

Vaccines Case Study: Niger, 2015

Vaccinating older children against pneumococcal diseases in Niger



A nurse preparing a syringe in Niger. ©Sylvain Cherkaoui/Cosmos

Background

Médecins Sans Frontières/Doctors Without Borders (MSF) has worked in a number of regions in Niger¹ since 1985, focusing on reducing child mortality during annual “hunger gaps” and malaria outbreaks during the rainy season, as well as providing humanitarian assistance to refugees and people internally displaced by violence. In the Magaria district, Zinder region, MSF provided medical and nutritional care for children under the age of five, supporting the paediatric unit of Magaria hospital, as well as a number of health centres. Efforts to decentralise care made medical care available through community health workers, who also carried out preventive and outreach activities including vaccinations and health promotion.

Pneumonia is the leading cause of death of children under the age of five worldwide, killing more than 800,000 children in 2017 alone.² Niger is among the five countries with the highest pneumonia mortality rates.³ Pneumonia is the second-leading cause of death in the country after malaria. The pneumococcal conjugate vaccine (PCV)*

* Two pneumococcal conjugate vaccines (PCV), PCV-10 and PCV-13, can provide protection against pneumonia, as well as other serious illnesses such as meningitis and sepsis, caused by *Streptococcus pneumoniae* infections. PCV is [recommended by WHO](#) for inclusion in every government’s Expanded Programme on Immunization (EPI) for infants up to 24 months, and children aged 2-5 years who are at high risk of pneumococcal infection.

provides protection against many types of pneumonia and other illnesses caused by pneumococcal infection and is recommended by the World Health Organization (WHO) for inclusion in national routine childhood immunisation programmes.⁴ In September 2013, the Nigerien Ministry of Health (MoH) announced the introduction of several new vaccines, including PCV, into the national immunisation programme. This introduction included the recommendation to vaccinate children up to 23 months of age who had not been fully vaccinated or who had missed doses in their first 11 months of life. This recommendation is in line with WHO guidance.³

Per 2020 UNICEF data, an estimated 60% of children in Niger received the second dose of measles-containing vaccine.⁵ In the Zinder region, a demographic and health survey conducted in 2012 demonstrated vaccination coverage of 41%.⁶ Furthermore, a vaccination coverage survey conducted by MSF Epicentre in the Magaria district in 2014 also showed low immunisation rates, with coverage for measles estimated between 21% (using information from a vaccination card only) and 54% (with or without a vaccination card).⁷ In order to improve vaccination coverage rates for children in Magaria, including the newly introduced PCV, MSF worked with the Nigerien MoH in early 2015 to conduct a multi-antigen vaccination campaign with PCV-13, pentavalent* and measles vaccines. In line with the MoH guidance, this campaign included vaccinating children up to 23 months of age. Seven locations in Magaria were targeted, representing 56% of children under two years old in the district.

Obtaining vaccines for older children in Niger

As a low-income country, Niger is eligible to receive financial support from Gavi, the Vaccine Alliance, for immunisations, and is subject to the prices that Gavi negotiates with pharmaceutical corporations that are the lowest global prices. However, despite WHO recommendations to vaccinate children aged up to 23 months if they have missed previous doses, Gavi only purchases vaccines for national routine immunisation programmes for children up to 11 months of age. Countries receiving Gavi support are not able to access vaccines through Gavi in order to vaccinate children over 11 months, despite WHO recommendations to do so. As a result, the Nigerien MoH and MSF were unable to access a subsidised supply of vaccines from Gavi for use in Niger to vaccinate children aged 11-23 months in the planned vaccination campaign.

MSF aimed to use three vaccines as part of the 2015 campaign (measles, pentavalent and PCV). Although each vaccine posed its own procurement challenges, accessing an alternative supply of PCV in particular presented significant affordability challenges. The two available PCV vaccines (PCV-10 and PCV-13) at the time were some of the newest and highest-priced vaccines on the market,⁸ making it expensive for countries and organisations to buy them outside of Gavi support.

