DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
and Prevention (CDC)
Memorandum

Date: May 12, 2006

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

Subject: GUINEA WORM WRAP-UP #162

To: Addressees

Count Down to Glory
Consecutive months with zero indigenous cases:
Ethiopia 8
Burkina Faso 3
Nigeria 2

WHEN WILL GHANA ACHIEVE INDEPENDENCE FROM GUINEA WORM?

Ghana has reported a provisional total of 1,995 indigenous cases of dracunculiasis in January-April 2006, which is an increase of 9% from the 1,828 indigenous cases reported during the same period of 2005. The program thus reaps the consequences of serious deficiencies in several, although not all, of the remaining endemic areas during the peak transmission season of October 2004-April 2005. Last year's shortcomings follow much more effective interventions during the peak transmission season before that. The recent reversal thus extends the sustained fluctuations in incidence of Guinea worm disease that Ghana has allowed over the past decade (Figure 1). During that time Ghanaians have suffered more than 66,000 additional cases of the disease and missed five target dates for eradication, and Government of Ghana and The Carter Center have provided at least $5 million and over $9 million in assistance, respectively, to Ghana's Guinea Worm Eradication program over the same decade. The latest status of interventions by month during 2006 is given in Table 1.

Figure 1

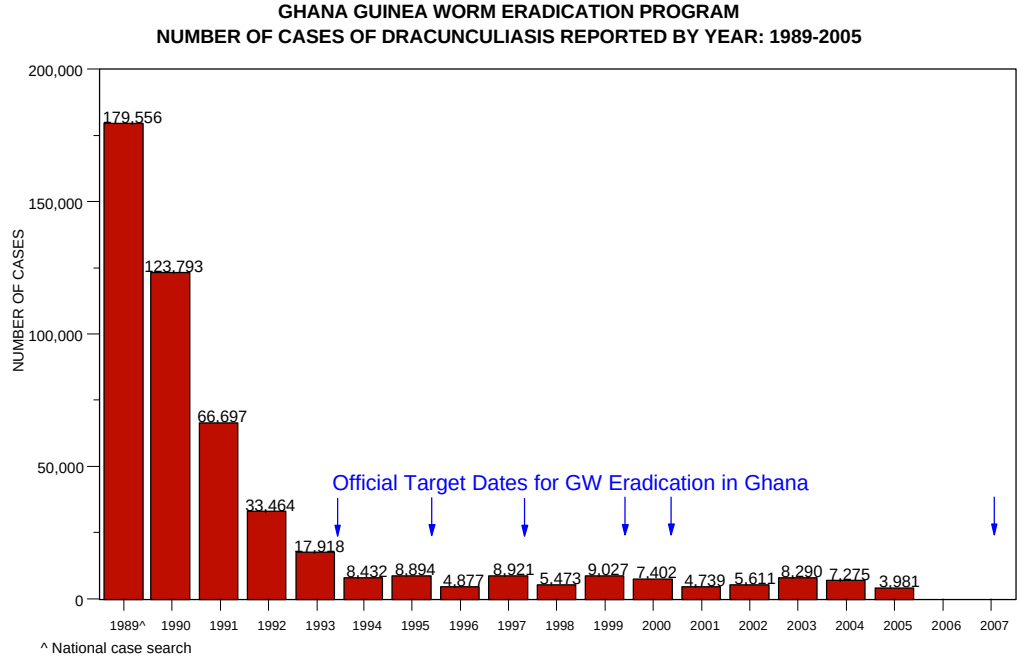


Table 1

Ghana Guinea Worm Eradication Program
Interventions Against Transmission of Guinea Worm Disease: 2001- 2006*

Year	Number of villages reporting 1+ cases	Number of cases reported	% of cases contained	Percentage of Endemic Villages		
				with filters in households	using ABATE	with 1+ sources of safe drinking water
2001	783	4739	68%	85%	20%	34%
2002	739	5611	66%	95%	26%	44%
2003	975	8290	59%	100%	39%	42%
2004	876	7275	66%	94%	7%	47%
2005	422	3981	60%	89%	56%	39%
2006*	296	1995	61%	74%	16%	37%

