

Dramatic fall in cases of meningitis A in 3 west African nations after new vaccine introduction

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Burkina Faso, Mali, and Niger report the lowest number of confirmed meningitis A cases ever recorded during an epidemic season this year following the successful introduction of a new vaccine that could eliminate the primary cause of the deadly disease from Africa's meningitis belt, announced the Meningitis Vaccine Project (MVP) today, which spearheaded development of the vaccine. Also today, a new analysis published in the journal Health Affairs shows that introducing this vaccine in seven highly endemic African countries could save as much as US\$300 million over a decade and prevent a million cases of disease.

With the 2010-2011 [epidemic](#) season largely over, [surveillance data](#) compiled by the [World Health Organization](#) (WHO) show just four confirmed cases of [meningitis](#) A in Burkina Faso, the first country to introduce the vaccine nationwide. Three of the four cases occurred in individuals from neighboring Togo who crossed the border for [medical care](#), and the fourth case was a [citizen](#) of Burkina Faso who had not received the new vaccine. No confirmed cases were reported in Mali, while four cases were reported in Niger, all in unvaccinated individuals. While these initial data are extremely encouraging, continuing surveillance for cases of meningitis and robust systems for monitoring [vaccination coverage](#) will be crucial to confirm the impact of the vaccine as it is introduced across the meningitis belt.

Six months ago, the three West [African countries](#) were the first to introduce a revolutionary new vaccine called MenAfriVac™, vaccinating nearly 20 million people in a massive immunization campaign. While Burkina Faso launched the vaccine nationwide, immunizing close to 100% of its target population, Mali and Niger opted for a phased approach, with campaigns in districts at highest risk conducted in late 2010 and the remainder to be conducted in late 2011.

"The huge expectations that we had for this vaccine are now being fulfilled," said Professor Adama Traoré, Minister of Health of Burkina Faso. "Our country has been suffering from repeated meningococcal A epidemics for several decades. Meningitis A cases are close to zero this year, which will enable us to divert resources to help combat other diseases and other types of epidemic."

The first vaccine designed specifically for Africa, MenAfriVac was developed by MVP—a partnership between the Seattle-based nonprofit PATH and WHO—through an innovative vaccine development model spanning four continents. The vaccine costs less than one-tenth the US\$500 million usually required to develop and bring a new vaccine to market.

The new conjugate vaccine has several advantages over older polysaccharide vaccines currently used to combat meningitis epidemics in Africa: it protects children as young as one; and it is expected to both protect from the disease for significantly longer than the vaccine now used to combat epidemics, and to reduce infection and transmission. For these reasons, it is expected to help health workers eliminate meningococcal A epidemics in the 25 countries of the African meningitis belt stretching from Senegal in the west to Ethiopia in the east. Vaccine monitoring activities conducted thus far show the vaccine to be safe and highly effective.

Cost-Benefit Analysis for Widespread, Phased Introduction of Vaccine

Planning is now under way for a new round of immunization campaigns in 2011-2012. Campaigns will be finalized in Mali and Niger, and new campaigns will begin in Cameroon, Chad, and Nigeria, providing a contiguous block of immunized populations across the heart of the meningitis belt. Counting those vaccinated during the December 2010 campaigns, nearly 65 million people are expected to have received the MenAfriVac vaccine by the end of the year.

Experts from PATH, WHO, and partner organizations are supporting the ministries of health in Cameroon, Chad, and Nigeria in determining appropriate strategies for vaccine introduction to ensure sufficient vaccine supplies and availability of health care personnel, as well as adequate disease surveillance and vaccine safety monitoring systems.

"The commitment of ministries of health in the African meningitis belt, partners, and affected communities to introduce this vaccine quickly, is remarkable," said Dr. Luis Sambo, WHO Regional Director for Africa, adding that "WHO and partners will continue to support countries in strengthening disease surveillance and vaccine safety monitoring systems as the vaccine is introduced across Africa."

Developed at a cost less than US\$0.50 per dose, this vaccine is a highly affordable solution to one of the region's most feared health threats. But a significant funding gap needs to be closed if the vaccine is to be rolled out in all 25 countries of the meningitis belt by 2016. The GAVI Alliance, a core supporter of the vaccine's introduction, recently released US\$100 million for vaccine and operational costs for the campaigns in Cameroon, Chad, and Nigeria. An estimated US\$375 million is needed to protect target populations in other countries.

New research published today in the [journal Health Affairs](#) suggests that widespread introduction of MenAfriVac throughout sub-Saharan Africa could prevent more than 1 million cases of illness and free up as much as US\$300 million over the next 10 years that would otherwise be spent on medical costs for diagnosis and treatment, as well as repetitive vaccination campaigns with polysaccharide vaccine. Dr. F. Marc LaForce, Director of MVP and a co-author of the article, said, "This vaccine provides African health authorities, for the first time, with an affordable, long-term solution that protects even young children against meningitis A."

Meningitis is an infection of the thin lining that surrounds the brain and spinal cord. It is one of the world's most dreaded infectious diseases and particularly devastating to children and young adults. Even with antibiotic treatment, at least 10 percent of patients die, with up to 20 percent left with brain damage, deafness, epilepsy, or necrosis leading to limb amputation. In 2009, the seasonal outbreak of meningitis across sub-Saharan Africa infected at least 88,000 people and led to more than 5,000 deaths.

By introducing the meningococcal A conjugate vaccine through mass vaccination campaigns of 1- to 29-year-olds, the goal is to immediately and drastically reduce carriage and transmission of the bacteria and rapidly reduce rates of death and illness caused by the disease. Research to determine how best to integrate the [vaccine](#) into routine immunization programs to protect future birth cohorts is ongoing, with results expected in 2013.

The most prominent groups of meningococci are A, B, C, Y, and W135. Groups A, B, and C are responsible for the majority of cases worldwide, and group A causes deadly, explosive epidemics every 8 to 10 years, predominantly in the African meningitis belt, which has an at-risk population of about 450 million. One of the largest epidemic waves ever

recorded swept across the entire region in 1996-1997, causing more than 250,000 cases and 25,000 deaths.

More information: www.meningvax.org/

Provided by Meningitis Vaccine Project

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