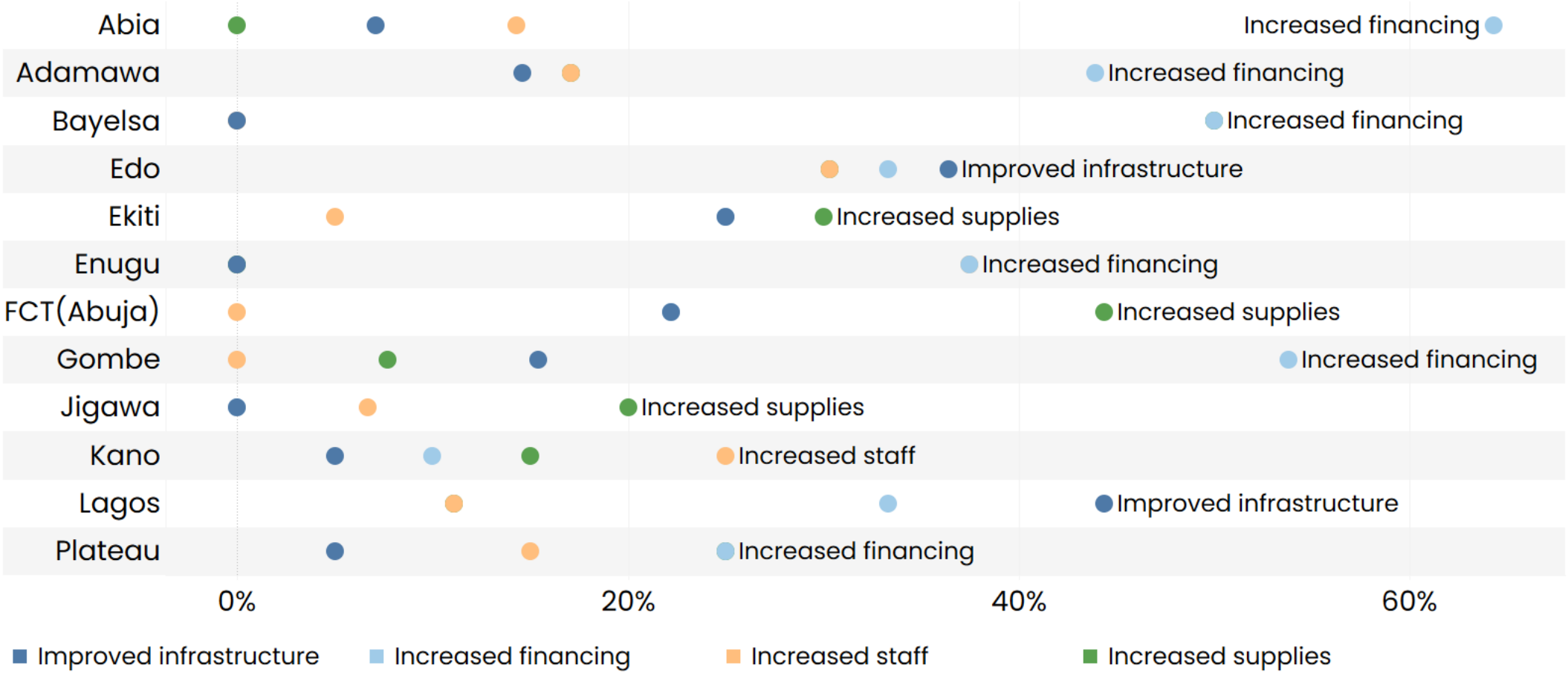


- Fewer challenges in maintaining EHS were reported over time

Facilities generally report that they have adapted well to deliver services during COVID-19



Additional resources that would prevent future challenges to maintaining EHS



- Increased financing (including more attractive staff salaries) was the most frequently requested resource

Conclusions

- Nigeria's facilities reported nation-wide challenges to maintaining essential health services
- The largest barriers to maintaining EHS stem from financing and supply constraints
  - Both domains improved nationwide between August 2020 and April 2021
- Facilities made adaptations to cope with COVID-19 disruptions and felt fewer challenges until April 2021

