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

Date: October 4, 2010

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

Subject: GUINEA WORM WRAP-UP #200

To: Addressees

Detect Every Case! Contain all transmission! Explain every source!

SUDAN: CONTINUING TO TIGHTEN SURVEILLANCE AND CONTAINMENT

Figure 1 shows the history of cases of Guinea worm disease (GWD) reported from Sudan since 1994, when the national effort to eradicate the disease was launched. Indigenous transmission of GWD in the northern states of Sudan was interrupted in 2003 and the remaining endemic areas are in Southern Sudan. The Southern Sudan Guinea Worm Eradication Program (SSGWEP) was organized in early 2006, following the signing of the Comprehensive Peace Agreement that ended the civil conflict in that

With most of the 2010 transmission season nearly over, the current status of Guinea worm disease in Southern Sudan and the full impact of the Southern Sudan Guinea Worm Eradication Program's work in 2009 are becoming clearer. During January–August 2010, a total of 1,398 cases of GWD were reported from 639 villages, a reduction in cases of 38% from the 2,248 reported during the same period in 2009 (Table 1). Provisional reports for January – September 2010 are shown in Figure 2 and Table 2. Transmission is localized, with the disease now concentrated in three main foci (Table 3, Figures 4, and 5):

- Warrap Western Bahr Al Ghazal States;
- Lakes Central Equatoria States; and
- Eastern Equatoria State.

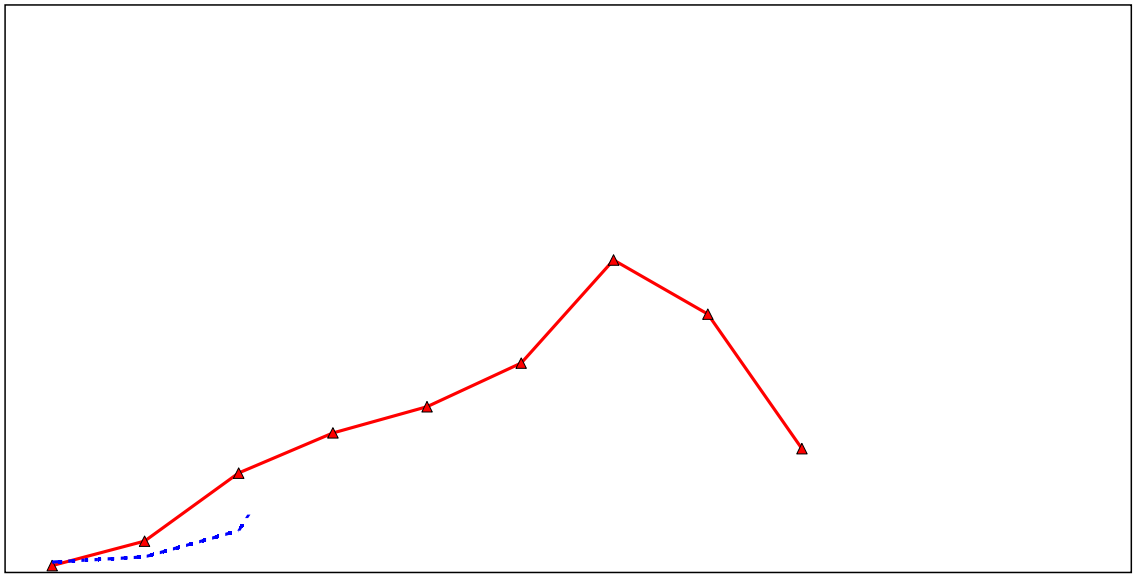
Table 1

Southern Sudan Guinea Worm Eradication Program
Seleced Parameters and Status of Program Indicators:2006-2010*

