



COVID-19 RECOVERY FOR ROUTINE IMMUNIZATION PROGRAMS FELLOWSHIP

CASE STUDY

Catch-up Routine Immunization to Restore Childhood Immunization Coverage Following COVID-Induced Declines in Zamboanga Peninsula, Philippines

Introduction

Even before the COVID-19 pandemic, immunization rates were low and declining in the Philippines, where the national-level Fully-Immunized Child (FIC) coverage decreased from 70% in 2015 to only 61.5% in 2020. The 2017 Dengvaxia controversy, in which an alleged increased risk for dengue was reported among children who received school-based immunization, contributed to this decline, resulting in measles and polio outbreaks in 2018 and 2019.¹ Starting with the first case of COVID-19 in the Philippines in March 2020, the WHO and UNICEF have sounded an alarm on the possible decline of routine immunization, predicting two million children in the Philippines may miss out on vaccination.² With the threat of disease resurgence, the Department of Health (DOH) instituted the Measles-Rubella (MR) and Oral Polio Vaccine (OPV) Supplemental Immunization Activity (SIA) from October to November 2020 to interrupt disease transmission.¹

Zamboanga Peninsula, with a total population of 3,834,801, is in the western part of Mindanao Island, Philippines. Consisting of three provinces, more than 18% of its 1,904 barangays (the smallest administrative division in the Philippines) belong to geographically isolated and disadvantaged areas (GIDA). With intensified campaigns before the start of the pandemic, the FIC rate in Zamboanga Peninsula increased to 63% in 2020; however further declines in FIC coverage were experienced after the COVID-19 pandemic began. Though the Zamboanga Peninsula achieved population immunity of 95.8% among children ages 9-59 months for OPV/IPV and MCV through the MR and OPV Supplemental Immunization Activity, FIC coverage rates continued to decrease to 52% in the first quarter of 2021.

Given the need to maintain immunity to prevent outbreaks, the DOH issued streamlined guidelines for conducting routine catch-up immunization activities, which began in October 2021. However, COVID-19 vaccination and routine immunization efforts continued to share and compete for the same resources (e.g., human resources, logistics, providers, commodities, and local government unit commitment), leading to lower routine immunization coverage and an increase to only 59% FIC coverage in Zamboanga Peninsula by the end of 2021.

Intervention

Following the successful stakeholder collaboration conducted for coordination and planning of National COVID-19 Vaccination Days, the National Inter-Agency Task Force for Emerging Diseases (NIATF) created multi-agency policies to address supply needs and gaps in demand generation, endorsing the redirection of human resources to conduct routine and catch-up activities. The DOH also created guidelines for national vaccination days for catch-up activities for under-immunized vulnerable children, called "Chikiting Bakunation Days: National Vaccination Days for Catch-up and Routine

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immunization".³ The target for the catch-up immunization campaign was to vaccinate at least 80% of infants ages 0-23 months who missed any of their routine immunizations.

In October 2021, the National Immunization Program (NIP) Manager met with representative NIP coordinators at the sub-national/regional DOH offices to create and disseminate guidelines for routine catch-up for immunization. These guidelines were then cascaded to all NIP coordinators, including those from the Zamboanga Peninsula.

Four micro planning workshops were conducted to plan activities in the Zamboanga Peninsula: one in Zamboanga City and Isabela City, one in Zamboanga Sibugay, one in Zamboanga del Norte, and one in Zamboanga del Sur. Conducted virtually due to COVID-19 movement restrictions, these sessions enabled collaboration among the Health Officers, NIP coordinators, and Health Education and Promotion officers of the different provinces, cities and municipalities of Zamboanga Peninsula. Inter-agency stakeholders also attended, such as health and nutrition sector representatives from the Department of Education, Philippine National Police, and the Department of Social Welfare and Development; governance sector representatives of the Department of Interior and Local Government; and local chief executives.



A barangay health worker visiting mothers and their children to bring them to a nearby vaccination site.

