



Date: April 15, 2005



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

Subject: GUINEA WORM WRAP-UP #152

To: Addressees

GATES FOUNDATION AWARDS \$25 MILLION CHALLENGE GRANT; CANADA AND HILTON FOUNDATION MATCH \$6 MILLION

BILL & MELINDA
GATES foundation

Conrad N. Hilton
Foundation



Canadian International
Development Agency

The Bill & Melinda Gates Foundation has awarded a challenge grant of \$25 million to The Carter Center to help complete the eradication of dracunculiasis (Guinea worm disease). The grant includes an initial contribution of \$5 million, and challenges other donors to provide another \$20 million, which the Gates Foundation will match one-to-one. In the press release announcing the grant, Dr. Regina Rabinovich, director of the Gates Foundation's infectious disease program, said the "success in fighting Guinea worm demonstrates the power of international collaboration to solve the health problems facing developing countries." Former U.S. President Jimmy Carter emphasized that "The last cases of Guinea worm disease are the most crucial, difficult, and expensive to contain. The new peace agreement between northern and southern Sudan and the recent Gates Foundation challenge grant will help us secure the remaining access and resources needed to finish the job." Dr. Donald Hopkins, associate executive director of The Carter Center, announced the grant on April 5 at the opening ceremony of the Tenth Meeting of National Program Managers of Dracunculiasis Eradication Programs, in Accra, Ghana. About \$1.5 million of the challenge grant will help support the World Health Organization's activities to certify eradication and prepare endemic countries for certification.

The Canadian International Development Agency and the Conrad N. Hilton Foundation have already responded to the challenge by pledging \$5 million and \$1 million, respectively, to the campaign. In announcing Canada's contribution at the ceremony in Accra, Dr. Donald Bobiash, the Canadian High Commissioner to Ghana, said that "Ridding the world of Guinea worm is within our grasp. We know that healthy people are absolutely key to building a better world for all." The president of the Conrad N. Hilton Foundation, Mr. Steve Hilton, who did not attend the opening ceremony in Accra, conveyed his statement that "The Hilton Foundation is honored to be part of a positive effort to improve the lives of the most forgotten people." The Gates Foundation's first grant of \$28.5 million to the Guinea worm eradication program in May 2000 contributed greatly to the eradication program's current dramatic momentum, which was evident in the reports of all endemic countries during the remainder of the meeting in Accra (see below).

"Explain & Contain" Every Case During 2005!

REPORTS TO PROGRAM MANAGERS MEETING SHOW ERADICATION PACE IS ACCELERATING

The news from endemic and formerly endemic countries was consistently good during the Tenth Meeting of National Program Managers of Dracunculiasis Eradication Programs, which met in Accra, Ghana on April 57. For the first time, all of the remaining endemic countries were experiencing significant reductions in cases, **Uganda** had reported zero indigenous cases for the entire calendar year of 2004, and **Benin** announced that it had had no indigenous cases for twelve consecutive months, from April 2004 through March 2005. **Cote d'Ivoire** reported one indigenous case at the end of March 2005 from a village (Ndakro Bini) in Tanda District that had had 7 cases, not all of which were contained, in March and April 2004. At the end of March 2005 **Mauritania** had gone nine months without an indigenous case, and **Ethiopia** had not had an indigenous case for eight months as of the end of February, while **Burkina Faso**, which reported 35 indigenous cases in all of 2004, had not had an indigenous case from December 2004 to the end of March 2005. Five of the eleven endemic countries remaining were in their peak transmission seasons during January-March: **Ghana, Nigeria, Togo, Benin, and Cote d'Ivoire**. But whereas these five contiguous countries on the Gulf of Guinea reduced their cases of dracunculiasis by -23% in all of 2004 (compared to 2003), during their peak transmission season in January-March 2005, the same five countries reduced their indigenous cases by -60%, from 3,693 cases to 1,472 cases, with the national rates of reduction ranging from -58% in Ghana, to -74% in Nigeria, -85% in Togo, -91% in Cote d'Ivoire, and -100% in Benin.

Official reports confirm that **Ghana** ended 2004 with 2 more cases of dracunculiasis than **Sudan**, which reported 7266 cases in 2004. (see Table 1, Figure 3). Data from Ghana also document the impact of its 23 Case Containment Centers, which reduced the number of reported cases in their catchment areas by -48%, from 3,710 to 1,941 between 2003 and 2004, which is four times the overall reduction rate of -12% in Ghanaian cases in 2004 (seven of the centers were closed for lack of any cases in the catchment areas in 2004). Somewhat less propitious was the news that of 101 successful borehole wells drilled in the Government of Ghana's large-scale effort to provide safe drinking water to dracunculiasis-endemic communities over the past year, only 62 have been fitted with hand pumps so far, and the 39 communities benefiting from those 62 functioning wells reported only 6%, or 461, of Ghana's Guinea worm cases in 2004.