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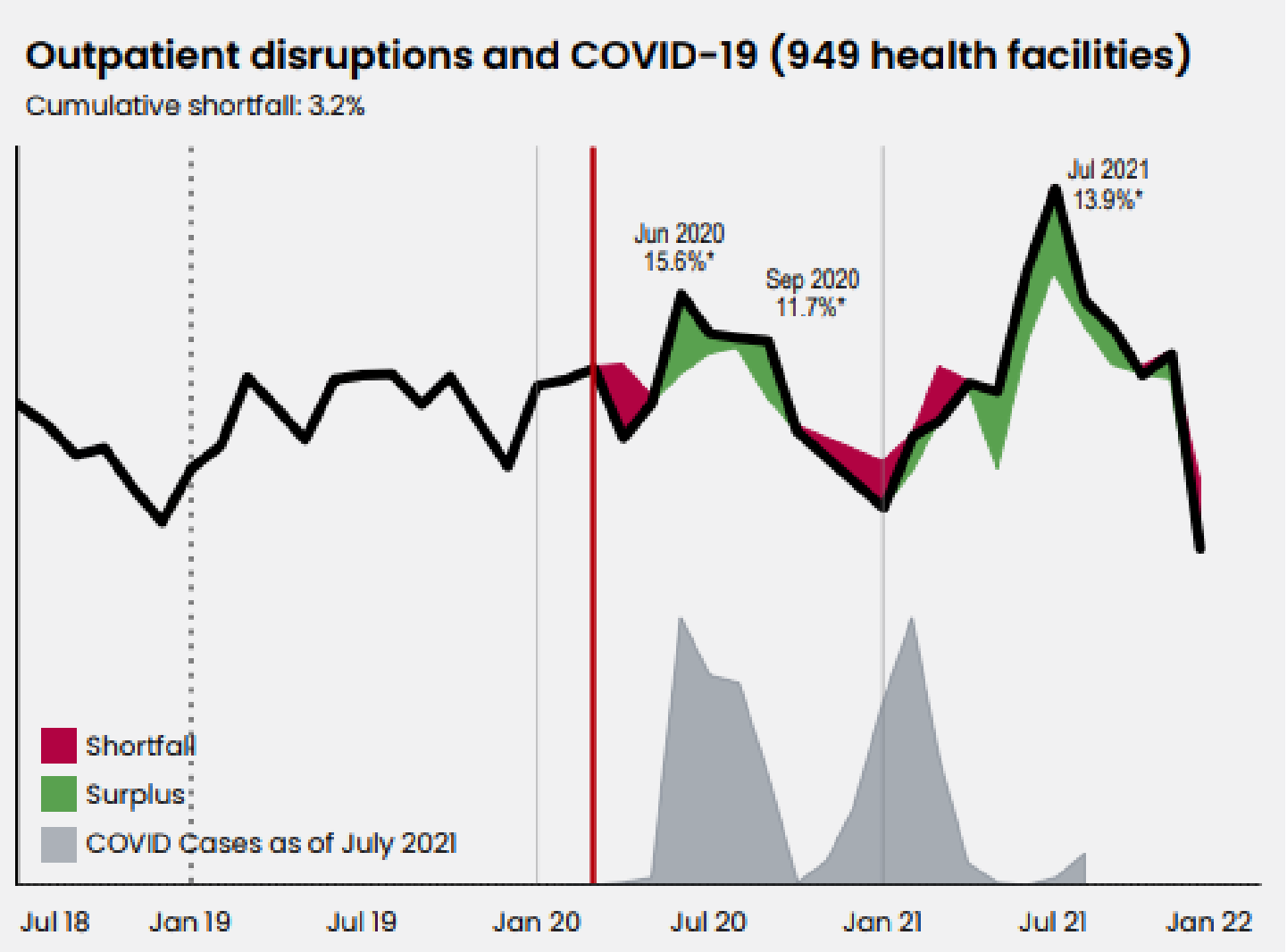
INTERPRETING THE STATE PROFILES

We randomly choose two states with different experiences to illustrate how to interpret the state profiles

