

Memorandum



Date: November 1, 2016

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

Subject: GUINEA WORM WRAP-UP #244

To: Addressees

Detect and Contain Every Guinea Worm Infection Immediately!!!

MALI: NO CASES IN 2016 SO FAR

Mali has reported no cases of Guinea worm disease since November 17, 2015. The infection in that patient, a 45 year old woman from a nomadic group in Gourma Rharous district of Timbuktu Region, was not contained but water sources that she may have contaminated were treated with Abate one day after her worm emerged. In 2015, Mali also reported one uncontained case in August and three contained cases in October. Mali's Guinea Worm Eradication Program (GWEP) is monitoring all five patients from 2015 several times each month in 2016. A total of 698 villages are under active village-based surveillance, however insecurity is still a serious impediment to program operations, especially in the region of Kidal. As of August 2016 the crude average reward awareness rate for reporting a case in humans was 84%, while the crude average reward awareness rate for reporting an infected dog was 76%. A total of 391 rumors were reported in January-September this year, all of which were investigated within 24 hours. The KYNE consultant group has worked with Malian communications staff to conduct Focus Group Discussions and prepare material for pre-testing in mid-October before jointly implementing an intensified communications plan to increase reward awareness.

Mali also has reported 11 infected dogs (9 contained) in 9 villages of Tominian district in Segou Region so far this year: 1 in June, 2 in July, 1 in August, 5 in September, and 2 in October. Abate was applied to local water sources associated with the five dogs that were not contained. All but one of the infected dogs originated in Tenenkou district, which is an insecure area, of adjacent Mopti Region. Tominian district is also where the single infected dog was detected in Mali in 2015. Mali institutionalized its cash reward of 5,000 CFA (~US\$10) for the informant of an infected dog and 10,000 CFA to the infected dog's owner for tethering the dog until the worm emerges, in July 2016.

Mali's National Program Coordinator Dr. Mohamed Berthe and Carter Center Country Representative Mr. Sadi Moussa visited three health areas (Fangasso, Ouan, Monisso) in Tominian district on September 20-24 to discuss the status of dog infections and containment of dogs. The team visited four villages, including Bathiribougou and Kantama that reported 3 and 1 infected dogs respectively this year, and also visited the family that had the one case of GWD in the district in 2015. On October 3-10 Carter Center advisor Dr. Gabriel Guindo and GWEP data manager Mr. Madani Dialle made supervisory visits to authorities and GWEP teams in Gourma Rharous district of Timbuktu Region and Ansongo, Gao and Bourem districts of Gao Region. They reported finding

records of activities properly archived, examined two suspected cases that proved not to be GWD, and confirmed that the mechanized water system in Tanzikratene that was rehabilitated with UNICEF's support in August 2015 had broken down again in August 2016. They discussed possibilities for its repair with a local Non-Governmental Organization, HELP, and also notified the local UNICEF office. Insecurity is still a serious constraint to program activities in these areas. National Program Coordinator Dr. Berthe met with Minister of Health Dr. Marie Madeleine Togo to review the status of Mali's GWEP in September.

CHAD: 14 CASES SO FAR THIS YEAR; DOG TREATMENT DEMONSTRATION STARTED



Chad has reported a total of 14 cases of Guinea worm disease (GWD) so far this year, 10 of which (71%) were contained (Table 1 and 4, Figure 2). The program has also reported 988 infected dogs (66% tethered/contained). The most recent surveys of 1,190 households in fishing villages and villages with one or more infected dogs or humans found that 88% were reportedly burying the entrails of gutted fish. Chad has 1,558 villages under active surveillance, and has recorded 2,082 rumors so far this year. The crude average rate of awareness of the cash reward for reporting a case of the disease in humans is estimated to be about 40%, and only 29% for awareness of the reward for reporting an infected dog, according to surveys, but anecdotal reports suggest the actual awareness rates are much higher. The program is working to correct the apparent discrepancy. The project with assistance of KYNE group is expected to begin introducing new interventions to help raise reward awareness in an intensified communications initiative before the end of this year.

