Impact of COVID-19 on Coverage and Equity

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Outline

• Immunization Coverage and Equity
  • Before COVID-19
  • After COVID-19
• Surveillance: Impact of COVID-19
• Considerations for research moving forward
Almost 9 out of 10 children reached in 2019, but almost 20 million children un-or under vaccinated

Coverage of a third dose of vaccine protecting against diphtheria, tetanus, and pertussis (DTP-3) remains at 85% in 2019, leaving 19.7 million children vulnerable to vaccine preventable diseases.

The key goal of the Immunization Agenda 2030 is to make vaccination available to everyone, everywhere, by 2030.

While immunization is probably the most successful public health intervention, reaching 85% of infants is not enough. Coverage has plateaued over the last decade, leaving almost 20 million children unprotected. Almost half of these live in the African Region.

Un-or under vaccination is measured through the lack of DTP-3 in this analysis.
The African Region and countries affected by conflict are home to large numbers of “zero-dose children”

The 14 million children who didn’t receive an initial dose of basic vaccines often lack access to immunization services and other health services.

Zero-dose children live disproportionately in the African continent and in countries affected by conflict. They are also likely to lack access to other health and welfare services and are subject to multiple deprivations.

Middle income countries such as the Philippines, Brazil, Mexico and Angola also have sizeable numbers of zero-dose kids.

If coverage is unchanged, by 2030, projected population increases in Africa will mean that 15 million children may be left out.

* Zero dose children defined as those lacking DTP1.
COVID-19 in 2020

30 January 2020: public health emergency of international concern (PHEIC) declared

11 March 2020: Global pandemic declared

26 March 2020: WHO publishes Guiding Principles for Immunization during COVID-19 Pandemic
Reported Immunization Service Disruptions due to COVID-19, May 2020

The data collected are subject to limitations inherent to voluntary self-reporting, self-selection bias, not all countries responded, countries with only one response vis-à-vis countries with many, possibility of fraudulent responses and not having a sampling frame to make inferences. Furthermore, the information about each country does not represent official reporting from Member States to WHO or UNICEF. Thus, the results presented here need to be interpreted with caution and do not represent in any way a WHO or UNICEF position regarding any country or territory for which one or more replies were received.

Source: Immunization Pulse Poll 2, Question 7. Displayed percentages are of the calculated single status for disruption level in a country based on the majority response from that country.
Global Reasons Reported for Disruption to Immunization, May 2020

Source: Immunization Pulse Poll 2, Question 9. Includes both national & sub-national respondents. Results weighted by # respondents per country.

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### Weighted by # respondents per country

- **Low availability of PPE for healthcare workers**: 49%
- **Low availability of healthcare workers**: 43%
- **Travel restrictions**: 40%
- **Limited availability of vaccine(s) or vaccine-related supplies (e.g., syringes)**: 24%
- **National policies related to immunization services**: 15%
- **Other**: 17%

### Unweighted

- **Low availability of PPE for healthcare workers**: 57%
- **Low availability of healthcare workers**: 46%
- **Travel restrictions**: 44%
- **Limited availability of vaccine(s) or vaccine-related supplies (e.g., syringes)**: 26%
- **National policies related to immunization services**: 16%
- **Other**: 10%
Global Reasons Reported for Disruption to Demand for Immunization, May 2020

Source: Immunization Pulse Poll 2, Question 11. Includes both national & sub-national respondents. Results weighted by # respondents per country.

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Countries Reported Disruptions in all 25 Tracer Services

Percentage of countries reporting disruptions to 25 tracer services

- **Partial disruption**: change in service use by 5-50% of patients/users
- **Severe/complete disruption**: change in service use by more than 50% of patients/users

In 2020, disruptions to the routine immunization program linked to the COVID-19 pandemic and its response measures are widespread and have affected countries in all WHO regions. Preliminary and incomplete data received from many countries suggest steep drops in the number of administered doses in March and especially April of this year, compared to last year.

While countries have made efforts to continue providing immunization services, most outreach activities have been suspended and demand for vaccination has declined linked to fear of SARS-CoV 2 transmission in health care facilities and physical distance measures, including lockdowns and reduced transportation.