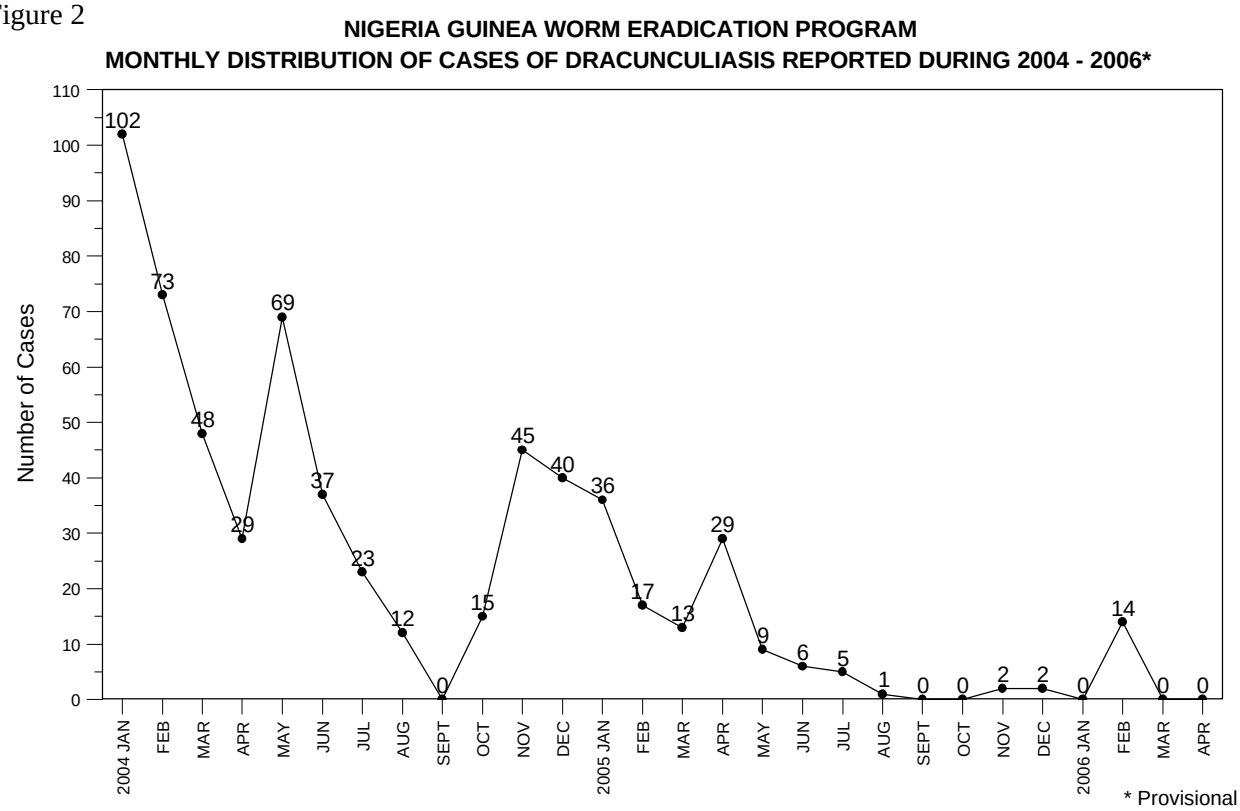
* Provisional reports for January -April

The number of cases reported so far this year and the large proportion of those cases that were not contained pose a serious challenge to Ghana's intention to celebrate freedom from transmission of Guinea worm disease in conjunction with the Golden Jubilee of its Independence on March 6, 2007. There is potentially still time to accomplish this goal before the end of the year-long celebrations in 2007, but only if Ghana mobilizes itself fully to make that happen. Among the Ghanaian artists working to fight the disease, Mr. Sheriff Ghale, Ghana's 2005 Reggae Artist of the Year, has been writing songs for the Guinea Worm Eradication Program, and performed at a massive concert to support heath education about the disease in Savelugu (Northern Region) in March 2006. Miss Ghana 2005, Miss Lamisi Mbillah, meanwhile, continues her efforts to help mobilize villagers and decision makers in endemic areas by undertaking another tour to key zones in the Northern Region for two weeks in May 2006. Also in May, the director for prevention and control of communicable diseases at WHO's Regional Office for Africa, Dr. James N. Mwanzia, led a delegation of six persons from the WHO to review the Guinea worm situation. The team was accompanied by Dr. George Amofa, the director of public health in the Ghana Health Service, in a visit to Savelugu in the Northern Region. Dr. Amofa is reported to have called for a "state of emergency" in regard to Guinea worm eradication in Ghana following the visit. *ERRATA: In last month's issue, we reported that the Government of Ghana has allocated the equivalent of $500,000 to the Ministry of Health for the GWEP in 2006. A request was made to the ministry for $500,000 in support, but the program is not yet sure of how much additional support it will receive beyond the $77,000 already received for 2006. We regret the error.*

NIGERIA: ANY CASE OF DRACUNCULIASIS FROM NOW ON COULD BE THE LAST CASE!!

