



Date: June 20, 2005



From: WHO Collaborating Center for
Research, Training and Eradication of Dracunculiasis

Subject: GUINEA WORM WRAP-UP #153

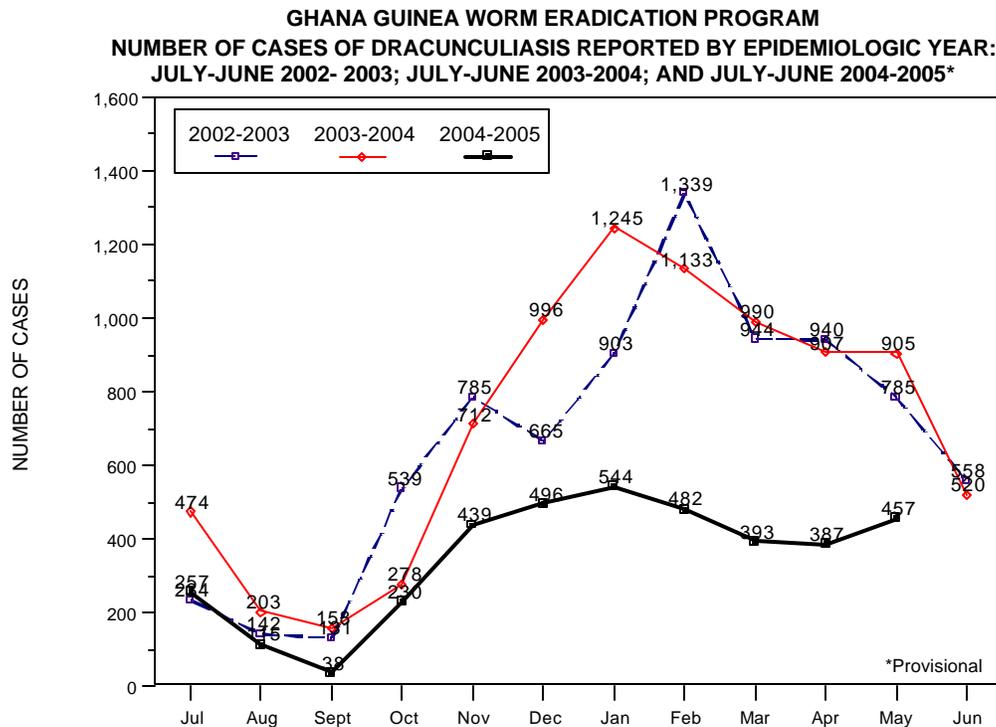
To: Addressees

Explain & Contain Every Case During 2005!

GHANA REDUCES CASES BY -56% IN JANUARY-MAY 2005

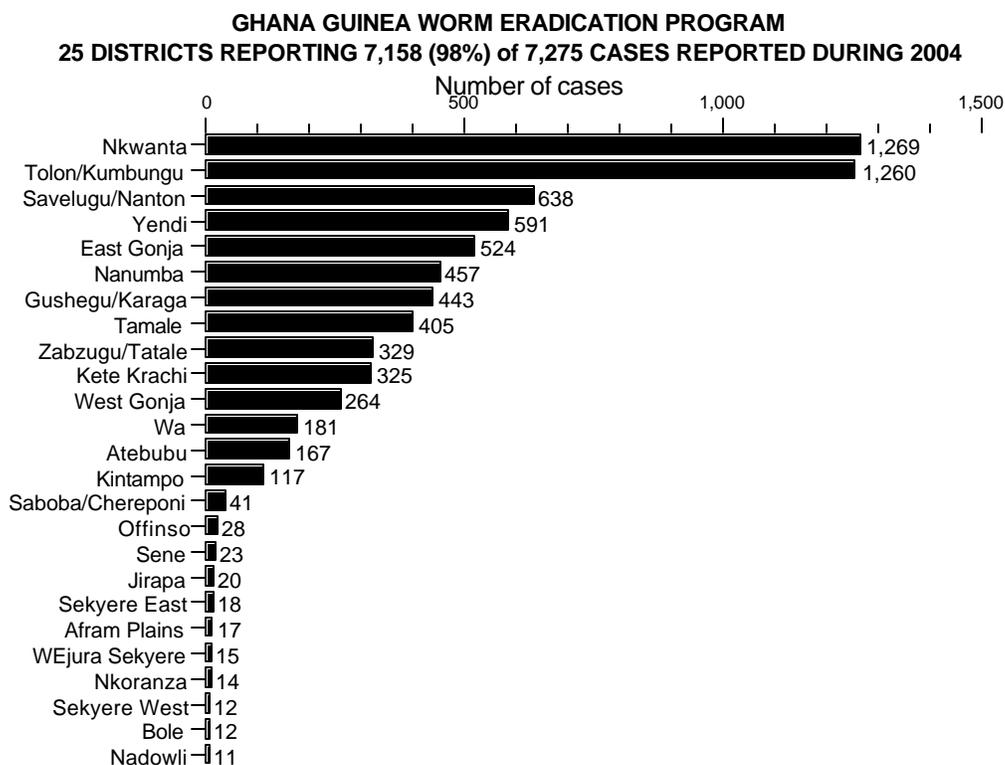
The National Program Coordinator of Ghana's Guinea Worm Eradication Program (GWEP), Dr. Andrew Seidu-Korkor of the Ghana Health Service, reports that during January-May 2005, Ghana detected 2,263 cases of dracunculiasis, in 420 villages, which is a reduction of -56% from the 5,176 cases detected in Ghana during the same period of 2004 (Figure 1). 300 of the villages had indigenous cases. 98% of Ghana's cases in 2004 were reported from only 25 districts (Figures 2 and 3).