However, in November 2013, Gavi published a document detailing a mechanism by which civil society organisations (CSOs) such as MSF could access the lowest global prices for vaccines, including for “additional age groups”.⁹ The document outlined a novel means of vaccine procurement (and has since been updated and corrected).⁹ At the time, the document stated, “CSOs could make a request to UNICEF with a supporting letter from the Ministry of Health endorsing the programme and demonstrating that the organisation is accredited to provide

* Pentavalent vaccine components include diphtheria, tetanus, whole-cell pertussis, hepatitis B and *Haemophilus influenzae* type b (DPT-Hib-HepB).

this type of service in country. [The vaccines] would be available at the prices Gavi pays.” MSF therefore worked under the premise that this mechanism would enable the procurement of PCV-13 at the Gavi price of US\$3.10/dose (the lowest global price at the time) for the planned campaign, including for vaccinating children 11-23 months of age.

MSF approached UNICEF Supply Division, which buys vaccines on behalf of Gavi, for a cost estimate to procure 56,722 doses of PCV-13, the estimated need based on population figures. Initial communication from UNICEF claimed that the supply could not be obtained at Gavi prices to vaccinate children over 11 months of age, even though MSF had obtained a supporting letter from the Nigerien MoH in accordance with Gavi’s 2013 CSO procurement mechanism outlined above. Gavi stated that the letter was not sufficient to fulfil the requirements outlined in the mechanism document, and specifically did not address the government’s approval of the MSF programme (doses, timing, and location) nor provide evidence demonstrating MSF’s accreditation. UNICEF then offered MSF the Pan American Health Organization (PAHO) price of US\$15.70/dose for PCV-13. The PAHO Revolving Fund¹⁰ is a long-standing pooled procurement mechanism that negotiates prices on behalf of the countries of the Americas, typically securing more affordable prices than if countries individually negotiated with companies. PAHO has an exception that allows only Gavi to receive a lower price for vaccines for countries below a certain gross national income. The PAHO price was still much higher than the Gavi price of US\$3.10/dose.

Continued negotiations between MSF, Gavi, UNICEF Supply Division and Pfizer led Gavi to make the following admittance of error: “Through this set of communications we have noted the inaccuracy in the FAQ with regards to the applicability to PCV and will be amending that document... Beyond making this amendment to the FAQ, our views on CSO access to Gavi prices are as outlined in the document.”¹¹ As a result, MSF was unable to access a subsidised supply of PCV-13 to vaccinate children 11-23 months old through Gavi’s CSO procurement mechanism.

As a last resort, MSF was forced to use part of a previous PCV-13 donation¹² from Pfizer to vaccinate children 11-23 months old for this campaign. While the vaccines from this donation were free, acceptance of this donation was an exception to MSF’s corporate donation policy, which views pharmaceutical product donations as undermining long-term efforts to expand access to affordable vaccines and medicines.¹³ Of the 56,722 doses of PCV-13 needed, Gavi supplied 27,400 for children aged 0-11 months through the MoH, while MSF supplied the remaining doses from the Pfizer donation for children aged 11-23 months.

Procuring the supply of the measles and pentavalent vaccines brought similar challenges. MSF used Gavi-supported MoH vaccines for children aged 0-11 months, while MSF was required to supply the vaccines needed for children over 11 months of age. These were ordered through MSF’s supply centre, and therefore procured directly from the vaccine manufacturers. Measles and pentavalent vaccines are less expensive than newer vaccines such as PCV, and MSF routinely keeps a stock of these vaccines. However, the multiple supply scenarios required to access the three different vaccines needed for this campaign required significant additional time and resources that could have been avoided if Gavi supported organisations and governments to vaccinate children over 11 months of age, as recommended by WHO.

Ultimately, between April and July 2015, MSF conducted the vaccination campaign in three rounds in the seven priority areas of Magaria district. For all children (with or without a vaccination card), an estimated coverage rate of 81% was achieved for the full course of the measles vaccine, 85% for pentavalent, and 78% for PCV-13.

