

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

**Date:** July 7, 2010

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

**Subject:** GUINEA WORM WRAP-UP #198

**To:** Addressees

**Detect Every Case! Contain all transmission! Explain**

Table 1

County															
<b>Warrab</b>	Tonj North	1 / 1	2 / 2	0 / 0	4 / 4	11 / 14	36 / 46	/	/	/	/	/	/	54 / 67	81%
	Tonj East	0 / 0	1 / 1	1 / 1	8 / 8	3 / 3	32 / 38	/	/	/	/	/	/	45 / 51	88%
	Tonj South	0 / 0	1 / 1	0 / 0	1 / 1	2 / 2	2 / 3	/	/	/	/	/	/	6 / 7	86%
	Gogrial East	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	3 / 5	/	/	/	/	/	/	4 / 6	67%
STATE TOTAL		1 / 1	4 / 4	2 / 2	13 / 13	16 / 19	73 / 92	/	/	/	/	/	/	109 / 131	83%
<b>Eastern Equatoria</b>	Kapoeta North	0 / 0	0 / 0	11 / 14	43 / 53	37 / 44	15 / 19	/	/	/	/	/	/	106 / 130	82%
	Kapoeta East	2 / 2	17 / 25	72 / 84	49 / 83	72 / 99	56 / 83	/	/	/	/	/	/	268 / 376	71%
	Kapoeta South	0 / 0	0 / 0	0 / 1	5 / 6	4 / 4	0 / 1	/	/	/	/	/	/	9 / 12	0%
	Torit	/	/	/	/	/	0 / 1	/	/	/	/	/	/	0 / 1	0%
STATE TOTAL		2 / 2	17 / 25	83 / 99	97 / 142	113 / 147	71 / 104	/	/	/	/	/	/	383 / 519	74%
<b>Central Equatoria</b>	Awerial	0 / 0	1 / 1	0 / 0	4 / 4	23 / 24	24 / 30	/	/	/	/	/	/	52 / 59	88%
	STATE TOTAL		0 / 0	1 / 1	0 / 0	4 / 4	23 / 24	24 / 30	/	/	/	/	/	52 / 59	88%
	Terekeka	1 / 2	1 / 3	2 / 2	0 / 0	0 / 1	4 / 4	/	/	/	/	/	/	8 / 12	67%
STATE TOTAL		1 / 2	1 / 3	2 / 2	0 / 0	0 / 1	4 / 4	/	/	/	/	/	/	8 / 12	67%
<b>Western Bahr Al Ghazal</b>	Jur River	1 / 1	0 / 0	0 / 0	1 / 1	5 / 5	/	/	/	/	/	/	/	7 / 7	100%
	STATE TOTAL		1 / 1	0 / 0	0 / 0	1 / 1	5 / 5	/	/	/	/	/	/	7 / 7	100%
<b>Western Equatoria</b>	Mvolo	1 / 1	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	/	/	2 / 2	100%
	STATE TOTAL		1 / 1	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	/	2 / 2	100%
<b>Jonglei</b>	Nyriol	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	1 / 1	100%
	Pibor	/	/	/	/	/	4 / 12	/	/	/	/	/	/	4 / 12	33%
	STATE TOTAL		0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	4 / 12	/	/	/	/	/	5 / 13	38%
SOUTHERN SUDAN TOTAL		6 / 7	24 / 34	87 / 103	115 / 160	158 / 197	176 / 242	/	/	/	/	/	/	566 / 743	76%
% CONTAINED		86%	71%	84%	72%	80%	73%							76%	

\* provisional

As reported in the previous issue, *Guinea Worm Wrap-Up # 197*, only 26% of expected surveillance reports from non-endemic districts were received in January – April 2010; and there was no change in the status of provision of safe water in endemic villages. There have been 11 security incidents affecting Guinea worm program operations in January – May 2010 compared to 17 such incidents in January – May 2009. Dr. Luka Tombikana Monoja is the newly designated minister of health of the Government of Southern Sudan.