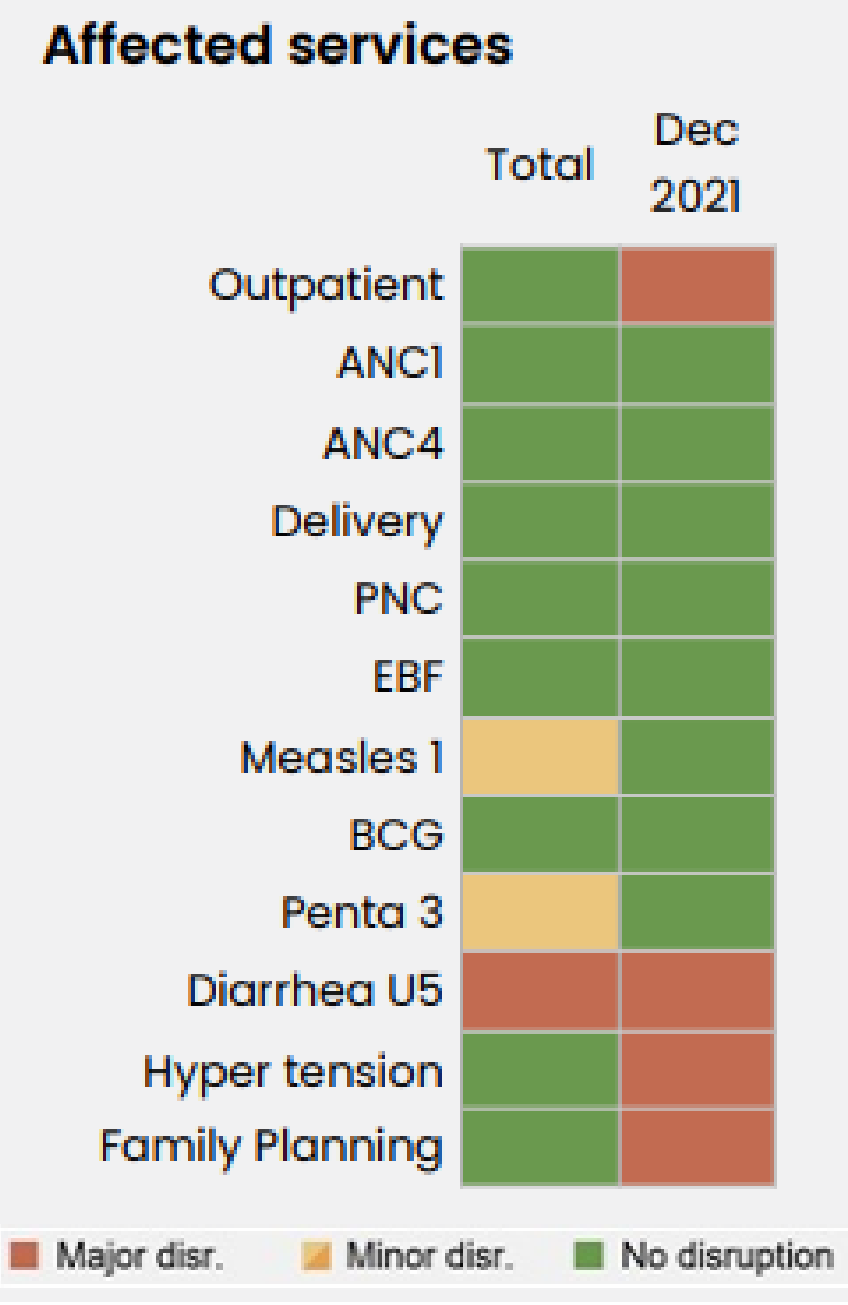
Overall outpatient disruption – Abia (1/3)

- The black line is the expected outpatient service volume had there been no pandemic
- In red, we see outpatient service declines twice:
  - March to April 2020, the start of the pandemic
  - October to April 2021, during an increase in COVID-19 infections.
- In green, we see outpatient service recovery following each disruption



Across services – Abia (2/3)