Sudan's announcement that it was presenting one report for the whole country to this meeting for the first time as a result of the recent peace agreement was greeted with warm applause. **Ethiopia** reported that a KAP survey conducted in 27 villages under surveillance in formerly endemic South Omo found 100% of households using cloth filters when they use pond water, while in Gilo District of Gambella Region, a similar survey found 36% of households used cloth filters. Statistical summaries of data from this meeting are summarized in Tables 1,2 and Figure 3.

Representatives of the Government of Ghana, UNICEF, WHO, and The Carter Center addressed the opening ceremony, in addition to Nigerian former head of state General (Dr.) Yakubu Gowon, the Canadian High Commissioner, and Prof. Albert Wright, co-chair of the task force on water and sanitation of the Millennium Project. In his remarks, Dr. Erzio Murzi, UNICEF's regional representative for West Africa, stressed this eradication program's illustration of the powers of partnership, advocacy and investment in clean drinking water. Dr. Melville George (the resident representative of WHO) and Prof. Wright both underscored that dracunculiasis is a disease of poverty and that the Guinea Worm Eradication Program is an important milestone for the

Millennium Development Goals. Dr. Donald Hopkins of The Carter Center noted that the eradication target is finally within reach, and that Ghana's recent substantial reduction in cases was welcome news for Ghana, its neighboring countries, and the entire campaign. General Gowon expressed his pleasure at being back in Ghana, at the recent peace agreement in Sudan, and at the progress achieved by the eradication program so far, and said Nigeria was priming itself for its final onslaught against the disease. In a speech read on his behalf by deputy minister Owusu-Ajyay, The Minister of Health, Major Courage Quashigah stated that the Ghana Health Services had directed all regional and district directors to give top priority to Guinea worm eradication in their budgets and plans. The deputy minister of works and housing, Mrs. Cecelia Dapaah, chaired the opening ceremony. Representing the Government of Ghana at the closing ceremony, the director of the Ghana Health Services, Prof. Agyeman Badu Akosa, charged the participants to remain unrelenting in their war against dracunculiasis, and he reminded everyone that the target date of 2009 that was established by last year's Geneva Declaration was for Sudan, and that all other countries were expected to eradicate the disease well before then. He then thanked the Bill & Melinda Gates Foundation and President and Mrs. Jimmy Carter for their support.

WHERE IS TRANSMISSION OCCURRING IN SOUTHERN SUDAN? ARE REDUCTIONS IN CASES REAL?

Peace has finally come to Sudan and we are fortunate that this happens as we are in the final push for eradication of Guinea worm disease (GWD). During the last 15 months the Sudan Guinea Worm Eradication Program (SGWEP) has not only intensified interventions in accessible areas with known endemic disease transmission, but also expanded the program to newly discovered endemic areas. To evaluate "hot spots" for disease transmission, Dr. Sharon Roy, CDC, and SGWEP staff examined case report data from January 2001 to August 2004 to evaluate it at multiple levels: village, supervisor surveillance areas (SSAs are composed of multiple villages), and payams (districts). Two different indicators were used to identify "hot spots" for transmission: analysis by case numbers (SSAs and payams containing any village reporting 5+ cases were classified as "hot spots") with analysis by case density rates (number of reporting cases in an SSA divided by the number of endemic villages reporting in the same area). Together both indicators identified 43 payams as "hot spots" and six of these payams reported five or more cases in at least 20% of their villages. Figure 5 shows a listing of the 17 payams reporting > 100 cases, ranked in descending order of cases reported during all of 2004. We note that 5 payams (Terekeka, Kwauto, Toch (Old Fangak), Marial Wau, and Kassingor) each with 20% or more villages reporting 5+ cases, as indicated above, indeed turned out to be the most endemic in 2004. The locations of the 17 payams are indicated in Figure 6 (map).

A second objective was to assess the reductions in cases observed since 2002. A cohort representing 3,729 endemic villages reporting to the GWEP from January 2001 through August 2004 was followed annually. Figure 7 shows that the number of villages in this cohort that reported zero cases has steadily risen from 1,443 in 2001 to 2,957 during January – August 2004, while those reporting 1-4 cases and those reporting 5 or more cases has steadily decreased since 2001. The number of villages reporting 5+ cases has decreased annually, from 1,288 in 2001 to 173 during January – August 2004, strongly suggesting the effectiveness of interventions against transmission of Guinea worm disease in this cohort of villages.

Table 1

Number of cases contained and number reported by month during 2004*

(Countries arranged in descending order of cases in 2003)

