



Date: July 31, 2005



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

Subject: GUINEA WORM WRAP-UP #154

To: Addressees

### GUINEA WORM BOX SCORE

Number of consecutive months reporting zero indigenous cases		
Uganda	18	(8/03 – 6/05)
Benin	15	(4/04 – 6/05)
Mauritania	12	(7/04 – 6/05)

### BENIN, MAURITANIA REPORT ZERO CASES FOR 12+ MONTHS

As of the end of June 2005, Benin has reported zero indigenous cases for fifteen consecutive months, while Mauritania has reported zero indigenous cases for twelve consecutive months (see Box Score). These are welcome benchmarks for both programs. With Uganda having reported zero indigenous cases for an entire calendar year for the first time in 2004, it now appears that Benin and Mauritania are set to follow in 2005.

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

**Mali.** As of July 20, 4 of the 14 endemic villages targeted have pumps with flowing water. The pumps were installed in July. These 4 villages are in Ansongo District and had already reported 21 cases, or 36% of Mali's cases during January-June 2005. These same 4 villages reported a total of 46 cases in 2004. The program reports that drilling for the remaining wells has been halted, apparently due to unresolved issues between Hydraulique-Mali and UNICEF/Mali concerning accounting of funds for past projects.

**Niger.** Drilling has not yet started. Geologic survey is underway. The 12 endemic villages that are targeted in Niger have reported 4 cases in January-June, or 17% of Niger's cases so far this year.

**Togo.** Drilling has not yet started, delayed because of the recent political crisis. Bidding for contractors is underway. The fourteen endemic villages that are targeted to receive new borehole wells reported 23, or 49% of Togo's cases in January-June 2005.

### GUINEA WORM WRAP-UP GOING ELECTRONIC

Beginning with issue #155 we will distribute a link to the internet allowing access to the current issue of the Guinea Worm Wrap-Up. We will not send printed copies via mail. Please send your name and current e-mail address to [gwwrapup@cdc.gov](mailto:gwwrapup@cdc.gov), so we can begin to implement this very important change.

Table 1

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

(Countries arranged in descending order of cases in 2004)