Two of the 31 technical assistants provided to this program by The Carter Center in addition to 20+ Sudanese program officers are former “Lost Boys of Sudan”, now young Sudanese men resettled in the United States who are US citizens, and have returned to help eradicate dracunculiasis from Southern Sudan. They are Mr. David Thon, a 2009 MPH graduate of the Rollins School of Public Health, Emory University and Mr. Peter Anyang Manyang, a 2010 MPH graduate of the Mailman School of Public

Table 2

**Number of Cases Contained and Number Reported by Month during 2010\* (Countries arranged in descending order of cases in 2009)**

	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	6 / 7	24 / 34	87 / 103	115 / 160	158 / 197	176 / 242	/	/	/	/	/	/	566 / 743	76
GHANA	2 / 2	3 / 3	1 / 1	1 / 1	1 / 1	0 / 0	/	/	/	/	/	/	8 / 8	100
MALI	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	/	/	1 / 1	100
ETHIOPIA	0 / 0	1 / 1	2 / 2	6 / 6	1 / 2	0 / 1	/	/	/	/	/	/	10 / 12	83
TOTAL*	8 / 9	28 / 38	90 / 106	122 / 167	161 / 201	176 / 243	/	/	/	/	/	/	585 / 764	77
% CONTAINED														
% CONT. OUTSIDE SUDAN														

\* provisional

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

**Number of Cases Contained and Number Reported by Month during 2009\* (Countries arranged in descending order of cases in 2008)**

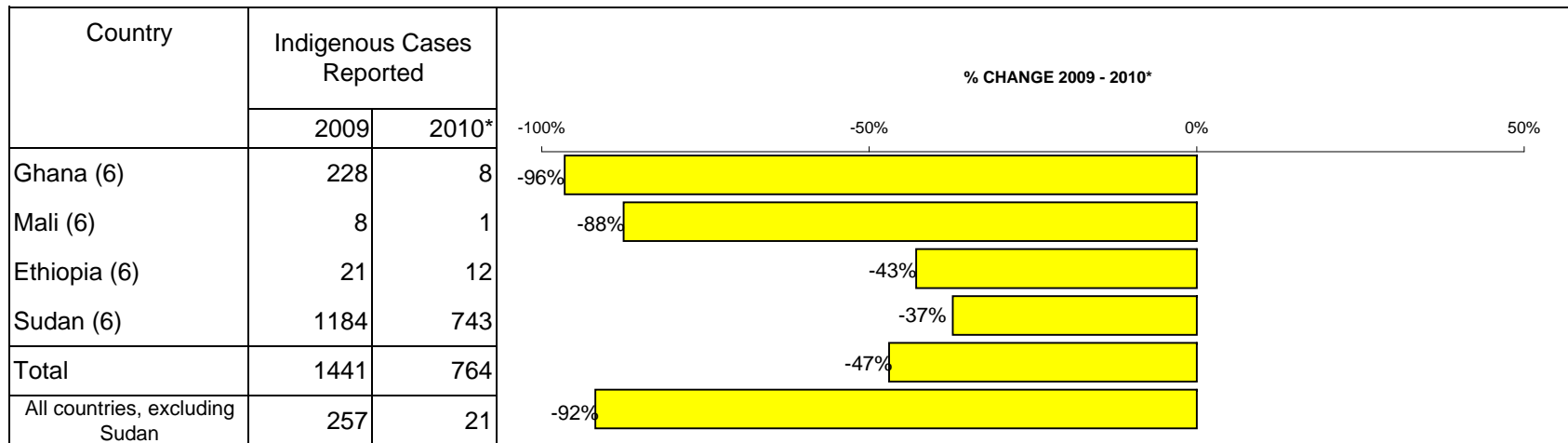
	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	4 / 12	12 / 18	39 / 47	134 / 221	277 / 428	388 / 458	434 / 521	452 / 543	240 / 275	104 / 141	39 / 55	11 / 14	2134 / 2733	78
GHANA	40 / 45	49 / 50	50 / 52	27 / 28	30 / 34	18 / 19	6 / 7	1 / 1	1 / 1	2 / 3	0 / 0	1 / 2	225 / 242	93
MALI	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	7 / 7	14 / 23	34 / 43	48 / 68	23 / 34	5 / 7	3 / 3	135 / 186	73
ETHIOPIA	0 / 0	0 / 0	2 / 2	6 / 6	2 / 5	6 / 8	2 / 2	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	19 / 24	79
NIGERIA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0
NIGER	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 2	0 / 1	1 / 1	0 / 0	2 / 5	40
TOTAL*	44 / 57	61 / 68	91 / 102	167 / 255	310 / 468	419 / 492	456 / 553	488 / 588	290 / 346	129 / 179	45 / 63	15 / 19	2515 / 3190	79
% CONTAINED														
% CONT. OUTSIDE SUDAN														

\* provisional

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

% CONT. OUTSIDE % CONT. OUTSIDE #DIV/0!

