



Date: September 17, 2014

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

Subject: GUINEA WORM WRAP-UP #228

To: Addressees

Contain Every Worm! Trace Every Source!! Raise Reward Awareness!!!

80 CASES (PROVISIONAL) REPORTED GLOBALLY IN JANUARY-AUGUST 2014

Eighty (80) cases of Guinea worm disease have been reported provisionally in January-August 2014 (Figures 1, 2, and Table 1). This is a reduction of 34% from the 121 cases that were reported during the same period of 2013. Worm specimens from 34 of the provisional cases reported from South Sudan have not yet been tested or confirmed in the laboratory at CDC (26 of 75 specimens from South Sudan that were tested this year were not Guinea worms). With 68 provisional cases, South Sudan has reported 85% of cases so far this year, while Chad has reported 9 cases, Ethiopia 2 cases, and Mali 1 case. Sudan, which reported two cases during January-August 2013, has reported no case so far this year.

Figure 1

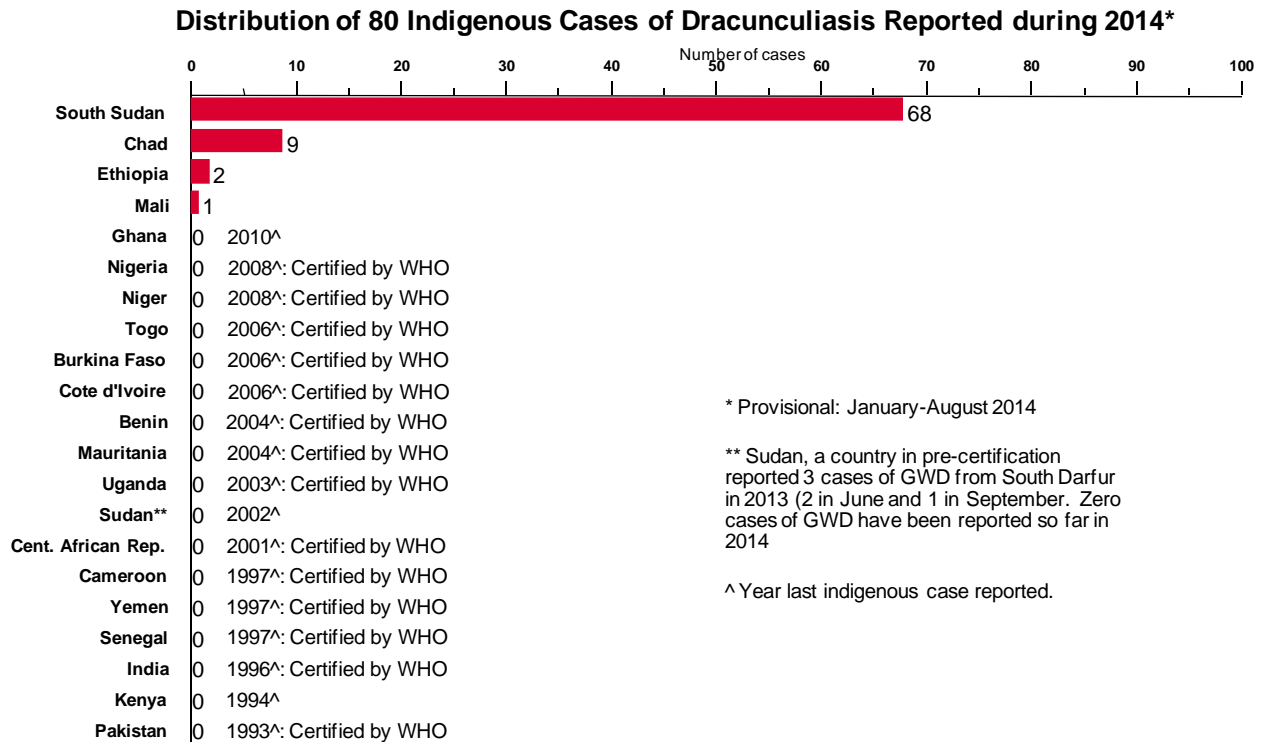


Table 1

Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2014*
(Countries arranged in descending order of cases in 2013)

Countries with Endemic Transmission	Number of Cases Contained / Number of Cases Reported													% Contained
	January	February	March	April	May	June	July	August	September	October	November	December	Total*	
South Sudan	0/0	0/0	3/3	3/4	3/4	6/8	15/23	17/26	/	/	/	/	47/68	69
Chad	1/1	1/1	1/1	1/1	0/1	0/1	1/3	0/0	/	/	/	/	5/9	56
Mali [§]	0/0	0/0	0/0	0/0	0/0	0/0	0/0	1/1	/	/	/	/	1/1	100
Ethiopia	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0	/	/	/	/	2/2	100
Total*	1/1	1/1	4/4	4/5	3/5	8/11	16/26	18/27	0/0	0/0	0/0	0/0	55/80	69
% Contained	100	100	100	80	60	73	63	69					70	

Countries Reporting Cases	Number of Cases Contained / Number of Cases Reported													% Contained
	January	February	March	April	May	June	July	August	September	October	November	December	Total*	
Sudan [^]	/	/	0/0	0/0	0/0	0/0	0/0	0/0	/	/	/	/	0/0	0

Total	1/1	1/1	4/4	4/5	3/5	8/11	16/26	18/27	0/0	0/0	0/0	0/0	55/80	70
--------------	------------	------------	------------	------------	------------	-------------	--------------	--------------	------------	------------	------------	------------	--------------	-----------

*Provisional

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were contained and reported that month.

Cells shaded in yellow denote months when transmission of GWD from one or more cases was not contained.

[§]Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Timbuktu and Gao Regions; in late April, the GWEP deployed one technical advisor to Kidal to oversee the program during the transmission season (for the first time since 2012).

[^]A Carter Center consultant, deployed to Kafia-Kingi area in South Darfur in March, implemented active village-based surveillance in Kafia-Kingi and four other at-risk villages, and began monthly reporting.

Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2013
(Countries arranged in descending order of cases in 2012)

Countries with Endemic Transmission	Number of Cases Contained / Number of Cases Reported													% Contained
	January	February	March	April	May	June	July	August	September	October	November	December	Total*	
South Sudan [^]	0/0	1/2	1/4	18/25	19/24	13/19	8/14	7/11	7/11	2/3	0/0	0/0	76/113	67
Chad	0/0	0/0	0/0	3/3	1/1	0/1	3/3	1/1	0/0	0/0	0/3	0/2	8/14	57
Mali [§]	0/0	0/0	0/0	0/0	0/3	1/1	0/0	0/0	1/1	1/2	4/4	0/0	7/11	64
Ethiopia	1/1	0/0	0/0	0/1	3/4	0/1	0/0	0/0	0/0	0/0	0/0	0/0	4/7	57
Total*	1/1	1/2	1/4	21/29	23/32	14/22	11/17	8/12	8/12	3/5	4/7	0/2	95/145	66
% Contained	0	50	25	72	72	64	65	67	67	60	57	0	66	

Countries Reporting Cases	Number of Cases Contained / Number of Cases Reported													% Contained
	January	February	March	April	May	June	July	August	September	October	November	December	Total*	
Sudan [^]	/	/	/	/	/	2/2	/	/	1/1	/	/	/	3/3	0%

Total	1/1	1/2	1/4	21/29	23/32	16/24	11/17	8/12	9/13	3/5	4/7	0/2	98/148	66
--------------	------------	------------	------------	--------------	--------------	--------------	--------------	-------------	-------------	------------	------------	------------	---------------	-----------

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were contained and reported that month.

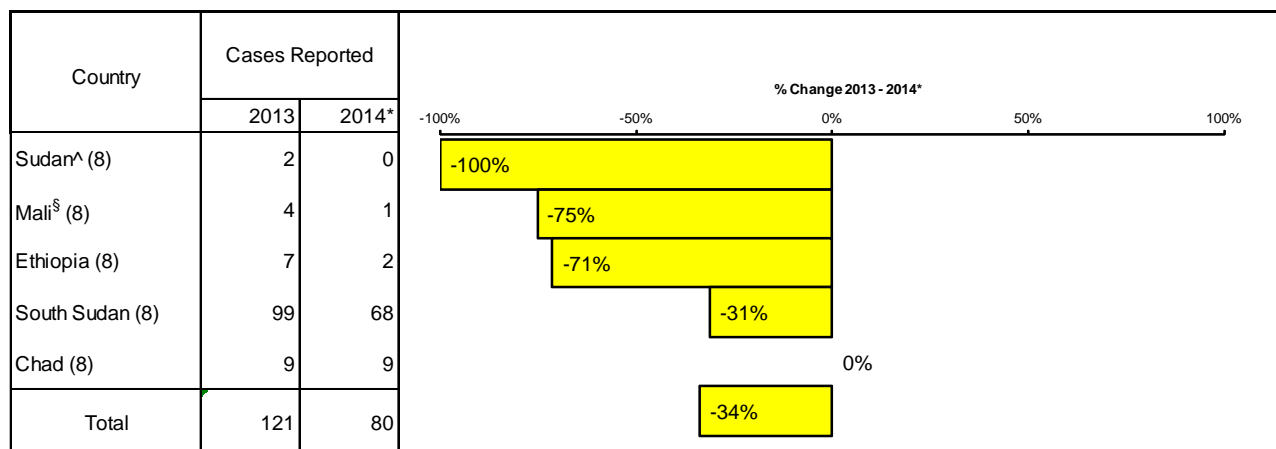
Cells shaded in yellow denote months when transmission of GWD from one or more cases was not contained.

[^] The South Sudan GWEP ceased operations on December 16, 2013 as a result of armed conflicts and insecurity. However, village volunteers and local supervisory staff remained in place and continued village-based surveillance throughout December, when zero

[§] Since April 2012 reports include only Kayes, Koulikoro, Segou, Sikasso, and Mopti Regions; the GWEP was not fully functional in Timbuktu, and Gao Regions throughout 2013, and not at all in Kidal Region.

Figure 2

Number of Indigenous Cases Reported During the Specified Period in 2013 and 2014*, and Percent Change in Cases Reported



* Provisional: Numbers in parentheses denote months for which data received, e.g., (8)= January- August

§ Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Tinbuktu and Gao Regions; in late April 2014, the GWEP deployed one technical advisor to Kidal to oversee the program during the transmission season (for the first time since 2012).

[^] Under pre-certification of eradication; reported three cases in 2013 from Kafia Kingi area of South Darfur State. A Carter Center consultant was deployed to Kafia-Kingi area in March 2014 to implement active village-based surveillance and interventions in Kafia Kingi and four other at-risk villages, all of which began reporting monthly as of the end of March.

SOUTH SUDAN: OUTBREAKS IN KAPOETA EAST AND AWERIAL COUNTIES



The South Sudan Guinea Worm Eradication Program (SSGWEP) has reported a provisional total of 42 cases of GWD in Kapoeta East County, Eastern Equatoria State, and 10 cases in Awerial County of Lakes State in July-August 2014. After personally investigating both areas, the director of the SSGWEP, Mr. Samuel Makoy Yibi, concluded that both outbreaks resulted from lapses in surveillance associated with complacency, inadequate supervision, and failure to treat all appropriate water sources with Abate in 2013. Moreover, in the village of Nasuwatkou, where most cases in Kapoeta East County occurred (other cases were in Lochapio village), use of cloth filters was low. In Abyong payam of Awerial County, most cases were linked to undetected cases that occurred before control measures were instituted during an outbreak in 2013. The patients in 2014 shared water sources with households of cases in 2013. All of the 2014 cases in Abyong were contained except one (Table 2). Recent reports from Nyirol and Uror Counties of northern Jongolei State for June and July 2014 reveal there has been no indication of cases there, where two unexplained and uncontained cases occurred in July and September 2013. A total of 75 worm specimens have now been sent to the CDC for testing during 2014, of which 34 were confirmed as cases of GWD, 11 were confirmed as worms from previously confirmed cases, 26 were ruled out as Guinea worm, and 4 specimens are pending molecular analysis. Four additional cases (all contained) have been reported so far during September.

The first survey of reward awareness in Kapoeta East and Kapoeta South Counties of Eastern Equatoria State, where the cash reward for reporting a case of GWD was launched in April 2014, reveals that by July 2014, 84% (70) of 83 village volunteers interviewed and respondents in 83% (343) of 413 households visited knew about the reward. The SSGWEP intends to assess reward awareness monthly.