Nigeria has reported only 14 cases of dracunculiasis in January-April 2006, compared to 95 cases during January-April 2005, and all of this year's cases were reported in February. In the past year (May 2005-April 2006), Nigeria has reported a total of only 39 cases, 9 of which were not contained: two cases each in May and June 2005, one case in July 2005, and four cases in February 2006. During that year, Nigeria, which enumerated over 653,000 cases of Guinea worm disease during its first national case search in 1988-89, reported five months with zero indigenous cases of dracunculiasis (Figure 2). Nigeria has recorded 54 rumored cases of Guinea worm disease in its national rumor register for the period January-April 2006. Only one of these was confirmed as a case of dracunculiasis.

Figure 2



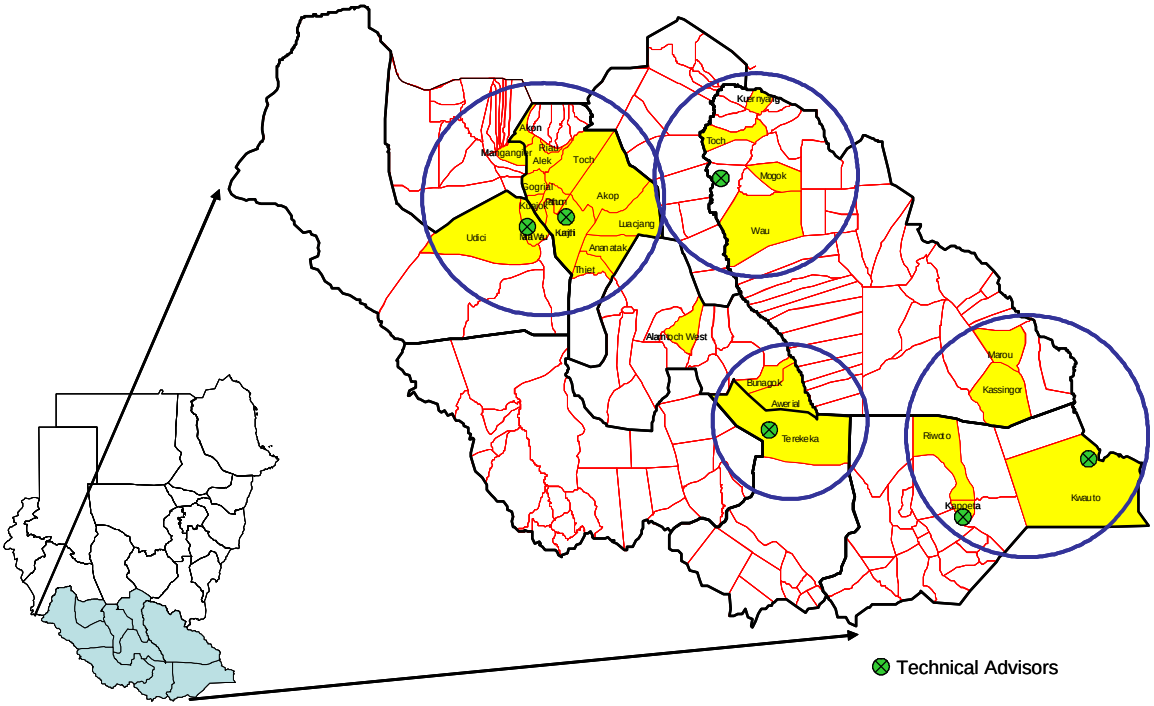
SUDAN ESCALATING INTERVENTIONS

The Sudan Guinea Worm Eradication Program and its partners have been working furiously to escalate interventions in the remaining endemic areas of southern Sudan, especially in the four Focus Areas (Figure 3), before the rains limit access. The Carter Center has provided six international technical advisors for the four areas, as well as 11 four wheel drive vehicles, 950,000 cloth filters and 1,000,000 pipe filters, ABATE@ Larvicide, health education materials and other supplies. UNICEF plans to drill 40 borehole wells in Kapoeta North County. Two new data managers have been trained with CDC's assistance, and are beginning to organize reports for 2006. So far, 2822 cases have been during January - April 2006 which represents an increase of 737%, compared to 337 cases reported for all of Sudan during the same period of 2005.