Figure 1



Two districts, Nkwanta (Volta Region) and Tolon-Kumbungu (Northern Region), that together reported 35% of Ghana's cases in 2004, have recorded reductions of -90% (from 1,006 to 97 cases) and -11% (from 452 to 404 cases), respectively, in cases during Jan. – Mar. 2005. Two of Tolon-Kumbungu's highest endemic villages, which shared a common water source (Gblarimani and Gburimani- Tibogu), reduced their cases by -93%, from 132 cases to 9 cases, between the first four months of 2004 and of 2005 with aggressive use of ABATE® larvicide and other interventions. Ten U.S. Peace Corps Volunteers helped implement a Worm Week that targeted 5 endemic communities in Nkwanta District in March 2005, after which improved acceptance of bandaging by patients was noted. Guinea worm workers from Nkwanta District held quarterly cross-border meetings with their counterparts in Togo in March and at Kpassa on June 9. In Tolon-Kumbungu, the Suyuhini Drama Group performed in nine endemic villages, educational videos were shown in eight other endemic villages, and educational songs about Guinea worm prevention by four groups of Ghana Red Cross Mothers' Clubs have been recorded for airing on Simli Radio. The Church of Christ has targeted 10 communities for new borehole wells and 13 communities for repair of borehole wells in Tolon-Kumbungu for 2005.

