



**DEPARTMENT OF HEALTH & HUMAN SERVICES**

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

Date: August 26, 2005



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

Subject: GUINEA WORM WRAP-UP #155

To: Addressees

**FIND, EXPLAIN, CONTAIN EVERY CASE IN 2005**

**EDITORIAL : STOP GUINEA WORM TRANSMISSION NOW!**

With the completion of this year's program Review for the remaining endemic francophone countries (see below), it is clear that all of those countries are close to ending transmission of Guinea worm disease (GWD, dracunculiasis). The only question now is: How long will it take them to reach zero cases? The answer: there should be ZERO indigenous cases in all of those countries after one year from now – September 2006. Benin and Mauritania are about to report zero indigenous cases for an entire calendar year for the first time in 2005, and Burkina Faso and Cote d'Ivoire may also do so in 2006. Burkina Faso, Cote d'Ivoire, Ethiopia, Ghana, Mali, Niger, Nigeria and Togo each need to escalate their expectations and raise their program's performance. We all need to change the way we think about this stage of the campaign. From now on, our ATTITUDE should be that we shall do everything that we can to stop ALL transmission of Guinea worm disease from now on. No one should be satisfied with reductions in cases of 60%, 70% or even 80% by this time next year. We should aim for reductions of 100% everywhere except Sudan. Allow no worms to pass! What would accepting that challenge mean? It means

- From now on, every case of GWD is intolerable.
- The entire country, including the head of state, minister of health, Guinea worm workers, government health workers, school children, and the general public nationwide should be primed to detect any case within 24 hours, report it urgently, and help contain it immediately.
- Immediate cross notification of an imported case, and immediate response to receipt of such cross-notification.
- Higher rates of case containment.
- Intensified supervision at all levels of the program led by the National Program Coordinators.
- Monthly monitoring of interventions, and response to any apparent deficiencies.
- Redundant surveillance: village-based, school-based, market-based, reward-based, etc..
- Putting as many interventions as possible in place in each endemic village.

This final phase requires a much more aggressive attitude than before. This is a challenge to greatness this year and next year. Will we meet the challenge? Time, and The Worm will tell. **The only thing standing between us and Guinea worm eradication a year from now in most of the remaining endemic countries is us. It is not The Worm.**

**BENIN HOSTS ANNUAL PROGRAM REVIEW FOR FRANCOPHONE COUNTRIES**

The National Program Coordinators of the Guinea Worm Eradication Programs of Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, and Togo met in Cotonou, Benin on August 18-19 for their annual Program Review. The meeting began with congratulations to the host country Benin for having interrupted transmission of dracunculiasis over the past year.

**Benin** has reported only one case imported from Ghana so far in 2005, and no indigenous cases since March 2004. Benin's government has allocated the equivalent of US\$97,000 for the program in 2005. Benin plans to establish a national pre-certification committee later this year, to begin preparing its documentation to WHO for eventual certification of dracunculiasis eradication.

**Mauritania**, which was unable to attend because of a flight cancellation, has also interrupted transmission, with no indigenous cases reported since June 2004. Mauritania established its national pre-certification committee in 2002.

**Burkina Faso** reported only 6 indigenous cases from 3 villages plus 3 imported cases (2 from Ghana, 1 from Cote d'Ivoire) in three other villages during January-July. Although 3 of the indigenous case and 1 imported case were not detected within 24 hours of emergence of the worm and thus were not officially contained (56% containment rate), ABATE@ larvicide was applied to ponds in all six villages within 3 days after the cases were detected. The village of Kouini (in Boulsa District), which had 3 cases in July and 6 more in early August, participated in a Worm Week in June 2005 (one of 5 Worm Weeks held with assistance of US Peace Corps this year). Burkina Faso's peak transmission season is July-October. The government has allocated the equivalent of ~US\$136,000 for the program in 2005. Burkina Faso plans to establish a national pre-certification committee later this year. *Most important challenge now: transition to a new National Program Coordinator (see below).*