Dr. James Zingeser and Dr. Hubert Zirimwabagabo of The Carter Center led a team to help implement a demonstration project to treat 5,000 dogs monthly in Sarh district of Moyen Chari Region monthly with the topically administered anti-helminthic Advocate®, manufactured by Bayer. This drug is highly effective for treating another parasite of dogs that is in the same taxonomic Order as *Dracunculus*. Treatments began on October 10, and over 1,200 dogs had been treated by October 19. The earlier trial of monthly treatment of 200 dogs in 7 villages (three in Chari Baguirmi and 4 in Moyen Chari Regions) with Heartgard®, that is used to treat the filarial parasite heartworm in dogs and which is manufactured by Merial Corporation, has been underway since September. Mr. Kore Dedy has been appointed senior technical assistant and deputy country representative in Chad for The Carter Center.

SOUTH SUDAN-ETHIOPIA BORDER PUZZLE

The Ethiopia Dracunculiasis Eradication Program (EDEP) is investigating a 20 year old Nuer hunter and farmer whose Guinea worm emerged on September 20, 2016 when he was resident in the Kule 2 Refugee Camp in Itang district of Ethiopia's Gambella Region, although his infection was not detected there. His infection was detected at Kubri village in Lare district and he was admitted to a Case Containment Center at Pugnido in Gog district on September 22nd as an uncontained case, since he had entered water sources after his worm began to emerge. In August-September 2015 he was resident in Nyarkueth village of Torbar payam in Ulang County and a village in Kuerenge payam of Nasir County of South Sudan before traveling to or through Wanthoa, Makuey, Jikawo and Lare districts of Ethiopia in about September 2015 (Figure 1). He made return visits to Torbar payam in South Sudan in January and July 2016, hunting in South Sudan and farming in Ethiopia. He claims