Participants in these micro planning workshops planned the following activities at the provincial, city, and municipal levels:³

1. Assessment of immunization reports and coverage to identify barangays and puroks, a zone within the barangay, with a high number of unimmunized children.
2. Identification of children under 23 months who missed their primary immunization series through a review of master listings, target client lists, and immunization cards.
3. Hosting of routine catch-up immunization activities the final week of each month, utilizing strategies such as door-to-door vaccination, modified fixed posts (e.g., school/barangay gymnasiums, temporary outreach sites in puroks), and fixed sites (e.g., barangay health station, rural health units, district health centers).
4. Recording of all activities, updating of target children lists, and sharing of routine catch-up accomplishments.
5. Sharing of vaccine supply chain and management procedures and the surveillance and reporting of adverse events following immunization (AEFI) with the DOH.

The DOH Zamboanga Peninsula Center for Health Development also led coordination with the Regional Inter-Agency Task Force on COVID-19 (RIATF) to receive endorsement of the implementation of these catch-up immunization activities. The endorsement by this collaborative partnership and policy-making body of regional government agencies and stakeholders in the Zamboanga Peninsula enabled local chief executives to ensure responsibility for the implementation of activities in their area.

The mobilization of vaccination teams, vaccine freight and cold chain, supplies (e.g., AD syringes, cotton balls), and the coverage for all antigens at the regional level (all cities, and municipalities combined) were all addressed in planning processes to ensure success of the campaign. Stakeholder collaboration continued to be critical to implement the routine immunization catch-up activities to address staffing challenges. Nurses and midwives from the municipal and city health offices supported the immunization activities held the final week of each month, as did staff from the Philippine Red Cross. The Barangay council conducted health promotion activities, spearheaded by the barangay captain, barangay councilors, barangay health workers and barangay health emergency response teams.

Alongside these routine and catch-up immunization activities, the DOH addressed the impact of the Dengvaxia controversy, which had perpetuated high levels of vaccine hesitancy. The DOH created promotional materials with educational information on the benefits of routine immunization and held numerous town hall meetings across all multimedia platforms to discuss the importance of childhood immunization.