Parameter	Year				
	2006	2007	2008	2009	2010*
Villages Reporting Indigenous Cases	3,137	1,765	947	584	232
Number of Endemic Villages	3,137	3,023	2,301	1,283	682
Number of Cases Reported	20,582	5,815	3,618	2,733	1,398
Percent of Cases Contained	49%	50%	49%	78%	75%
Program Indicators: Endemic Villages					
Percent Reporting Monthly	63%	70%	87%	94%	99%
Percent Provided Health Education	71%	93%	96%	67%	92%
Percent with Cloth Filters in All Households	47%	38%	79%	98%	97%
Percent with Pipe Filters Distributed to All Resi	25%	38%	52%	46%	60%
Percent Protected with ABATE Larvicide	6%	11%	34%	45%	58%
Percent with One or More Sources of Safe Wa	16%	16%	15%	16%	23%

* Provisional: January - August

Figure 2



The status of interventions in the three foci is summarized in Table 3. In 2009, 94% of cases occurred in only 10 of Southern Sudan's 79 counties under active surveillance which have reported 1,344 (96%) of cases in 2010 (Figure 6). Five of these counties are in the Warrap-W. Bahr Al Ghazal focus (Tonj N, Tonj S, Tonj E, Jur River, Gogrial E), three in Eastern Equatoria focus (Kapoeta N, S, E) and two in Central Equatoria/Lakes focus (Terekeka, Awerial). The main transmission season is April-October in all three foci, but in 2009 and 2010 cases peaked earlier in the Greater Kapoeta focus of Eastern Equatoria state (April-May) than in the other two foci (July-August, respectively) (Figure 4). An 86% increase in Southern Sudan's cases during the first quarter of 2010 (143 cases, vs. 77 cases in January-March 2009) resulted from insecurity incidents in the Eastern Equatoria focus during the first quarter of 2009, but cases were reduced by 44% in April-August 2010.