Figure 3  
 Number of Indigenous Cases Reported During the Specified Period in 2009 and 2010\*, and Percent Change in Cases Reported



\* Provisional: excludes cases exported from one country to another  
 (6) Indicates months for which reports were received, i.e., Jan. -June 2010\*

**Table 3**

**GHANA GUINEA WORM ERADICATION PROGRAMME  
TRACKING OF UNCONTAINED CASES, 2009-2010**

ID NO.	MONTH	DISTRICT	VILLAGE DETECTED	Age	CLAIMED DATE OF GUINEA WORM EMERGENCE	HISTORY	REASON(S) FOR NON-CONTAINMENT	POSSIBILITY OF TRANSMITTING GWD (YES OR NO)	CLASSIFY STATUS OF COMMUNITY FOR 2010 (AT RISK /NO RISK*)	CLASSIFICATION (INDIGENOUS /IMPORTED)
1	Jun-09	Savelugu-Nanton	Diare	18	4-Jun-09	Farmer. Patient detected as suspect case, but not recently seen as the young man was staying in a farm settlement . Detected with worm hanging by national/regional/district case search team. ABATE was being applied monthly in all known unsafe sources of drinking water in Diare.	Not detected until 5 June 2009 (> 24 Hours based on having lost contact with patient since 1 June.)	YES	High Risk	Indigenous
2	Jul-09	Savelugu-Nanton	Tampion	10	Uncertain	This young girl was found by The Gushegu Technical Advisor (TA) with a hanging worm by the road side. The Gushegu TA called the Savelugu Team to look at the case. When they went the family of the girl claimed the girl never had GW. All indicators point to the fact that the family is not telling the truth. ABATE was being applied monthly in all known unsafe sources of drinking water in Tampion.	Patient was detected on 24 July 2009	YES	High Risk	Imported
3	Oct-09	Central Gonja	Tidrope	33	29-Oct-09	Patient was detected at suspect stage and monitored continuously until worm emerged. However case removed bandage and thus was not continuously bandaged until worm was expelled. He was however monitored closely by the district team and the team believes that the case did not have the potential to infect a water source. ABATE was being applied monthly in all known unsafe sources of drinking water in Tidrope.	Removed dressing*	NO	Low Risk	Indigenous

\* Removal of occlusive bandages does not necessarily violate the standards for case containment, as long as the patient is monitored daily and no contamination of sources of water occurs.

## ETHIOPIA



THE  
CARTER CENTER



The Federal Minister of Health, the Honorable Dr. Tedros Adhanom Ghebreyesus, convened a meeting on May 15 to discuss the problems observed by the team of ministry, World Health Organization (WHO) and Carter Center staff who visited Gambella Region in April (see *Guinea Worm Wrap-Up # 197*). Representatives from the Ministry of Health, WHO and The Carter Center attending the meeting proposed actions to address weaknesses in supervision, reporting and community awareness. WHO will assist surveillance activities outside of Gog woreda (the only confirmed endemic woreda-or district-in Ethiopia), and responsibility for monthly reporting in areas free of GWD will be transferred from village volunteers to Health Extension Workers. Participants decided that the federal ministry would provide a mobile health education van and that authorities would train regional, zonal and woreda focal persons and conduct community mobilization from May 9 to June 12, with financial and technical assistance provided by WHO/Ethiopia. Revised reward modalities for reporting of cases of GWD were announced during these trainings: 500 Ethiopian Birr, about US\$ 37, to the patient with GWD and 500 Birr to the informant.