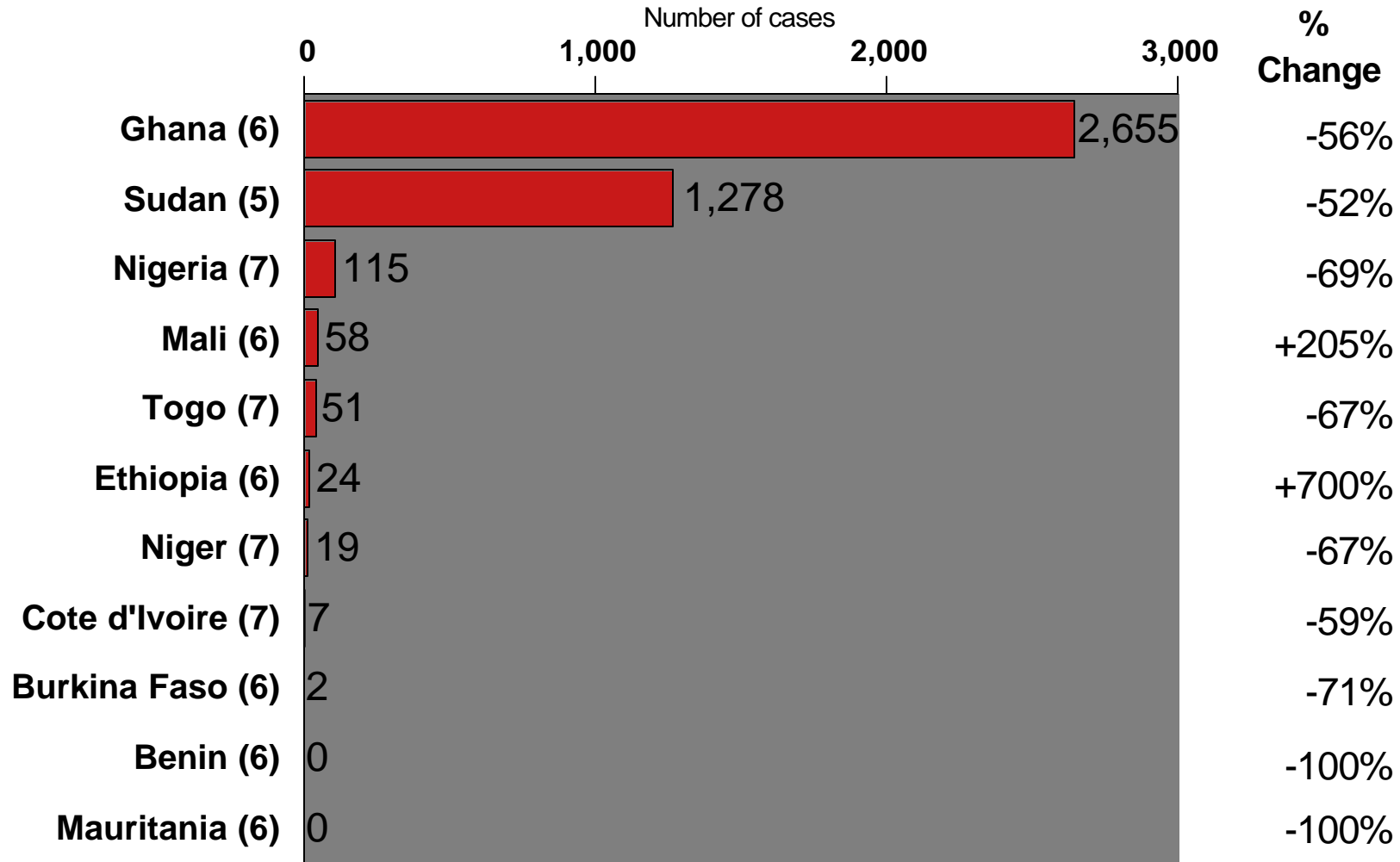
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
GHANA	374 / 544	343 / 484	282 / 393	249 / 395	332 / 458	241 / 385	/	/	/	/	/	/	1821 / 2659	68
SUDAN	0 / 88	1 / 131	0 / 364	1 / 373	2 / 322	/	/	/	/	/	/	/	4 / 1278	0
NIGERIA	25 / 36	13 / 17	9 / 13	11 / 29	7 / 9	4 / 6	4 / 5	/	/	/	/	/	73 / 115	63
MALI	2 / 4	1 / 1	1 / 1	0 / 1	22 / 26	23 / 25	/	/	/	/	/	/	49 / 58	84
NIGER	2 / 2	4 / 4	1 / 1	1 / 4	2 / 3	3 / 3	4 / 6	/	/	/	/	/	17 / 23	74
TOGO	11 / 11	1 / 4	2 / 2	3 / 3	16 / 19	7 / 8	6 / 6	/	/	/	/	/	46 / 53	87
BURKINA FASO	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	2 / 2	/	/	/	/	/	/	3 / 3	100
COTE D'IVOIRE	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 3	0 / 3	/	/	/	/	/	1 / 7	14
BENIN	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	1 / 1	100
ETHIOPIA	2 / 2	0 / 0	0 / 0	3 / 3	7 / 7	16 / 20	/	/	/	/	/	/	28 / 32	88
MAURITANIA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0
UGANDA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	4 / 4	/	/	/	/	/	/	4 / 4	0
TOTAL*	416 / 687	363 / 641	297 / 776	269 / 809	388 / 844	300 / 456	14 / 20	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2047 / 4233	48
% CONTAINED	61	57	38	33	46	66	70						48	

\* provisional

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

Figure 1

**Distribution by Country of 4,189 Indigenous Cases of Dracunculiasis  
Reported during 2005\* and Percent Change in Cases Compared to the Same Reporting Period in 2004**