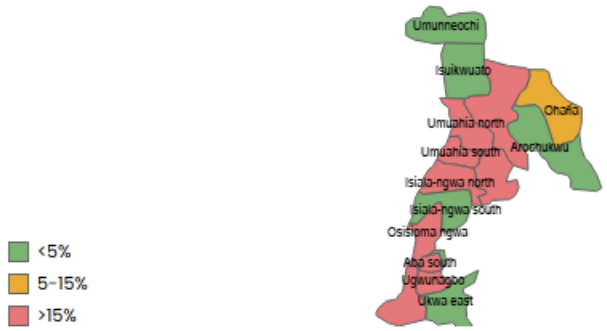
- This chart shows us the different impacts on essential services (1) during the entire pandemic, and (2) in December 2021
- Services in red show major disruptions (%), yellow is moderate (%), and green is no disruption
- In Abia, we see that:
  - immunization services were initially disrupted but have recovered.
  - Visits for outpatient services, including Diarrhea, hypertension, and family planning, were lower than expected in December 2021



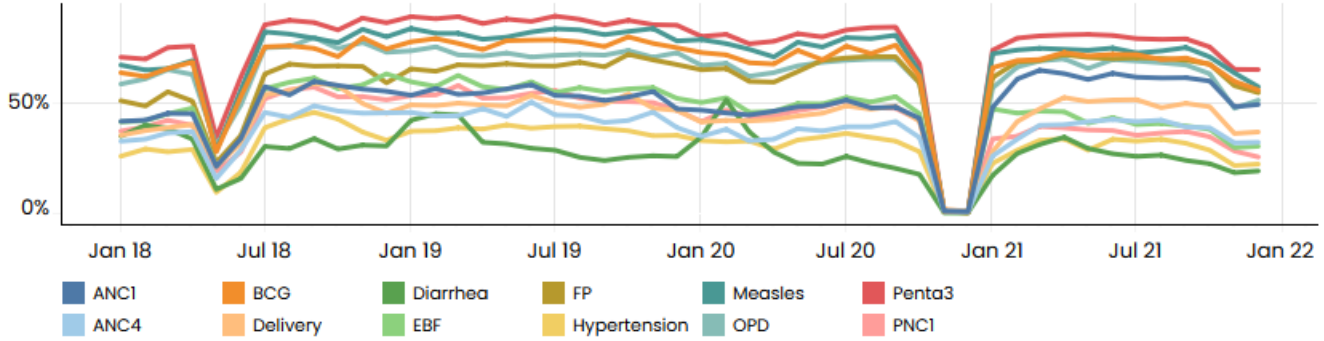
More details to interpret the results – Abia (3/3)

- **How outpatient disruption in December 2021 varied across LGAs:** variation in Abia State
- **HMIS data completion for each indicator:** In Abia, we see consistency in the reporting aside from January 2021; we see better data quality for immunizations and outpatient visits compared to other services
- The bottom graph **compares Abia's disruptions to the average for Nigeria**. We see that Abia's disruptions are generally average or slightly above average.

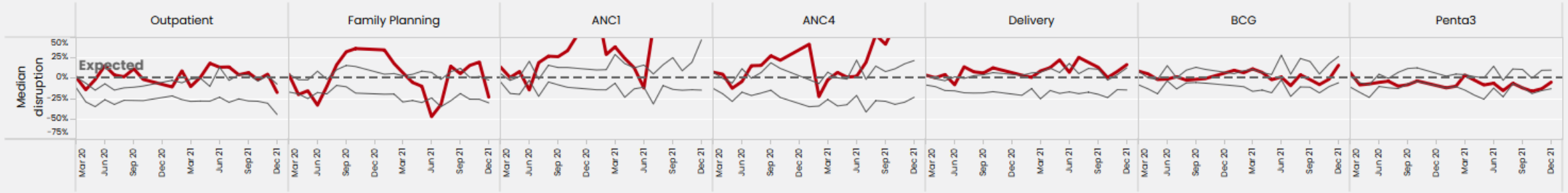
Outpatient disruptions during December 2021



