DELIVERING MENAFRIVAC USING THE CONTROLLED TEMPERATURE CHAIN APPROACH

OPTIMIZE

World Health Organization

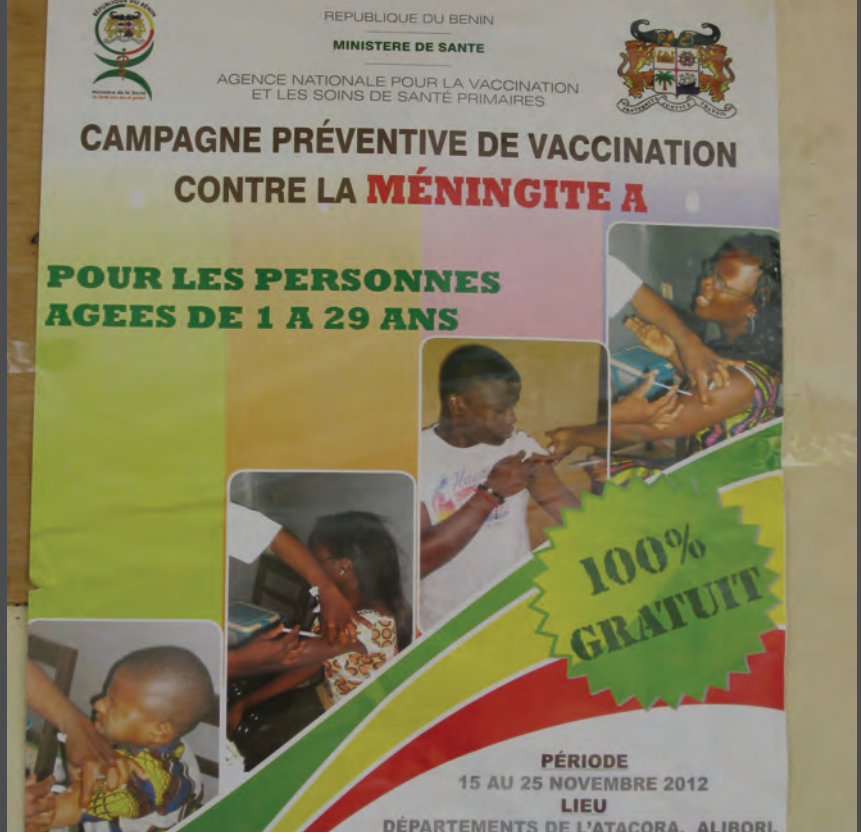
PATH

In November 2012, the first immunization campaign to use a controlled temperature chain (CTC) took place in Banikoara in northern Benin. This booklet contains photographs taken during the campaign, where over 155,000 people were vaccinated using the CTC approach.

The photo set accompanies an article on the MenAfriVac CTC campaign in the January 2013 edition of Op.ti.mize, an electronic newsletter on the vaccine supply chain. You can view an archive of all Op.ti.mize newsletters here:
www.path.org/projects/project-optimize-newsletter

For more information on project Optimize:
www.path.org/projects/project-optimize
www.who.int/immunization_delivery/optimize

For information on the Meningitis Vaccine Project:
www.meningvax.org



1. Poster for the MenAfriVac campaign

MenAfriVac, a meningitis A vaccine developed by the Serum Institute of India with support from PATH and the World Health Organization through the Meningitis Vaccine Project, is the first vaccine to be authorized by WHO for use at ambient temperatures of up to 40°C for up to four days.

Photo: WHO / Sylvestre Tiendrebeogo

2. **People queue to receive the MenAfriVac vaccine**

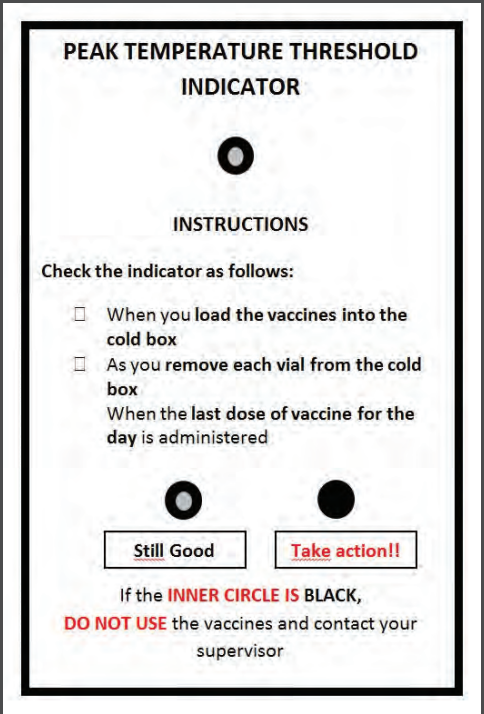
The campaign in Banikoara provided a unique opportunity to get a better understanding of how the CTC approach works in the field.

