



Editorial

The measles campaign in West and Central Africa: Remembering the future

ARTICLE INFO

Keywords:

Measles
Vaccine
Field work
West Africa

ABSTRACT

The rainy season was once the harbinger of measles and child deaths in Western Africa, but measles has now become so uncommon that some younger West African doctors have never seen a single case. A series of successful measles campaigns were carried out in the late eighties through the early part of this century in West Africa—these campaigns have almost eliminated measles in Mali, the thirtieth poorest country in the world. This article provides a retelling of the measles campaigns that were carried out in West Africa during that time period for young doctors and vaccine researchers. The power of vaccination to stop an endemic disease from killing between 5 and 20% of children under the age of five living in rural villages in West and Central Africa is recalled, and the importance of vaccination for the improvement of human life is considered deserving of renewed emphasis.

© 2008 Elsevier Ltd. All rights reserved.

1. Introduction

The words Mali and Timbuktu invoke images of dryness, sand, and desert. In truth, the contrast between those readily available images and the reality of the “hivernage” in West Africa could not be more dramatic. For an outsider, the experience of the rainy season can only be compared to having the Niger pour down from the sky; the roads turn to mud, the fields become puddles, and even sheet metal roofs do not manage to keep huts dry. For those of us who worked on the measles campaigns in West and Central Africa, that kind of rain brings back memories of measles epidemics and the deaths that followed close behind. But some younger West African doctors have no such memories. Those young doctors – even pediatricians – have never seen a single measles case.

AIDS is as devastating now as measles was then. And so, in this period between the ending of one pandemic and the next, it is important to remember the measles vaccination campaigns. Let us remember the triumph of vaccines over disease, even as yet another HIV vaccine trial has failed [1], and concerns are raised about the safety of new and old vaccines in the context of the expansion of the epidemic of HIV in the developing world. This article recalls the experience of vaccinating against measles in rural Africa, and suggests we remember the lessons we learned during those campaigns. We should remember those lessons on that day in the future, when we are setting out to remote villages in West Africa, holding an AIDS vaccine in our hands.

2. Sticks and insects

What young doctors in Africa do not remember, or have now forgotten, is the endless toll of child deaths from measles and mal-

nutrition that accelerated as the rains came down. Then, as now, no food could be planted because of the rain, and families survived on crops that had been stored. By the end of the rains, there was often nothing but sticks and insects for children to eat. Children in the villages would begin to get thin, and then they would get a cough, a runny nose, and the skin rash of measles would follow soon after.

At the time, according to custom in some areas of West Africa, the treatment for children who were ill with measles was not to give them any meat – and not to bathe them either – and so with malnutrition and poor hygiene their measles would become more severe. Due to the effect of the measles virus on mucosal surfaces, the children would develop ulcerations in their mouths, diarrhea, and pneumonia. They would cease to eat entirely, becoming mere ghosts, unable to move and unable to eat, and then they would die.

Children died by the droves—every day during the peak of the measles season, villages would lose more children. During an epidemic, as many as one in three children between the ages of 1 and 5 living in rural villages in Africa would die. The morbidity and mortality was experienced at a personal level by the parents of the children, and by the medical students and physicians working in rural settings (SIB) and mission hospitals (ADG). For a frame of reference, in just 1 year, the World Health Organization (WHO) estimated that measles accounted for 452,000 deaths in Africa (58% of global deaths) [2]. Following the measles vaccine campaigns, this changed so dramatically that villagers and physicians still remember the change.

3. The vaccination campaigns

The first large measles control effort in Africa was the 20-country program that began in 1966 [3]. This effort eliminated measles in

Table 1
Number of reported measles cases, by country group and year of nationwide catch-up supplementary immunization activities (SIAs)—World Health Organization African Region, 1999 and 2005 (reproduced with permission from MMWR)