In a speech before the parliament of South Sudan on April 11, 2006, the President of the Government of South Sudan and Vice President of the Government of National Unity, His Excellency Mr. Salva Kiir, noted his government's intention to combat several debilitating diseases, including Guinea worm, and said that "With assistance from The Carter Center, WHO, UNICEF and other organizations, the Government of Southern Sudan hopes to eradicate the guinea worm disease from the whole of Southern Sudan by the year 2009. All these plans go hand in hand with programs for drinking water and environmental sanitation."

Figure 3

SUDAN GUINEA WORM ERADICATION PROGRAM
LOCATION OF FOCUS AREAS AND TCC TECHNICAL ADVISORS



IN-BRIEF:

Kenya. Dr. Ahmed Tayeh, WHO/Geneva conducted an assessment of Kenya's Guinea Worm Eradication Programme during May 3 -9, which included a field visit to the formerly endemic district of Turkana to review surveillance and case containment activities, provide technical assistance, and make recommendations. Since the last known indigenous case occurred in Kenya in 1994, this country has been kept in the stage of pre-certification of eradication because of annual importations of cases from Sudan. However, the International Commission for Certification of Dracunculiasis Eradication is expected to review Kenya's status in 2008 and decide whether it should then be certified free of dracunculiasis.

Benin. A joint external evaluation to confirm the interruption of dracunculiasis transmission in Benin is being conducted during May 8 - 22, 2006. Dr Alhousseini Maiga, WHO/AFRO, led the evaluation, which included representatives from CDC, UNICEF, WHO and the Government of Benin. Three evaluators each is leading a team to investigate the status of dracunculiasis in one or more formerly endemic districts (Savalou, Djidja, Tchaourou, Ouesse, Ouake Cobly and Boukoumbe).

Cote d'Ivoire. After having reported zero cases of GWD during the last 7 consecutive months, Cote d'Ivoire reported one case from the village of Arrah, in the Sanitary District of Bongoaunou on Apri120, 2006. Transmission of GWD from this case was contained. This person is a 33 year old male, from the Agni ethnic group, and a farmer. According to the national GWEP coordinator, Dr. Brou Aka, this case is indigenous to Arrah, and he also notes that this village last reported 15 cases of GWD during 1999. We note that there were zero cases of GWD reported from Bongouanou during 2005, but 3 cases were reported there during 2004. The probable origin of this case needs to ascertained.

Table 2

Number of Cases Contained and Number Reported by Month during 2006*
(Countries arranged in descending order of cases in 2005)

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SUDAN	/	0 / 263	0 / 2559	/	/	/	/	/	/	/	/	/	0 / 2822	0
GHANA	396 / 608	374 / 587	269 / 411	183 / 389	/	/	/	/	/	/	/	/	1222 / 1995	61
MALI	3 / 3	1 / 1	0 / 0	1 / 1	/	/	/	/	/	/	/	/	5 / 5	100
NIGER	2 / 2	0 / 0	0 / 0	1 / 2	/	/	/	/	/	/	/	/	3 / 4	75
NIGERIA	0 / 0	10 / 14	0 / 0	0 / 0	/	/	/	/	/	/	/	/	10 / 14	71
TOGO	1 / 1	2 / 3	0 / 0	0 / 1	/	/	/	/	/	/	/	/	3 / 5	60
BURKINA FASO	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	0 / 0	0
COTE D'IVOIRE	0 / 0	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	/	/	1 / 1	100
ETHIOPIA	1 / 1	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	1 / 1	100
TOTAL*	403 / 615	387 / 868	269 / 2970	186 / 394	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1245 / 4847	26
% CONTAINED	66	45	9	47									26	
% CONT. OUTSIDE SUDAN	66	64	65	47									61	

