



Date: November 17, 2015

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

Subject: GUINEA WORM WRAP-UP #237

To: Addressees

**Detect Every Case! Contain Every Worm! Trace Every Source!**

**83% CASE REDUCTION WORLDWIDE IN JANUARY-OCTOBER**

Only 20 cases of Guinea worm disease (40% contained) were reported worldwide in January-October 2015 compared to 115 cases (71% contained) reported during the same period of 2014 (Figure 1). This is a provisional reduction of 83%. Zero cases were reported worldwide in January and again in September 2015. So far this year Chad has reported 9 cases (0 contained), South Sudan 4 cases (2 contained), Mali 4 cases (3 contained), and Ethiopia 3 cases (3 contained). Specimens from two cases (1 each in Ethiopia and Mali) have not yet been confirmed in the laboratory.

Figure 1

## Guinea Worm Eradication Program Reported Cases of Dracunculiasis Worldwide

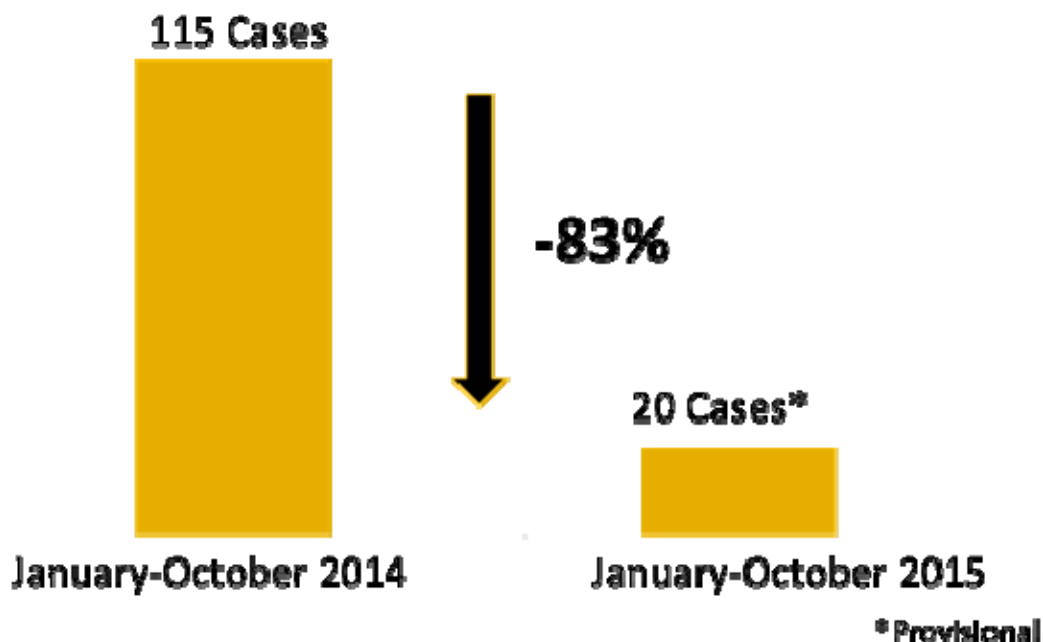


Table 1

**Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2015\***  
(Countries arranged in descending order of cases in 2014)

COUNTRIES WITH ENDEMIC TRANSMISSION	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED												% CONT.	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		TOTAL*
SOUTH SUDAN	0/0	0/0	0/0	0/0	0/0	1/1	1/2	0/1	0/0	0/0	/	/	2/4	50
MALI <sup>§</sup>	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/0	3/3	/	/	3/4	75
CHAD	0/0	0/1	0/2	0/1	0/0	0/2	0/1	0/1	0/0	0/1	/	/	0/9	0
ETHIOPIA	0/0	0/0	0/0	0/0	1/1	0/0	0/0	1/1	0/0	1/1	/	/	3/3	100
TOTAL*	0/0	0/1	0/2	0/1	1/1	1/3	1/3	1/4	0/0	4/5	0/0	0/0	8/20	40
% CONTAINED	0	0	0	0	100	33	33	25	0	80			40	

\*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.

<sup>§</sup>Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Timbuktu and Gao Regions; in late April. One technical advisor deployed to Kidal in April 2013 continues to oversee the program in that region.