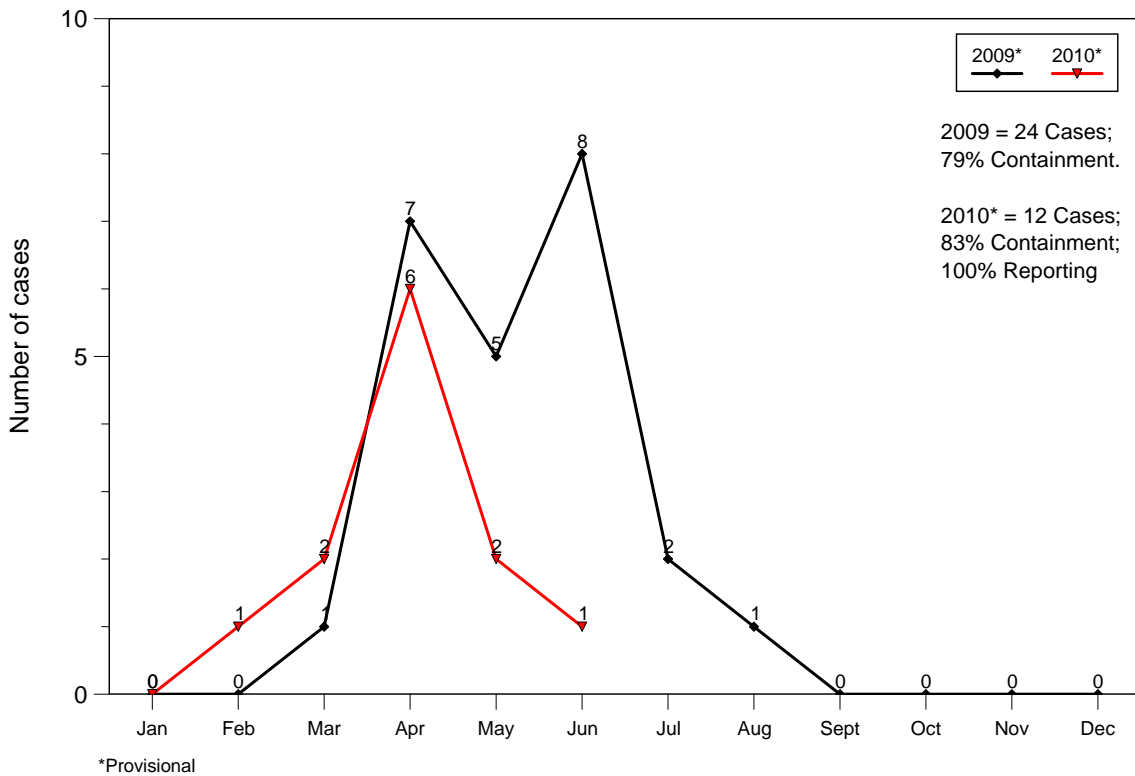
Dr. Ernesto Ruiz-Tiben, director of Guinea Worm Eradication Program at The Carter Center, made a supervisory visit to Ethiopia on June 8-15. He met with the National Ethiopian Dracunculiasis Program (EDEP) Coordinator Mr. Gole Ejeta, the director Dr. Chieng and GW staff from the Gambella Regional Health Bureau, Mr. Getachew Temeche, the WHO/Ethiopia GW focal point officer, Mr. Teshome Gebre, director of The Carter Center's office in Ethiopia, and with Ms. Jessica Flannery and Mr. Adam Weiss, Carter Center Technical Advisors to the EDEP in Gog Woreda. Dr. Ruiz visited Gambella town and other endemic localities in Gog Woreda and stressed to all concerned the urgency of stopping transmission of dracunculiasis in Ethiopia this year. He raised the issue of a four-month long bureaucratic impasse that had delayed motorcycle driving permits for Field Officers of the program in the endemic woreda with Dr. Chieng, which was resolved the following day. With Carter Center assistance, village-based active surveillance has been expanded to all 72 inhabited villages/localities in Gog Woreda since January 2010. Dr. Ruiz met with WHO staff in Addis Ababa, and with Federal Minister of Health Dr. Tedros, who expects monthly reports on the status of the EDEP from the recently appointed director of public health for Gambella Region, Dr. Chieng.

Ethiopia has reported 12 cases in January-June 2010, all but two of which were contained (Figure 4). The first uncontained case self-reported to the Pugnido case containment center on May 29, 2010. However, the 40 year old male patient had had a swelling below a buttock for about three weeks which was thought to have been a bee sting prior to his admission to the containment center. The patient's wife reported that she had cut open the wound (swelling) approximately one month ago and a white worm became visible (about May 8, 2010). She reported that she and her husband kept this hidden from everyone outside of their house in Wicini Village. Reportedly, the patient has had a long-standing feud with village volunteers (there are two, but one lives near their house). Upon admission to the containment center approximately 3 inches (7 centimeters) of the worm was already exposed. The patient had reportedly told the village volunteer and village chief repeatedly that he had a bee sting and the village volunteer reported seeing the swelling approximately three weeks before with no evident open lesion. Moreover, the patient reported bathing in Tanchay and Odieli Ponds, and his wife