Crucially, an estimated 84% of all the children vaccinated were between 11 and 23 months of age—children who would otherwise not have been eligible for vaccination through Gavi support.

Conclusions and future solutions

Gavi policies

Despite WHO recommendations to vaccinate children over 11 months of age who have missed their recommended primary vaccinations, Gavi only purchases vaccines for routine immunisation programmes for children up to 11 months of age, even if a government includes the WHO recommendation in their national EPI policy. This represents a missed opportunity to fully protect children against preventable diseases, and undermines governments' efforts to align their national immunisation programmes with WHO recommendations. Gavi should align its policies with WHO recommendations and provide the needed vaccines for governments to realise their national immunisation programme goals.

The Humanitarian Mechanism

This experience highlighted the lack of vaccine accessibility for humanitarian organisations such as MSF. Due to the multiple barriers MSF faced in accessing affordable prices for PCV in a number of settings, including Niger, MSF launched “A Fair Shot” campaign¹⁴ in April 2015. This campaign called on the two global manufacturers of PCV, Pfizer and GlaxoSmithKline (GSK), to reduce the price of their products to US\$5 per child (i.e., for the full three-dose course) for developing countries and humanitarian organisations.

After working with WHO and other stakeholders to define the challenges of procuring vaccines in emergencies, a Humanitarian Mechanism¹⁵ for the timely and affordable supply of vaccines in emergencies was jointly launched by WHO, MSF, UNICEF and Save the Children in May 2017. With WHO acting as the validation body, the Mechanism enabled the procurement of vaccine products pledged to the Mechanism at the lowest global prices for CSOs, governments and United Nations (UN) agencies responding to emergencies. In September and November 2016, GSK¹⁶ and Pfizer¹⁷ each announced they would provide access to their PCV products through the Humanitarian Mechanism at the lowest global price of US\$3.05 per dose for NGOs, CSOs and UN agencies; their pledges excluded governmental access. Since the launch, the Humanitarian Mechanism facilitated access to PCV for more than 20 MSF emergency vaccination activities in countries such as Central African Republic (CAR), Greece, Niger, Nigeria, South Sudan and Syria, amongst others.

While the Humanitarian Mechanism would facilitate access to PCV-13 at the lowest global price for an MSF PCV-13 vaccination campaign for children over 11 months of age in Niger, the Mechanism should not be limited to PCV. Other manufacturers must commit to providing other vaccines to the Mechanism at the lowest global price to ensure that MSF and others do not face the same challenges with new and expensive vaccines entering the market. As of January 2022, no other manufacturers have committed to providing vaccines to the Humanitarian Mechanism; the only other vaccine available is GSK's rotavirus vaccine.¹⁸