**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)

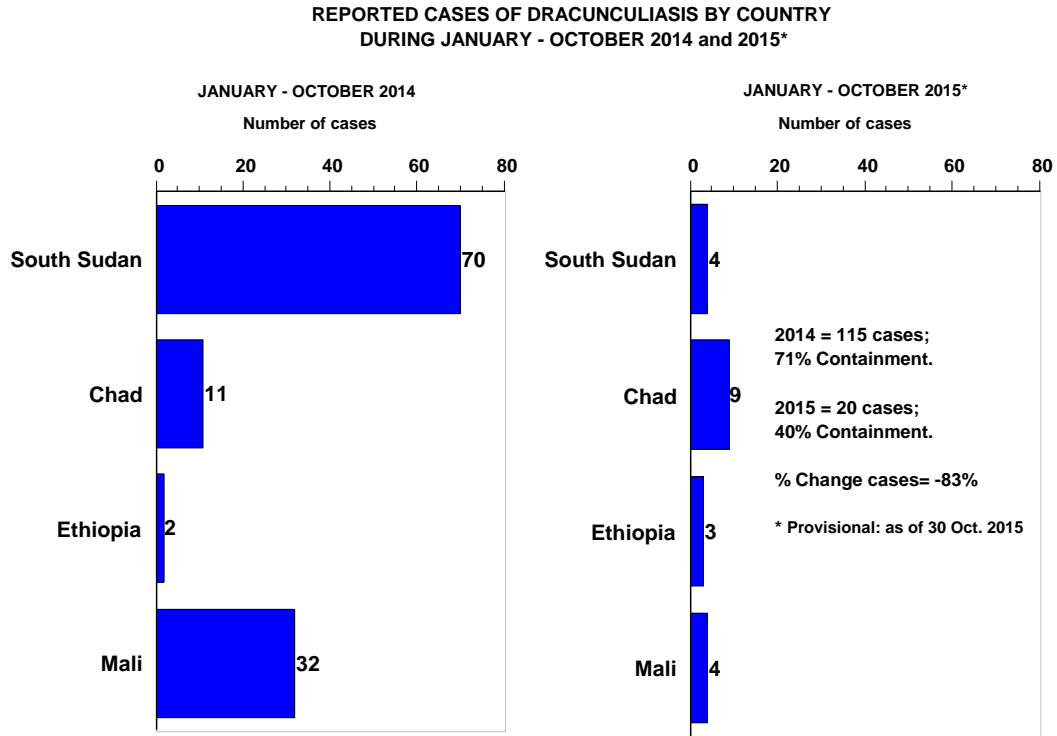
COUNTRIES WITH ENDEMIC TRANSMISSION	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED												% CONT.	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		TOTAL*
SOUTH SUDAN	0/0	0/0	3/3	3/4	3/4	6/8	13/22	14/21	4/5	1/3	0/0	0/0	47/70	67
CHAD	1/1	1/1	1/1	1/1	0/1	0/1	1/3	0/1	1/1	0/0	1/1	1/1	8/13	62
MALI <sup>§</sup>	0/0	0/0	0/0	0/0	0/0	0/0	0/0	1/1	14/18	12/13	8/8	0/0	35/40	88
ETHIOPIA	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0	0/0	0/0	0/0	0/1	2/3	67
TOTAL*	1/1	1/1	4/4	4/5	3/5	8/11	14/25	15/23	19/24	13/16	9/9	1/2	92/126	73
% CONTAINED	100	100	100	80	60	73	56	65	79	81	100	50	73	

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.

<sup>§</sup>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).

**Figure 2**



**CHAD: ONE MORE CASE IN OCTOBER; NEW MINISTER VISITS ENDEMIC AREA**



Chad has reported 9 confirmed cases of Guinea worm disease in humans, the latest one in October, located in Kyabe district of Moyen Chari Region (Table 3). Chad’s GWEP has reported 1,210 rumors of GWD in January-September 2015, compared to 1,723 rumors reported in all of 2014 (Table 2). In January-October, Chad has reported 459 dogs infected with Guinea worms, from 150 villages, of which worms from 317 dogs (69%) were contained (Figure 3). The distribution by month of the 459 infected dogs, the 924 Guinea worms that emerged, and the percentage of the 924 Guinea worms that were contained is shown in Figure 4. Overall 73% of the Guinea worms were contained.

According to surveys done in October, 83% of 1,253 residents of fishing villages and 81% of 260 fish market vendors surveyed were practicing fish entrails burials. A trial to determine whether twice monthly treatment of dogs with Mectizan® will prevent development of GW infection has now been underway for six months.

On September 23<sup>rd</sup>, Minister of Public Health Dr. Hissein Massar Hissein joined the Minister of Water (de L’Hydraulique Pastorale et Villageoise), Mr. Mahamat Abali Salah, in a ceremony at Mogrom to launch 250 wells equipped with hand pumps in the region of Mayo Kebbi Est. The governor of Mayo Kebbi Est also participated in the ceremony, which representatives of UNICEF and The Carter Center also attended. The entire event was covered on national radio and television.