Figure 3

SSGWEP Villages Reporting 1+ Cases of Dracunculiasis 2013 and 2014

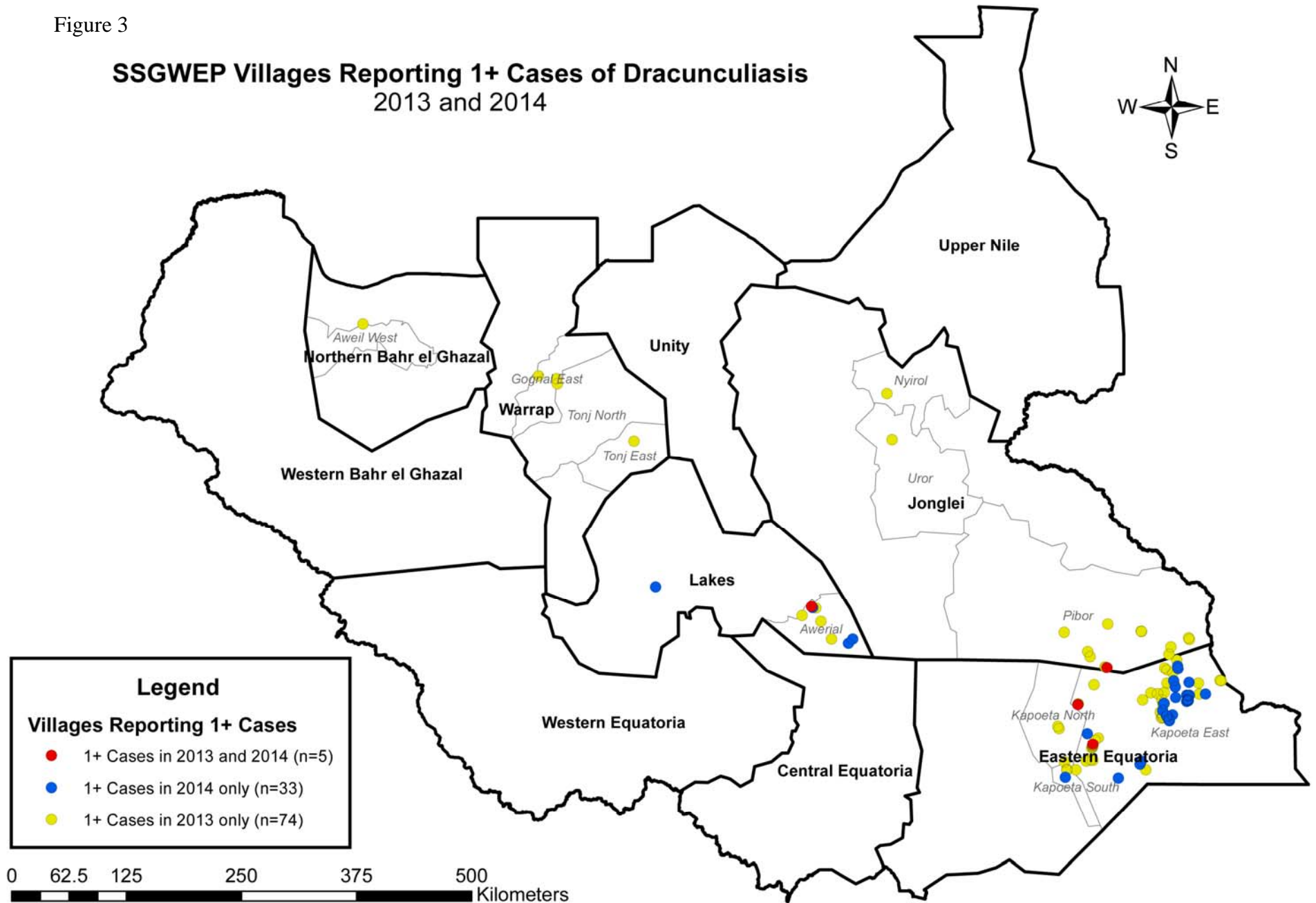


Table 2

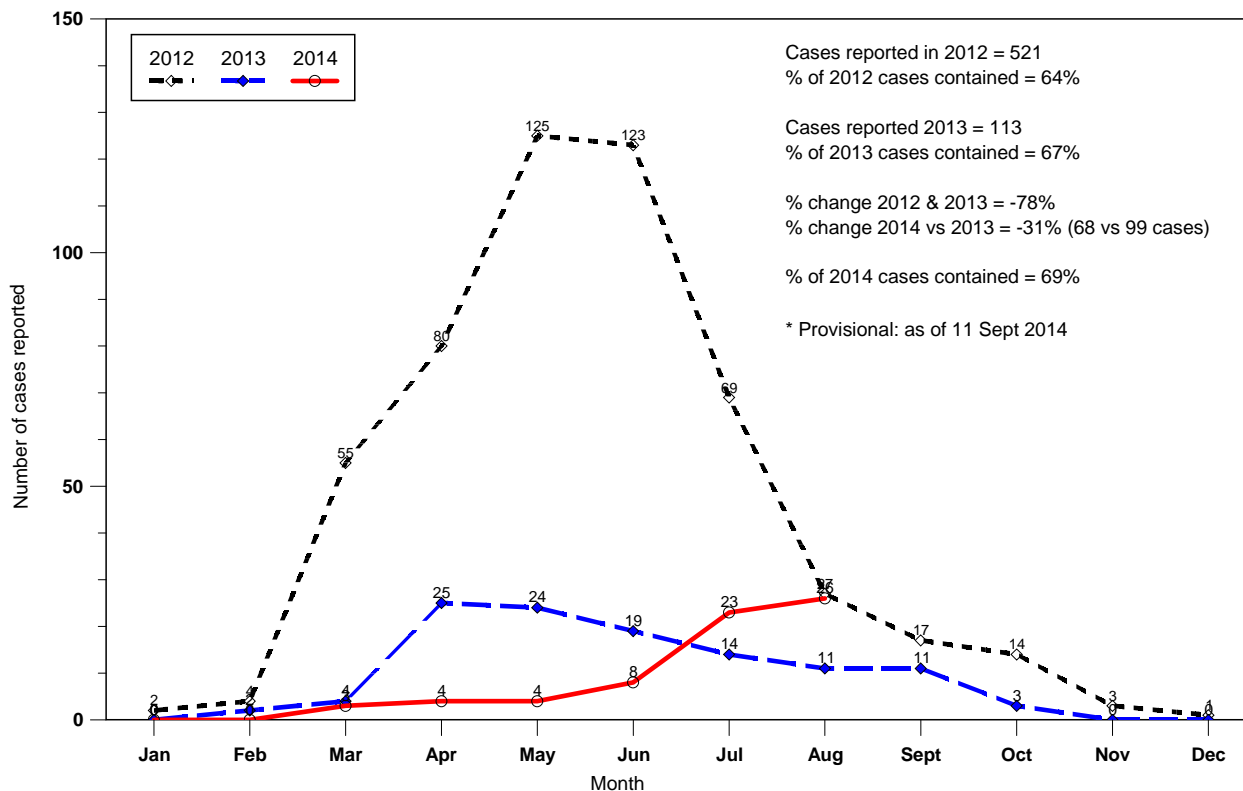
South Sudan Guinea Worm Eradication Program
Line Listing of Cases: 2014