Table 1

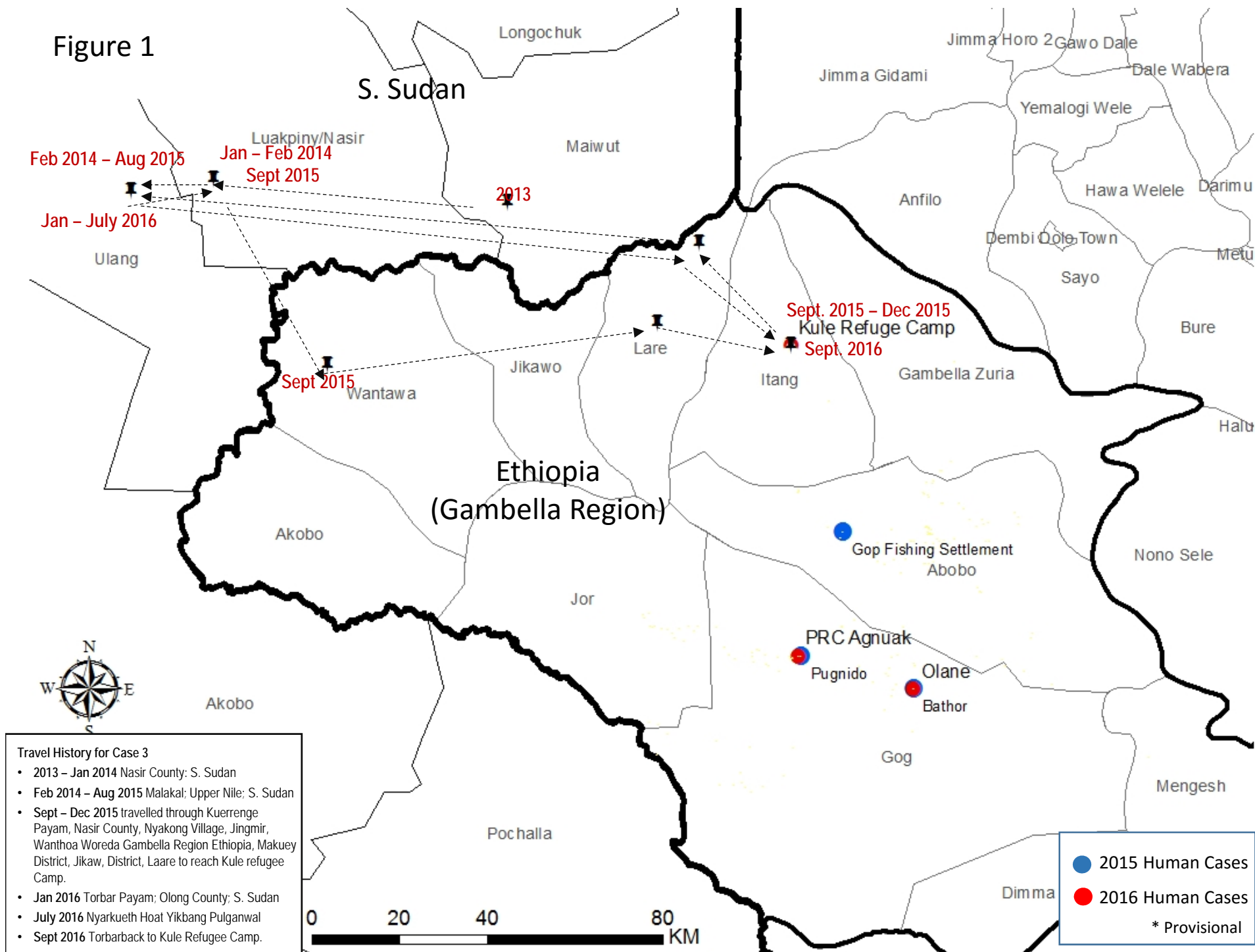
Chad GWEP Line Listing of Cases: January - October 2016*

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
1.1	12	M	Mongo	Sarh (quartier Kassai)	Sarh	Moyen Chari	28-Feb-16	Yes	No	-	No	10-Mar-16	Confirmed
1.2	12	M	Mongo	Sarh (quartier Kassai)	Sarh	Moyen Chari	1-Mar-16	Yes	No	-	No	16-Mar-16	Confirmed
1.3	12	M	Mongo	Sarh (quartier Kassai)	Sarh	Moyen Chari	29-Mar-16	Yes	No	-	No	11-Apr-16	Confirmed
2.1	5	M	Ngambaye	Ngara	Bailli	Chari Banguermi	29-Apr-16	Yes	No	-	No	9-May-16	Confirmed
3.1	11	F	Mousgom	Gole Mass	Onoko	Chari Banguermi	25-May-16	Yes	No	-	No	31-May-16	Confirmed
3.2	11	F	Mousgom	Gole Mass	Onoko	Chari Banguermi	16-Jun-16	Yes	No	-	No	3-Jul-16	Confirmed
4.1	38	F	Boa	Mama	Korbol	Moyen Chari	2-Jun-16	No	Yes	-	No	10-Jun-16	Confirmed
5.1	60	F	Rounga	Kombol	Haraze	Salamat	7-Jul-16	No	No	-	No	18-Jul-16	Confirmed
5.2	60	F	Rounga	Kombol	Haraze	Salamat	4-Aug-16	No	Yes	7-Aug-16	No	12-Aug-16	Confirmed
6.1	55	M	Briguite (Abdeya)	Dankolo	Danamadji	Moyen Chari	3-Jul-16	Yes	No	-	No	29-Aug-16	Confirmed
7.1	24	F	Rachid	Al-Ardep	Aboudeia	Salamat	10-Aug-16	No	No	September 20, 21, 22	No	30-Aug-16	Confirmed
8.1	11	F	Rounga	Kombol	Haraze	Salamat	16-Aug-16	Yes	No	-	No	13-Sep-16	Confirmed
9.1	18	F	Rachid	Al-Ardep	Aboudeia	Salamat	31-Aug-16	No	Yes	September 20, 21, 22	No	13-Sep-16	Confirmed
10.1	50	F	Mboulou	Waitan	Niellim	Sarh	24-Sep-16	No	Pending	-	No	29-Sep-16	Confirmed
11.1	4	M	Rounga	Ndimti	Haraze	Salamat	28-Sep-16	Yes	No	-	No	17-Oct-16	Confirmed
12.1	35	M	Sara Kaba	Dankolo	Danamadji	Moyen Chari	11-Oct-16	Yes	No	-	No	13-Oct-16	Confirmed
13.1	50	F	Rachid	Al-Ardep	Aboudeia	Salamat	12-Oct-16	Yes	No	-	No	15-Oct-16	Confirmed
14.1	22	M	Laka	Madoc	Bessao	Logone Oriental	15-Oct-16	Yes	No	-	No	15-Oct-16	Confirmed