Table 2


Legend
Eastern

Figure 4

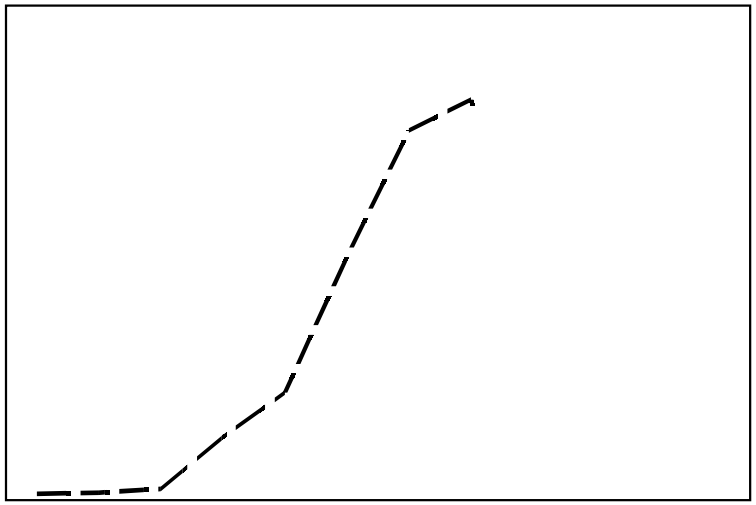
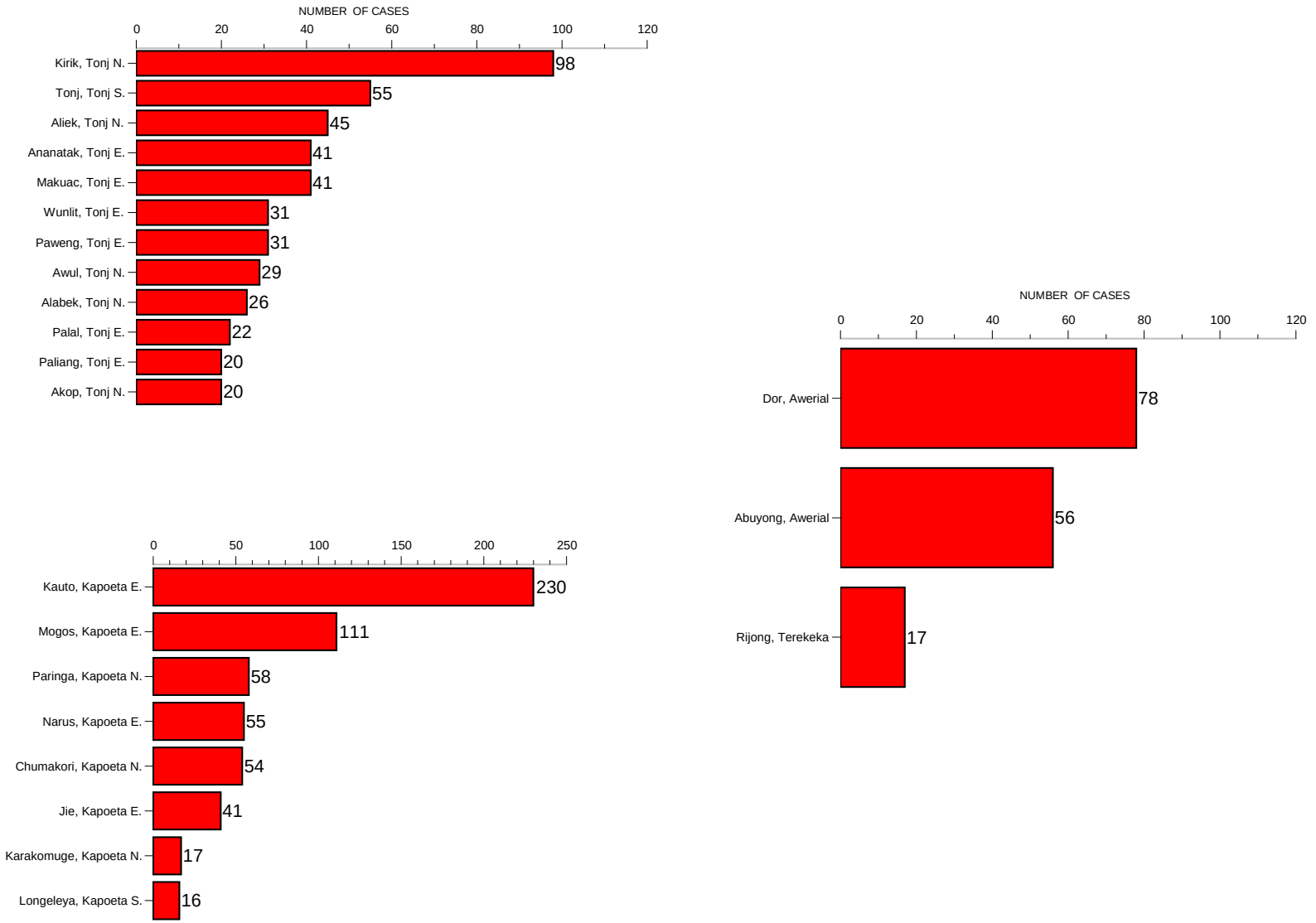


Figure 5

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
23 PAYAMS AND COUNTIES REPORTING 1,192 (85%) OF 1,398 CASES OF DRACUNCULIASIS BY FOCAL AREA:JANUARY-AUGUST 2010*



The broad extent of the surveillance system has been necessary because of the seasonal patterns of population movements in Southern Sudan. The prominence of Group III and Group IV villages (villages under surveillance that reported zero cases in the first year but reported cases in the second year, and villages not under surveillance in the first year that reported cases in the second year) requires more attention. The percentage of all villages reporting cases that were Group III/IV villages was 69% (2007), 60% (2008), 63% (2009), and 60% in 2010, so far, while the percentage of all cases that occurred in Group III/IV villages was 50% (2007), 45% (2008), 53% (2009), and 53% (2010). Group III/IV villages reported an average of 2.1 cases per village, compared to an average of 4.2 cases per village in Group I villages. Seasonal movements of significant segments of populations to attend to cattle, farming and domestic chores and sudden displacements of populations because of cattle raids, or other violence are important determinants of these patterns, the latter two beyond the control of the SSGWEP.

At this end stage of the campaign the Southern Sudan Ministry of Health, the SSGWEP and their partners, especially The Carter Center and the World Health Organization, will need to improve the quality of case detection and case containment in known endemic villages and in areas of Southern Sudan that appear to be Guinea worm-free.