Case #	Age	Sex	Ethnicity	Village/Locality of Detection			Date GW emerged (D/M/Y)	Case contained? (Yes/No/Pending)	Patient contaminated sources of water (Yes/No)	Date ABATE applied (D/M/Y)	Source* of infection established? (Yes/No)	Worm Specimen	
				Name	Payam	County						Date sent to CDC (D/M/Y)	Diagnosis
1.1	14	F	TOPOSA	CHOKOIN	KAUTO WEST	KAPOETA EAST	11-Mar-14	YES	NO		YES	30-Apr	GUINEA WORM
1.2	14	F	TOPOSA	CHOKOIN	KAUTO WEST	KAPOETA EAST	19-Apr-14	YES	NO		YES	30-Apr	GUINEA WORM
2.1	32	F	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	18-Mar-14	YES	NO		YES	30-Apr	GUINEA WORM
2.2	32	F	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	17-Apr-14	YES	NO		YES	30-Apr	GUINEA WORM
3.1	10	F	TOPOSA	LOBOER	KAUTO WEST	KAPOETA EAST	25-Mar-14	YES	NO		YES	22-Apr	GUINEA WORM
3.2	10	F	TOPOSA	LOBOER	KAUTO WEST	KAPOETA EAST	3-Apr-14	YES	NO		YES	30-Apr	GUINEA WORM
3.3	10	F	TOPOSA	LOBOER	KAUTO WEST	KAPOETA EAST	26-Apr-14	YES	NO		YES	22-May	GUINEA WORM
3.4	10	F	TOPOSA	LOBOER	KAUTO WEST	KAPOETA EAST	14-May-14	YES	NO		YES	22-May	GUINEA WORM
4.1	6	M	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	6-Apr-14	YES	NO		YES	30-Apr	GUINEA WORM
5.1	12	F	TOPOSA	LOKUTA	KAUTO EAST	KAPOETA EAST	19-Apr-14	YES	NO		YES	30-Apr	GUINEA WORM
5.2	12	F	TOPOSA	LOKUTA	KAUTO EAST	KAPOETA EAST	29-Apr-14	YES	NO		YES	22-May	GUINEA WORM
5.3	12	F	TOPOSA	LOKUTA	KAUTO EAST	KAPOETA EAST	30-Apr-14	YES	NO		YES	22-May	GUINEA WORM
6.1	10	M	TOPOSA	NAWOYAPAK	KAUTO WEST	KAPOETA EAST	5-Apr-14	YES	NO		YES	22-May	GUINEA WORM
7.1	22	F	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	11-Apr-14	NO	NO	9-Apr	YES	23-Jun	GUINEA WORM
8.1	25	F	TOPOSA	KATIANYAUNG-AGILICHAIT-	KAUTO EAST	KAPOETA EAST	10-May-14	NO	NO	12-May	YES	5-Jun	GUINEA WORM
8.2	25	F	TOPOSA	NARENGEWI	KAUTO WEST	KAPOETA EAST	8-Jul-14	NO	NO	12-May	YES	3-Aug	GUINEA WORM
9.1	5	M	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	19-May-14	YES	NO		YES	13-Jun	GUINEA WORM
9.2	5	M	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	2-Jun-14	YES	NO		YES	13-Jun	GUINEA WORM
10.1	6	M	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	20-May-14	YES	NO		YES	2-Jul	GUINEA WORM
11.1	18	M	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	23-May-14	YES	NO		YES	7-Jul	GUINEA WORM
12.1	28	M	JIE	LORIWO	JIE	KAPOETA EAST	30-May-14	NO	YES	2-Jun	YES	13-Jun	GUINEA WORM
12.2	28	M	JIE	LORIWO	JIE	KAPOETA EAST	14-Jun-14	NO	YES	2-Jun	YES	1-Jul	GUINEA WORM
13.1	15	M	TOPOSA	NAKITIRIOK CC	KAUTO EAST	KAPOETA EAST	1-Jun-14	YES	NO		YES	13-Jun	GUINEA WORM
14.1	30	M	JIE	DOCHA	JIE	KAPOETA EAST	2-Jun-14	YES	NO		YES	12-Jul	GUINEA WORM
15.1	13	M	TOPOSA	LOCHAPIO	KAUTO WEST	KAPOETA EAST	6-Jun-14	YES	NO		YES	23-Jun	GUINEA WORM
16.1	32	M	TOPOSA	TELEMABOYO	NARUS	KAPOETA EAST	10-Jun-14	YES	NO		YES	23-Jun	GUINEA WORM
16.2	32	M	TOPOSA	TELEMABOYO	NARUS	KAPOETA EAST	11-Jun-14	YES	NO		YES	23-Jun	GUINEA WORM
17.1	12	F	TOPOSA	ITIBO	KAUTO WEST	KAPOETA EAST	17-Jun-14	YES	NO		YES	1-Jul	GUINEA WORM
18.1	31	F	DINKA	DAK BUONG	ABUYONG	AWERIAL	21-Jun-14	YES	NO		YES	12-Jul	GUINEA WORM
19.1	16	M	TOPOSA	NGISIGAR	MACHI I	KAPOETA SOUTH	28-Jun-14	NO	YES	2-Jul	YES	1-Jul	GUINEA WORM
20.1	4	F	DINKA	DAK BUONG	ABUYONG	AWERIAL	16-Jul-14	YES	NO		YES	3-Aug	GUINEA WORM
21.1	50	F	DINKA	DAK BUONG	ABUYONG	AWERIAL	16-Jul-14	YES	NO		YES		
22.1	19	M	TOPOSA	NATITIA	NARUS	KAPOETA EAST	19-Jul-14	YES	NO		YES	8-Aug	GUINEA WORM
23.1	5	M	DINKA	DAK BUONG	ABUYONG	AWERIAL	21-Jul-14	YES	NO		YES	13-Aug	GUINEA WORM
24.1	25	M	TOPOSA	LOPASMoe	KAUTO CENTRAL	KAPOETA EAST	21-Jul-14	YES	NO		YES		
25.1	24	F	DINKA	YEPIC	PULUK	AWERIAL	22-Jul-14	NO	YES	24-Jul	YES		
26.1	25	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	23-Jul-14	NO	NO	25-Jul	YES	3-Aug	GUINEA WORM
26.2	25	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	16-Aug-14	NO	NO	25-Jul	YES	27-Aug	GUINEA WORM
27.1	20	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	23-Jul-14	NO	NO	25-Jul	YES	27-Aug	GUINEA WORM
28.1	12	M	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	25-Jul-14	NO	YES	23-Jul	YES	27-Aug	GUINEA WORM
29.1	22	F	TOPOSA	KORICHUPA	KAUTO CENTRAL	KAPOETA EAST	26-Jul-14	NO	YES	30-Jul	YES	27-Aug	GUINEA WORM
30.1	20	M	TOPOSA	LOTUKOMOE	KAUTO CENTRAL	KAPOETA EAST	27-Jul-14	NO	NO	31-Jul	YES		
31.1	14	F	DINKA	DAK BUONG	ABUYONG	AWERIAL	27-Jul-14	YES	NO		YES		
31.2	14	F	DINKA	DAK BUONG	ABUYONG	AWERIAL	3-Aug-14	YES	NO		YES	13-Aug	GUINEA WORM
32.1	30	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	27-Jul-14	YES	NO		YES	27-Aug	GUINEA WORM
33.1	40	M	TOPOSA	BUNYAYE	KAUTO CENTRAL	KAPOETA EAST	28-Jul-14	YES	NO		YES	27-Aug	GUINEA WORM
34.1	45	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	28-Jul-14	YES	NO		YES		
35.1	8	F	DINKA	WUNKUM	ABUYONG	AWERIAL	28-Jul-14	YES	NO		YES		
36.1	30	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	28-Jul-14	YES	NO		YES		