References

- ¹ MSF. Niger. [Online]. 2019 [Cited 2019 Oct 21]. Available from: <https://www.msf.org/niger>
- ² WHO. Pneumonia. Key facts. [Online]. 2019 Aug 2 [Cited 2019 Oct 21]. Available from: <https://www.who.int/news-room/fact-sheets/detail/pneumonia>
- ³ McAllister DA, Liu L, Shi T, et al. Global, regional, and national estimates of pneumonia morbidity and mortality in children younger than 5 years between 2000 and 2015: a systematic analysis. *Lancet* 2019;7(1):e47-e57. [Cited 2019 Oct 21]. Available from: [https://doi.org/10.1016/S2214-109X\(18\)30408-X](https://doi.org/10.1016/S2214-109X(18)30408-X)
- ⁴ WHO. WHO recommendations for routine immunization – summary tables. [Online]. 2019 Apr [Cited 2019 Oct 21]. Available from: https://www.who.int/immunization/policy/immunization_tables/en/
- ⁵ UNICEF. Data Warehouse. [Online]. 2020 [Cited 2021 Aug 25]. Available from: https://data.unicef.org/resources/data_explorer/unicef_f/?ag=UNICEF&df=GLOBAL_DATAFLOW&ver=1.0&dq=IM_MC_V2..&startPeriod=2017&endPeriod=2021
- ⁶ Institut National de la Statistique (INS), Ministère des Finances, République du Niger. Enquête Démographique et de Santé et à Indicateurs Multiples, 2012. [French]. [Online]. 2013 Sep [Cited 2021 Aug 25]. Available from: <https://dhsprogram.com/pubs/pdf/FR277/FR277.pdf>
- ⁷ Salou H. Epicentre. MSF. Enquête transversale de mortalité rétrospective et de couverture vaccinale. Département de Magaria, Région de Zinder, Niger, février-mars 2014. [French]. May 2014.
- ⁸ MSF. The Right Shot: Bringing down barriers to affordable and adapted vaccines - 2nd Ed., 2015. [Online]. 2015 Jan 19 [Cited 2019 Oct 21]. Available from: <https://msfaccess.org/right-shot-bringing-down-barriers-affordable-and-adapted-vaccines-2nd-ed-2015>
- ⁹ Gavi. Civil society access to Gavi vaccine prices. Frequently asked questions. [Online]. 2015 Aug [Cited 2019 Oct 21]. Available from: <https://www.gavi.org/sites/default/files/document/faq---civil-society-access-to-gavi-pricing-for-vaccinespdf.pdf>
- ¹⁰ PAHO. PAHO Revolving Fund. [Online]. [Cited 2019 Oct 21]. Available from: https://www.paho.org/hq/index.php?option=com_content&view=article&id=1864
- ¹¹ Malhame M. Personal communication. 2015 Mar 24.
- ¹² MSF. MSF statement on accepting donations of the pneumococcal conjugate vaccine (PCV). [Online]. 2015 Jan 18 [Cited 2019 Oct 21]. Available from: <https://msfaccess.org/msf-statement-accepting-donations-pneumococcal-conjugate-vaccine-pcv>
- ¹³ Cone J. There is no such a thing as “free” vaccines: Why MSF rejected Pfizer’s donation offer of pneumonia vaccines. The BMJ Opinion. [Online]. 2016 Oct 19 [Cited 2019 Oct 21]. Available from: <http://blogs.bmj.com/bmj/2016/10/19/jason-cone-there-is-no-such-a-thing-as-free-vaccines-why-msf-rejected-pfizers-donation-offer-of-pneumonia-vaccines/>
- ¹⁴ MSF. A Fair Shot campaign. [Online]. [Cited 2019 Oct 21]. Available from: <https://www.afairshot.org/>
- ¹⁵ WHO. Accessing Affordable and Timely Supply of Vaccines for use in Humanitarian Emergencies: the Humanitarian Mechanism. WHO Working Document. [Online]. 2021 Mar 4 [Cited 2021 Aug 25]. Available from: https://www.who.int/immunization/programmes_systems/sustainability/The_Humanitarian_Mechanism_ToRs.pdf
- ¹⁶ GSK. GSK sets out further steps to address emerging global health security challenges. [Online]. 2016 Sep 19 [Cited 2019 Oct 21]. Available from: <https://www.gsk.com/en-gb/media/press-releases/gsk-sets-out-further-steps-to-address-emerging-global-health-security-challenges/>
- ¹⁷ Pfizer. Pfizer announces major expansion of humanitarian assistance program. [Online]. 2016 Nov 11 [Cited 2019 Oct 21]. Available from: <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-announces-major-expansion-of-humanitarian-assistance-program>
- ¹⁸ GSK. GSK makes landmark pricing agreement for rotavirus vaccine, Rotarix, for use with children living in humanitarian crises. [Online]. 2021 Mar 04 [Cited 2022 Feb 15]. Available from: <https://www.gsk.com/en-gb/media/press-releases/gsk-makes-landmark-pricing-agreement-for-rotavirus-vaccine-rotarix-for-use-with-children-living-in-humanitarian-crisis/>