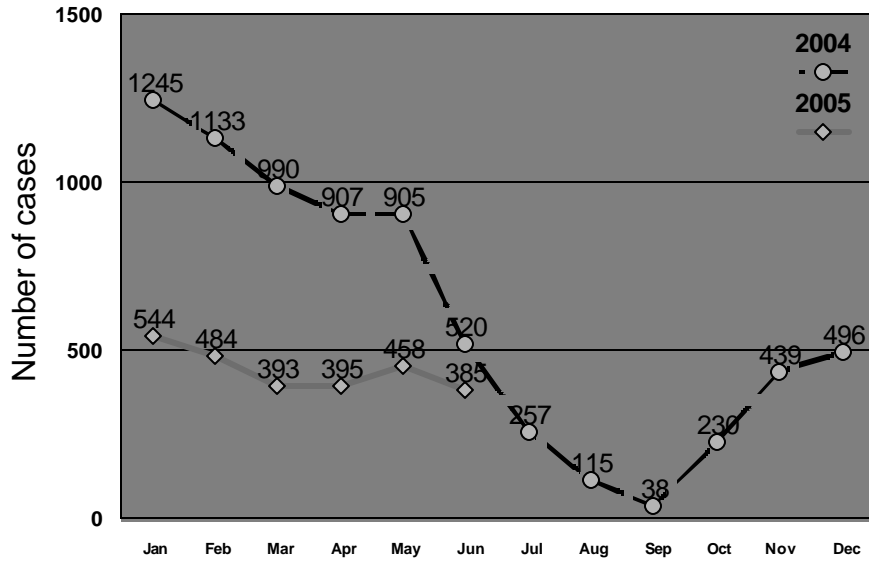


- All 2005 data is provisional
- Numbers in parentheses indicate how many months the country has provided monthly reports in 2005. For example: Benin (6) = Jan-Jun 2005