**Cote d'Ivoire** reported 8 cases, all of them indigenous, in 3 villages, including 6 cases in Lendoukro village of M'Bahiakro District in January-July 2005. Lendoukro village is in the part of Cote d'Ivoire that is not now under control of the national government, although personnel from the national program have access to the village. Only two of the 8 cases was contained (25% containment rate). Interventions were applied in each of the villages, including ABATE@ larvicide, but use of ABATE began nearly 2 months after worms appeared in the first three cases, not within ten days, which could have prevented transmission (see *Guinea Worm Wrap-Up #154*). Cote d'Ivoire's peak transmission season is January-May. The government has allocated the equivalent of ~US\$80,000 for the program this year. Cote d'Ivoire plans to reactivate its national pre-certification committee, which was formed in 2001, later this year. *Most important challenges now: the de facto division of the country since September 2002.*

**Niger** has reported 24 cases, 17 of them contained (71%), in January-July 2005, but four of these cases were imported: 3 from Mali and 1 from Ghana. This is a reduction of -65% from the 57 cases reported in the same period of 2004. The endemic cases were in 9 villages of Tillabery Region. 17% of the endemic villages currently have a safe source of drinking water. Health education and cloth filters are being used in all 12 villages reporting cases, and ABATE@ larvicide in 54% of them. Niger's peak transmission season is June-December. The Government of Niger has released 10 million FCFA (~US\$20,000) for the program this year. Health and Development International will provide a supplementary grant of US\$16,180 for food allowances for health workers and support of more local language-speaking workers in endemic villages. *Most important challenge now: improving supervision at all levels for Tillabery Region.*

**Togo** reported 53 cases in January-July, of which 45 (85%) were contained, including only 2 cases imported from Ghana (vs. 36 cases imported from Ghana during the same period of 2004). This is a reduction of -67% from the 154 indigenous cases that Togo reported in the same period of 2004, and a significant improvement in the case containment rate from 2004 (69%). The 53 cases were reported from 18 villages, 8 of which reported only internally or externally imported cases. All of the 47 endemic villages have received health education and cloth filters in all households; ABATE@ larvicide is being used in 87%, and 55% have at least one safe source of drinking water. Togo's peak transmission season is October-June. The Government of Togo has allocated 5 million FCFA (~US\$10,000) for the program this year, and plans to reactivate its national pre-certification committee (established in 2003) later this

year. The minister of health plans to participate in a training session in an endemic area in late August. *Most important challenge now: establishing and maintaining effective surveillance for cases nationwide, including in non-endemic and formerly endemic areas.*

**Mali** reported 139 cases in January-July, of which 94 (67%) were contained. All 140 cases were indigenous, predominantly in Ansongo, Douentza, and Mopti Districts. This is an increase of 209% over the 45 indigenous cases reported by Mali during the same period of 2004, and makes Mali the third most endemic country in 2005, after Sudan and Ghana, and ahead of Nigeria (Figure 2). This year's upsurge in reported case is due to early outbreaks in Ansongo District and in Douentza and Mopti Districts of Mopti Region. (When Mali's program began in 1993, Mopti and Kayes Regions were the most highly endemic regions in Mali. Kayes Region had its last indigenous case in 2003, having chosen a "vertical" mode of attack as compared to the "integrated" approach in Mopti Region.) Worm Weeks were held in Ansongo, Douentza, Gao, and Gourma Rharous Districts earlier this year. Health education and cloth filters have been deployed in all endemic villages, ABATE® larvicide was used in 49%, and 13% of endemic villages have at least one safe source of drinking water. Mali's peak transmission season is June-November. The Government of Mali has released the equivalent of US\$107,000 for the program this year, plus 24 motorcycles, and added dracunculiasis to the list of diseases that must be reported to national health authorities immediately. *Most important challenge now: establishing effective interventions and supervision in Mopti Region and Gao District.*

#### **OUTBREAK OF CASES IN THE MOPTI REGION OF MALI IN JUNE AND JULY, 2005.**

Toulewendo is a formerly endemic village in the subdistrict of Mondoro (Douentza District, Mopti Region) that reported its last case in 1997. In 2002, a girl from Toulewendo went to the highly endemic village of Niaggassadjou, near the border with Burkina Faso (*see Guinea Worm Wrap-up #149*). On her return to Toulewendo the following year she had a Guinea worm emerge, but it was not reported nor well contained by the Village Volunteer who was also her father. In 2004 another girl from Toulewendo had a Guinea worm emerge and she was cared for by the sub district nurse (ICPM) of Mondoro. Unfortunately, once again no actions were taken by the supervisor to inform the District and Region about the case and to provide information to the village on how to prevent Guinea worm disease. Consequently, this girl contaminated several water sources in Toulewendo that were used as the primary source of drinking water, since the 2 borehole well hand pumps in the village broke down in 2001. The result has been an outbreak of 30 cases in Toulewendo during June –July in 2005, not including 3 cases exported to Bamako, 1 case to the village of Petaka, and 1 case to the town of Gao. Only 20% of the cases were contained. During July, the district supervisor visited Toulewendo once, the regional supervisor twice, and staff of the National GWEP once. Cloth filters and pipe filters were distributed to households, 5 sources of water were treated with ABATE, and door-to-door health education was conducted in all 28 households. The 2 hand pumps remain broken.