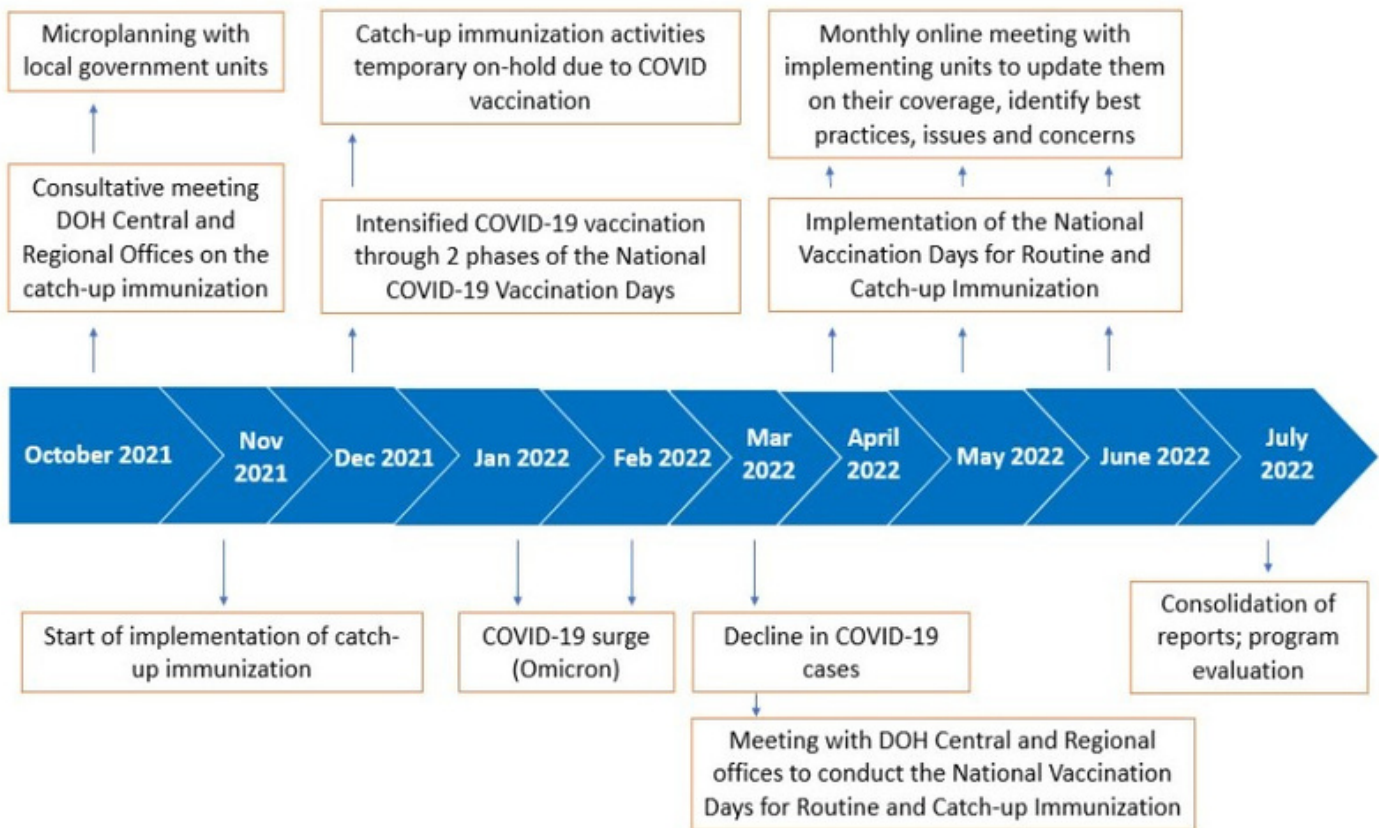
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Interviews were conducted with field experts, local chief executives, and tribal leaders who shared their trust in the safety of immunization through the media. The DOH also ensured transparency of government processes during immunization services.

Results

Planned catch-up routine immunization activities began in November 2021 but only lasted one month due to a COVID-19 outbreak and the need for intensified COVID-19 vaccination efforts from December 2021 through February 2022. When COVID-19 cases decreased in March and resources could be reallocated, the DOH-DPCB (Department of Health - Disease Prevention and Control Bureau) championed the National Vaccination Days for Routine and Catch-up Immunization from April to June 2022, allotting the last Thursday and Friday of each month for intensified catch-up immunization activities; these National Vaccination Days for Routine and Catch-up Immunization were then adopted at the regional level.

Figure 1: Timeline of catch-up routine immunization activities in Zamboanga Peninsula



Leveraging the stakeholder coordination and preparation for the intensified catch-up during the fall of 2021, DOH Zamboanga Peninsula Center for Health Development held conversations with the local chief executives to ascertain their logistical and operational support. The same activities were implemented as previously planned.

Following implementation, a record review was conducted on data from municipal and provincial health offices and then consolidated at the regional level. The following tables present the target number of children with missed doses, the number of doses given during catch-up activities, and immunization coverage among children with missed doses, per antigen for OPV/IPV, MCV, Penta and PCV vaccines.

Overall, almost half (48.22%) of the targets were achieved during the catch-up vaccination activities, however substantial variation was seen by province and city, from 2% to 195%. For example, OPV1 coverage was 2% for Pagadian City but 140% for Zamboanga City. MCV2 was 29% in Pagadian City, but 195% for Isabela City. For variation by vaccine, approximately 50% of the missed children were vaccinated with OPV1, OPV2, and OPV3 but only 31% of the target population received IPV2. For MCV1, 56% of missed children received this dose and 59% received their MCV2 vaccine during the catch-up campaign.