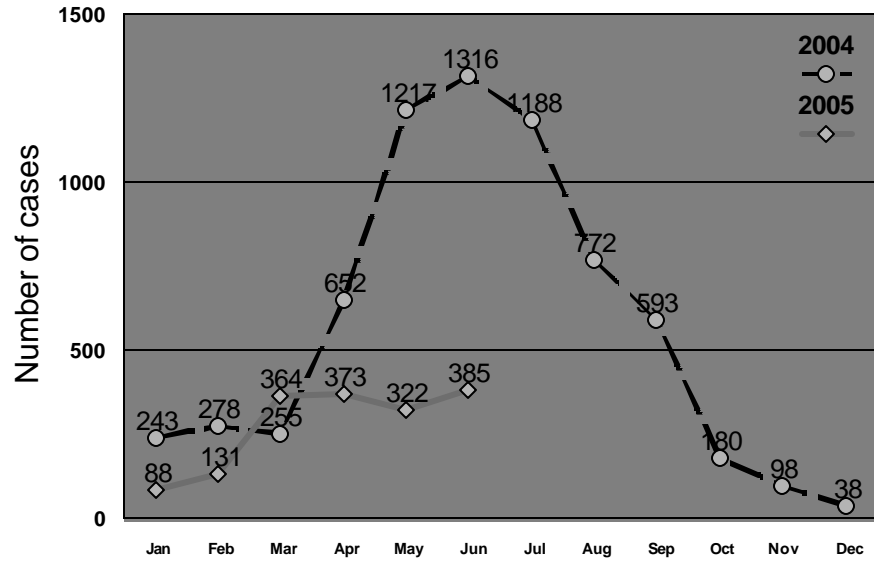
Figure 2A

# Number of Cases Reported by Year: 2004 - 2005\*

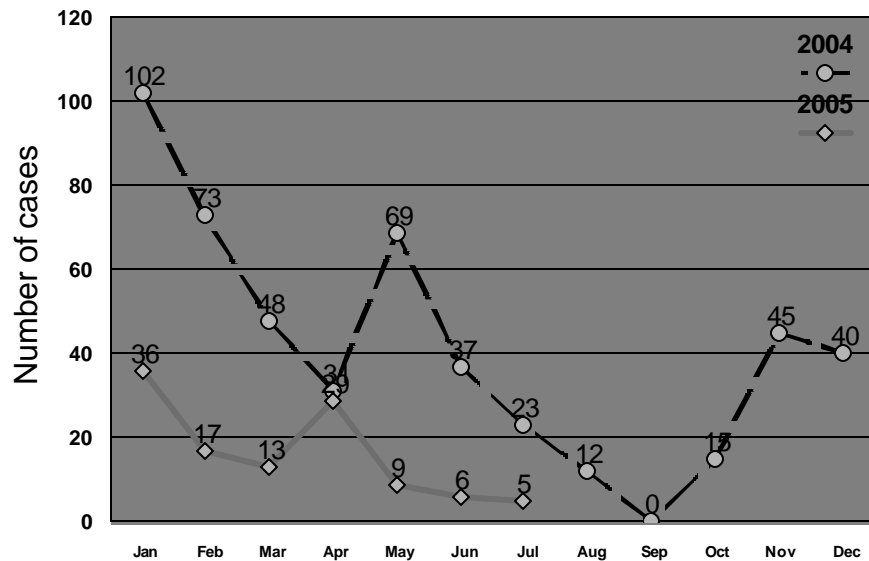
## Ghana



## Sudan



## Nigeria



## Mali

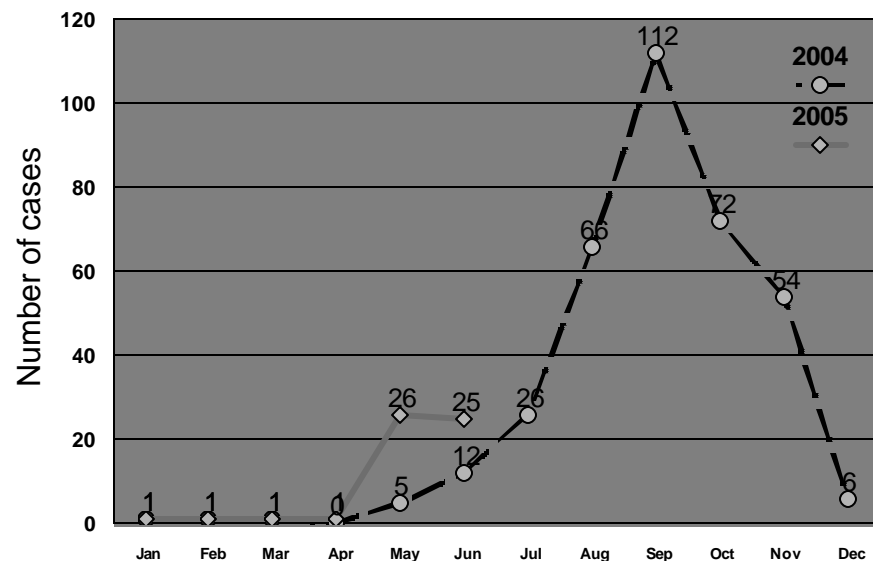
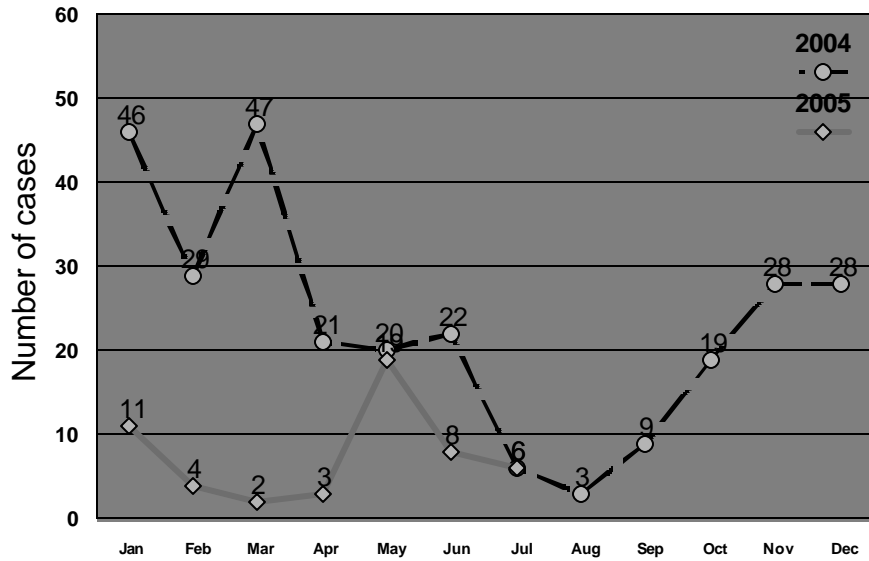