Case #	Age	Sex	Ethnicity	Village/Locality of Detection			Date GW emerged (D/M/Y)	Case contained? (Yes/No/Pending)	Patient contaminated sources of water (Yes/No)	Date ABATE applied (D/M/Y)	Source* of infection established? (Yes/No)	Worm Specimen	
				Name	Payam	County						Date sent to CDC (D/M/Y)	Diagnosis
37.1	24	M	TOPOSA	LONGELENGOR-KUCHARA-	KAUTO EAST	KAPOETA EAST	28-Jul-14	NO	NO		YES	27-Aug	GUINEA WORM
38.1	15	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	29-Jul-14	NO	YES		YES		
39.1	10	M	TOPOSA	PARPAR	KAUTO EAST	KAPOETA EAST	29-Jul-14	YES	NO		YES	27-Aug	PENDING
40.1	26	M	TOPOSA	TARADUNA	KAUTO CENTRAL	KAPOETA EAST	29-Jul-14	YES	NO		YES	27-Aug	GUINEA WORM
41.1	16	M	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	30-Jul-14	YES	NO		YES	6-Aug	GUINEA WORM
41.2	16	M	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	15-Aug-14	YES	NO		YES		
42.1	26	M	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	30-Jul-14	YES	NO		YES		
43.1	35	F	TOPOSA	PARPAR	KAUTO EAST	KAPOETA EAST	1-Aug-14	NO	YES		YES		
43.2	35	F	TOPOSA	PARPAR	KAUTO EAST	KAPOETA EAST	1-Aug-14	NO	YES		YES		
43.3	35	F	TOPOSA	PARPAR	KAUTO EAST	KAPOETA EAST	11-Aug-14	NO	YES		YES		
44.1	5	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	3-Aug-14	YES	NO		YES		
44.2	5	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	4-Aug-14	YES	NO		YES		
44.3	5	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	15-Aug-14	YES	NO		YES		
45.1	20	F	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	4-Aug-14	YES	NO		YES		
46.1	26	M	TOPOSA	EDOUKWANGA	KAUTO CENTRAL	KAPOETA EAST	4-Aug-14	YES	NO		NO		
47.1	24	M	TOPOSA	LOPASMoe	KAUTO CENTRAL	KAPOETA EAST	4-Aug-14	YES	NO		YES		
48.1	20	M	TOPOSA	LOTABO	NARUS	KAPOETA EAST	8-Aug-14	NO	YES	9-Aug	YES	6-Sep	GUINEA WORM
48.2	20	M	TOPOSA	LOTABO	NARUS	KAPOETA EAST	28-Aug-14	NO	YES	9-Aug	YES		
49.1	4	M	DINKA	WUNKUM	ABUYONG	AWERIAL	8-Aug-14	YES	NO		YES		
50.1	15	F	TOPOSA	LONGELENGOR-KUCHARA-	KAUTO EAST	KAPOETA EAST	8-Aug-14	NO	NO		YES		
51.1	21	M	TOPOSA	NASUWATKOU	KAUTO CENTRAL	KAPOETA EAST	9-Aug-14	NO	NO		YES		
52.1	10	F	DINKA	DAK BUONG	ABUYONG	AWERIAL	10-Aug-14	YES	NO		YES		
53.1	28	M	JIE	LORIWO	JIE	KAPOETA EAST	11-Aug-14	YES	NO		YES		
54.1	50	M	JIE	LORIWO	JIE	KAPOETA EAST	12-Aug-14	YES	NO		YES		
55.1	10	M	DINKA	DAK BUONG	ABUYONG	AWERIAL	12-Aug-14	YES	NO		YES		
56.1	21	F	JIE	LORIWO	JIE	KAPOETA EAST	13-Aug-14	YES	NO		YES		
57.1	24	M	TOPOSA	KACHILABO CC	KAUTO EAST	KAPOETA EAST	14-Aug-14	NO	YES		YES		
58.1	4	F	DINKA	NYICIE CC	PULUK	AWERIAL	16-Aug-14	YES	NO		YES		
59.1	28	F	TOPOSA	NGIRO	KAUTO WEST	KAPOETA EAST	18-Aug-14	YES	NO		YES	27-Aug	PENDING
60.1	17	F	TOPOSA	LOBURIN	KAUTO WEST	KAPOETA EAST	18-Aug-14	NO	YES	21-Aug	YES		
61.1	10	M	JIE	NATELENGOREIT	JIE	KAPOETA EAST	20-Aug-14	NO	YES	23-Aug	NO		
62.1	36	F	TOPOSA	MUNA	KAUTO CENTRAL	KAPOETA EAST	21-Aug-14	YES	NO		YES		
62.2	36	F	TOPOSA	MUNA	KAUTO CENTRAL	KAPOETA EAST	30-Aug-14	YES	NO		YES		
63.1	18	M	TOPOSA	LOPASMoe	KAUTO CENTRAL	KAPOETA EAST	23-Aug-14	YES	NO		YES		
64.1	14	F	TOPOSA	LOMAYO	KAUTO WEST	KAPOETA EAST	25-Aug-14	YES	NO		YES		
65.1	27	M	TOPOSA	LOKUPE	KAUTO WEST	KAPOETA EAST	25-Aug-14	NO	YES	26-Aug	YES		
66.1	25	M	DINKA	PAN KUNYUK	BARGEL	WULU	27-Aug-14	NO	YES	5-Sep	NO	6-Sep	GUINEA WORM
66.2	25	M	DINKA	PAN KUNYUK	BARGEL	WULU	3-Sep-14	NO	YES	5-Sep	NO		
67.1	22	M	TOPOSA	CHILAKWA	KAUTO CENTRAL	KAPOETA EAST	29-Aug-14	YES	NO		YES		
67.2	22	M	TOPOSA	CHILAKWA	KAUTO CENTRAL	KAPOETA EAST	29-Aug-14	YES	NO		YES		
68.1	40	F	TOPOSA	BUNYAYE	KAUTO CENTRAL	KAPOETA EAST	31-Aug-14	YES	NO		YES		
69.1	51	F	TOPOSA	LOTULIAMERI	KAUTO CENTRAL	KAPOETA EAST	1-Sep-14	YES	NO		YES		
70.1	25	F	TOPOSA	MUNA	KAUTO CENTRAL	KAPOETA EAST	2-Sep-14	YES	NO		NO		
71.1	26	F	TOPOSA	LORUONOMOR	MOGOS SOUTH	KAPOETA EAST	4-Sep-14	YES	NO		NO		
72.1	30	F	TOPOSA	NATUBOKAKEROI	MOGOS NORTH	KAPOETA EAST	8-Sep-14	YES	NO		NO		
73.1	25	F	TOPOSA	MUNA	KAUTO	KAPOETA EAST	2-Sep-14	YES	NO		NO		
74.1	26	F	TOPOSA	LORUONOMOR	MOGOS	KAPOETA EAST	4-Sep-14	YES	NO		NO		