Figure 6

Tonj N., Warrap	552	252
Awerial, Lakes	357	174
Kapoeta N., Eastern Equatoria	316	146
Tonj E., Warrap	274	186
Kapoeta E., Eastern Equatoria	225	457
Terekeka, Central Equatoria	196	31
Kapoeta S., Eastern Equatoria	84	20
Tonj S., Warrap	59	65
Jur River, N. Bahr Al Ghazal	44	13
Total	2,107	1,344

* Provisional

IN BRIEF

COUNTRIES REPORTING CASES												
ETHIOPIA	0/0	1/1	2/2	6/6	2/3	0/1	1/1	2/2	1/1	/	/	
TOTAL*	8/9	26/40	83/116	126/166	151/195	177/241	278/365	238/303	123/161	/	/	
% CONTAINED	89	65	72	76	77	73	76	79	76			
% CONT. OUTSIDE SUDAN	100	100	100	100	80	0	71	100	75			

* 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

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED											
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DE
SUDAN	4/12	12	23/34	5/7	3/3	135/186	73					
	1/1					19/24	79					
	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	
TOTAL*	44/57	61/68	91/102	167/255	310/468	419/492	456/553	488/588	290/346	129/179	45/63	
% CONTAINED	77	90	89	65	66	85	82	83	84	72	71	
% CONT. OUTSIDE SUDAN	89	98	95	97	83	91	69	80	70	66	75	

2/5 6/8

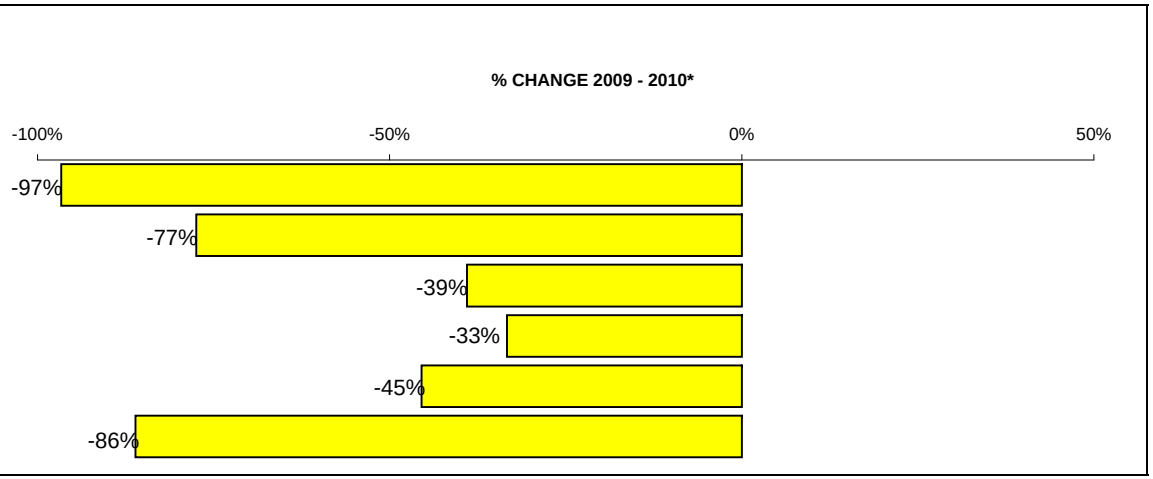
* provisional

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

Figure 7

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

Country	Indigenous Cases Reported	
	2009	2010*
Ghana (9)	237	8
Mali (9)	142	32
Sudan (9)	2523	1539
Ethiopia (9)	24	16
Total	2926	1595
All countries, excluding Sudan	403	56



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

MEETINGS

The Carter Center and WHO will co-sponsor the annual joint program review for endemic countries and countries in the post-certification stage, to be held at The Carter Center in Atlanta on February 15-18, 2011. Also, President and Mrs. Jimmy Carter will host the Fourth Carter Center Awards Ceremony in the evening on February 17 to honor Niger and Nigeria for achieving their first year with no indigenous case of dracunculiasis.

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