A similar situation occurred in the village of Goulumbo in the district of Mopti which reported 8 cases in July, 3 of which were contained. Cases from Goulumbo were reported from 2 families who were camped approximately 10 km outside of the village. This encampment is not far from another endemic camp called Karawoye. Karawoye was endemic in 2003, but did not report cases in 2004. These two camps use the same water sources at certain times during the year, which can help explain the cases reported from the two families in Goulumbo. This conclusion is based on a suspicion that although Karawoye is only reporting 1 case in July, 2005, there were probably other cases in 2004 that were not reported.

Table 1

Number of cases contained and number reported by month during 2005\*  
(Countries arranged in descending order of cases in 2004)

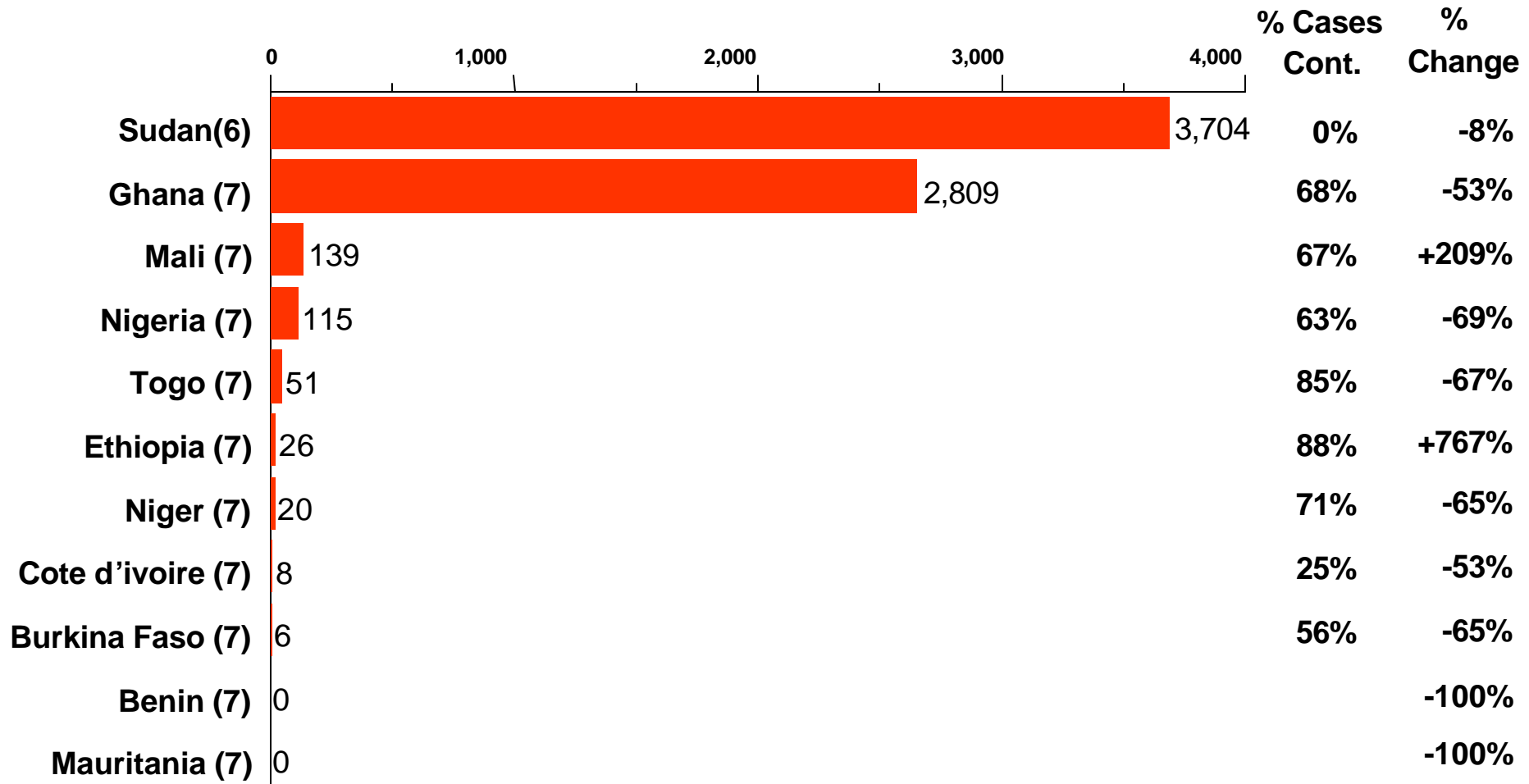
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
GHANA	374 / 544	343 / 483	282 / 393	249 / 396	332 / 458	244 / 386	92 / 153	/	/	/	/	/	1916 / 2813	68
SUDAN	0 / 88	1 / 131	0 / 375	5 / 744	7 / 1629	0 / 737	/	/	/	/	/	/	13 / 3704	0
NIGERIA	25 / 36	13 / 17	9 / 13	11 / 29	7 / 9	4 / 6	4 / 5	/	/	/	/	/	73 / 115	63
MALI	3 / 4	1 / 1	1 / 1	1 / 1	22 / 25	25 / 25	40 / 82	/	/	/	/	/	93 / 139	67
NIGER	2 / 2	4 / 4	1 / 1	1 / 4	1 / 3	3 / 3	5 / 7	/	/	/	/	/	17 / 24	71
TOGO	11 / 11	1 / 4	2 / 2	3 / 3	16 / 19	7 / 8	5 / 6	/	/	/	/	/	45 / 53	85
BURKINA FASO	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	3 / 3	1 / 5	/	/	/	/	/	5 / 9	56
COTE D'IVOIRE	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 4	1 / 3	/	/	/	/	/	2 / 8	25
BENIN	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	1 / 1	100
ETHIOPIA	2 / 2	0 / 0	0 / 0	3 / 3	7 / 7	16 / 20	2 / 2	/	/	/	/	/	30 / 34	88
MAURITANIA	0 / 0	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*	417 / 687	363 / 640	297 / 787	274 / 1181	392 / 2150	306 / 1196	150 / 263	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2199 / 6904	32
% CONTAINED	61	57	38	23	18	26	57						32	