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													TOTAL*	CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				
SUDAN	41 / 252	51 / 290	35 / 260	62 / 660	158 / 1224	193 / 1337	174 / 1209	106 / 891	51 / 674	17 / 274	7 / 114	3 / 81	898 / 7266	12		
GHANA	766 / 1245	719 / 1133	630 / 990	603 / 907	702 / 905	372 / 520	188 / 257	92 / 115	22 / 38	157 / 230	271 / 439	279 / 496	4801 / 7275	66		
NIGERIA	81 / 102	64 / 73	40 / 48	25 / 31	63 / 69	31 / 37	17 / 23	11 / 12	0 / 0	13 / 15	41 / 45	35 / 40	421 / 495	85		
MALI	1 / 1	0 / 1	0 / 1	0 / 0	4 / 5	8 / 11	21 / 26	47 / 65	65 / 113	59 / 75	25 / 53	6 / 6	236 / 357	66		
TOGO	35 / 46	20 / 29	18 / 47	12 / 21	17 / 20	16 / 22	4 / 6	1 / 3	9 / 9	19 / 19	27 / 28	22 / 28	200 / 278	72		
NIGER	1 / 1	2 / 2	1 / 1	3 / 4	4 / 9	13 / 16	25 / 28	21 / 28	30 / 34	40 / 51	23 / 49	11 / 17	174 / 240	73		
BURKINA FASO	1 / 1	1 / 2	0 / 0	2 / 2	5 / 5	3 / 5	6 / 8	4 / 9	10 / 15	5 / 8	2 / 5	0 / 0	39 / 60	65		
COTE D'IVOIRE	1 / 2	5 / 6	0 / 5	0 / 3	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0 / 2	0 / 0	6 / 21	29		
BENIN	0 / 0	2 / 2	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	100		
ETHIOPIA	0 / 0	1 / 1	0 / 0	2 / 2	6 / 6	3 / 5	3 / 3	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	15 / 17	88		
UGANDA	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	1 / 1	0 / 0	0 / 0	1 / 1	4 / 4	100		
MAURITANIA	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	100		
KENYA	/	/	/	/	1 / 1	2 / 2	/	1 / 1	3 / 3	/	/	/	7 / 7	100		
TOTAL*	928 / 1651	865 / 1539	725 / 1353	709 / 1630	961 / 2246	643 / 1957	438 / 1560	284 / 1125	191 / 887	310 / 674	396 / 735	357 / 669	6807 / 16026	42		
% CONTAINED	56	56	54	43	43	33	28	25	22	46	54	53	42			

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

Figure 1

Number of Villages/Localities Reporting Cases of Dracunculiasis in 2003, Percentage of Endemic Villages Reporting in 2004, Number of Indigenous Cases Reported During the Specified Period in 2003 and 2004, and Percent Change in Cases Reported