Figure 2

**South Sudan Guinea Worm Eradication Program
Number of Reported Cases of Dracunculiasis: 2012 - 2014***



MALI: ONE CASE REPORTED IN AUGUST



Mali's first case of GWD in 2014 occurred in August, but Mali reported 5 additional cases in September, all from the village of Tanzikratene in Ansongo district of Gao Region (Table 3). All patients were detected within 24 hours of worm emergence, and immediately hospitalized to prevent contamination. The worm specimen from the first patient is being sent to CDC for confirmation. The apparent source of this infection is in or near the same village (Tanzikratene) where six cases were reported in the village or nearby in October-November 2013, including one uncontained case in October. Tanzikratene is also the residence of the 3 koranic students detected in Niger in September 2012. A resident medical officer and two zonal assistants (ASZ, Agents Sante de Zone) conduct daily house-to-house surveillance of villagers in Tanzikratene and neighboring villages

The director of Mali's GWEP, Dr. Gabriel Guindo, data manager Madani Dialle, and Carter Center country representative Sadi Moussa made supervisory visits to Mopti district of Mopti Region; Gossi, Ghourma Rharous district of Timbuktu Region, Gao and Ansongo districts of Gao Region; Tominian and Macina districts of Segou Region from August 17-27. They visited a total of more than 16 villages and 59 nomadic camps, including several formerly endemic villages. During the visit to Tanzikratene, Dr. Guindo announced that the cash reward for reporting cases of GWD in Mali was being increased to 50,000 Fcfa (~US\$100) from 20,000 Fcfa, and the increased cash reward was paid to recipients for the first time. They also informed regional and district health officials about the status of the disease and eradication efforts in their respective areas and the need to continue advocating for safe water sources. Mali will also place all villages and nomadic camps in the district reporting cases of GWD since 2012 (estimated at 372 more villages) under more intensive surveillance including the 85 villages currently under active surveillance.

Table 3

Mali Guinea Worm Eradication Program
Line Listing of Cases: 2014

Case #	Age	Sex	Ethnicity	Village/Locality of Detection			Date GW emerged (D/M/Y)	Case contained? (Yes/No/Pending)	Patient contaminated sources of water (Yes/No)	Date ABATE applied (D/M/Y)	Source* of infection established? (Yes/No)	Worm Specimen [^]	
				Name	District/ payam/ woreda	County/ Region						Date sent to CDC (D/M/Y)	Diagnosis
1	23	F	Touareg Noir	Tanzikratene	Ansongo	Gao	31-Aug-14	Yes	No	1-Sep-14	Yes(Tanzikratène)		
2	18	M	Touareg Noir	Tanzikratene	Ansongo	Gao	3-Sep-14	Yes	No	1-Sep-14	Yes(Tanzikratène)		
3	7	M	Touareg Noir	Tanzikratene	Ansongo	Gao	3-Sep-14	Yes	No	1-Sep-14	Yes(Tanzikratène)		
4	21	M	Touareg Noir	Tanzikratene	Ansongo	Gao	3-Sep-14	Yes	No	1-Sep-14	Yes(Tanzikratène)		
5	48	F	Touareg Noir	Tanzikratene	Ansongo	Gao	7-Sep-14	Yes	No	1-Sep-14	Yes(Tanzikratène)		
6	13	F	Touareg Noir	Tanzikratene	Ansongo	Gao	8-Sep-14	Yes	No	1-Sep-14	Yes(Tanzikratène)		

* Source: known visit or residence of patient in a known endemic village/locality or village/cluster where cases of GWD occurred 10-14 months before GW emerged, and verified by the GWEP.

[^] Worm specimens are in transit to CDC.

GUINEA WORM EXPERTS REVIEW THE GLOBAL GWEP

**BILL & MELINDA
GATES foundation**

Led by the Bill & Melinda Gates Foundation (B&MGF), three current major donors to the GWEP (Gates Foundation, United Kingdom's Department for International Development, Children's Investment Fund Foundation) convened a meeting of about 35 experts on July 29-30 at The Carter Center in Atlanta to review approaches, assess challenges and make recommendations for the final phase of the global campaign to eradicate Guinea worm disease. The meeting was chaired by Dr. Julie Jacobson of the B&MGF. The experts included three members of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE): Drs. Joel Breman, Mark Eberhard and David Molyneux. All agreed that from now on, the requirements that countries must satisfy for certification of eradication will be more stringent than ever at this final stage. Among the key recommendations:

- **Improved surveillance.** Endemic countries especially are urged to implement *redundant active surveillance*, using village volunteers in Guinea worm, onchocerciasis and other mass drug administration programs, National Immunization Days and other active searches, school and market-based surveys, and Integrated Disease Surveillance and Response programs (see Table 4 below). The Carter Center will assume responsibility for helping national GWEPs *maintain active surveillance in endemic villages for three years* after the last known indigenous case. If at all possible, worm specimens should be submitted from each suspected case to obtain *laboratory confirmation*. The *revised definition* of a case of GWD is given below. Ethiopia and Mali are urged to increase the amount of their cash reward to the equivalent of at least US\$100.
- **Intensified interventions.** Programs are encouraged to *apply ABATE@* Larvicide to appropriate sources of drinking water within ten days after worm emergence *whenever there is doubt* whether a patient contaminated a water source *and whenever it is known that the patient contaminated* a source. The *revised criteria for case containment* now include appropriate use of Abate, as listed below.
- Participants also made suggestions for **operational research** to better understand and combat the unusual circumstances of Guinea worm transmission among people and dogs in Chad, and for **enhanced advocacy** for the campaign, including *visits to endemic areas* by ministers of health and *establishment of national interagency task forces and/or national certification committees* where they do not yet exist (Mali and South Sudan).