Table 2

**Guinea Worm Eradication Program**  
**Surveillance and Cash Reward Awareness Parameters in Endemic Countries**

Parameter	Surveillance level	Cumulative: January - October 2015				
		Chad <sup>§</sup>	Ethiopia	Mali	South Sudan <sup>§</sup>	Total
Number of rumors <sup>^</sup> reported	I	1,075	NR	196	6,746	8,017
	II	23	NR	298	53	374
	III	112	NR	5	300	417
	TOTAL	1,210	NR	499	7,099	8,808
Number, and (%) of rumors investigated within 24 hours	I	1069 (99%)	NR	194 (99%)	NK	NK
	II	22 (96%)	NR	288 (97%)	48 (91%)	358 (96%)
	III	107 (96%)	NR	5 (100%)	294 (98%)	406 (97%)
	TOTAL	1198 (99%)	NR	487 (98%)	NK	NK
Number and (%) rumors investigated < 24 hours & determined to be GWD	I	0 (0%)	NR	4 (2%)	1 (<0.5%)	5 (<0.5%)
	II	0 (0%)	NR	0 (0%)	3 (6%)	3 (1%)
	III	0 (0%)	NR	0 (0%)	0 (0%)	0 (0%)
	TOTAL	0 (0%)	NR	4 (1%)	4 (<0.5%)	8 (1%)
Number of suspects (Rumors) seen at a fixed reporting unit (IDSR+) and reported to the surveillance system: number of units reporting rumors and (%) of total rumors	I	0	NR	1 (<0.5%)	NK	1 (<0.5%)
	II	0	NR	0	1 (2%)	1 (<0.5%)
	III	0	NR	3 (1%)	NK	3 (1%)
	TOTAL	0	NR	4 (1%)	NK	4 (0.5%)
Cash reward awareness*: number of persons surveyed, and (%) aware	I	514 (75%)	NR	223 (99%)	1,121 (85%)	1,858 (84%)
	II	0	NR	8464 (99%)	195 (10%)	8,659 (97%)
	III	113 (41%)	NR	0	364 (18%)	477 (23%)
	TOTAL	627 (68%)	NR	8687 (99%)	1,680 (62%)	10,994 (82%)
Cash reward awareness for dogs*: number of persons surveyed, and (%) aware	I	258 (78%)	NR	NA	NA	258 (78%)
	II	0	NR	NA	NA	0
	III	27 (14%)	NR	NA	NA	27 (14%)
	TOTAL	285 (54%)	NR	NA	NA	285 (54%)

\*Aware = a person who has heard about the reward.

<sup>^</sup> Rumor = any information about a possible human case of GWD.

NA = not applicable; NK= not known; NR = no report

<sup>§</sup> As of September 2015

Figure 3

CHAD GUINEA WORM ERADICATION PROGRAM  
 FREQUENCY OF DRACUNCULIASIS AMONG HUMANS AND DOGS BY MONTH DURING 2012<sup>^</sup>-2015\*