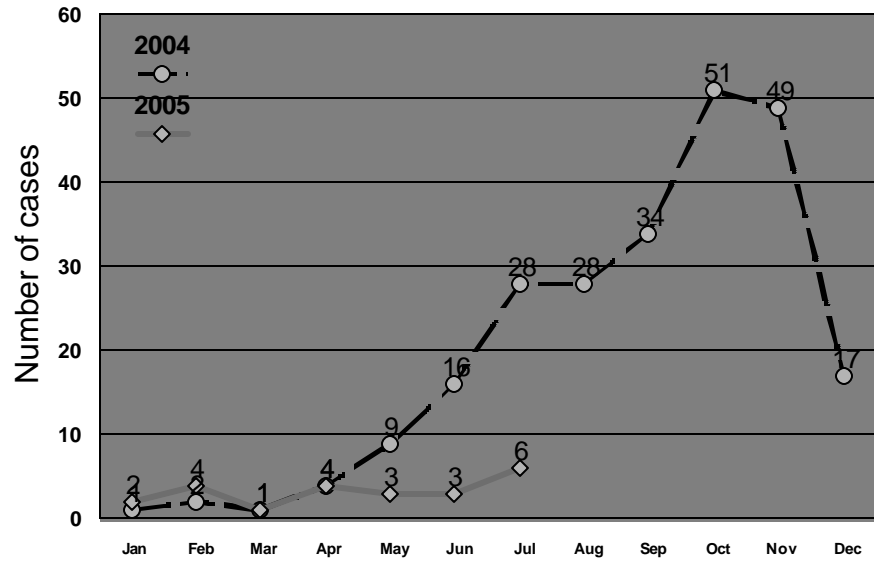
Figure 2B

# Number of Cases Reported by Year: 2004 - 2005\*

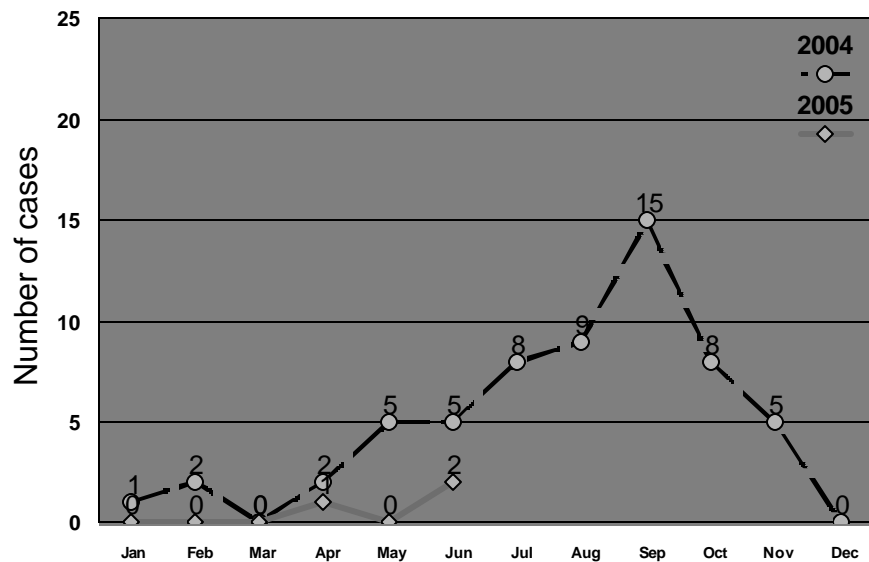