Figure 2

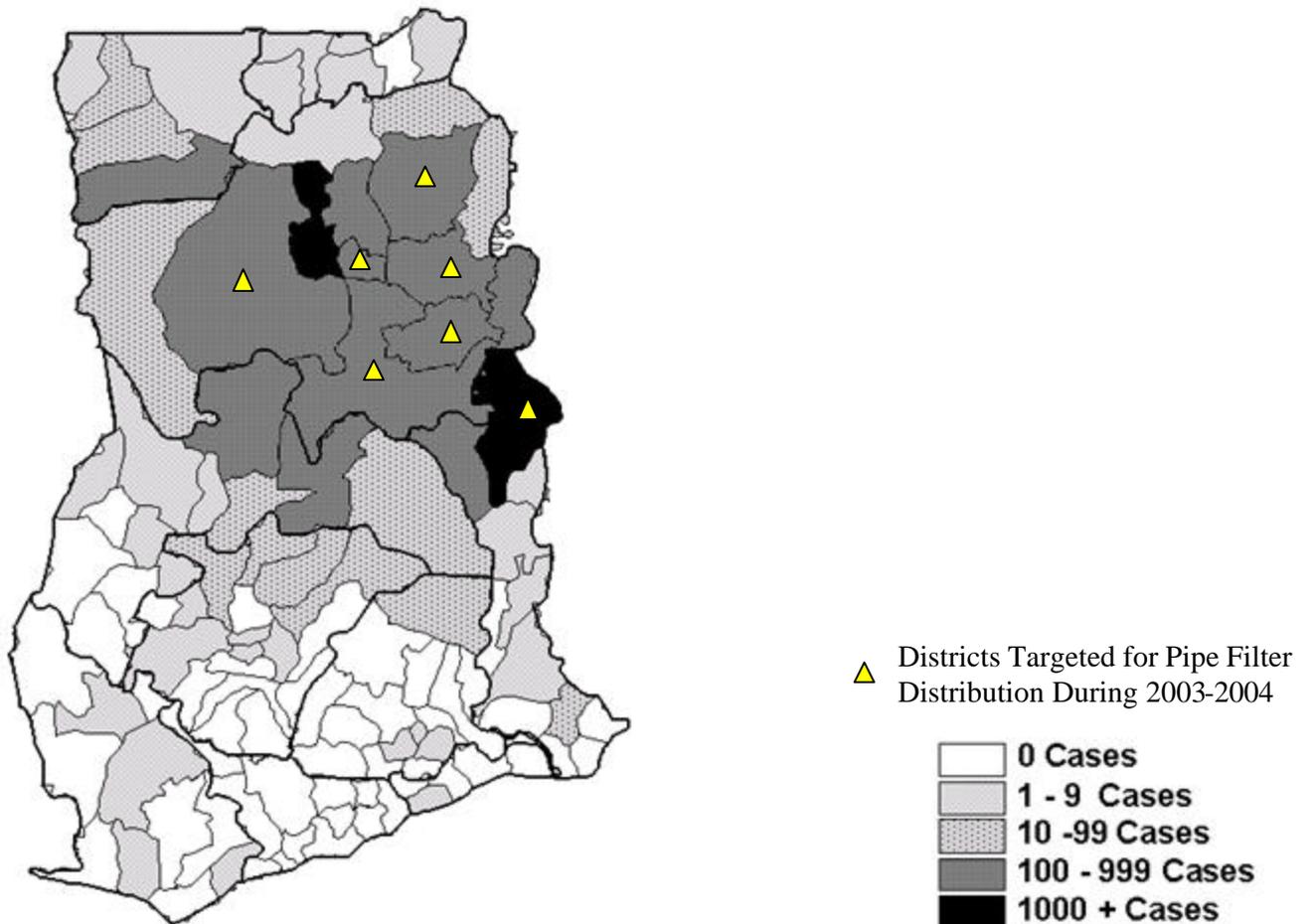


55% of Ghana's cases so far in 2005 were contained. Of the endemic villages, 86% had filters in all households, ABATE® larvicide was used in 82%, and 44% had access to at least one source of safe drinking water. Wa District in Upper West Region also held a Worm Week in late May. As of mid-June 2005, 69 of 133 successful borehole wells (already fitted with handpumps) supported by Government of Ghana HIPC funds were located in 36 Guinea Worm endemic villages in 7 of the top 15 endemic districts. These 36 villages reported 605 (8%) of Ghana's 7,275 cases in 2004.

Dr. Enesto Ruiz- Tiben technical director of the Guinea Worm Eradication Program at The Carter Center, made a consultative visit to Ghana on May 16-27. The WHO National Program Officer, Mr. Edward Gyepi-Gabrah, and Ms. Katherine Conlon of WHO/Geneva undertook a technical support visit to East and West Mamprusi Districts in Ghana's Northern Region to assess the sensitivity of the Community-Based Surveillance System in districts freed from Guinea worm disease, and thereby help Ghana's preparedness for detecting new outbreaks of cases and certification of such areas. The semi-annual Program Review for Ghana's GWEP is scheduled for August 16-17.

Figure 3

Ghana Guinea Worm Eradication Program Distribution of 7,275 Cases of Dracunculiasis in 2004



UPDATE: STATUS OF UNICEF/GATES WATER SUPPLY FOR MALI, NIGER, AND TOGO

As noted in earlier issues, the UNICEF missions in Mali, Niger and Togo received funds from the Contingency Fund of the Bill & Melinda Gates Foundation's original grant for dracunculiasis eradication, to help provide or repair safe sources of drinking water for priority endemic villages in parts of Mali, Niger and Togo before the end of 2005. Mali received \$305,000, Niger received \$257,500, and Togo received \$217,500. The GWEPs in these countries have urged that the wells be implemented before the onset of this year's peak transmission season. The current status of these wells is as follows:

Mali. Ten borehole wells are targeted for 10 key endemic villages in Ansongo, Gao and Gourma Rharous Districts, but were delayed due to financial accounting issues, which have been resolved, between UNICEF/Mali and the Ministry of Water (*Hydraulique*). None of the targeted villages currently has a safe source of drinking water. These ten villages had 98 (28%) of the 356 dracunculiasis cases reported in Mali in 2004. Construction of the wells was scheduled to begin on June 12. The aim is to complete them in time for President Amadou Toumani Toure to personally commission one or more well(s) in Ansongo District in late June or July. Mali has reported 329% more cases in January - May 2005 than in the same period of 2004.

Niger. A list of 12 endemic villages that are to receive ten borehole wells and two large diameter wells has been approved, but drilling has not yet started. These 12 villages had 56 (23%) of the 240 dracunculiasis cases reported in Niger in 2004. None of the twelve villages currently has a safe source of drinking water. Niger has reported a reduction of -14% in cases during January-May 2005 compared to the same period of 2004.

Togo. The list of 14 villages targeted to receive fourteen new borehole wells and 8 other endemic villages targeted for nine repairs has been approved, but selection of a contractor was delayed by the recent political crisis. These 22 villages had 134 (48%) of the 278 dracunculiasis cases reported in Togo in 2004. Thirteen of the targeted villages currently have no safe source of drinking water. Togo's wells are now expected to be completed in about October 2005. Togo has reported a reduction in cases of -66% in January-May 2005, compared to the same five months of 2004 (Figure 4).