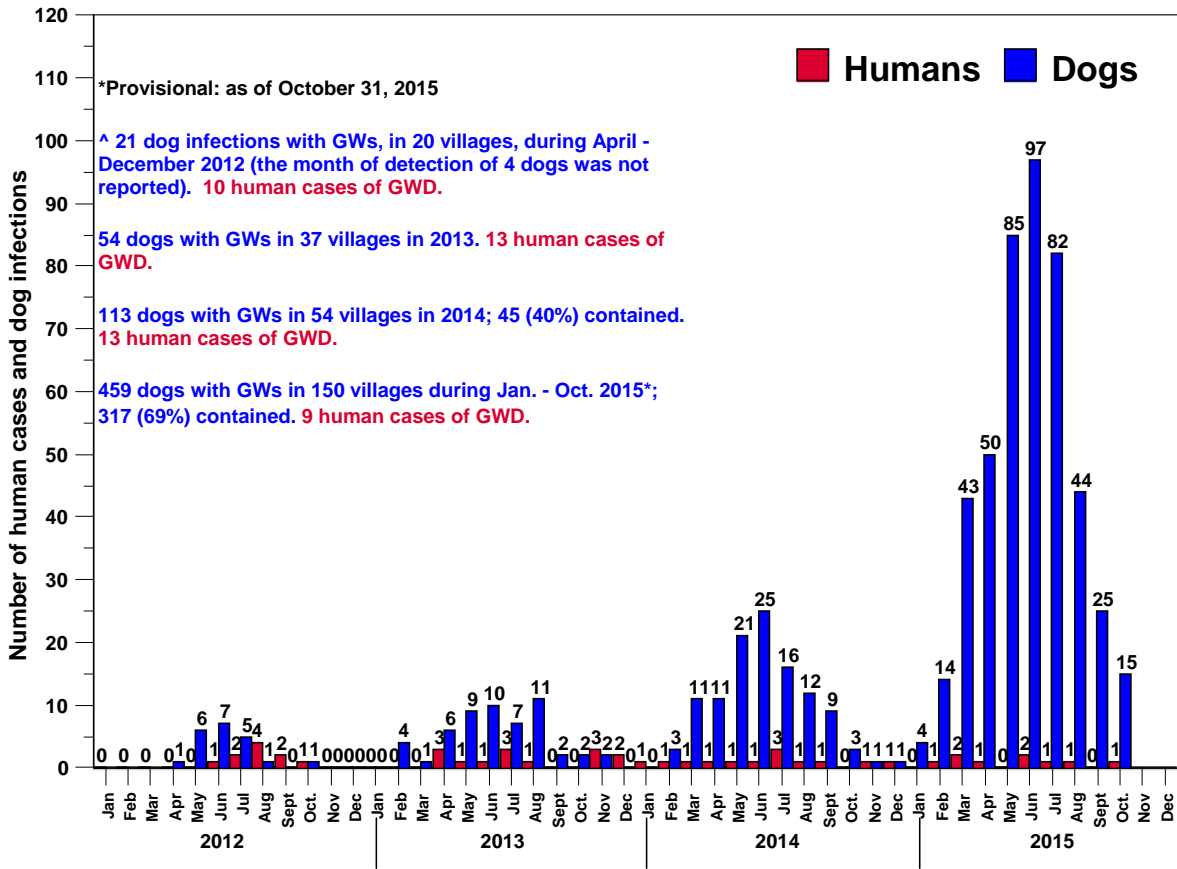


Figure 4

CHAD GUINEA WORM ERADICATION PROGRAM  
 DISTRIBUTION BY MONTH OF 459 OF DOGS INFECTED WITH GUINEA WORMS,  
 924 GUINEA WORMS THAT EMERGED, AND % OF GUINEA WORMS CONTAINED: JANUARY - OCTOBER 2015\*