\* 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 6,878 Indigenous Cases of Dracunculiasis Reported during 2005\*, Percent of Cases Contained in 2005, and 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: Sudan (6) = Jan-Jun 2005

## **GHANA AIMS FOR GOLDEN INDEPENDENCE ANNIVERSARY**

Ghana's Deputy Minister of Health, Dr. (Mrs.) Gladys N. Ashitey, opened this year's memorable Program Review, which was convened in Accra on August 15-16. The Opening Ceremony was chaired by the Director (Water) in the Ministry of works and Housing, Mr. Mintah A. Abogye. This year's review was marked by several notable events, including the report by Dr. Andrew Seidu-Korkor, the National Program Coordinator, that in January-June 2005, Ghana's Guinea Worm Eradication Program has reduced the number of cases by -56%, from 5,996 to 2,655, and increased the overall rate of case containment to 69% from 58% in 2004. Dr. Seidu-Korkor noted the dramatic reductions in cases over the past year in Nkwanta (-88%) and Nanumba (-79%) Districts as examples of what can be achieved, and warned all concerned against the "three major enemies" of "denial, complacency, and apathy". Dr. George Amofah, Director of Public Health presented certificates of appreciation on behalf of the Ghana Health Service to Dr. John Awoonor-Williams, district director of health services for Nkwanta District, and Dr. Andrew Arde-Acquah, regional director for health services for Volta Region, for their roles in Nkwanta District's recent success. Dr. Donald Hopkins of The Carter Center presented a 2005 Jimmy and Rosalynn Carter Award for Guinea Worm Eradication to Dr. Seidu-Korkor during the Opening Ceremony, in recognition of his effective efforts over the past few years. Ghana reported a total of 385 endemic villages so far in 2005, of which all have village volunteers and have received health education, 89% have cloth filters in all households, 54% are protected by ABATE@ larvicide monthly, and 50% have at least one source of safe drinking water.