IN BRIEF:

Nigeria observed its National Guinea Worm Eradication Day in Abuja on May 10, 2005, with a speech by the Federal Minister of Health, the Honorable Prof. Eyitayo Lambo. The president of Nigeria was represented by the Secretary to the Government of the Federation. Other participants included former Nigerian head of state General (Dr.) Yakubu Gowon, and representatives of WHO, UNICEF and The Carter Center. General Gowon made advocacy visits to Benue, Nasarawa and Niger States in May, and to Ebonyi State in April.

Sudan. The Commissioner for Health of South Sudan, Dr. Achol Marial Deng, was the guest of honor at a conference convened by Medical Skills and Services for the New Sudan (MSSNS) in Grand Rapids, Michigan on May 26-28. The main purpose of the conference was to encourage expatriate Sudanese physicians in North America to return to help improve medical services in post-war Sudan. Dr. Donald Hopkins and Mr. Craig Withers of The Carter Center also

participated in the conference and described health activities that are being assisted by The Carter Center in Sudan. One of the 18 draft recommendations of the conference states: "*The conference recognizes the great job being undertaken by the Samaritan Purse and also that by The Carter Center for Guinea worm eradication in the New Sudan; and recommends for the New Sudan government to make Guinea worm and polio eradication high national priorities*".

Dr. Nabil Aziz the National Program Coordinator of the Sudan GWEP and Dr. Ahmed Tayeh of WHO Geneva made a joint oversight visit on May 8-12 to review eradication activities in and around Juba, in Bahr Al Jabal State. A recent issue of the weekly English language newspaper, *Sudan Mirror* included a front page insert on the status of Guinea worm eradication in Sudan. An interview with Dr. Bellario Ahoy of the South Sudan Secretariat for Health was broadcast on National Public Radio's "Morning Edition" in the United States on May 12, as part of a two-part series called South Sudan: After the Peace. Mr. Conor Hartman, a Carter Center technical advisor to the Sudan GWEP, was featured in a story by the Reuters wire service on May 27, entitled "Sudan peace could help fight flesh-burrowing worm".

Mali conducted Worm Weeks in Ansongo, Gao, Gourma Rharous, and Bourem Districts in May.

Niger. The Minister of Health Mr. Ari Ibrahim chaired the launching of a Worm Week that targeted 30 localities in 3 districts of Tillabery Region, June 6 – 12, 2005. The launching was held in the village of Mari, and was also attended by representatives of the United States Embassy, WHO, UNICEF, The Carter Center, and Niger's Guinea Worm Eradication Program as well as other national, regional, and local health and administrative authorities.

MEETING IN YAOUNDE FOR COUNTRIES IN PRE-CERTIFICATION PHASE



The World Health Organization (WHO) sponsored a meeting of the national program coordinators from three countries in the pre-certification stage (Cameroon, Central African Republic, Chad) and two countries that need verification of the absence of dracunculiasis (Guinea, Sierra Leone) in Yaounde, Cameroon on 23-25 May. The participants presented and discussed the status of dracunculiasis surveillance and intervention in their countries and made recommendations to help prepare for certification in 2007.

The mandate of the WHO Collaborating Center for Research, Training and Eradication of Dracunculiasis at CDC was renewed for five years in March, by mutual consent of WHO, the Pan American Health Association and the director of CDC.

DIANA MEMORIAL FUND AND FRANKLIN MINT AWARD \$3.3 MILLION

The Diana, Princess of Wales Memorial Fund and the Franklin Mint and its owners, Stewart and Lynda Resnick, announced in April an award of \$3,350,000 over three years to The Carter Center. The award is "to support The Carter Center's continuing leadership role in eradicating Guinea worm disease (dracunculiasis) and control river blindness (onchocerciasis) in Africa. ..."

Table 1

Number of cases contained and number reported by month during 2005*

(Countries arranged in descending order of cases in 2004)