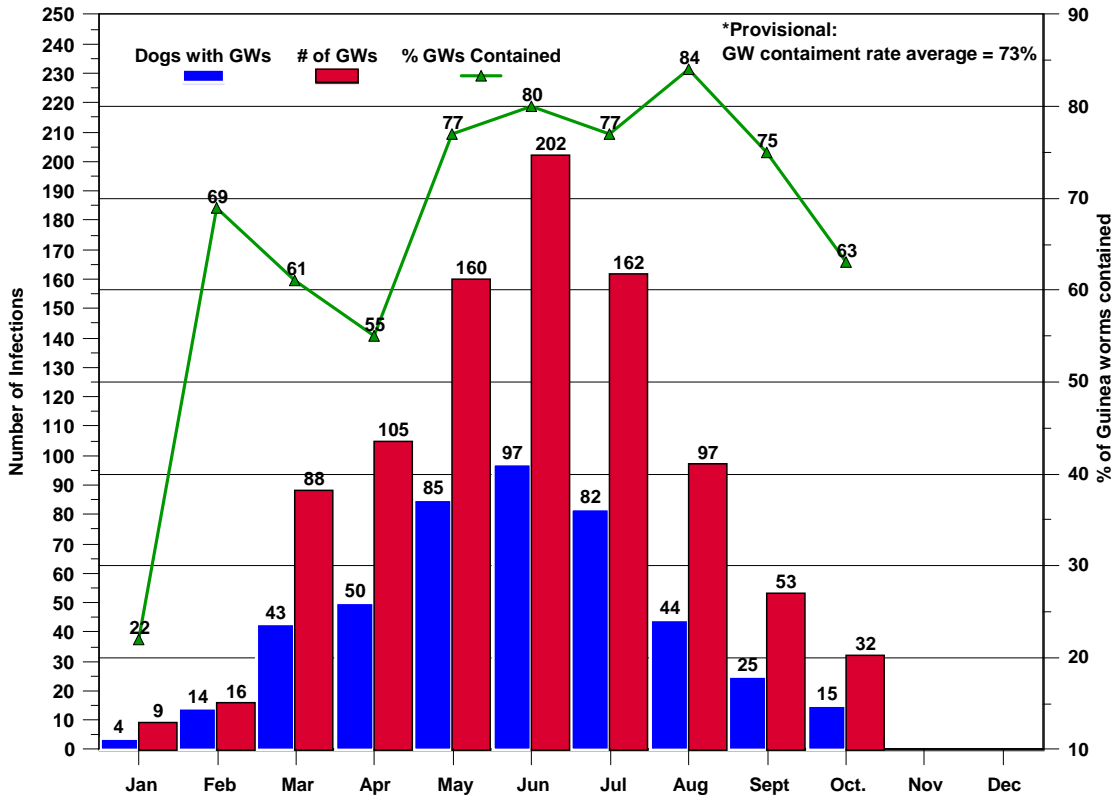


Table 3

**CHAD GUINEA WORM ERADICATION PROGRAM  
LINE LISTING OF CASES OF GWD DURING 2015**

Case #	Village or Locality of Detection			District	Region	Patient			Case Contained?		1 = Imported 2= Indigenous	Home Village or Locality			Presumed Source of Infection Identified?		Presumed Source of Infection is a Known VAS?	
						Age	Sex	Date GW Emerged (D/M/Y)	(Yes, No, or Pending)	If No, date of Abate Rx		Name	1= VAS	3= VNAS	(Yes or No)	Name	(Yes or No)	Actions/Comments?
	Name	1= VAS	2= VNAS															
1.1	Mourgoum		2	Dourbali	Chari Baguirmi	13	M	19-Feb-15	No	-	2	Mourgoum		2	No		No	Contaminated flowing water
2.1	Marabe I		2	Kyabe	Moyen Chari	8	F	7-Mar-15	No	-	2	Marabe I		2	No	-	No	Did not contaminate water
2.2								24-Mar-15										
2.3								13-Apr-15										
3.1	Diganaly	1		Guelendeng	Mayo-Kebi Est	9	M	28-Mar-15	No	6-Apr-15	2	Diganali	1		No	-	No	
3.2								5-Apr-15										
3.3								14-Apr-15										
4.1	Maicomb		2	Danamaji	Moyen Chari	3	M	28-Apr-15	No		2	Maicomb		2	No		No	
4.2								17-May-15										
4.3								17-May-15										
5.1	Mourabat	1		Bailli	Chari Baguirmi	14	M	24-Jun-15	No		2	Mourabat	1		yes	Pond 1km of Pandki	Yes	This boy and case 6.1 drank water from a contaminated pond last year . The pond was contaminated by a dog in Ngargue (1km of Pandori where both boys resided for several months last year)
6.1	Ferick Tchaguine		2	Lai	Logone Occidental	18	M	26-Jun-15	No		1	Mourabat		2	yes	Pond 1km of Pandki	Yes	This boy and case 5.1 drank water from a contaminated pond last year . The pond was contaminated by a dog in Ngargue (1km of Pandori where bptj boys resided for several months last year)
7.1	Houa Ali		2	Am-Timan	Salamat	12	F	6-Jul-15	No		2	Goz-Arachidia		2	No		No	
8.1	Mana Belegna	1		Massenya	Chari Baguirmi	54	F	17-Aug-15	No		2	Boulama Bororo Centre	1		No		No	
9.1	Kousseri		2	Kyabe	Moyen Chari	40	F	14-Oct-15	No	20-Oct-15	2	Kousseri		2	No		No	The patient has two villages of residence, depending on the time of year. During planting and harvesting season, she lives in Kousseri. During the remainder of the year, she lives in Tandja, which is a village very close to Kousseri.
9.2								18-Oct-15										
9.3								29-Oct-15										

use the 1.1, 1.2...etc. system to designate number of GWs emerging from same case-patient.

VAS = village under active surveillance

VNAS = village not under active surveillance

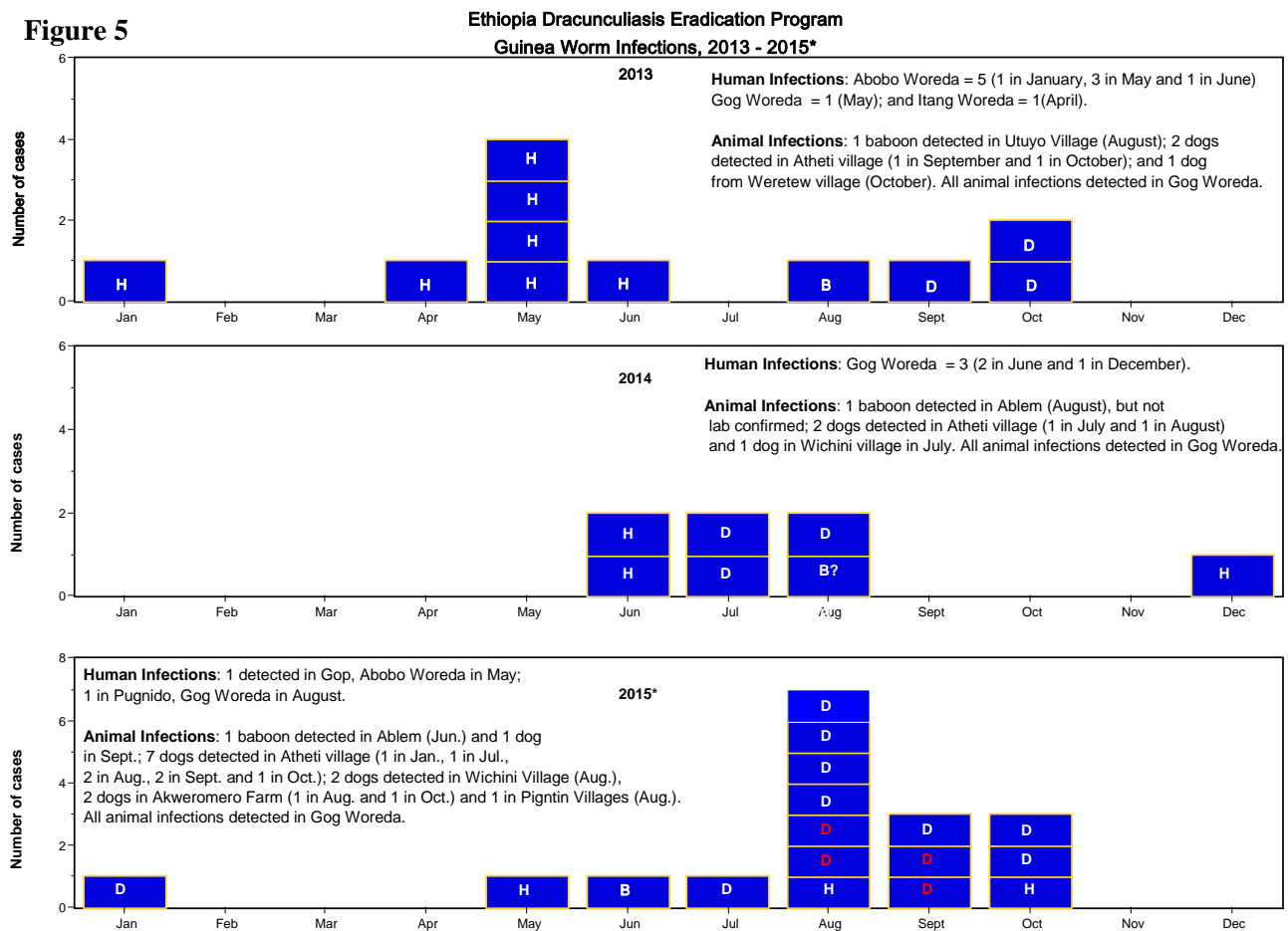
## ETHIOPIA REPORTS A THIRD CASE; CLOSING THE CIRCLE