The Chairman of the Opening Ceremony announced that the government has officially waived for Guinea worm-endemic villages the regular requirement that each village contribute 5% of the costs of providing safe water. As of August 15, the Government of Ghana's HIPC initiative has provided clean drinking water via 81 borehole wells with hand pumps to 50 villages that reported a total of 1,109 cases in 2004, while various other donors (*Agence France Development*, Church of Christ, DANIDA, District Assembly of Atebubu District, European Union, K Village, NORWASP, United States Agency for International Development, World Vision) have provided clean water via 41 borehole wells and hand pumps to another 30 villages that reported a total of 519 cases in 2004, for a coverage of villages that collectively reported 22% of Ghana's cases in 2004, with at least one safe source of drinking water.

Miss Ghana 2005, Miss Lamisi Mbillah, attended much of the review attired in well-fitted dresses made of Ghana's own Guinea worm cloth, including the Opening Ceremony, where she affirmed her intention to make Guinea worm eradication one of her major concerns during her reign, serving as an "ambassador for Guinea worm eradication" to higher endemic areas of the country. The Regional Minister for Brong-Ahafo Region, the Deputy Regional Minister for Volta Region, the Regional Director of Health Services for the Northern Region, Dr. Elias Sory, members of the Ghana Red Cross Society, the resident representatives of UNICEF and WHO, a representative of the Japan International Cooperation Agency, a few Japan Overseas Cooperation Volunteers, a U.S. Peace Corps Volunteer and representatives from The Carter Center and CDC also attended the review. A report on the Opening Ceremony was broadcast on Ghana National Television's evening news. The review ended with a consensus among the Ghanaian government officials that Ghana's Guinea Worm Eradication Program and the entire country should be mobilized with the aim of ridding Ghana of dracunculiasis by the time of its Golden Independence Jubilee, which will occur only 18 months hence, on March 6, 2007. It was agreed that final freedom from Guinea worm disease would be an especially suitable gift by Ghanaians to Ghanaians to celebrate Ghana's 50th birthday.

## **DR DIEUDONNE SANKARA SELECTED AS A FOEGE FELLOW**

The National Program Coordinator of Burkina Faso's Guinea Worm Eradication Program, Dr. Dieudonne Sankara, has been selected as one of this year's Foege Fellows for a two-year program at the Rollins School of Public Health at Emory University in Atlanta, Georgia, USA. The program, which is intended for promising young health workers in other countries is named for Dr. William H. Foege, former director of CDC and former executive director of The Carter Center, and is funded by the Bill & Melinda Gates Foundation. Dr. Sankara departed Burkina Faso for the United States on August 23<sup>rd</sup>. Mr. Sadi Moussa of Niger and Mr. Ayman El-Sheik of Sudan were among the first Foege Fellows two years ago, and completed their fellowships earlier this year. Congratulations Dr. Sankara!!!!

## **IS YOUR NEIGHBOR'S HOUSE ON FIRE?**

We cannot change the number of Guinea worm cases detected and contained in 2004, however we can change the urgency with which new cases are detected and contained starting right now. The importance of containment (preventing undesirable outcomes) is not new. In fact «containment» has been practiced in many of the endemic and non-endemic villages even before the start of the global campaign to eradicate Guinea worm disease. Containment occurs every time a thatched roof of a house catches on fire. Immediately, without a second thought, neighbors and friends run to the nearest source of water, carrying back buckets of water to douse the flames and prevent the fire from spreading. They know that if their response to their neighbor's fire is not immediate and unconditional the fire will spread quickly to other homes, including their own. The urgency of the villagers' actions towards fighting the fire determines the success of containment and whether or not other homes are destroyed. The same is true in fighting Guinea worm disease. The immediate threat of a person with Guinea worm disease in the village should be as obvious as a thatched roof on fire, and the response to contain it as urgent. Like putting out a fire, once a person with Guinea worm disease is detected in a village, friends and neighbors must immediately respond by bringing safe drinking water to the case and preventing the case from entering sources of water and spreading the disease. While fire might be more dramatic as it spreads, Guinea worm disease can spread as quickly if a person immerses their Guinea worm in a pond where people drink without using a filter. Every person in every village must see the threat of Guinea worm disease in the same way: if I am not urgently containing and treating this case now, it will spread and severely affect the lives of others, perhaps even my own family. Your neighbor has Guinea worm, his house is on fire! Take urgent action now!