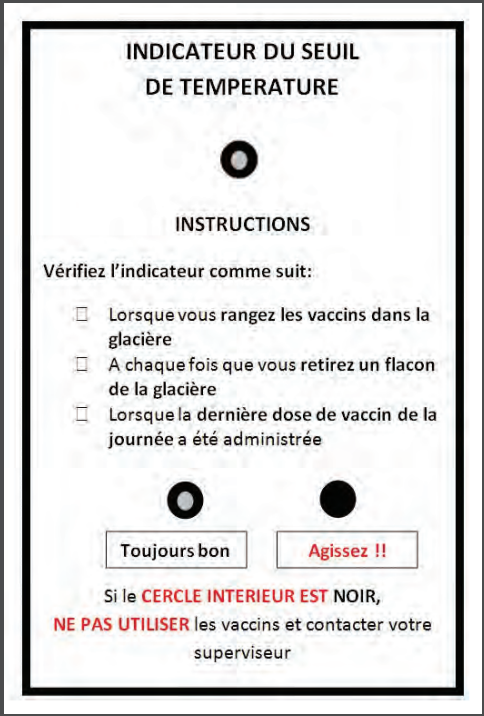
Photo: WHO / Rodrigue Barry

3. **A girl receives the MenAfriVac vaccine**

Because a controlled temperature chain had never been tested before with MenAfriVac, health workers carefully monitored adverse events following immunization (AEFI). No increases in AEFIs were found using the CTC approach.

Photo: WHO / Rodrigue Barry





4. A peak threshold indicator

With MenAfriVac only prequalified for use at ambient temperatures up to 40°C, precautions were taken to monitor exposure to temperatures at or above 40°C. This peak threshold indicator has a temperature-sensitive sticker that changes color when the threshold (in this case 40°C) is reached.

Photo: PATH

5. How the peak threshold indicator works

One indicator was placed in each vaccine carrier. Vaccinators were instructed to check the indicator each time they took a vial out of the vaccine carrier and contact their supervisor if they noticed the sticker had changed color. In this way, vials found to have been exposed to temperatures above 40°C would be discarded.

Photo: PATH/ Simona Zipursky

6. Threshold indicators easy to use

After extensive use, the indicators were deemed easy to read and use by health care workers, and supervisors' reports validated their correct use in the field. Together with the vaccine vial monitors (VVMs) on the vaccine's label, which monitor a vaccine's cumulative exposure to heat, the peak threshold indicator gave health care workers confidence that the vaccines kept in a CTC were still safe and effective to use.

Photo: WHO / Olivier Ronveaux

7. The CTC approach offers health workers more flexibility

Banikoara is a remote area in northern Benin. Using the CTC approach, health workers were able to revise their microplans and travel for three consecutive days to reach the entire target population, without needing to return at night to the health post.

Photo: WHO/ Olivier Ronveaux

8. On the MenAfriVac campaign trail

Although midday temperatures reached 39°C during the campaign, closed vial wastage (the number of vaccine vials thrown away without being opened) accounted for just 10 out of 15,500 vials, and some of those were due to vial breakage.

Photo: WHO / Rodrigue Barry

9. Each mark represents the number of days in CTC

At the end of each day, any unused vials that had been kept in a CTC for a day were marked with a single line. At the beginning of the following day, these marked vials were used first. If by chance these marked vials were not used again, at the end of each subsequent day they were marked with an additional line (up to three). This system was easy for health care workers and supervisors to implement and ensured that prequalification conditions were met.

Photo: PATH/ Simona Zipursky

10. Health workers followed procedures correctly during and after CTC

Concern that health care workers would be confused by having more than one set of rules to follow during immunization campaigns proved unfounded. It had been feared that using the CTC approach for the MenAfriVac campaign and then returning to the regular cold chain for another campaign might lead to inappropriate cold chain procedures being followed. But in the polio vaccination campaign conducted in Banikoara just a week after the MenAfriVac campaign, the cold chain was again used properly.

Photo: PATH/ Simona Zipursky

11. Health workers prefer the "CTC way"

At the end of the MenAfriVac CTC campaign, vaccinators and supervisors were asked what they thought of the approach. After weighing the benefits, the challenges, the learning curve, and the limitations, every person asked said they preferred conducting campaigns "the CTC way."

Photo: PATH/
Simona Zipursky

12. It can be done

Based on results of the MenAfriVac pilot use of the CTC in Banikoara, we know the CTC is possible. Additional experiences are needed to further document this new approach.

Photo: PATH/ Simona Zipursky

This photo book is available online: http://flic.kr/s/aHsjDz4cLT

WHO | www.who.int/immunization_delivery/optimize

PATH | www.path.org

TECHNET21 | www.technet-21.org

MENINGITIS VACCINE PROJECT | www.meningvax.org

Cover Photo: WHO/Rodrigue Barry

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