Table 1. Catch-up immunization coverage among infants ages 0-23 months who missed their routine immunizations by antigen and municipality, Zamboanga Peninsula, April - June 2022 (OPV)

	OPV (1st Dose)			OPV (2nd Dose)			OPV (3rd Dose)		
	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %
REGION 9	25,893	13,698	52.9%	26,724	13,728	51.37%	27,414	14,824	54.07%
DAPITAN CITY	145	117	81%	153	126	82%	165	135	82%
DIPOLOG CITY	686	431	63%	691	458	66%	732	541	74%
ZAMBOANGA CITY	3,035	4,249	140%	3,638	4,080	112%	3,730	4,202	113%
PAGADIAN CITY	1,132	23	2%	1,159	133	11%	1,083	200	18%
ISABELA CITY	675	775	115%	634	733	116%	607	752	124%
ZAMBOANGA DEL NORTE	4,910	3,444	70%	5,012	3,287	66%	5,411	3,571	66%
ZAMBOANGA DEL SUR	9,182	2,677	29%	9,192	2,956	32%	9,340	3,382	36%
ZAMBOANGA SIBUGAY	6,128	1,982	32%	6,245	1,955	31%	6,346	2,041	32%

Table 2. Catch-up immunization coverage among infants ages 0-23 months who missed their routine immunizations by antigen and municipality, Zamboanga Peninsula, April - June 2022 (IPV and MPV)

	IPV (1st Dose)			IPV (2nd Dose)			MCV (1st Dose)			MCV (2nd Dose)		
	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %
REGION 9	27,633	15,646	56.62%	75,867	24,076	31.73%	28,342	15,919	56.17%	27,034	15,990	59.15%
DAPITAN CITY	166	134	81%	1,755	1,108	63%	153	126	82%	165	131	79%
DIPOLOG CITY	704	559	79%	2,794	1,288	46%	678	566	83%	676	678	100%
ZAMBOANGA CITY	3,623	4,615	127%	18,596	7,584	41%	4,233	5,234	124%	4,093	5,092	124%
PAGADIAN CITY	1,043	236	23%	4,290	352	8%	1,344	321	24%	1,424	411	29%
ISABELA CITY	640	900	141%	2,544	1,388	55%	728	875	120%	443	864	195%
ZAMBOANGA DEL NORTE	5,526	3,559	64%	17,145	4,590	27%	5,273	3,456	66%	4,691	3,408	73%
ZAMBOANGA DEL SUR	9,351	3,545	38%	13,751	5,585	41%	9,660	3,378	35%	9,434	3,379	36%
ZAMBOANGA SIBUGAY	6,580	2,098	32%	14,992	2,181	15%	6,273	1,963	31%	6,108	2,027	33%

Table 3. Catch-up immunization coverage among infants ages 0-23 months who missed their routine immunizations by antigen and municipality, Zamboanga Peninsula, April - June 2022 (Penta)

	Penta (1st Dose)			Penta (2nd Dose)			Penta (3rd Dose)		
	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %
REGION 9	25,392	13,871	54.63%	26,362	13,964	52.97%	27,704	14,543	52.49%
DAPITAN CITY	147	118	80%	162	131	81%	175	136	78%
DIPOLOG CITY	641	424	66%	710	458	65%	721	534	74%
ZAMBOANGA CITY	2,899	4,352	150%	3,655	4,132	113%	3,698	4,172	113%
PAGADIAN CITY	1,117	19	2%	1,156	174	15%	1,100	263	24%
ISABELA CITY	676	782	116%	638	759	119%	651	749	115%
ZAMBOANGA DEL NORTE	4,645	3,460	74%	4,657	3,491	75%	5,320	3,533	66%
ZAMBOANGA DEL SUR	9,116	2,731	30%	9,100	2,866	31%	9,537	3,211	34%
ZAMBOANGA SIBUGAY	6,151	1,985	32%	6,284	1,953	31%	6,502	1,945	30%

Table 4. Catch-up immunization coverage among infants ages 0-23 months who missed their routine immunizations by antigen and municipality, Zamboanga Peninsula, April - June 2022 (PCV)