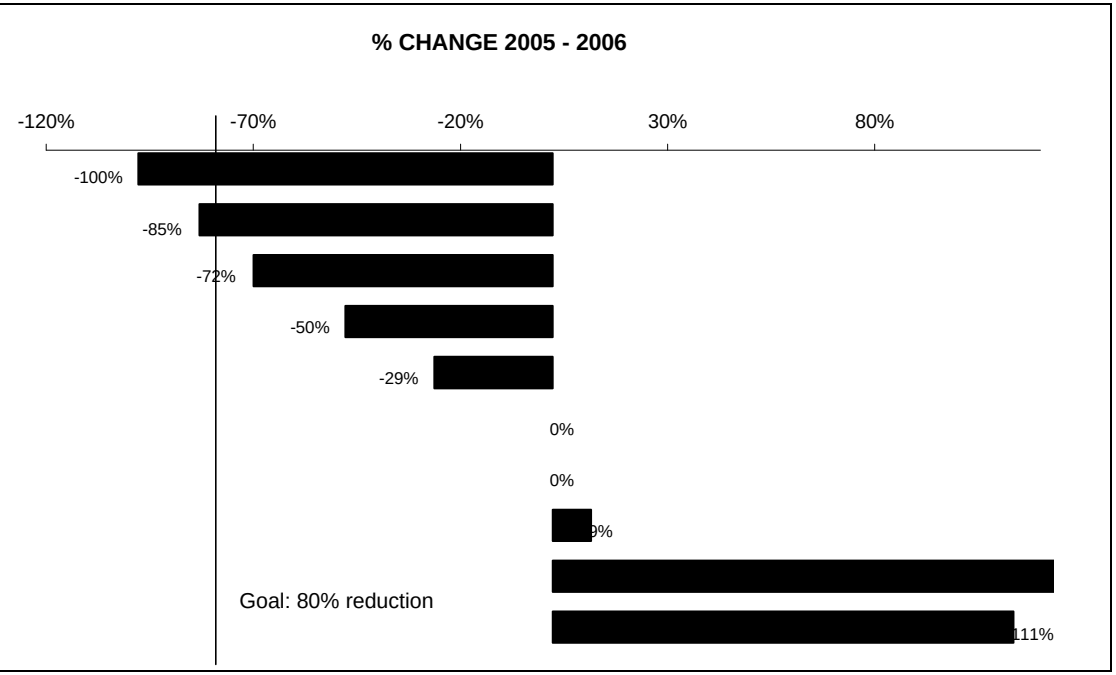
* provisional

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 2005 and 2006*, and Percent Change in Cases Reported

Country	Indigenous Cases Reported	
	2005	2006
Ethiopia (4)	3	0
Nigeria (4)	95	14
Togo (4)	18	5
Niger (4)	8	4
Mali (4)	7	5
Cote d'Ivoire (4)	1	1
Burkina Faso (4)	0	0
Ghana (4)	1825	1995
Sudan (3)	337	2822
Total	2294	4846



Overall % change outside of Sudan = 3%

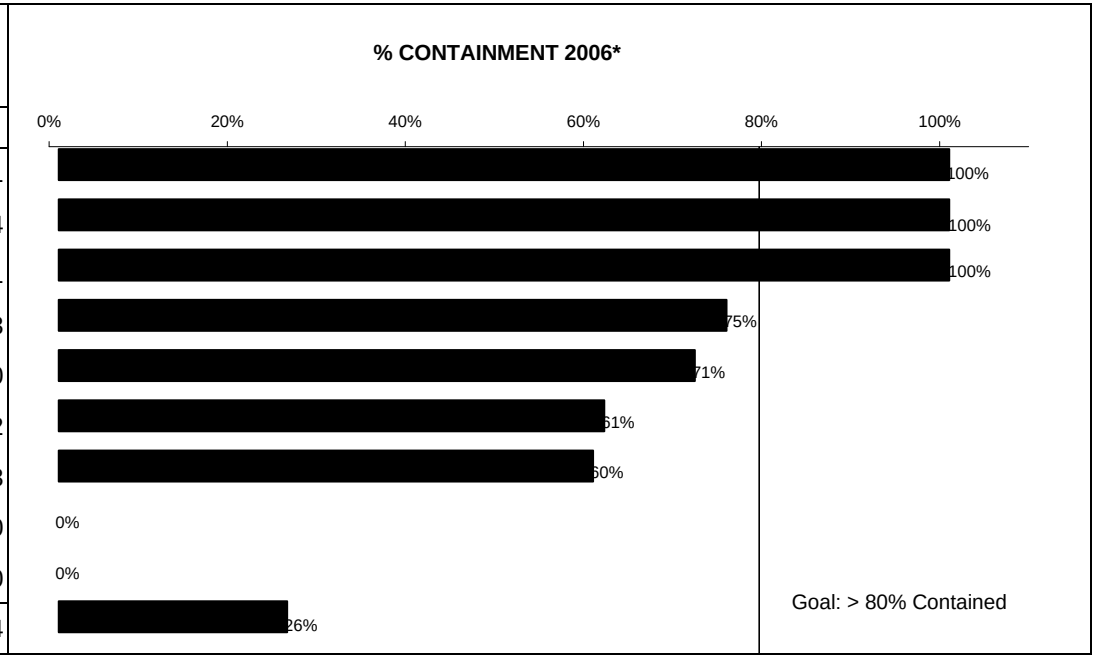
(4) Indicates months for which reports were received, i.e., Jan. - Apr. 2006