## Togo



## Niger



## Burkina Faso



## Ethiopia

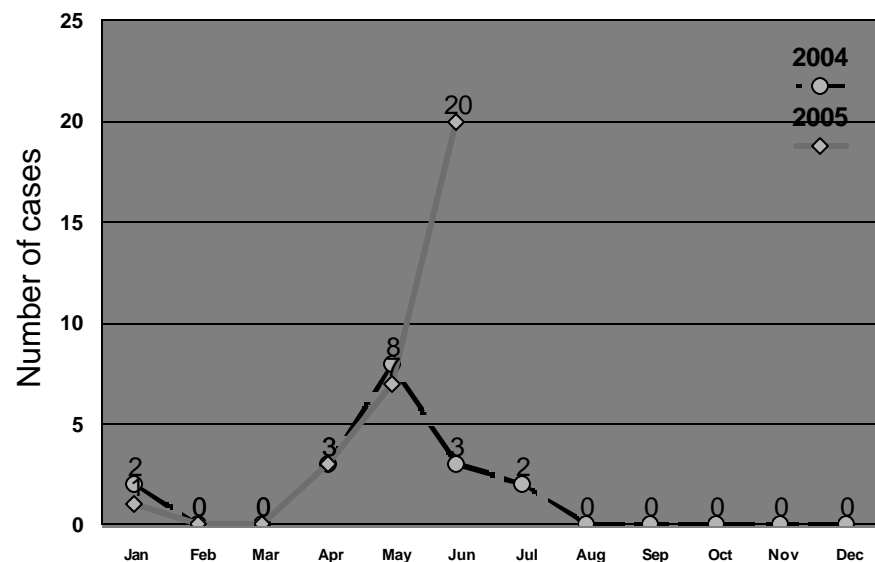
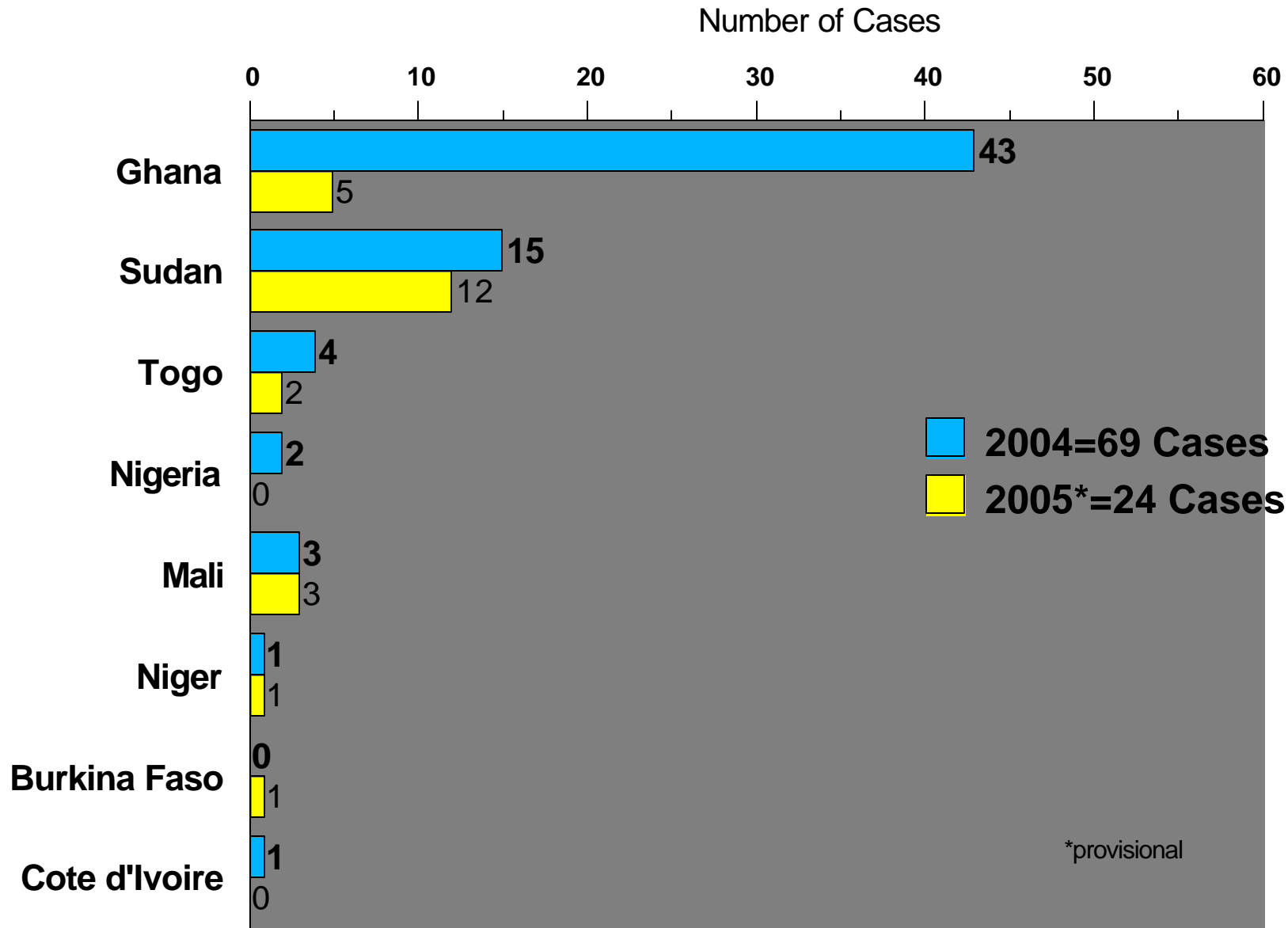