* Provisional

^ 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.

Figure 1



no known association with any case of Guinea worm disease in either country. Potentially contaminated water sources in Ethiopia have been treated with Abate and social mobilization is being conducted in Kule and Tierkidi Refugee Camps in Ethiopia. A team of experts from the Ethiopia Public Health Institute, the Gambella Regional Health Bureau, and Carter Center/Ethiopia and WHO is seeking more information about this patient in various districts of Gambella. The source of this patient's infection is unknown, but could be in South Sudan or Ethiopia. The nearest known infections in South Sudan were two uncontained cases that occurred in Nyirol and Uror Counties in July and September 2013, respectively, whose sources of infection were unknown, but which could not be investigated fully due to insecurity in that part of South Sudan then and subsequently.

With approval of South Sudanese authorities, a team of four persons—Mr. Gabriel Waat and Mr. Evans Lyosi of WHO/South Sudan, county health director Mr. Simon Lam, and county surveillance officer Mr. Michael Ter—conducted an investigation in Ulang County between 24th and 31st October 2016, supported by WHO. They confirmed that this patient lived in Keer village, but visited his uncle's village of Nyarkueth about 5 kilometers away along the Sobat River for 15 days before departing for Ethiopia in 2015. The team met with county authorities, visited 4 health facilities, and interviewed 214 persons in Keer village as well as relatives in Nyarkueth. They found no evidence or history of GWD in the villages visited or in Ulang County since more than 8-10 years ago. Residents of Keer village collect their drinking water from the Sobat River year-round. There is no borehole well in the village. There is frequent travel of family members and others in the area to and from Ethiopia. The team trained 20 persons from 7 health facilities, including 2 volunteers from Keer and Nyarkueth villages on GWD surveillance, and conducted health education and awareness about the cash reward in all the villages and other areas visited. Family members of the patient are to be monitored for one or two transmission seasons, and the county surveillance officer will visit the 2 villages weekly using a speed boat provided by the NGO Goal Ireland that has been screening for Kala azar and conducting nutrition and vaccination activities at village level in the county for the last 3 years. To improve surveillance in the refugee camps the EDEP is organizing a training of community outreach agents, followed by a comprehensive case search in four refugee camps (Terkidi, Kule, Jewi and Okugu) beginning on November 9th.

ETHIOPIA: GAMBELLA VICE-PRESIDENT VISITS GOG DISTRICT



On September 3, 2016 Gambella Region Vice-President Mr. Senay Akwor made an advocacy visit to Gog district and spoke to Cabinet officials of the district, which in recent years has reported almost all of the remaining cases of Guinea worm disease and infected dogs in Ethiopia. The vice-president and his entourage, which included the Regional Health Bureau Head, Mr. Paul Biel and Regional Water Bureau Head Mr. Ogula Ojulu, visited the Gog Case Containment Center and spoke to people gathered in Atheti Kebele (sub-district), which is the epi-center of the endemic area.