reported that these were entered with the exposed worm. All incriminated ponds were treated immediately with ABATE® larvicide. The probable source(s) of infection are thought to be: a pond within Wicini village, but most likely a pond on the corridor between Atheti / Wicini and Pugnido Town. The second uncontained case of GWD, a 34 year old man, also from Wicini Village, self-reported to the case containment center on June 26 with a Guinea worm that had emerged about 4 days before. Investigations of this case confirmed that the patient had not contaminated a source of drinking water, as he had been in the Pugnido refugee camp (where there is safe drinking water) and had no history of entering any ponds in the vicinity. Moreover, the EDEP has been dosing all stagnant sources of unsafe drinking water in the vicinity of the camp with ABATE® larvicide on a monthly basis. A supervisory visit to Wicini revealed that filter coverage was good. The chief and others interviewed were aware and felt positive about prevention measures and community detection. Wicini and the walking paths connecting it to Pugnido Town, Abiwiri, Utuyo and other high risk farming communities are all under high surveillance alert status and all ponds along the walking paths are being dosed regularly with ABATE® larvicide.

Figure 4

Ethiopia Dracunculiasis Eradication Program  
 Number of Reported Indigenous Cases of Dracunculiasis: 2009-2010\*





## **IN BRIEF**

**Nigeria. NO case of Guinea worm disease in Nigeria in June!** An alleged case reported by the *Nigerian Tribune* on June 24, 2010 was investigated by Dr. Cephas Iyonzughul of WHO/Nigeria (and former zonal facilitator in the Nigerian GWEP) and the “worm” specimen was examined at World Health Organization Collaborating Center for Research, Training and Eradication of Dracunculiasis at the Centers for Disease Control and Prevention in Atlanta and confirmed not to be a worm at all. Hence, this patient is not a case of Guinea worm disease.

Nigeria has recently installed one National toll-free number 0800 100 1000 for reporting of alleged cases of dracunculiasis. Citizens can call on this one number from anywhere in Nigeria and the call will search for an available operator who will collect all the information regarding the suspected case for further follow-up.

**Benin.** The World Health Organization held a post-certification meeting in Cotonou, Benin during June 1-4, 2010 for the countries in Africa that have been certified as free of dracunculiasis but still continue to be at risk of importations of cases from endemic countries. Nine countries participated: Benin, Cameroon, Guinea, Liberia, Mauritania, Republic of Central Africa, Senegal, Sierra Leone, and Uganda. Participants reviewed the current status of dracunculiasis surveillance in certified countries and formulated recommendations towards improving such surveillance, and agreed on Standard Operating Procedures for surveillance and reporting.

## **MEETINGS**

The Carter Center and the World Health Organization will co-sponsor the 2011 meeting of Guinea Worm Eradication Programs during February 15-18 to review the status of eradication efforts in the currently endemic countries and discuss the status of surveillance and response capacity in the seven countries now in the pre-certification stage. The review will be held at The Carter Center in Atlanta. The Carter Center and former US President and Mrs. Jimmy Carter will also host a special ceremony on the evening of Thursday, February 17, 2011 to recognize the interruption of transmission of dracunculiasis in Niger and Nigeria during 2008.

Ghana will hold its annual in-country GWEP Review during 2008. Reo271.50.e1crring 2008Jry G4(S )JTJ/TT pt-7180498-28.000(w.P)

## GUINEA WORM DISEASE IN PRINT, IN THE NEWS AND IN CYBERSPACE

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Habila, I. Daily Champion Nigeria: Yuguda's Water Projects in Bauchi June 30, 2010.

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*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 the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, CGH, 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>*

*Back issues are also available on the Carter Center web site English and French are located at*

*[http://www.cartercenter.org/news/publications/health/guinea\\_worm\\_wrapup\\_english.html](http://www.cartercenter.org/news/publications/health/guinea_worm_wrapup_english.html).*

*[http://www.cartercenter.org/news/publications/health/guinea\\_worm\\_wrapup\\_francais.html](http://www.cartercenter.org/news/publications/health/guinea_worm_wrapup_francais.html)*