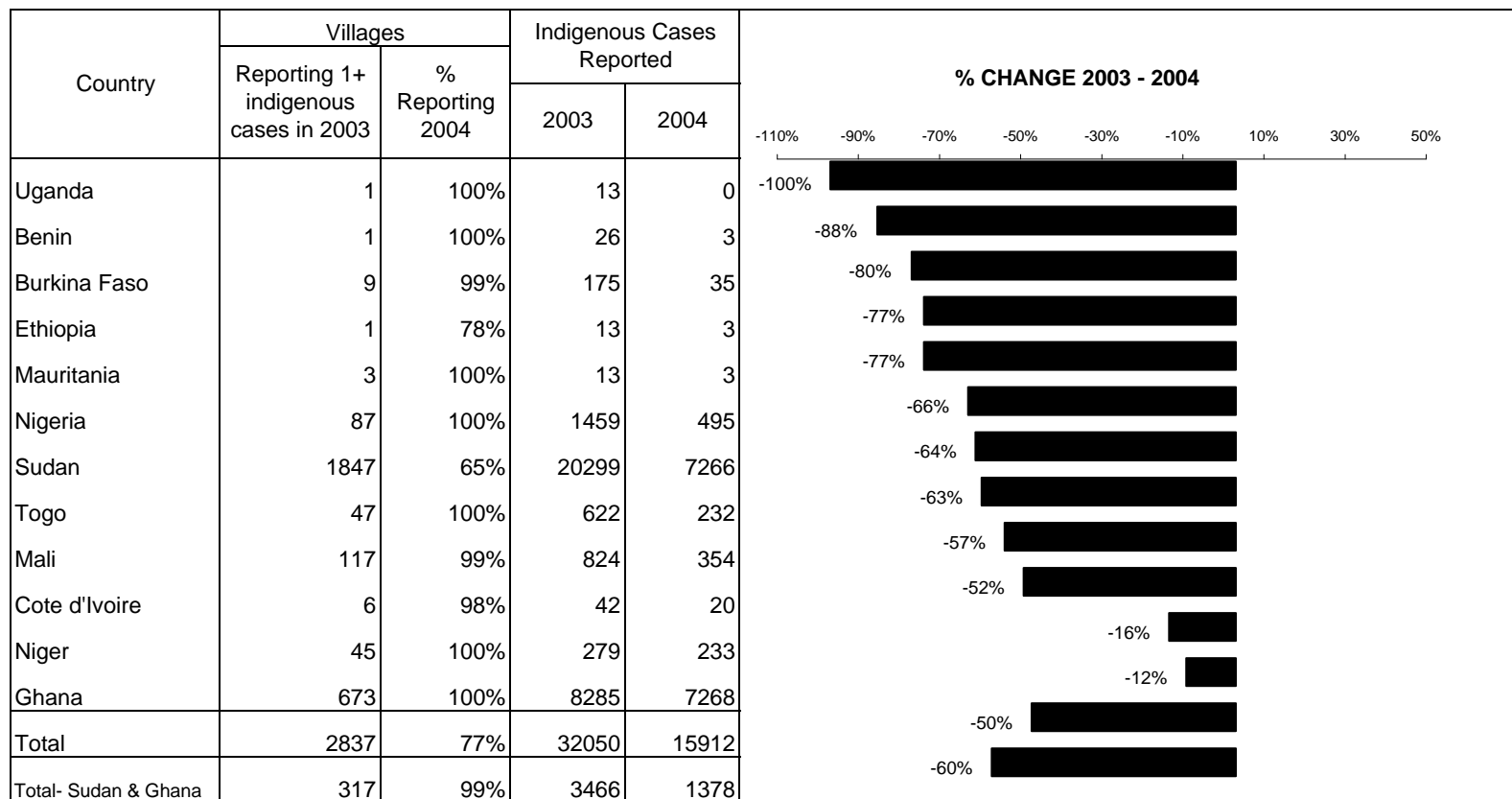


Table 2

Dracunculiasis Eradication Campaign: Status of Interventions during 2004

Country	Number of reported cases (indigenous) in 2004	Number of reported cases (imported) in 2004*	% of all cases reported that were contained during 2004	No. of villages/localities where interventions were applied in 2003 and 2004	% Change in cases where interventions were applied in 2003-2004	Villages/Localities							
						No. reporting one or more cases	No. reporting only imported cases	No. reporting indigenous cases	% reporting monthly^	% with filters in all households^	% using Abate^	% with one or more sources of safe water^	% provided health education^
Ghana	7,268	7	66%	1,478	-12%	1,017	344	673	100%	67%	23%	44%	90%
Sudan	7,266	0	12%	3,046	-74%	2,145	8	2,137	65%	64%	1%	28%	89%
Nigeria	495	0	85%	319	-66%	106	21	85	100%	100%	51%	70%	87%
Mali	354	3	66%	237	-57%	121	19	102	100%	100%	27%	20%	100%
Niger	233	7	73%	128	-18%	75	30	45	100%	100%	49%	11%	100%
Togo	232	46	72%	206	-58%	100	54	46	100%	100%	96%	45%	100%
Burkina Faso	35	25	65%	89	-70%	33	23	10	100%	100%	47%	70%	100%
Cote d'Ivoire	20	1	29%	17	-50%	8	2	6	90%	74%	79%	93%	100%
Benin	3	0	100%	13	-90%	1	0	1	100%	100%	100%	100%	100%
Ethiopia	3	14	88%	10	-88%	13	10	3	100%	50%	48%	59%	100%
Mauritania	3	0	100%	11	-77%	3	2	1	100%	91%	73%	91%	100%
Uganda	0	4	100%	10	-100%	3	3	0	100%	100%	0%	100%	100%
Total	15,912	107	42%	5,564	-54%	3,625	516	3,109	81%	71%	17%	36%	91%

* Kenya (a non-endemic country) reported 7 cases of dracunculiasis imported from Sudan

^ The base of the percentage is the number of villages/localities where the program applied interventions during 2003-2004