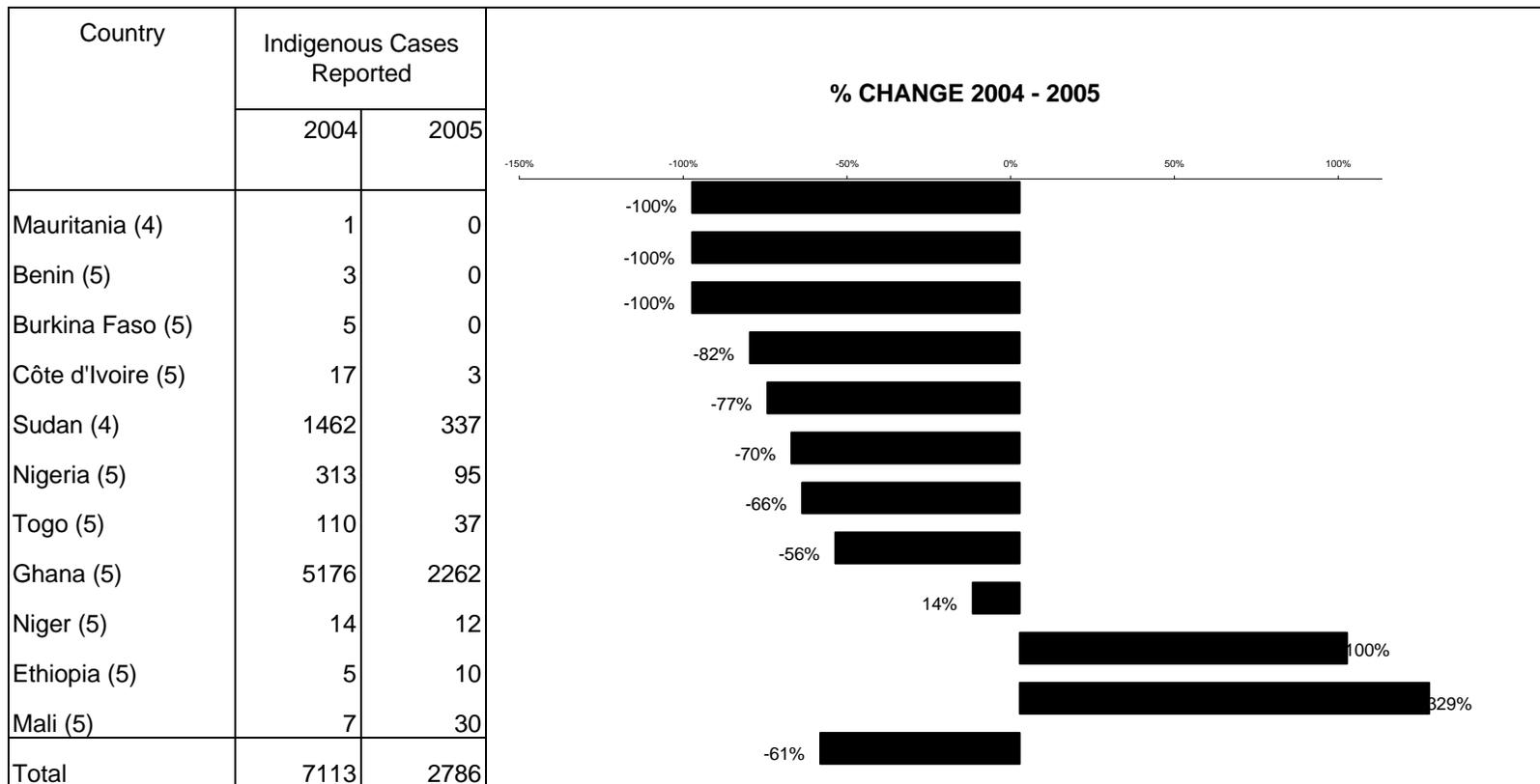
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*		
GHANA	358 / 544	242 / 482	217 / 393	181 / 387	242 / 457	/	/	/	/	/	/	/	1240 / 2263	55	
SUDAN	0 / 70	1 / 91	1 / 92	5 / 84	6 / 9	/	/	/	/	/	/	/	13 / 346	4	
NIGERIA	25 / 34	13 / 15	5 / 9	11 / 29	7 / 8	/	/	/	/	/	/	/	61 / 95	64	
MALI	3 / 4	1 / 1	1 / 1	0 / 1	22 / 23	/	/	/	/	/	/	/	27 / 30	90	
NIGER	2 / 2	4 / 4	1 / 1	1 / 4	2 / 3	/	/	/	/	/	/	/	10 / 14	71	
TOGO	11 / 11	1 / 4	2 / 2	3 / 3	16 / 19	/	/	/	/	/	/	/	33 / 39	85	
BURKINA FASO	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	/	/	/	1 / 1	100	
COTE D'IVOIRE	0 / 0	0 / 0	1 / 1	1 / 1	1 / 1	/	/	/	/	/	/	/	3 / 3	100	
BENIN	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	/	/	/	/	/	/	/	1 / 1	100	
ETHIOPIA	2 / 2	0 / 0	0 / 0	3 / 3	6 / 7	/	/	/	/	/	/	/	11 / 12	92	
MAURITANIA	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	0 / 0	0	
TOTAL*	401 / 667	262 / 597	229 / 500	206 / 513	302 / 527	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1400 / 2804	50	
% CONTAINED	60	44	46	40	57								50		

* provisional

Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported and contained that month.