Supervisors, Community Health Volunteers, and entire villages should be reminded that the same urgency used to put out fires is also needed to stop the spread of Guinea worm disease. We encourage program supervisors to use this analogy in their discussions with villagers, or create their own, to communicate the level of urgency villagers need to take when a Guinea worm case is detected.

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

**Mali.** As of mid-August, 4 of the 14 targeted endemic villages have wells and hand pumps with flowing water since July. Outstanding issues between UNICEF/Mali and the ministry of water supply (*Hydraulique*) have been resolved. The remaining ten wells are to be completed between October 1 and November 30, 2005. These 14 villages reported **24%** of Mali's cases in January – July 2005.

**Niger.** Contractors have been selected to construct 2 large diameter draw wells and 10 new borehole wells with hand pumps for the sites selected under the UNICEF/Gates grant agreement. Construction will

start in October, after the rains subside. These 12 endemic villages reported **30%** of Niger’s indigenous cases in January – July 2005.

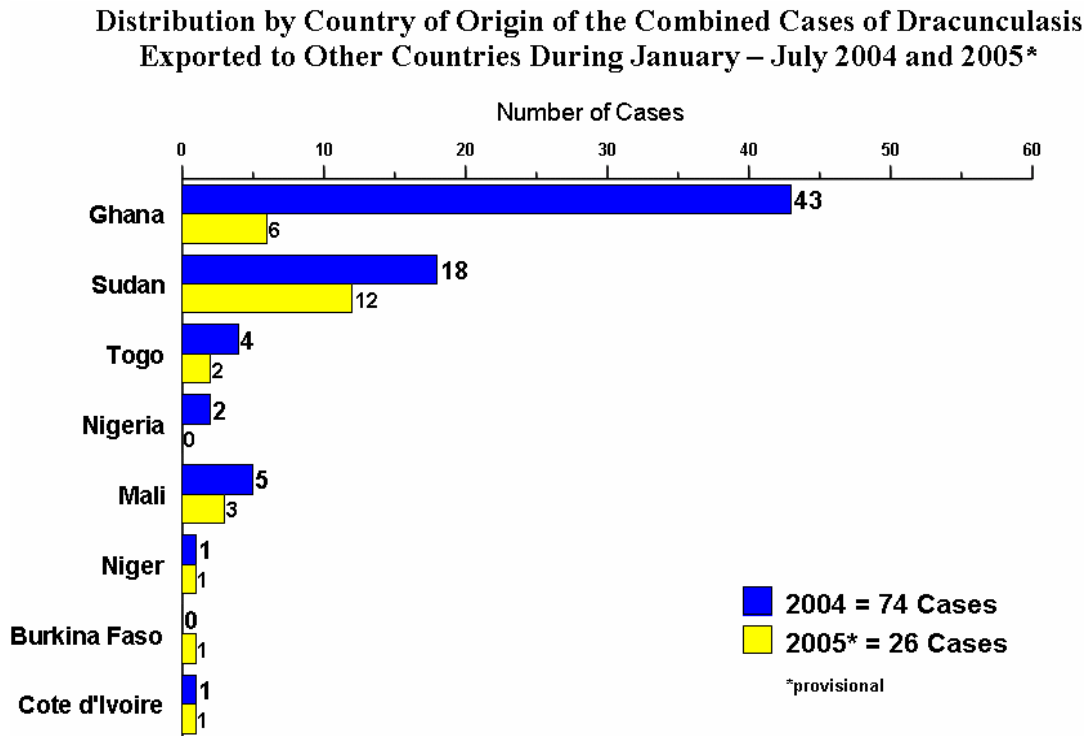
**Togo.** Contractors have been selected for the construction and/or rehabilitation of safe water sources in 26 villages. These 26 endemic villages reported **55%** of Togo’s cases in January – July 2005.

**RECENT PUBLICATIONS**

WHO, 2005 Evaluation of the dracunculiasis surveillance system in 4 districts in Ghana. *Wkly Epidemiol Rec* 80:270-276

Wijova, W., Moravec, F., et al. 2005 Phylogenetic position of *Dracunculus medinensis* and some related nematodes inferred from 18S rRNA. *Parasitol Res* 96; 133-135

Figure 2



*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.