Figure 2

Dracunculiasis Eradication Program Status of Eradication Efforts: 2004

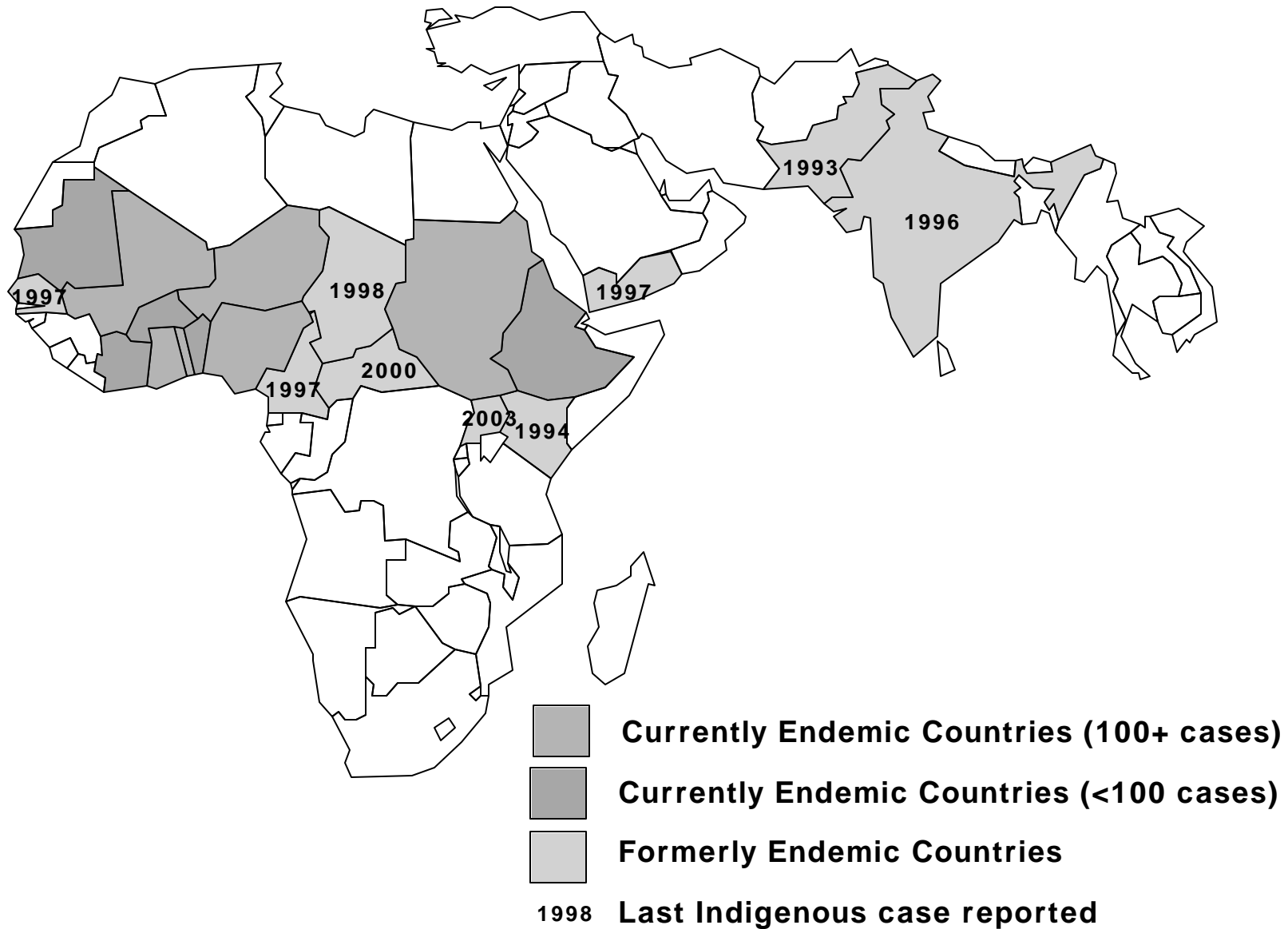


Table 3

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

(Countries arranged in descending order of cases in 2004)

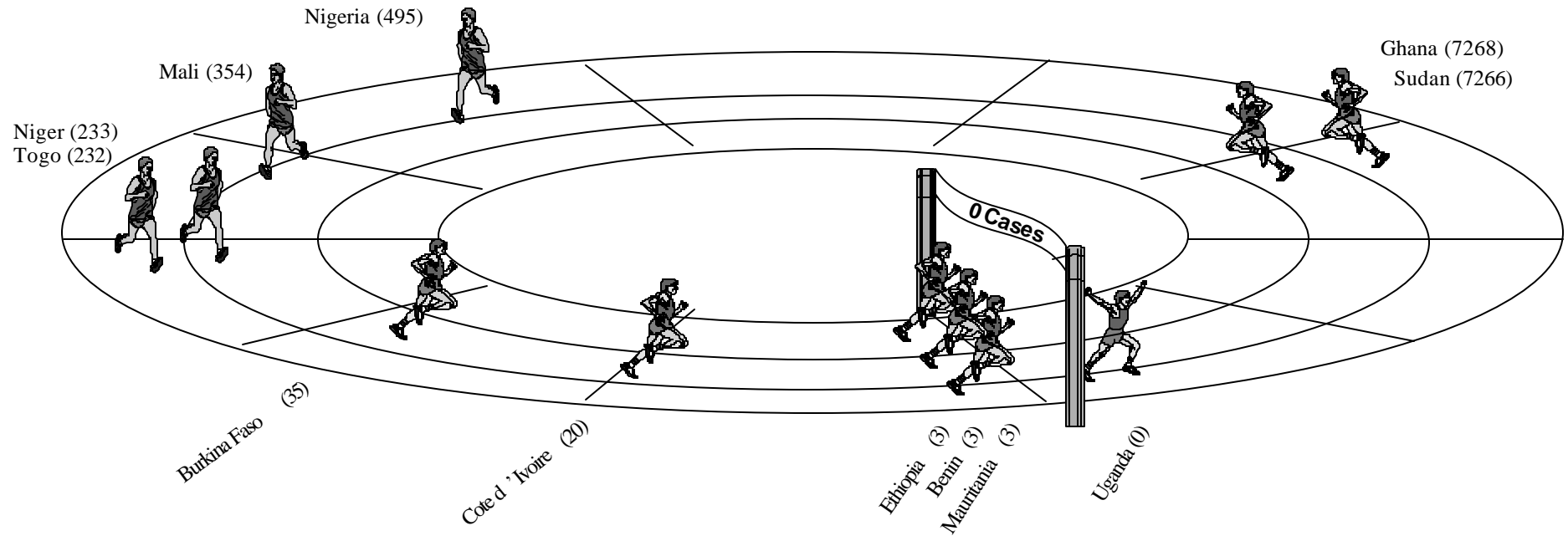
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
GHANA	358 / 531	242 / 480	217 / 389	/	/	/	/	/	/	/	/	/	817 / 1400	58
SUDAN	0 / 42	/	/	/	/	/	/	/	/	/	/	/	0 / 42	0
NIGERIA	25 / 34	13 / 15	5 / 9	/	/	/	/	/	/	/	/	/	43 / 58	74
MALI	3 / 4	1 / 1	1 / 1	/	/	/	/	/	/	/	/	/	5 / 6	83
NIGER	2 / 2	4 / 4	1 / 1	/	/	/	/	/	/	/	/	/	7 / 7	100
TOGO	11 / 11	1 / 4	3 / 3	/	/	/	/	/	/	/	/	/	15 / 18	83
BURKINA FASO	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	0 / 0	
COTE D'IVOIRE	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	/	/	/	1 / 1	100
BENIN	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	/	/	/	1 / 1	100
ETHIOPIA	2 / 2	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	2 / 2	100
MAURITANIA	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	0 / 0	
TOTAL*	401 / 626	261 / 504	229 / 405	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	891 / 1535	58
% CONTAINED	64	52	57										58	