Figure 4

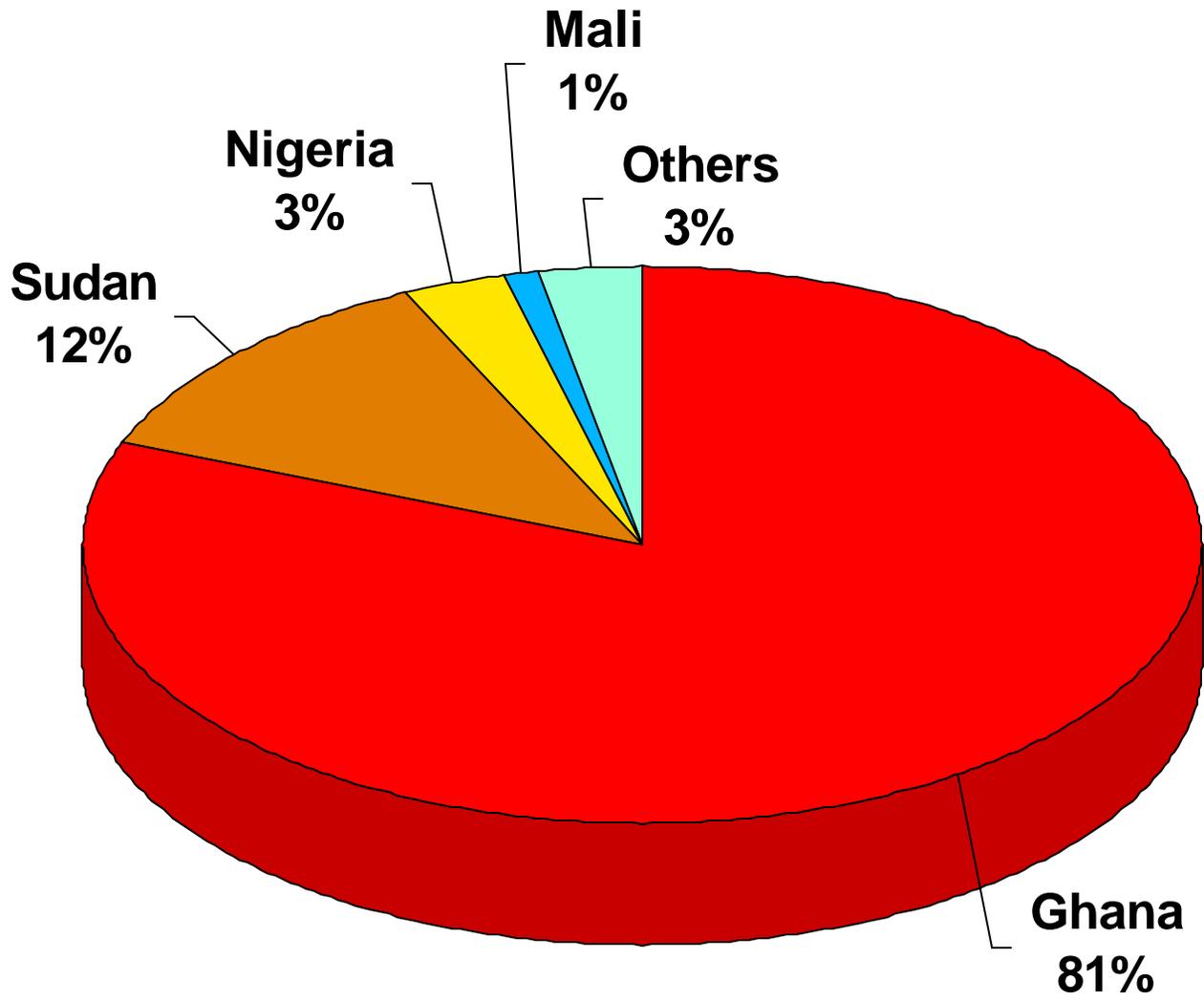
Number of Indigenous Cases Reported During the Specified Period in 2004 and 2005*, and Percent Change in Cases Reported



(5)Indicates months for which reports were received, i.e., Jan-May 2005
Provisional

Figure 5

Distribution of 2,802 Cases of Dracunculiasis Reported During January - May 2005*



NEW INTERNATIONAL DECADE: “WATER FOR LIFE” 2005 – 2015

The second international decade on water, Water for Life 2005 - 2015, is coordinated by a United Nations-wide inter-agency unit that is currently chaired by the World Health Organization. The fundamental goals for the 2005 – 2015 decade are to:



- Achieve the millennium Development Goals to halve the number of people living without access to safe water and basic sanitation (currently 1.1 billion people) by 2015.
- Fulfill the Johannesburg Summit agreement (2005) to stop unsustainable exploitation of water resources.
- Focus on ensuring that women participate in these development issues.

So, far we have found no mention of dracunculiasis in UN documents related to this new decade. The first international decade related to water was the International Drinking Water Supply and Sanitation Decade (1981 – 1990), which launched the global Guinea Worm Eradication Program.