	PCV (1st Dose)			PCV (2nd Dose)			PCV (3rd Dose)		
	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %	Target	Total Doses Given	Percent %
REGION 9	26,165	13,833	52.87%	27,158	13,808	50.84%	29,560	14,559	49.25%
DAPITAN CITY	150	121	81%	159	130	82%	164	133	81%
DIPOLOG CITY	679	443	65%	684	459	67%	779	535	69%
ZAMBOANGA CITY	3,113	4,439	143%	3,803	4,067	107%	4,592	4,135	90%
PAGADIAN CITY	1,139	24	2%	1,160	132	11%	1,261	229	18%
ISABELA CITY	784	762	97%	764	756	99%	759	725	96%
ZAMBOANGA DEL NORTE	4,739	3,432	72%	4,802	3,547	74%	5,430	3,683	68%
ZAMBOANGA DEL SUR	9,331	2,655	28%	9,342	2,835	30%	9,822	3,146	32%
ZAMBOANGA SIBUGAY	6,230	1,957	31%	6,444	1,882	29%	6,753	1,973	29%

Lessons Learned

While the direction and implementation of the catch-up immunization activities stemmed from the success of COVID-19 vaccination campaigns, inter-sectoral collaboration and micro planning were key to success by addressing supply and staffing needs, as well as gaps in demand generation. For example, the Department of Interior and Local Government (DILG) worked with the local chief executives to secure logistical support for the health workers and participate in the health promotion activities. Partners, such as the Philippine Red Cross, midwives, and local government units (LGUs) hired nurses to support activities, enabling the DOH nurses to focus on COVID-19 vaccination. UNICEF supplied routine immunization supplies and vaccines, while the government supported the same for COVID-19. Additionally, the Philippine National Police and the Armed Forces of the Philippines provided security and transportation for health workers in hard-to-reach areas.



A nurse doing her house-to-house visit to vaccinate the child of a Badjao (Sea Nomad) mother.

However, even with this support and collaboration, activities achieved only half of the set targets, driven by several factors. City health office officials noted that high target numbers often did not match with master list planning conducted at the barangay level, highlighting the importance of accurate planning at the most local levels. The low vaccine confidence brought about by the Dengvaxia controversy remained an issue, despite intensified social mobilization and demand generation activities.⁴ Vaccinators also recognized a need for a local chief or executive, such as a mayor or a governor, to be vaccine champions for their localities and to sustainably enforce policies that help incentivize parents/caregivers to bring their children for vaccination services.

Looking Forward

With the pandemic ending, health workers in the Zamboanga Peninsula are shifting their focus to non-COVID services, including routine immunization. Furthermore, multi-sectoral collaboration is continuing, including advocacy for immunization from the Department of Education and Department of Social Welfare and Development. As staff and resources return to routine activities alongside strong advocacy for immunization, planning must ensure sufficient resources are being used for catch-up activities to maintain progress.

To address the remaining immunization gap, the catch-up immunization campaign will continue wherein local government unit health workers are allotted one day every month to conduct door-to-door vaccination activities to track and vaccinate missed children. The commitment of local government officials, along with a multi-sectoral approach, is crucial in ensuring the success and sustainability of the catch-up immunization campaign, which aims to protect vulnerable children from vaccine-preventable diseases. It is also important to encourage community members and local leaders to be vaccine champions, not only encourage others to bring their children to vaccine sites but also create policies and strategies to maintain coverage for the future.



A nurse and barangay health worker setting up their vaccination post in front of a tiny neighborhood store (sari-sari store) where Badjao mothers are gathering.

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ABOUT THE COVID-19 RECOVERY FOR ROUTINE IMMUNIZATION PROGRAMS FELLOWSHIP

In May 2022, Sabin's Boost Community and the World Health Organization (WHO) launched the first cohort of the COVID-19 Recovery for Routine Immunization Programs Fellowship. The aim of this program was to strengthen the capacity of national and sub-national immunization professionals to plan and implement immunization programming during the COVID-19 recovery period, with the ultimate goal of reversing the declining rates of immunization coverage.

LEARN MORE:

<https://boostcommunity.org/page/COVID-19-Recovery-Fellowship>

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