* provisional

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

Figure 3

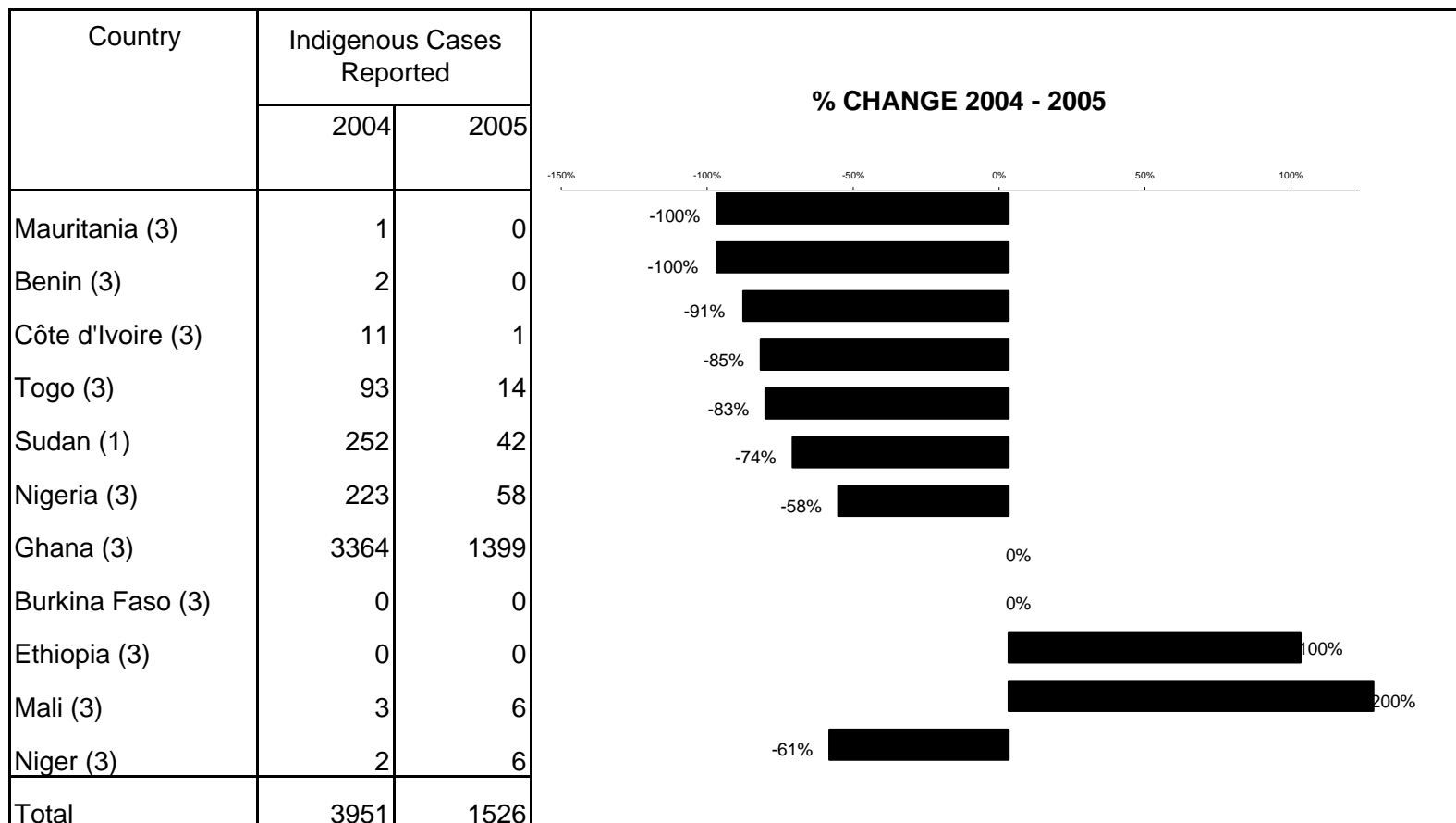
GUINEA WORM RACE: 2004*



*Indigenous Cases only

Figure 4

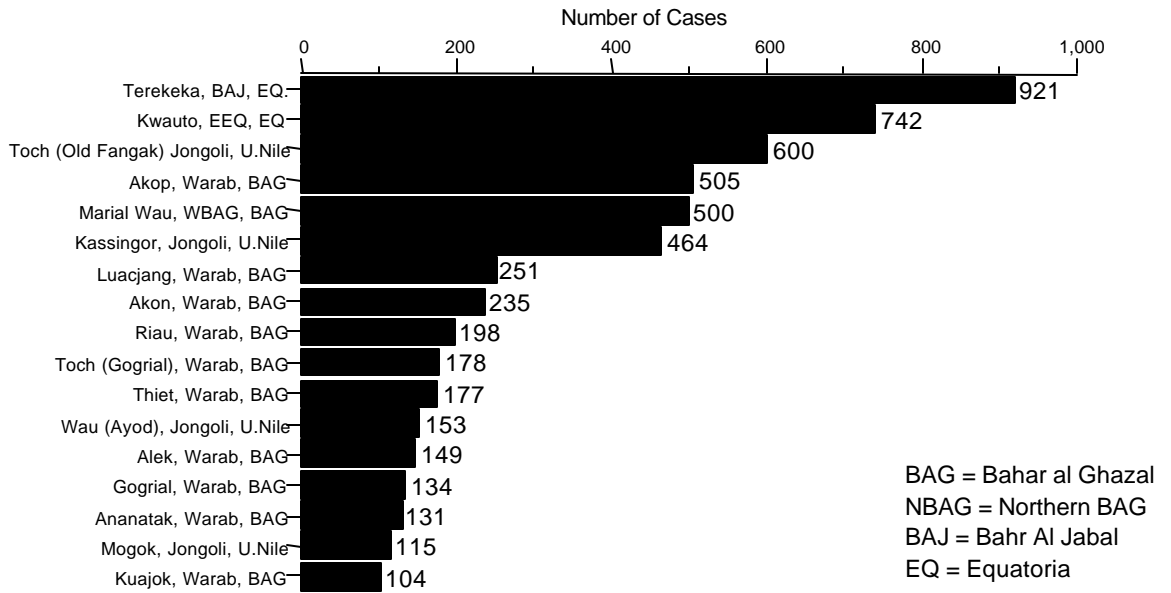
Number of Indigenous Cases Reported During the Specified Period in 2004 and 2005*, and Percent Change in Cases Reported