DRACUNCULIASIS ERADICATION HELPS MEET THE MILLENNIUM DEVELOPMENT GOALS



The Millennium Development Goals (MDGs) were adopted by the United Nations General Assembly in 2000. They include specific development goals targeted to be achieved by 2015 - 2025. Among these are eight goals related to health. Given the importance of the MDGs to development agencies and others, we describe and document below how eradicating dracunculiasis (Guinea worm disease) contributes directly to achieving seven of the eight health-related MDGs.

Goal 1: Eradicate extreme poverty and hunger. A debilitating disease, dracunculiasis decreases productivity and prevents farmers from farming. In three rice-growing Nigerian states, the estimated annual economic losses from rice production alone totaled USD\$20 million in 1987 (1). Research in Mali showed that dracunculiasis caused a 5 percent drop in production of two critical food crops, sorghum and peanuts (2). Yam production in Ghana's Nanumba District increased by 33 percent the year after dracunculiasis was reduced by 77 percent (3).

Goal 2: Achieve universal primary education. The painful wounds of dracunculiasis prevent large numbers of infected children from walking to school for an average of 2-3 months or more. School absenteeism also increases when uninfected children must assume duties of parents who have dracunculiasis (4,5).

Goal 3: Promote gender equality and empower women. Women in endemic communities often are responsible for collecting water for household use, as well as for household health care. Using these informal but crucial networks, women are trained to carry out surveillance and community health education for dracunculiasis. In Ghana, over 6,800 Red Cross Women volunteers are assisting the eradication program, and in Benin, the creation of women's clubs has helped stop transmission of the disease. Such networking with women will far outlast the campaign to eradicate dracunculiasis, and can be used for myriad other health interventions.

Goal 4: Reduce child mortality by 2/3. Children living in households with adults infected with dracunculiasis are three times as likely to be malnourished (6,7). Malnutrition in all its forms increases the risk of disease and early death. For example, in developing countries, protein-energy malnutrition is a major factor in half of all under-five deaths.

Goal 5: Reduce maternal mortality by 3/4. No significant direct effect.

Goal 6: Combat HIV/AIDS, malaria and other diseases. Dracunculiasis was the second disease, after smallpox, to be officially targeted for eradication. In 1986 there were an estimated 3.5 million cases of dracunculiasis and by 1998, The World Bank estimated that the campaign had already prevented between 9 and 13 million cases. Today, cases of dracunculiasis have been reduced by more than 99.5 percent (8,9).

Goal 7: Ensure environmental sustainability. This goal reminds us that 1.1 billion people, mostly in the developing world, lack access to safe sources of drinking water. Dracunculiasis is a marker for poverty and for locations that are most in need of clean water. The dracunculiasis eradication campaign has helped hundreds of these neglected communities to get an improved source of drinking water. In addition, millions of household and personal pipe filters have been distributed to help remove the parasite from contaminated water.

Goal 8: Create a global partnership for development. The Dracunculiasis Eradication Program has been called an example for mobilization through partnerships, which include dozens of governments, foundations, nongovernmental organizations, and private companies, as well as the affected populations and the endemic countries themselves. This program has been cited by the Center for Global Development as an example of "exemplary coordination" (10).

References :