Ethiopia has reported 3 cases of GWD (2 contained) so far in 2016 (Table 2 and 4, Figure 2), one of which may have been imported from South Sudan (see above), as well as 12 infected dogs (9 contained) and two infected baboons in 10 villages. The program has 152 villages under active village-based surveillance and has investigated 6,671 rumors of cases in level 1 surveillance areas, and 1,879 in level 2 surveillance areas, of which 99% were investigated within 24 hours, so far this year. As of August, the crude average reward awareness rate for reporting a case of Guinea worm disease was 72% and the crude average reward awareness rate for reporting an infected dog was 47%, as of September 2016. Increased coverage of water sources in Atheti sub-district of Gog

Table 2

Ethiopia Dracunculiasis Eradication Program Line Listing of Cases: January - October 2016*

Case #	Village or Locality of detection			District	Region	Patient			Case Contained?		1 = imported 2=indigeno us	Home Village or Locality			Presumed Source of infection identified?		Presumed Source of	Actions/Comments?
	Name	1 or 2= VAS	VNAS			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)	
1.1	Olane	1		Gog	Gambella	14	M	20-May-16	Yes		2	Olane	1		No			Transmission is suspected to have occurred in the farming area or the nearby forest area for Olane Village. Case was primarily farming, hunting and collecting honey in this area from March to July 2015.
2.1	PRC-Agnuak	1		Gog	Gambella	40	M	30-Jun-16	Yes		1	PRC-Agnuak	1		No			Transmission is suspected to have occurred in forest area near Abawiri and Utuyu-Nyikani Villages. In April to August 2015, the case would regularly travel to this forest area to collect wood.
3.1	Kubri	2		Lare	Gambella	20	M	20-Sep-16	No	27-Sep-16	1	Nyarkueth, South Sudan		3	No			

*Provisional

VAS = village under active surveillance in level 1 or 2 areas

VNAS = village not under active surveillance, level 3 areas

district with Abate continues. In July 2016, 131 water sources were treated compared to 44 water sources in July 2015; 136 water sources in August 2016 vs. 29 in August 2015, and 96 water sources in September 2016 vs. 28 in September 2015. The National Certification Commission held a meeting on November 2, 2016.

SOUTH SUDAN: FIVE CASES IN THREE VILLAGES; MINISTER OF HEALTH DR. RIEK GAI KOK VISITS ENDEMIC VILLAGE



South Sudan's GWEP has reported 5 cases of GWD (3 contained) in 3 villages of Tonj East County of Tonj State and Jur River County in Western Bahr el Ghazal State so far this year (Table 3 and 4, Figure 2). The SSGWEP has 2,666 villages under active village-based surveillance. No infected dogs have been detected in South Sudan so far this year. Expatriate technical assistants to the program have been evacuated from South Sudan since July 2016, due to insecurity.

The Honorable National Minister of Health, Dr. Riek Gai Kok, visited Udici Payam, Wau State on September 23 to present the cash reward to three confirmed cases of GWD from Angoon Village (all contained), in Udici Payam. Wau State Governor, the Hon. Andrea Mayar hosted the event. Accompanying Dr. Riek Gai Kok were the Hon. Undersecretary of the national ministry of health, Dr. Makur Matur Kariom, Area Member of Parliament Hon. Siro Giarjk Mariano, Director of the SSGWEP, Mr. Makoy Samuel Yibi and many other distinguished guests from the national, state, and local levels. All three confirmed case-patients were praised by the Hon. Minister and each received full GW reward of 5,000 Southern Sudanese Pounds (about US \$100) for meeting all containment standards for each of their multiple GWs. Following the visit to Angoon, the Hon. Minister travelled to Udici center to continue raising awareness about GWD and the cash reward. During the event, held at the case containment center in Angoon Village as well as in Udici center, the Hon. Minister remarked that the President, H.E. General Salva Kiir Mayardit, and the government are closely monitoring the race to be the next country to stop transmission. The Hon. Minister expressed the government's unwavering commitment to the remaining endemic communities and called on the paramount chief of Udici and local authorities to intensify community mobilization efforts. The Hon. Minister recognized the volunteers, Guinea worm team and health workers as the real heroes and heroines of the South Sudan effort to eradicate Guinea worm disease