Pulse polls suggest that special efforts are being made to monitor the levels of disruption in immunization services in order to better plan vaccination catch-up activities.
66 Countries with ≥1 Vaccination Campaign Postponed due to COVID-19, 15 May 2020
WHO Guidance for Planning and Implementing Catch-up Vaccination

www.who.int/immunization/programmes_systems/policies_strategies/catch-up_vaccination/en/
Monthly Comparison of DTP3 Coverage in Countries, Southeast Asia Region, 2019 and 2020

*Quarterly data available for Sri Lanka and Thailand; Q1, Q2, Q3 and Q4 data plotted against end of each quarter respectively

Source: Monthly routine immunization data from member states
52 Countries with ≥1 Vaccination Campaign Postponed due to COVID-19, 1 February 2021
Utilized Strategies

Vaccination in strategic places, like pharmacies, stadiums, day care centers, cultural centers, banks, schools, work areas, grocery stores

Vaccination according to sex and ID number

Adaptation of vaccination centers and vaccination complying with security measures

Institutional vaccination

Follow-up on vaccination and calling on absentees

Integration with other health and government programs

Health worker referrals

Work with community leaders

Use of social media

Changes in opening hours

Vaccination in cars

Vaccination at home

Results from the Sixth Survey on the NIP Situation in the Region of the Americas, IM/PAHO Focal Points, August 2020
Confirmed Measles and COVID-19 Cases by WHO Region

Based on provisional monthly measles/rubella data reported to WHO (Geneva) as of February 2020 and covid 19 dashboard from WHO (https://covid19.who.int/)
Monthly Reported Acute Flacid Paralysis Cases by WHO Region, 2019 and 2020

Abbreviations: AFR = African Region; AMR = Region of the Americas; EMR = Eastern Mediterranean Region; EUR = European Region; SEAR = South-East Asia Region; WPR = Western Pacific Region.
Reasons for Decline in Vaccine-Preventable Disease Cases

• Real decline?
  • Possible decreased disease spread from COVID-19 interventions (e.g. movement restrictions, physical distancing, group size limits)
  • Possible post-outbreak burn out of susceptibles for measles after high burden years in 2018-2019

• Weaker surveillance
  • Fewer cases seeking in-person medical care \(\rightarrow\) less samples for testing
  • Delayed shipping and limited supplies for testing samples
  • Diversion of surveillance personnel (field, lab, data) toward COVID-19 surveillance
MONITORING EFFORTS

- VPD Campaign tracker
- eJRF 2021
- DTP3 monthly doses as a tracer
- Regional data collection processes
- Monthly surveillance data
- Periodic EHS polls
  - Results of more recent one expected in March 2021
- UNICEF supply data
- “Sentinel” sites, in the context of COVID learning agenda
- TechNet-21 repository of papers
Summary

- Disruptions to immunization services and surveillance due to COVID-19 reported widely in all regions
- More severe disruptions with outreach and campaigns (underserved populations likely more impacted)
- Recovery and rebuilding dependent on infection prevention and control measures and innovations (additional costs must be considered)
- Variable levels of recovery and catch up across countries
Reflections on Equity and Resiliency

• Historical emphasis on equity of coverage
  • Focus on providing immunization services to more underserved communities
  • Interventions often based on vulnerable delivery strategies (outreach, campaigns)

• Equity of resiliency
  • COVID-19 disruptions reveal inequitable vulnerabilities beyond coverage
  • Equal coverage in two communities may not be equitable if one is more vulnerable to disruption

• Equity focus needs to balance coverage goals with need to build resiliency
Learning Agenda and Research Needs

• Disruptions

• Build back better

• COVID-19 vaccine introduction impact
Disruption Questions

• More accurate description of magnitude and duration of disruptions particularly at subnational level
• Factors that led to service delivery disruptions
• Factors that led to changes in demand
Build Back Better Questions

- Factors that led to faster recoveries to baseline
- Factors that led to faster catch up after reaching baseline
- Impact of demand interventions to rebuild confidence
- Impact and scalability of innovations (e.g. drive-thru immunization)
- Factors that led to greater resiliency
COVID-19 Vaccine Impact Questions

- Negative impacts to coverage and equity
- Immunization service disruptions?

- Positive impacts to coverage and equity
- Use of digital technologies (e.g. information systems)
- Cold chain investments
- Service delivery innovations (e.g. drive-thru vaccination)