Ethiopia has reported three cases of GWD, all contained, so far this year, in May, August, and October, thus equaling its number of cases reported in all of 2014. It reported three more infected dogs in September, two of which were contained, and two infected dogs in October (neither contained), bringing the total number of dogs infected in 2015 to 13 (4 contained), in addition to the three cases in humans and one infected baboon (Figure 5 and Table 4). Twenty-seven (73%) of the 37 worms removed from the first 11 infected dogs this year were contained. Worms from the suspected provisional human case and 2 dogs diagnosed in October have not been confirmed yet in the laboratory.

Fourteen of the 17 dog infections so far in 2015 and 6 of the 7 dog infections in 2014 are associated with three villages—Atheti, Wichini, Ablen—located less than 5 kilometers (3 miles) apart in Gog district of Gambella Region. Surface water sources in this area are relatively small. The ponds associated with Atheti and Wichini have reportedly been treated with Abate® every four weeks since June 2014, while ponds associated with Ablen have been treated since September 2014. Ponds associated with the 3 other confirmed and suspect infections in 2015 (around Bathor, including Gop fishing area and Akweramera Farm) have reportedly been treated with Abate since the uncontained case was detected there in December 2014.

**Figure 5**



\*Provisional

H = human infection; D = dog infection; D- = dog contained; B = baboon infection

NB: All dog and baboon infections in 2014-2015 were detected in Gog Woreda (District), as were human infections in 2014 and 1 human infection in May 2013. Water sources associated with human, dog and baboon infections in 2014-2015, in Atheti, Wichini, and Ablem villages of Gog Woreda treated monthly with ABATE. The human case in May 2015 was fully contained at the Abobo Woreda case containment center, and considered to have been infected in Bathor forest area of Gog Woreda during 2014, therefore imported from that locality. The human case in August was also contained.

Table 4

**ETHIOPIA DRACUNCULIASIS ERADICATION PROGRAM (EDEP)  
LINE LISTING OF CASES OF GWD DURING 2015**

Case #	Village or Locality of Detection			Woreda	Region	Patient				Case Contained?		1 = Imported 2=Indigenous	Home Village or Locality			Presumed Source of Infection Identified?		Presumed Source of Infection is a Known VAS?		Worm Specimen	
	Name	1= VAS	2= VNAS			Ethnicity	Age	Sex	Date GW Emerged (D/M/Y)	(Yes, No, or Pending)	If No, Date of Abate Rx		Name	1= VAS	2= VNAS	(Yes or No)	Name	(Yes or No)	Actions/Comments?	Date sent to CDC (D/M/Y)	Laboratory Confirmation
	1.1	Gop Fishing Area	1				Abobo	Gambella	Agnuak	25	M	27-Mar-15	Yes	-	1	Terkudi	1		Yes		No
2.1	PRC Agnuak	1		Gog	Gambella	Agnuak	30	M	2-Aug-15	Yes	-	1	Marabe I	1		Yes	-	Yes	One of group of four men associated with activities in the forest area, including Belak and Aruti ponds, and a swamp area near Bathor village (residence of December 2014 case of GWD).	28-Aug-15	GW
3.1	Akwaramero Farm/Bathor Village	1		Gog	Gambella	Agnuak	60	M	26-Oct-15	Yes		1	Bathor	1		Yes		Yes	Same area (Bathor and forest) associated with infections of cases 1.1 and 2.1 in 2014.	Pending	Pending

VAS = village under active surveillance

VNAS = village not under active surveillance



Since the last indigenous cases were found in South Omo (Southern Nations and Nationalities People's Region) in 2000, all indigenous GW cases in Ethiopia have occurred in Gambella Region, where 5 of the 6 human cases in 2014 and 2015 have been reported from only one district: Gog. The Ethiopia Dracunculiasis Eradication Program (EDEP) has 175 villages under active surveillance covering all of Gog and Akobo districts and part of Itang district for over two years. There are 5 expatriate technical advisors assisting the program, and it is adding 18 new positions this year to improve supervision of surveillance in Guinea worm-free areas. In August 2015 the EDEP and Ethiopia's polio eradication campaign conducted a house-to-house search for cases that reached almost 95,000 persons in 23,931 households and found no cases of GWD. The EDEP also conducted a house-to-house active case search in September that reached 6,274 households in 153 villages under active surveillance.