Data completeness



ABIA disruptions compared to average range of disruptions in all states



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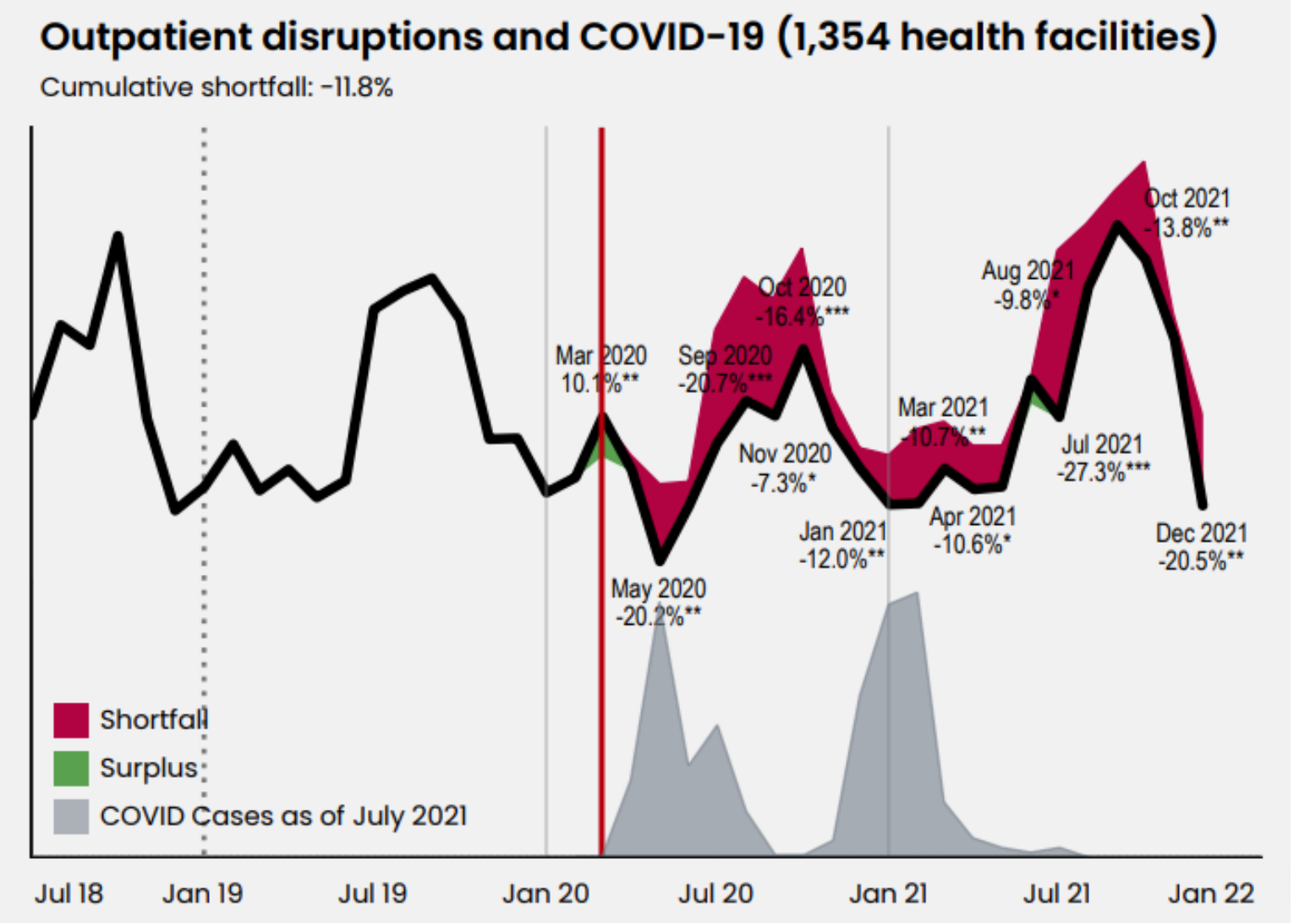
ANOTHER EXAMPLE

We randomly choose two states with different experiences to illustrate how to interpret the state profiles