* Provisional

Figure 5

Number of Cases of Dracunculiasis Reported by Country During the Specified Period in 2006*, and Percent of Cases that were Contained

Country	Number of Cases	
	Reported	Contained
Ethiopia (4)	1	1
Mali (4)	4	4
Cote d'Ivoire (4)	1	1
Niger (4)	4	3
Nigeria (4)	14	10
Ghana (4)	1995	1222
Togo (4)	5	3
Burkina Faso (4)	0	0
Sudan (3)	2822	0
Total	4846	1244



(4) Indicates months for which reports were received, i.e., Jan. - Apr. 2006

* Provisional

STATUS OF GATES/UNICEF WATER SUPPLY PROJECTS

Mali. The project has been completed, with 12 of 14 planned wells provided. Eight are currently functional and 4 are in disrepair. We are informed that the two remaining planned wells will not be provided.

Togo. 14 of 14 new wells successfully drilled. Temporary hand pumps were placed on 3 of the wells in April, and those are now functioning in the villages of Agbole, Kpatala, and Okeloukoutou. Permanent hand pumps for all 14 wells were to arrive in Lome on May 10, 2006.

Niger. The project has been completed. Seven of the 12 planned wells (3 hand-dugwells and 4 borehole wells) were provided. Four boreholes did not yield water, and a 5th which did, has had to be condemned because of dangerous levels of nitrates in the water.

NEW DONATION FROM KUWAIT

The Kuwait Fund for Arab Economic Development has informed The Carter Center of a renewal grant of US$ 500,000 for the final stage of the Guinea Worm Eradication campaign. The grant, which will be paid over 2006 and 2007, will be matched 1:1 by funds from the Bill & Melinda Gates Foundation. This brings to $1,250,000 the total amount provided to The Carter Center by the Kuwait Fund for Guinea worm eradication since 2000.

VOICE OF AMERICA BROADCAST

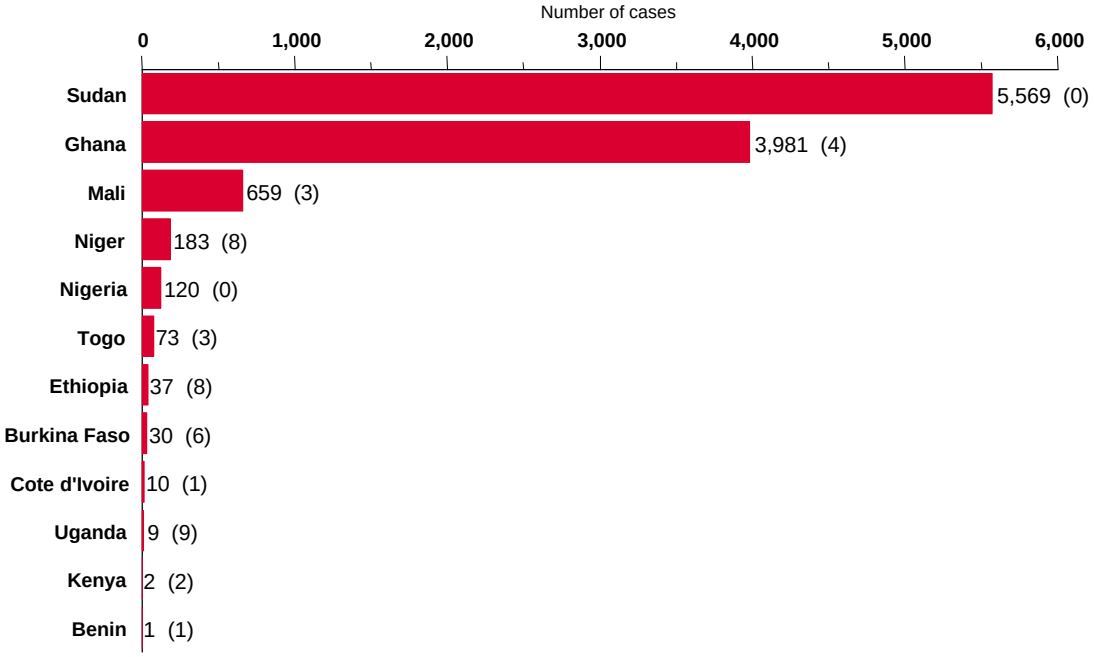
The Voice of America broadcast an interview with Dr. Donald Hopkins of The Carter Center on May 3, 2006. The interview focused on the current status of the global Guinea Worm Eradication Program. The interview may be heard at http://www.voanews.com/english/Africa/2006-05-03-voa77.cfm