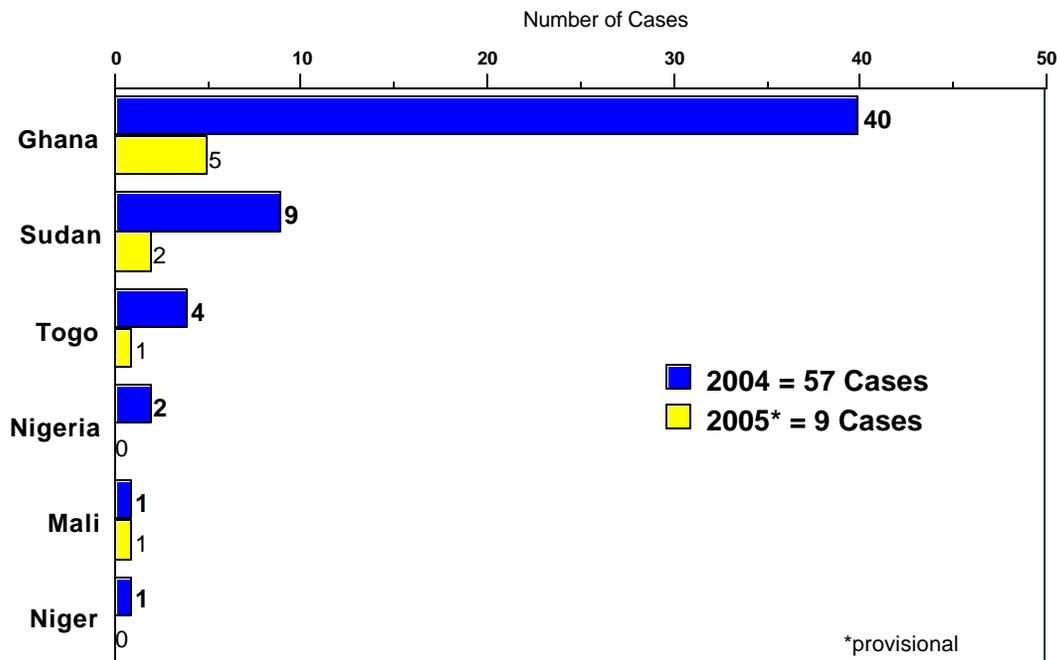
1. de Rooy C, 1987. Guinea worm control as a major contributor to self-sufficiency in rice production in Nigeria. Water and Sanitation Sector, UNICEF/Nigeria.
2. Cairncross S *et al.*, 2002. Dracunculiasis (Guinea Worm Disease) and the eradication initiative. *Clinical Microbiology Reviews*. 15:223-246.
3. *Peoples' Daily Graphic*, Accra, Ghana February 19, 1991.
4. Ilegbodu, V A *et al* 1986. Impact of Guinea worm disease on children in Nigeria. *Am J Trop Med Hyg* 35:962-964.
5. S. Nwosu ABC *et al.*, 1982. Endemic dracontiasis in Anambra State of Nigeria: geographical distribution, clinical features, epidemiology and socio-economic impact of the disease. *Ann Trop Med Parasitol*. 76: 187-200.
6. Tayeh A *et al*, 1996. The impact of dracunculiasis on the nutritional status of children in South Kordofan, Sudan. *Ann Trop Pediatrics* 16:221-226.
7. Brieger R, 1989. Guinea worm, maternal morbidity and child health. *J Trop Pediatrics* 35:285-288.
8. Watts SJ, 1987. Dracunculiasis in Africa: its geographical extent, incidence, and at-risk population. *Am J Trop Med Hyg* 37: 119-125.
9. Kim A, 1997. Cost-benefit analysis of the global dracunculiasis eradication campaign. Policy Research Working Paper 1835. The World Bank; Africa Human Development Department.
10. Levine R *et. al.*, 2004. Reducing Guinea worm in Asia and Sub-Saharan Africa. *Millions Saved: Proven Success in Global Health* Center for Global Development 10:91-98.

SADI MOUSSA GRADUATES, WINS AWARD

We are delighted to report that Foege Fellow and former National Program Coordinator of Niger's GWEP, Mr. Sadi Moussa, received his Masters of Public Health (MPH) degree from the Rollins School of Public Health of Emory University during the annual graduation ceremonies in Atlanta, Georgia on May 16, 2005. Mr. Moussa also was honored during the ceremonies by being named as this year's recipient of the James W. Alley, M.D. Student Award, which "recognizes the graduating MPH student who, in the eyes of the faculty and students, has provided the greatest service to disadvantaged populations during his or her career". The award, which has been given annually since 1991, is in memory of Dr. Alley, who was the state health officer for the state of Georgia from 1973 to 1990. CONGRATULATIONS., Sadi!!!!

Figure 6

Distribution by Country of Origin of the Combined Cases of Dracunculiasis Exported to Other Countries During January - May 2004 and 2005*



GUINEA WORM WRAP-UP GOING ELECTRONIC



We alert the readership of the *Guinea Worm Wrap-Up* that beginning with issue #155 we will only distribute a link to the internet allowing access to issue #155 and subsequent issues. Thereafter, we will not send printed copies via mail. Please send your name and current e-mail address to gwwrapup@cdc.gov, so we can begin to implement this very important change.

RECENT PUBLICATIONS

Owusu DA, 2005. Guinea worm: on the brink of extinction. New African May: 27.

Seim A.R, 2005. Time for an additional paradigm? The community-based catalyst approach to public health. Bull Wid Hlth Qrg 83:392-394.

WHO, 2005. Dracunculiasis eradication: global surveillance summary, 2004. Wkly Epidemiol Rec 80: 165-176.

GUINEA WORM BOX SCORE

Number of consecutive months
reporting zero indigenous cases

Uganda	17	(8/03 – 5/05)
Benin	14	(4/04 – 5/05)
Mauritania	10	(7/04 – 4/05)
Burkina Faso	6	(12/04 – 5/05)

*Inclusion of information in the Guinea Worm Wrap-Up does not
constitute “publication” of that information.
In memory of BOB KAISER.*

For information about the GW Wrap-Up, contact Dr. Sharon Roy, Director, WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCID, Centers for Disease Control and Prevention, F-22, 4770 Buford Highway, NE, Atlanta, GA 30341-3724, U.S.A. FAX: 770-488-7761. The GW Wrap-Up web location is <http://www.cdc.gov/ncidod/dpd/parasites/guineaworm/default.htm>.



CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.