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

Figure 5

SUDAN GUINEA WORM ERADICATION PROGRAM
 17 PAYAMS REPORTING 5,517 (76%) OF 7,266 CASES REPORTED IN 2004



Map 1

17 Payams Reporting More Than 100 Cases
 Of Dracunculiasis During 2004

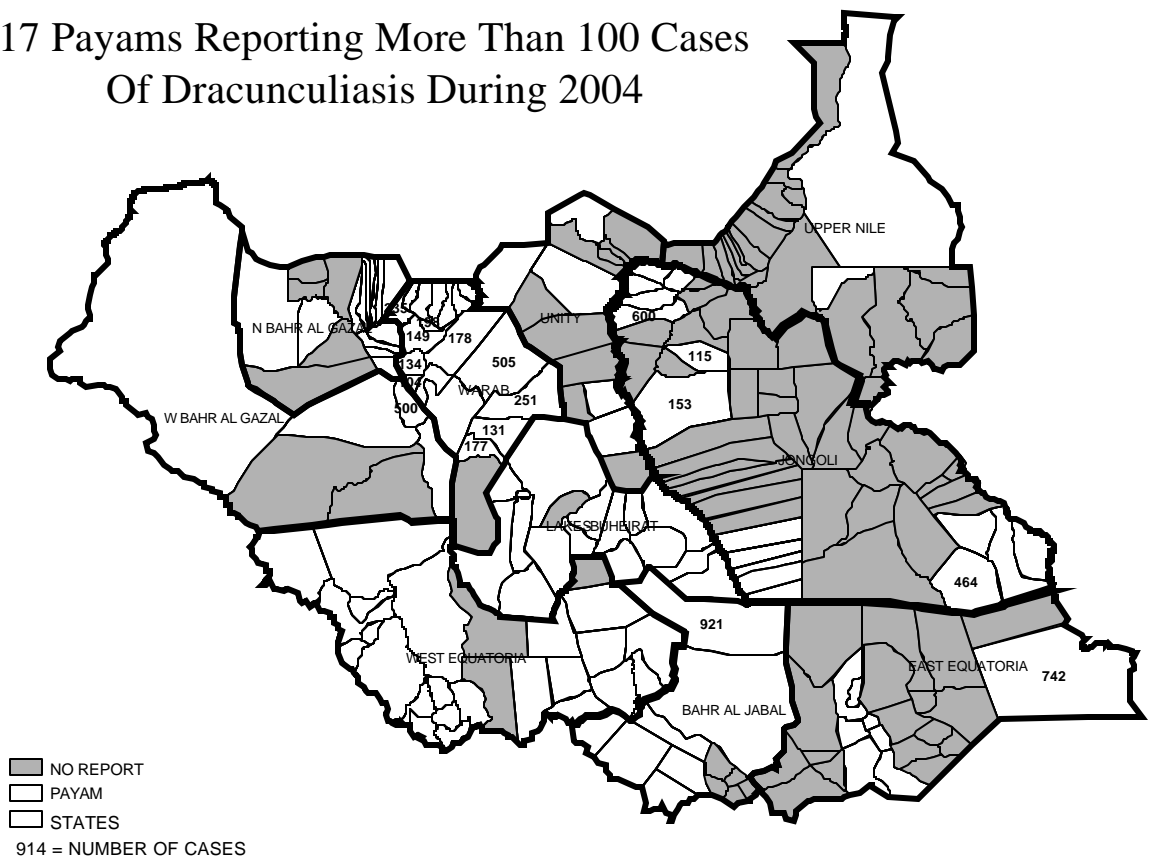
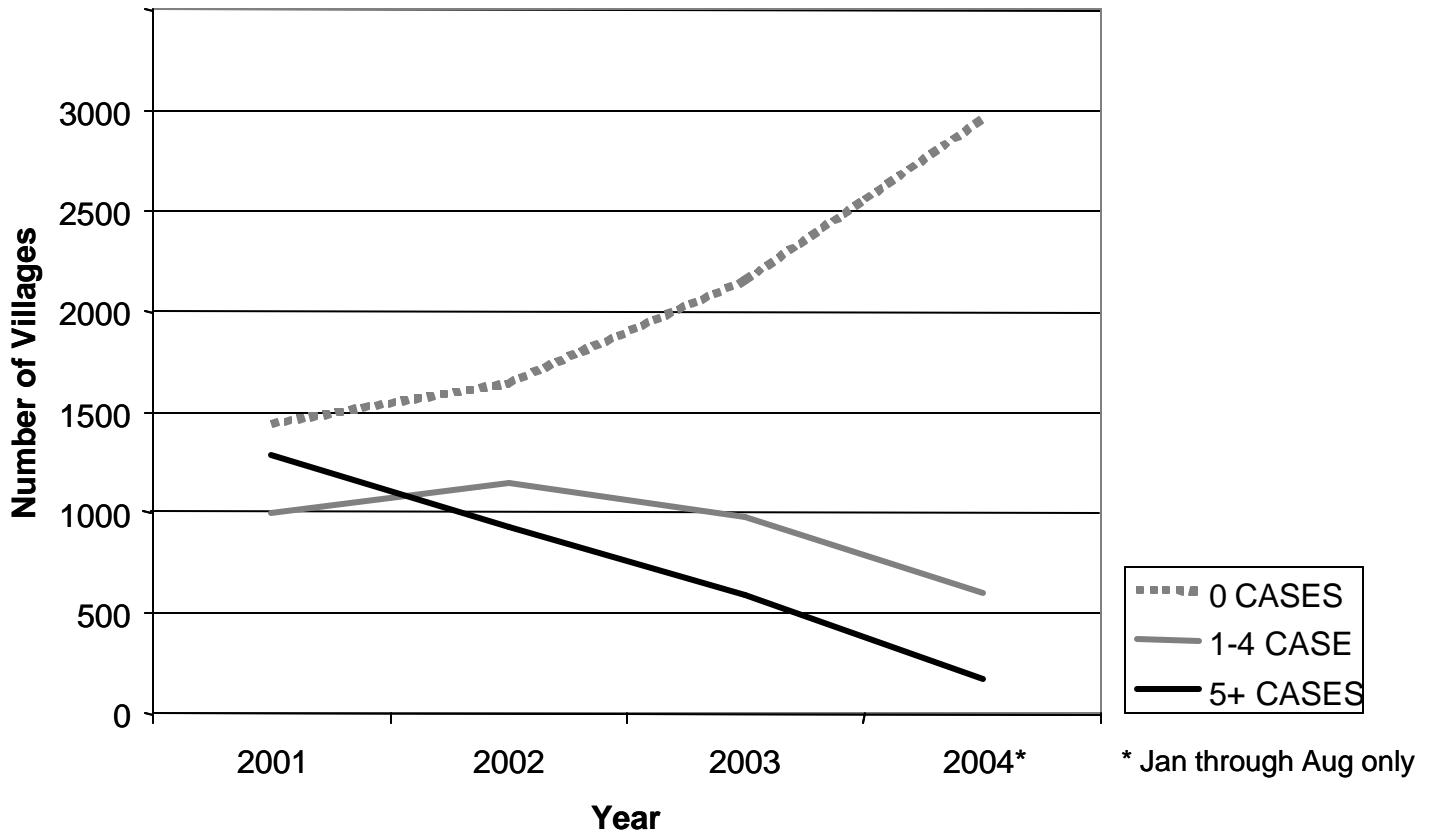


Figure 6

Number of Villages Reporting 0 Cases, 1-4 Cases, and 5 or More Cases Among a Cohort of 3,729 Endemic Villages Reporting to the SGWEP Annually From January 2001 - August 2004*.



*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. James H. Maguire, 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.