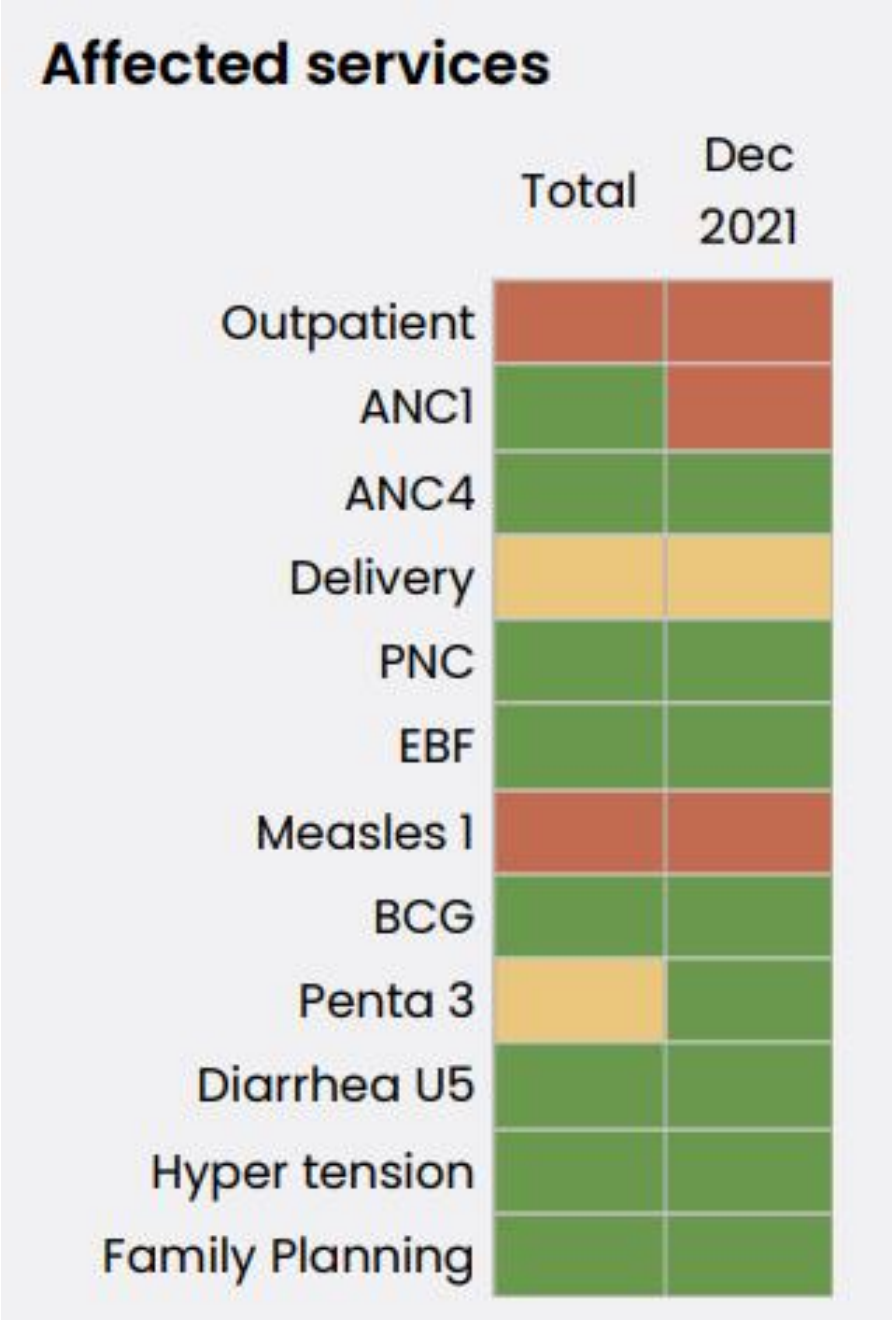
Overall outpatient disruption – Kano (1/3)

- In red, we see that outpatient services declined later than Abia, but that the declines in outpatient visits have been ongoing since ~ April 2020
- The bottom graph shows us how these declines compare to COVID-19 cases



Across services – Kano (2/3)