WHO ASSISTS DEMOCRATIC REPUBLIC OF CONGO (DRC) AND ANGOLA TO PREPARE FOR CERTIFICATION



**World Health
Organization**

Dr Dieudonné P. Sankara from WHO HQ and Dr Andrew Seidu Korkor from WHO AFRO, conducted a mission to DRC and Angola to support the efforts of the two countries to implement their road maps to certification. DRC and Angola are two of the four countries without a history of endemic transmission of Guinea worm disease (GWD) during at least 4-5 decades, but are yet to be certified free of the disease.

Verification of the absence of endemic GWD from both countries is a prerequisite for certification. The delegation held discussions with the National authorities about the status of implementation of their road maps to certification, challenges encountered, and identified action points and

Table 3

South Sudan GWEP Line Listing of Cases: January - October 2016*

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 = EVAS	2 = NEVAS						(Yes, No, or Pending)	If No, Date of Abate Rx*		Name	1 = EVAS	2 = NEVAS	(Yes / No)	Description	(Yes / No)	Actions?	Date sent to CDC	Diagnosis	CDC Accession Number
1.1	RUMCHIETH	1		WUNLIT	TONJ EAST	29	F	04/06/16	NO	4/Jun/16	2	RUMCHIETH	1		YES	RUMCHIETH	YES	ABATE WAS ALREADY APPLIED, BANDAGING AND HEALTH EDUCATION DONE	15/Jun	GUINEA WORM	PDB16-42
2.1	ANGON	1		UDICI	JUR RIVER	13	F	09/06/16	YES	NA	2	ANGON	1		YES	WATER SOURCES AROUND THE HOUSEHOLD IN ANGON	YES	ABATE WAS ALREADY APPLIED, BANDAGING AND HEALTH EDUCATION DONE	28/Jun	GUINEA WORM	PDB16-47
2.2								02/07/16											12/Aug	GUINEA WORM	PDB16-69
2.3								06/07/16											25/Jul	GUINEA WORM	PDB16-65
2.4								26/09/16													
3.1								25/06/16											25/Jul	GUINEA WORM	PDB16-62
3.2	03/07/16	25/Jul	GUINEA WORM	PDB16-62																	
3.3	ANGON	1		UDICI	JUR RIVER	26	M	05/07/16	YES	NA	2	ANGON	1		YES	WATER SOURCES AROUND THE HOUSEHOLD IN ANGON	YES	ABATE WAS ALREADY APPLIED, BANDAGING AND HEALTH EDUCATION DONE	25/Jul	GUINEA WORM	PDB16-62
3.4								17/07/16											25/Jul	GUINEA WORM	PDB16-62
3.5								25/09/16													
4.1	ANGON	1		UDICI	JUR RIVER	47	F	27/06/16	YES	NA	2	ANGON	1		YES	WATER SOURCES AROUND THE HOUSEHOLD IN ANGON	YES	ABATE WAS ALREADY APPLIED, BANDAGING AND HEALTH EDUCATION DONE	25/Jul	GUINEA WORM	PDB16-64
4.2								28/06/16											25/Jul	GUINEA WORM	PDB16-64
4.3								01/07/16											25/Jul	GUINEA WORM	PDB16-64
4.4								09/07/16											25/Jul	GUINEA WORM	PDB16-64
4.5								24/07/16											12/Aug	GUINEA WORM	PDB16-68
4.6								28/08/16											19/Sep	GUINEA WORM	PDB16-98
4.7								14/09/16											24/Sep	GUINEA WORM	PDB16-116
5.1	PARIENG CC		2	PAWENG	TONJ EAST	14	M	11/09/16	NO	19/09/16	1	PALOR		2	NO	STILL UNDER INVESTIGATION			24/Sep	GUINEA WORM	PDB16-114