Figure 3

## Distribution by Country of Origin of the Combined Cases of Dracunculiasis Exported to Other Countries During 2004 and 2005\*



## GHANA EVALUATIONS

From June 6-20, a team jointly sponsored by The Carter Center, WHO, UNICEF, and the Ghana Health Service and led by Prof. Sandy Cairncross of the London School of Tropical Medicine and Hygiene conducted an independent external evaluation to examine aspects of Ghana's Guinea Worm Eradication Program in four districts. The four districts (Tolon-Kumbungu, Savelugu-Nanton, Kete-Krachi, and Wa) all had significant increases in cases of dracunculiasis in 2004 compared to 2003. Key findings were that at least 93% of persons sampled knew about filtering their drinking water, and everyone had a filter, but only 68 of 122 cases (56%) seen by members of the evaluation team had been reported, more than half of the cases seen were not contained, and "hundreds of boreholes in endemic villages lack a hand pump". Perhaps the most important recommendation is that supervision should be more frequent, structured, and better documented.

Assisted by GWEP staff, an Epidemic Intelligence Service officer of CDC, Ms. Sara Russell, also recently conducted a separate study to help the Ghana Health Service evaluate the distribution of pipe filters in northern Ghana in 2003-2004. She interviewed villagers in a sample of villages in six districts (Tamale, West Gonja, East Gonja, Nanumba, Yendi and Gushiegu-Karaga). Key findings were that 80% of pipe filters were distributed at household level, as intended, that 84% of those interviewed knew how to use the pipe filter but health education about filter usage and care was inconsistent (only 32% could describe how to clean their pipe filter properly), that there were not enough filters to cover the populations targeted, and that women were especially under-represented among those who did receive pipe filters, because the protocol for distribution excluded female heads of households, as these were believed to be protected most of the time by the household cloth filter. The protocol for distribution was not adhered to at the district level. GWEP district staff did not distribute the filters as intended, were not informed about the durability (2-4 years) of these pipe filters, and as a result too many pipe filters were kept in storage as replacements and were slowly distributed over many months. Overall, only 36% of the eligible population received a pipe filter. Coverage was highest in East Gonja and Yendi Districts, and lowest in Tamale and Nanumba Districts.