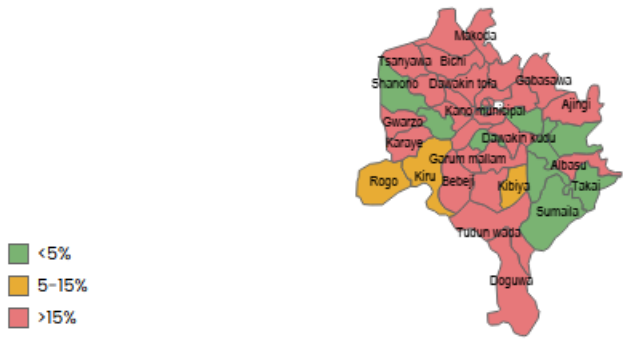
- Services in red show major disruptions (%), yellow is moderate (%), and green is no disruption
- In Kano, we see that:
  - There is a sustained disruption in outpatient services, delivery, and measles
  - Other services have not been disrupted



More details to interpret the results – Kano (3/3)

- **How outpatient disruption in December 2021 varied across LGAs:** variation in Kano State
- **HMIS data completion for each indicator:** In Kano, we see consistency in the reporting rates; we see better data quality for immunizations, outpatient visits, and ANC1 compared to other services
- The bottom graph **compares Kano's disruptions to the average for Nigeria**. We see that Kano has experienced more disruption than average for all services except family planning and ANC4

Outpatient disruptions during December 2021



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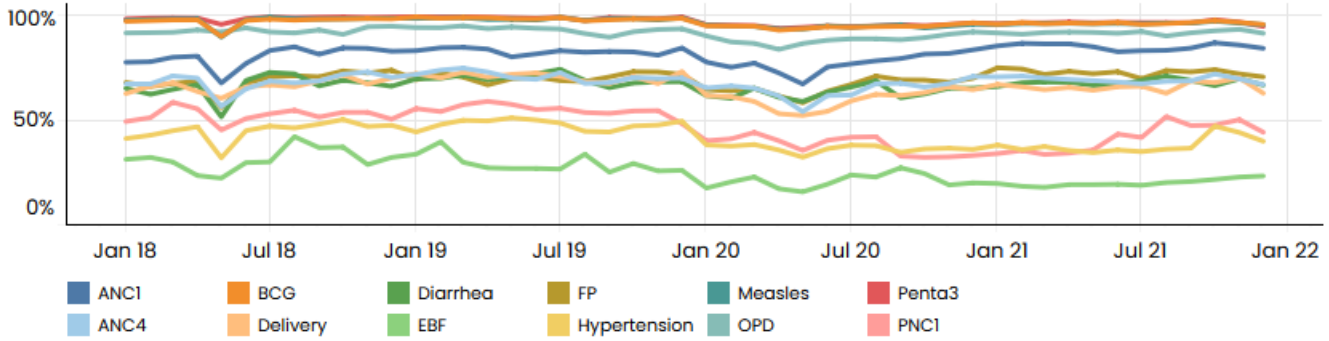
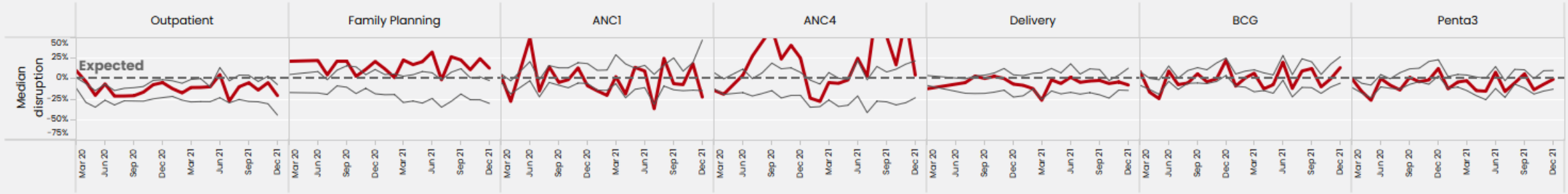


KANO disruptions compared to average range of disruptions in all states



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THANK YOU!

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