Awareness of the cash reward (2,000 birr, ~US\$116) for reporting a case of GWD is over 80% in the recently endemic districts of Gog, Akobo and Itang, but surveys in other districts of Gambella Region in June-September found average rates of awareness of only 27% (1119/4135), although awareness appears to be increasing, from 19% in June-July to 40% in August and 73% in September. The national Task Force decided in September that the reward for reporting an infected dog (500 birr) will be split between the person who reports the dog and the dog's owner in exchange for cooperation in containing the dog. The program has erected ten large billboards publicizing the reward at roadsides in Gambella and began broadcasting Guinea worm messages to affected areas of Gambella in three local languages (Agnuak, Nuer, Mejeng) in October. It had already provided 926 radio broadcasts and 142 televised broadcasts in January-September. The EDEP has reported 5,672 rumors of GW cases in January-September 2015, compared to 4,354 rumors in all of 2014.

## SOUTH SUDAN



South Sudan's Guinea Worm Eradication Program has reported a provisional total of 4 cases of Guinea worm disease (2 contained) in January-October 2015, including zero cases reported in September and October (Tables 1 and 5). This is a reduction of 94% compared to the 70 cases reported in the same period of 2014.

## MALI: 88% REDUCTION IN CASES JANUARY-OCTOBER



Mali's Guinea Worm Eradication Program has reported 4 cases (3 contained) in January-October 2015, which is a reduction of 88% from the 32 cases (84% contained) reported during the same period of 2014. Three of this year's cases were reported in October from the locality of Tanzikratene in Ansongo district of Gao Region. Worms from latest human cases have not yet been confirmed in the laboratory (Table 6).

The one uncontained case was reported from the village of Parasilame in Tominian district (Segou Region) in June, where a dog owner from Katama village of Tominian District reported the animal had a worm emerge from the skin at end of October. No one from the GWEP confirmed this event, but during a recent visit by GWEP secretariat staff to Katama, the same dog was confirmed to have a blister on the skin, which may be a precursor to another worm emergence. Preventive measures to contain transmission from this dog, including use of ABATE in source of water possibly contaminated by the animal are underway. If confirmed, this may be the first dog infected with a Guinea worm in Mali in recent years.

Drs. Ernesto Ruiz-Tiben and Hubert Zirimwabagabo of The Carter Center and Drs. Dieudonne Sankara and Andrew Seidu-Korkor of the World Health Organization visited the National Program Coordinator of

Table 5

South Sudan Guinea Worm Eradication Program  
Line Listing of Cases of GWD During 2015

Case #	Village or Locality of Detection			Payam	County	Age	Sex	Date GW Emerged	Case Contained?		1 = Imported 2 = Indigenous	Home Village or Locality			Presumed Source of Infection Identified?		Presumed Source of Infection is a Known EVA?		Worm Specimen	
	Name	1 = VAS	2 = VNAS						(Yes, No, or Pending)	If No, Date of Abate Rx*		Name	1 = VAS	2 = VNAS	(Yes / No)	Description	(Yes / No)	Actions?	Date sent to CDC	Laboratory confirmation
1.1	DAKBUONG	1		ABUYONG	AWERIAL	5	F	22-Jun-15	YES		2	DAKBUONG	1		NO	PATIENT LIKELY INFECTED IN DAKBUONG IN 2014	Yes		1-Jul-15	GW
2.1	LORIWO	1		JIE	KAPOETA EAST	25	M	11-Jul-15	YES		2	LORIWO	1		YES	POSSIBLE LOZUDOK OR KASSINGOR MOUNTAIN VILLAGES (STILL INVESTIGATING)	Yes		7-Jul-15	GW
3.1	ANGON		2	UDICI	JUR RIVER	12	F	26-Jul-15	NO	28-Aug-15 and 31-Aug-15	2	ANGON		2	NO	STILL UNDER INVESTIGATION	No		12-Aug-15	GW
3.2								25-Aug-15	NO	28-Aug-15 and 31-Aug-15									22-Sep-15	GW
4.1	RUMCHIETH		2	WUNLIT	TONJ EAST	28	F	25-Aug-15	NO	21-Sept-15, and 23-Sept-15	2	RUMCHIETH		2	NO	STILL UNDER INVESTIGATION	No		9-Sep-15	GW
4.2								11-Sep-15	NO	21-Sept-15, and 23-Sept-15									22-Sep-15	GW

VAS = village under active surveillance.