### IN BRIEF:

**Cote d'Ivoire.** Following up on a report sent in by a UNICEF contractor on June 14, a team from the district of M'Bahiakro confirmed 3 cases of dracunculiasis in the village of Lendoukro, in a rebel-controlled area, on June 17-19. The worms in the cases emerged on June 6, and the medical response was thus too late to contain them. A team from the national program also confirmed the 3 cases, plus a fourth case that will be officially notified in July, during a visit on June 29. The medical teams conducted health education, distributed cloth filters, and applied ABATE@ larvicide to appropriate ponds. UNICEF/Cote d'Ivoire supported a technician to repair the two pumps in the village on July 12. The investigating teams found that there had been no cases in Lendoukro in 2004, but that there had been at least one case then in the village of Moroko, located about 3 kilometers away, and sharing a water source with Lendoukro. Moroko has so far had no cases in 2005.



**Nigeria.** Dr. Cephas Ityonzughul has been appointed by WHO as the national professional officer responsible for assisting in development of surveillance for dracunculiasis in formerly endemic areas of the country. The appointment is for one year, effective July 1, 2005. Dr. Ityonzughul was formerly The Carter Center's zonal consultant for the north central zone of Nigeria. Congratulations, Cephas!!

### Sudan.

The Nairobi office of The Carter Center for assisting the GWEP in South Sudan was closed on July 5, 2005 and is being transferred into southern Sudan.

Table 2

**Dracunculiasis Eradication Campaign: Status of Interventions during  
January - June 2005\***

Country	% Change in cases 2004 - 2005*	Number of villages reporting 1 or more cases 2004 - 2005	% of cases contained in 2005	Percentage of Endemic Villages			
				provided Health Education	100% households with filters	protected by ABATE ®	with 1+ sources of safe water
Ghana	-56%	1017	55%				
Sudan **	-52%	2322	1%	65%	53%	1%	28%
Nigeria	-69%	92	63%	100%	100%	62%	66%
Mali	205%	125	84%	100%	93%	18%	34%
Togo	-65%	47	85%	100%	100%	47%	57%
Ethiopia	700%	9	88%	100%	44%	67%	44%
Niger	-57%	45	76%	100%	100%	22%	11%
Cote d'Ivoire	-76%	9	25%	100%	22%	11%	67%
Burkina Faso	-71%	10	100%				
Benin	-100%	1		100%	0%	0%	100%
Mauritania	-100%	1		100%	100%	100%	100%

\* provisional data

\*\* Sudan reporting at 40%

### MEETINGS

Ghana will hold its annual review of the GWEP during August 15-16 in Accra. The French-speaking endemic countries will meet in Cotonou, Benin during August 18-19 for their annual program review. The annual review of Nigeria's GWEP will be on September 7, 2005 in Abuja.

### RECENT PUBLICATIONS

Bimi L, Freeman AR, Eberhard ML, Ruiz-Tiben E, Pieniazek NJ, 2005. Differentiation of *Dracunculus medinensis* and *Dracunculus insignis* by sequence analysis of the 18S RNA. *Ann Trop Med Parasitol* 99; 1-7.

WHO, 2005. Report and Recommendations of the International Commission for the Certification of Dracunculiasis Eradication. Fifth Meeting, 9-11 March. 2004. WHO/CDS/CPE/CEE/2005.51. Geneva: World Health Organization.

*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, 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.