MEETINGS:

The Carter Center and WHO/Geneva will hold an informal meeting on May 25, 2006, during the 59th World Health Assembly, for Ministers of Health of the 9 Guinea worm endemic countries and 7 Ministers of Health of countries in pre-certification stage. The theme of the meeting is: "The final push to interrupt dracunculiasis transmission by 2009". This will be an opportunity by all partners to re-affirm their political support and commitment towards Guinea worm eradication by 2009.

Figure 6 and Table 3 show the numbers of cases of dracunculiasis reported during 2005 and the numbers of cases exported and imported by the endemic countries.

Figure 6 **Distribution by Country of 10,674 Cases of Dracunculiasis Reported during 2005**



* Includes 45 cases of dracunculiasis imported from other countries
(1) Numbers in parentheses indicate how many of the country's total cases were imported from another country. During 2005 Benin reported one case imported from Ghana, Kenya reported 2 cases, and Uganda reported 9 cases imported from Sudan.

Table 3

Dracunculiasis Eradication Campaign

Reported Importations and Exportations of Cases of Dracunculiasis: 2005

From	To	Month and number of cases imported													Number of caes exported
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total	
Ghana	Burkina Faso				1			1						2	7
	Niger		1											1	
	Benin			1										1	
	Togo		1	1									1	3	
Sudan	Ethiopia	2					6							8	19
	Kenya						2							2	
	Uganda						4	1	2	2				9	
Mali	Burkina Faso										1			1	9
	Cote d'Ivoire								1					1	
	Niger				2		1	1	1		1	1		7	
Niger	Mali								2		1			3	6
	Burkina Faso											2		2	
	Ghana	1												1	
Togo	Ghana			1	1									2	2
Cote d'Ivoire	Burkina Faso						1							1	1
Burkina Faso	Ghana					1								1	1
	Total	3	2	3	4	1	14	3	6	2	3	3	1	45	

NEW PUBLICATIONS

Menon T, 2006. Incidental finding of *Dracunculiasis medinensis* in Australia. Med, J. Australia 183:51-52. [This report is of a calcified Guinea worm identified by X-ray in an immigrant from Sudan.]

World Health Organization, 2006. Dracunculiasis eradication: global surveillance summary, 2005. Wkly Epidemiol Rec 81:173-182.

Sternberg S, 2006. Carter Center closes in on the Guinea worm. USA Today May 15; 7D

DEFINITION OF CASE CONTAINMENT

A case of Guinea worm disease is contained if all of the following conditions are met:

1. The patient is detected before or within 24 hours of worm emergence; **and**
2. The patient has not entered any water source since the worm emerged; **and**
3. The village volunteer has properly managed the case, by cleaning and bandaging until the worm is fully removed, and by giving health education to discourage the patient from contaminating any water source (if two or more emerging worms are present, the case is not contained until the last worm is pulled out); **and**
4. The containment process, including verification that it is a case of Guinea worm disease, is validated by a supervisor within 7 days of the emergence of the worm.

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.