Country	Year of catch-up SIAs	Population aged <15 years (in millions)	No. of reported measles cases		
			1999 ^a	2005	Continued ^c
				Clinical ^b	
Group A^d					
Botswana	1997, 1998	0.7	439	565	21
Lesotho	1999, 2000	0.7	944	218	1
Malawi	1998	6.1	152	182	24
Namibia	1997	0.8	296	235	2
South Africa	1996, 1997	15.5	385	1,944	609
Swaziland	1997, 1998	0.4	0	79	0
Zimbabwe	1998	5.2	772	403	11
Group A subtotal	–	29.4	2,988	3,626	667
Group B^e					
Angola	2003	7.4	350	397	200
Benin	2001, 2002	3.7	2,573	207	165
Burkina Faso	2003	6.2	5,516	429	231
Burundi	2003	3.4	2,928	79	0
Cameroon	2003	6.7	10,894	1,299	581
Eritrea	2003	2.0	320	1,359	32
Ethiopia	2003, 2004	34.5	5,329	159	321
Gabon	2004	0.6	NA ^f	0 ^g	0 ^g
Gambia	2003	0.6	856	18	0
Ghana	2001, 2002	8.6	15,987	350	27
Guinea	2003	4.1	18,004	95	1
Kenya	2002	14.7	8,601	1,051	97
Liberia	2003	1.5	1,679	8 ^g	8 ^g
Madagascar	2004	8.2	35,156	NA	NA
Mali	2001	6.5	2,506	90	24
Mauritania	2004	1.3	5,263	127 ^g	127 ^g
Niger	2004	6.8	36,156	2,183 ^h	2,183 ^h
Republic of the Congo	2004	1.9	313	125	0
Rwanda	2003	3.9	4,359	259	96
Senegal	2003	5.0	3,666	129	0
Sierra Leone	2003	2.4	NA	29 ^g	29 ^g
Tanzania	2001, 2002	16.3	5,887	713	23 ⁱ
Togo	2001	2.7	2,540	122	28
Uganda	2003	14.5	42,737	926	6
Zambia	2003	5.3	23,518	494	28
Group B subtotal	–	168.8	199,934	10,656	4,176
Total			202,972	14,284	4,845^a

Sources: United Nations, World population prospects the 2004 revision, New York, NY; United Nations, 2005, and World Health Organization, Regional Office for Africa.

^a Data are from aggregate reporting.

^b Numbers of clinically suspected cases reported through the case-based system.

^c Numbers of cases confirmed by epidemiologic linkage or laboratory testing.

^d Countries that adopted the goal of eliminating measles and conducted SIAs during 1996–2000.

^e Countries that conducted SIAs during 2001–2004.

^f Not available.

^g Case numbers from aggregate reports (no data reported through the case-based system).

^h Case-based surveillance was not operational in Niger in 2005.

ⁱ Case numbers from aggregate reports were used because blood samples were taken from only 73% of suspected cases.

The Gambia, but measles quickly returned in other regions. A second large campaign was carried out as an integral component of the Expanded Program on Vaccination (EPI) in the late 1970s and early 1980s by WHO, and subsequent vaccination campaigns have taken place at relatively regular intervals, so as to give every African child at least one chance to be immunized.

Prior to the second measles campaign, information on the coverage of vaccination in rural areas of sub-Saharan Africa was lacking. Measles epidemics occurred cyclically with annual peaks immediately following the rainy season, killing 3–5% of children of all ages and as many as one in three children younger than 5 years of age. Estimates that only 10–37% of children were vaccinated have been published [4,5]. Interest in a second campaign in Mali and other West and Central African countries developed because ear-

lier measles campaigns had a dramatic effect on child mortality from measles, reducing deaths by as much as 90% during the first year of the campaign [2].

Although the WHO and EPI coordinated the campaigns, each of the countries directed its own initiatives. Mobile teams, based in rural hospitals, were used because they had been found to be more cost-effective methods for mass vaccination. Centers for the campaign were set up in small towns at the “hospital of reference” (CSRef, in Mali), where refrigeration was available for the live vaccines used during the campaign. During the campaigns, vehicles with four or five workers – usually medical students, perhaps one doctor, but more often a medical technician that had been trained for this purpose – would go out to the surrounding villages, visiting several different villages during the course of a day.

Download English Version:

<https://daneshyari.com/en/article/2407598>

Download Persian Version:

<https://daneshyari.com/article/2407598>

[Daneshyari.com](https://daneshyari.com)