Table 4

**Status of Redundant Surveillance in 2013
Guinea Worm Disease Surveillance Snapshot: 2013**

Country	Average Reward Awareness	% Reporting / Number of VAS*	NIDS or Other Active Searches	School or Market Based Surveys	IDSR Reporting: % of Districts /	Total # Districts, Woredas, Payams	Other
Chad	59%	99% / 682	Yes	Yes	? / 75		
Ethiopia	53%	97% / 90 [^]	Yes	Yes	71% / 825		HEWs, HDA, CDTI
Mali	47%	100% / 433	Yes	No	94% / 63		
South Sudan	NA	99% / 6,682	Yes	Yes	69% / 516		CDTI, POLIO

[^] 173 VAS in 2014

VAS = Villages under active surveillance

HEWs = Health Extension workers

HDA = Health Development Army

CDTI = Community Directed Treatment with ivermectin

Table 5

Status of Reward Amount, National Committee or Task Force

Country	Reward Amount	National Committee or Task Force	2014 Ministerial Visit (Y/N)
Chad	Fcfa 50,000 (US \$ 100)	Yes (task force); Monthly	No
Ethiopia	Birr 1,000 (US \$ 54)*	Yes (task force); Monthly	No
Mali	Fcfa 50,000 (in Ansogo district) (US \$ 100); Fcfa 20,000 elsewhere (during 2014)	No	No
South Sudan	Ssp 500 (US \$ 125)	Yes (task force); Monthly	Yes

* Being raised to 2,000 Birr

IN BRIEF



Chad has reported Guinea worm infections in 9 humans, 96 dogs, 1 domestic cat, and 1 wild cat in January-August 2014. This compares to 9 cases in humans, 48 cases in dogs, and 1 case in a domestic cat during the same period of 2013. Five of the nine human cases in 2014 were contained (Table 6).



World Health Organization

WHO carried out a technical mission conducted by Dr. Dieudonné Sankara and Ms. Junerlyn Agum (WHO Headquarters) at the request of the Ministry of Health of Chad from 6 to 19 August 2014.

The objectives of the mission were:

- to strengthen the GWD surveillance in non-active surveillance areas and increase awareness in freed areas by training MoH GWD surveillance staff along with newly recruited WHO surveillance staff on GWD surveillance and response, GWD and cash reward awareness creation, data collection, analysis and reporting.
- to follow up with the national Guinea worm program, along with WHO and The Carter Center country offices on issues related to extending the active surveillance areas and further defining areas under Carter Center and WHO support.

Along with Dr. Dieudonné Sankara and Ms. Junerlyn Agum, facilitators of the training comprised Dr. Ali Mahamat national coordinator GWEP, Mr. Tchoufienet Moundai national deputy coordinator, the former national coordinator Dr. Gagde Epainette now advisor to the GWEP, Drs. Honore Djimrassengar and Marthe Beral from WHO country office, and Ms. Corey Farrell and Mr. Scott Tambone from the Carter Center, Chad.

A total of 21 persons attended the training; participants comprised of staff from the national GWEP, national health management information staff, data managers from National GWEP and WHO, Polio surveillance officers and Hub coordinators, and 4 technical staff recruited by WHO to support the National GWEP to conduct surveillance and interventions including rumor investigation and case management as well as cash reward awareness creation in non-active surveillance areas.

Table 6

Chad Guinea Worm Eradication Program

Line Listing of Cases: 2014

Case #	Age	Sex	Ethnicity	Village/Locality of Detection			Date GW emerged (D/M/Y)	Case contained? (Yes/No/Pending)	Patient contaminated sources of water (Yes/No)	Date ABATE applied (D/M/Y)	Source* of infection established? (Yes/No)	Worm Specimen	
				Name	District/ payam/ woreda	County/ Region						Date sent to CDC (D/M/Y)	Diagnosis
1	9	F	Sara Madjigay	Maimou	Sarh	Moyen Chari	18-Jan-14	yes	no	no	no- eats fish	18-Apr-14	GW
2	52	F	Goulaye	Yadime	Bouso	Chari Baguirmi	14-Fev-14	yes	no	no	no- eats fish	18-Apr-14	GW
3	11	F	Sara	Nanguigoto	Guelendeng	Mayo Kebbi Est	7-Mar-14	yes	no	no	yes- eats fish	18-Apr-14	GW
4	11	M	Massa	Bongor	Bongor	Mayo Kebbi Est	12-Apr-14	yes	no	no	Yes-eats fish	14-Sep-14	GW
5	40	M	Mongo	Kalam Kalam	Mandelia	Chari Baguirmi	9-May-14	no	no	no	no- eats fish/sells frogs	14-Sep-14	GW
6	13	F	Sara Kaba	Massa Kaba	Kyabe	Moyen Chari	30-Jun-14	no	no	no	no- eats fish	14-Sep-14	GW
7	22	F	Sara Kaba	Moudjougoussou	Kyabe	Moyen Chari	15-Jul-14	no	no	no	no- eats fish	14-Sep-14	GW
8	30	F	Sara	Kirah	Sarh	Moyen Chari	18-Jul-14	yes	no	no	no- eats fish	14-Sep-14	GW
9	28	F	Baguirmi	Boti	Bouso	Chari Baguirmi	24-Jul-14	no	yes	24-Aug-14	no- eats fish	14-Sep-14	GW

* Source: known visit or residence of patient in a known endemic village/locality or village/cluster where cases of GWD occurred 10-14 months before GW emerged, and verified by the GWEP.