VNAS = village not under active surveillance

Table 6

MALI GUINEA WORM ERADICATION PROGRAM  
LINE LISTING OF CASES DURING 2015\*

Case #	Village/Locality of Detection					Age	Sex	Ethnicity	Village/Locality of Detection			Date GW emerged	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	1 = VAS	2 = VNAS	District	Region				Name	District	Region						Date sent to CDC (D/M/Y)	Laboratory Confirmation
1.1	Parassilame		2	Tominian	Segou	18	M	Peulh	Parassilame	Tominian	Segou	1-Jul-15	No	No	13-Aug-15	No	4-Aug-15	GW
1.2												12-Aug-15	Yes	No	13-Aug-15	No	In transit	Pending
2.1	Tanzikratene	1		Ansongo	Gao	12	M	Black Touareg	Tanzikratene	Ansongo	Gao	1-Oct-15	Yes	No	no*	Yes( Tanzikratène)	In transit	Pending
2.2	Tanzikratene	1		Ansongo	Gao	12	M	Black Touareg	Tanzikratene	Ansongo	Gao	28-Oct-15	Yes	No	no*	Yes( Tanzikratène)	In transit	Pending
3	Tanzikratene	1		Ansongo	Gao	17	M	Black Touareg	Tanzikratene	Ansongo	Gao	20-Oct-15	Yes	No	21-Oct-15	Yes( Tanzikratène)	In transit	Pending
4	Tanzikratene	1		Ansongo	Gao	35	M	Black Touareg	Tanzikratene	Ansongo	Gao	25-Oct-15	Yes	No	21-Oct-15	Yes( Tanzikratène)	In transit	Pending

VAS = village under active surveillance.

VNAS = village nor unde active surveillance.

No\*: Abate was not applied because water was flowing due to rains

Mali's GWEP, Dr. Mohamed Berthe, in Bamako on October 26-28 to discuss the status of the program and related issues. They were unable to meet the new Minister of Health Dr. Marie Madeleine Togo. In September 2015 GWEP staff monitored 39 of the 40 cases of GWD that Mali reported in 2014 in order to confirm that they had no signs or symptoms of the disease so far this year. On October 1-8 this year the national coordinator, GWEP data manager Mr. Madani Dialle, and Carter Center Country Representative Mr. Sadi Moussa made a supervisory visit to endemic areas of Gao, Ansongo and Gourma Rharous districts. Mali's GWEP has 664 villages under active surveillance as of June-October 2015. *Medecin d'appui* Dr. Adama Sobingo recently returned to Kidal to continue monitoring the status of GWD in the 57 villages under active surveillance there. Mali has reported 459 rumors of GWD in January-September 2015, compared to 151 rumors reported in all of 2014.

## SUDAN



Our deepest condolences to the Sudan Federal Ministry of Health, the State Ministry of Health of Darfur and the families of Mr. Hafez Adam Ahmed and Suleiman Mohammed, both staff of the ministry of health who perished during a vehicle hijack perpetrated by terrorists 65 kilometers south of the town of Geneina in West Darfur. Fortunately other members of the team assessing the status of GWD in West Darfur, Dr. Reema Adam Essa, WHO; Mr. Yousif Addulbagi, Head of Epidemiology Department MOH; and Ms. Thuria Abaker, Epidemiologist MOH, survived.

## MEETINGS

- South Sudan GWEP Annual Review: Juba, December 9-10, 2015.
- Ethiopia DEP Annual Review: Gambella, December 14-15, 2015.
- Mali GWEP Annual Review: Bamako, January 18-20, 2016.
- Chad GWEP Annual Review: N'Djamena, January 25-26, 2016
- 20<sup>th</sup> Annual GWEP managers review meeting, Atlanta, March 9-11, 2016

## DONATIONS



The Carter Center is grateful for [The Children's Investment Fund Foundation](https://ciff.org/grant-portfolio/guinea-worm-eradication/)'s recent contribution of \$20 million to support the Guinea Worm Eradication Program between 2015 and 2020. <https://ciff.org/grant-portfolio/guinea-worm-eradication/>

## RECENT PUBLICATIONS

Blood-Siegfried J, Zeantoe G, Evans L, Bondo J, Forstner J, Wood K. 2015 The Impact of Nurses on Neglected Tropical Disease Management. *Public Health Nursing* [serial online]. November 2015;32(6):680-701

Hopkins, DR; Ruiz-Tiben, E; Eberhard, ML; Roy, SL 2015. Progress toward global eradication of dracunculiasis, January 2014-June 2015. *Morbidity and Mortality Weekly Report* 64(1161-65) Oct 23.

Oberg C. The boy with the "snake" in his chest. *Minn Med*. 2014 Oct;97 (10):45.

Pearson, G 2015. Great news! These horrifying, 31-inch parasites that live under human skin are dropping sharply. *Washington Post* October 29.

Speaking of Science. *Scientist* [serial online]. October 2015;29 (10):14.

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](mailto:gwwrapup@cdc.gov)) or to Dr. Ernesto Ruiz-Tiben ([eruizti@emory.edu](mailto:eruizti@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](mailto:gwwrapup@cdc.gov), fax: 404-728-8040. The GW Wrap-Up web location is <http://www.cdc.gov/parasites/guineaworm/publications.html#gwwp>*

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