Ethiopia
Table 7

Ethiopia Guinea Worm Eradication Program
Line Listing of Cases: 2014

Case #	Age	Sex	Ethnicity	Village/Locality of Detection			Date GW emerged (D/M/Y)	Case contained? (Yes/No/Pending)	Patient contaminated sources of water (Yes/No)	Date ABATE applied (D/M/Y)	Source* of infection established? (Yes/No)	Worm Specimen	
				Name	District/ payam/ woreda	County/ Region						Date sent to CDC (D/M/Y)	Diagnosis
1	65	M	Agnuak	Gambella Town	Gambella	Gambella	12-Jun-14	Yes	No	1-Sep-14	No		
2	12	M	Agnuak	Wichini	Gog	Gambella	22-Jun-14	Yes	No	1-Sep-14	No		

* Source: known visit or residence of patient in a known endemic village/locality or village/cluster where cases of GWD occurred 10-14 months before GW emerged, and verified by the GWEP.

!!! NEW CDC CONTACT AND ADDRESS FOR GUINEA WORM SPECIMENS !!!

As announced in GW Wrap Up 227, Dr. Mark Eberhard has officially retired from CDC, but will continue to examine the morphology of worm specimens sent to CDC and will refer specimens to CDC’s molecular lab as necessary for confirmation of *D.medinensis* DNA. Below is the name and address to use when mailing preserved worm specimens to CDC. Please use this address effective immediately.

Dr. Vitaliano Cama, DVM, PhD
Supervisory Microbiologist
Division of Parasitic Diseases and Malaria
Center for Global Health
Centers for Disease Control and Prevention
1600 Clifton Road NE
Building 23, 10-164
Mailstop D-65
Atlanta, Georgia USA 30333

Telephone (404) 718-4131
Fax (404) 718-4193
vcama@cdc.gov

TRANSITIONS

Ms. Carla Blauvelt was appointed the Country Representative of The Carter Center in South Sudan as of July 1. A graduate of the University of Chicago (BA) and George Washington University (MA), she has worked with the SSGWEP for three years, and was promoted to deputy country representative earlier this year after serving as data manager for the secretariat of the program. She succeeds David Stobbelaar. Thank you David!! Welcome Carla!!

Ms. Melinda Denson was appointed the Country Representative of The Carter Center in Chad as of September 1. She holds degrees from Saint Olaf College (BS) and Emory University (MPH), and was the first technical advisor assigned by The Carter Center to assist Chad’s GWEP in 2011. Since September 2012, she provided technical assistance to ministries of health, including in Chad, for the Polio Eradication Program on behalf of CDC. She succeeds Cory Farrell. Thank you Corey!! Welcome back, Melinda!!

REVISED CASE DEFINITION

A case of Guinea worm disease is a person exhibiting a skin lesion with emergence of a Guinea worm, ideally with laboratory confirmation. That person is counted as a case only once during the calendar year, i.e., when the first Guinea worm emerged from that person. *All worm specimens should be obtained from each case-patient for laboratory confirmation and sent to CDC. All cases should be monitored at least twice per month during the remainder of the calendar year for prompt detection of possible additional Guinea worms.*

REVISED CRITERIA FOR A CONTAINED CASE

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 Guinea worms are present, the case is not contained until the last worm is pulled out), *and*
4. ABATE is used if there is any uncertainty about contamination of sources of drinking water, or if a source of drinking water is known to have been contaminated.

MEETINGS

- South Sudan GWEP Mid-Year Review: September 26-7 in Kapoeta, South Sudan.
- Chad GWEP Annual Review: November 4-7 in Bongor, Chad.
- Ethiopia DEP Annual Review: December 3-4 in Jimma, Ethiopia.
- South Sudan GWEP Annual Review: January 21-22, 2015 in Juba, South Sudan.
- International Commission for the Certification of Dracunculiasis Eradication: January 13-15, 2015 in Geneva, Switzerland.
- Mali GWEP Annual Review: February 2015 in Bamako, Mali (proposed).
- Annual Meeting of National Program Managers; February 2015 in Bamako, Mali (proposed).

REFERENCES

Electronic link to the 2013 Annual Surveillance Summary

[WHO WER Dracunculiasis Eradication Global Surveillance Summary](#)

Erratum: Dr. A Nadim's name was inadvertently omitted in the reference under "Recent Publications" in issue #226. The corrected reference is below.

Al-Awadi AR, Al-Kuhlani A, Breman JG, Doumbo O, Eberhard ML, Guiguemde RT, Magnussen P, Molyneux DH, Nadim A. 2014. Guinea worm (Dracunculiasis) eradication: update on progress and endgame challenges. *Trans Roy Soc Trop Med Hyg* doi:1093/trstmh/tru039.

OBITUARY

MARINO FULGENSIO LOKALE , GUINEA WORM WARRIOR (1968-2014)



We report with great sadness and regret the passing of Mr. Marino Fulgensio Lokale, of Kapoeta County on August 13, 2014 in Juba, South Sudan after a long illness. Marino was the fifth son of 15 sons and daughters of his father, Fulgensio Lokale, and mother Mama Akongo Hassan. Marino leaves a wife and eight children. He attended elementary school in Kapoeta County, Eastern Equatoria State, in 1972, and graduated from the High Medical institute in Juba with a diploma in health (Medical Officer) in 1990. After graduation Marino worked in the Juba Teaching Hospital until 2006, when he transferred to the Kapoeta Teaching Hospital. He became State Guinea Worm Coordinator for Eastern Equatoria State in 2012. During his tenure as State GW Coordinator Marino was very helpful to the GWEP and was often in the field helping resolve community issues and advising GWEP staff. He was very well liked and will be sorely missed. We extend our condolences to his family.

Inclusion of information in the Guinea Worm Wrap-Up
does not constitute “publication” of that information.
In memory of BOB KAISER

Note to contributors:

Submit your contributions via email to Dr. Sharon Roy (gwwrapup@cdc.gov) or to Dr. Ernesto Ruiz-Tiben (eruziti@emory.edu), by the end of the month for publication in the following month’s issue. Contributors to this issue were: the national Guinea Worm Eradication Programs, Drs. Donald R. Hopkins and Ernesto Ruiz-Tiben of The Carter Center, Drs. Sharon Roy and Mark Eberhard of CDC and Dr. Dieudonné Sankara of WHO.

WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, Center for Global Health, Centers for Disease Control and Prevention, Mailstop C-09, 1600 Clifton Road NE, Atlanta, GA 30333, USA, email: gwwrapup@cdc.gov, fax: 404-728-8040. The GW Wrap-Up web location is <http://www.cdc.gov/parasites/guineaworm/publications.html#gwwp>

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_francais.html



World Health
Organization

CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.