* Provisional

NEVS = Non Endeimic Villages
Gardens = Farming areas of villagesCC = Cattle Camp
CCC = Case Containment Center

recommendations, including additional assistance that might be needed to speed up preparations to certification.

The DRC mission lasted from 19 to 22 October 2016, and was planned to coincide with the end of the mission of two of the five GWD international experts who had been in the country supporting the implementation of pre-certification activities during the past five months. The team had an end-of-mission review and discussion with the experts and national GWD team, held discussions with Dr Yokouide Allaranger, WHO Country Representative in DRC and the Focal Point for GWD at WHO Country Office, the Undersecretary of the Ministry of Health, the Director of Disease Control and NTD staff at the Ministry of Public Health, as well as the Chairperson of the National certification committee (Prof Antoinette K. Tshefu) and Mr. Raymond Stewart of ENVISION to discuss further opportunities for strengthening preparations towards certification. Standalone case searches were completed in 17 of the 26 provinces of DRC. Hundreds of rumors about possible cases were received and each investigated. None were confirmed to be GWD. A search for cases of GWD has been integrated with a mass drug administration drive to control Trachoma in 4 districts of Katanga province-with support from USAID funded RTI-NTD project. Another search for cases of GWD will also be integrated with a nationwide Polio vaccination campaign scheduled in December 2016.

During the Angola mission from 24 – 28 October, the team held discussions with the WHO Country Representative (a.i) and the Focal Point for GWD at WHO country office, the National Director of Public Health of the Ministry of Health, the Chief of Department of endemic diseases (who is leading the country's efforts to prepare the country report about GWD), Partners, including UNICEF, Mentor (head of office in Angola) and the Ministry of Water. The team conducted working sessions with the NTD/GWD team and colleagues from the Polio Program to discuss how best to integrate with and use an up-coming NID exercise in December 2016 to conduct case search for GWD. One third of the country has already been searched for cases of GWD via integration with mapping of other NTDs-zero cases of GWD were found. The team also conducted a field visit to Bengo Province to discuss with the provincial health authorities on the pre-certification activities. The team was warmly welcomed by the Minister of Health, Dr. Luis Gomes Sambo, former Regional Director of WHO Africa's region. He expressed his gratitude for the support visit and also expressed his personal and the Ministry's commitment in ensuring that the country adequately meets the requirements for certification within the shortest possible time.

IN BRIEF

In its October 20, 2016 issue, the South Sudan Humanitarian Bulletin issued by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) published an unfortunate misleading story regarding 56 suspected cases of Guinea worm disease in South Sudan this year. The report, which was not authorized by the Government of South Sudan, mis-characterized the news as “a disappointing set-back” for the SSGWEP. The report did not mention, apparently because no one contacted the Ministry of Health to verify the information, that of the 65 *rumors of cases*, all of which were investigated, *only 5 were confirmed* to be Guinea worm disease.

Dr. Sharon Roy recently joined CDC's Parasitic Disease Branch's Elimination and Control Epidemiology team as a Medical Officer. Since 2010 Dr. Roy was a Medical Officer with CDC's Waterborne Disease Prevention Branch. She has served as the Director of the WHO Collaborating Center for Research, Training and Eradication of Dracunculiasis at CDC since 2005. In her new

position she will continue to coordinate CDC's work on Guinea worm eradication, as well as take up new work to integrate assessment surveys for lymphatic filariasis and onchocerciasis.

Figure 2

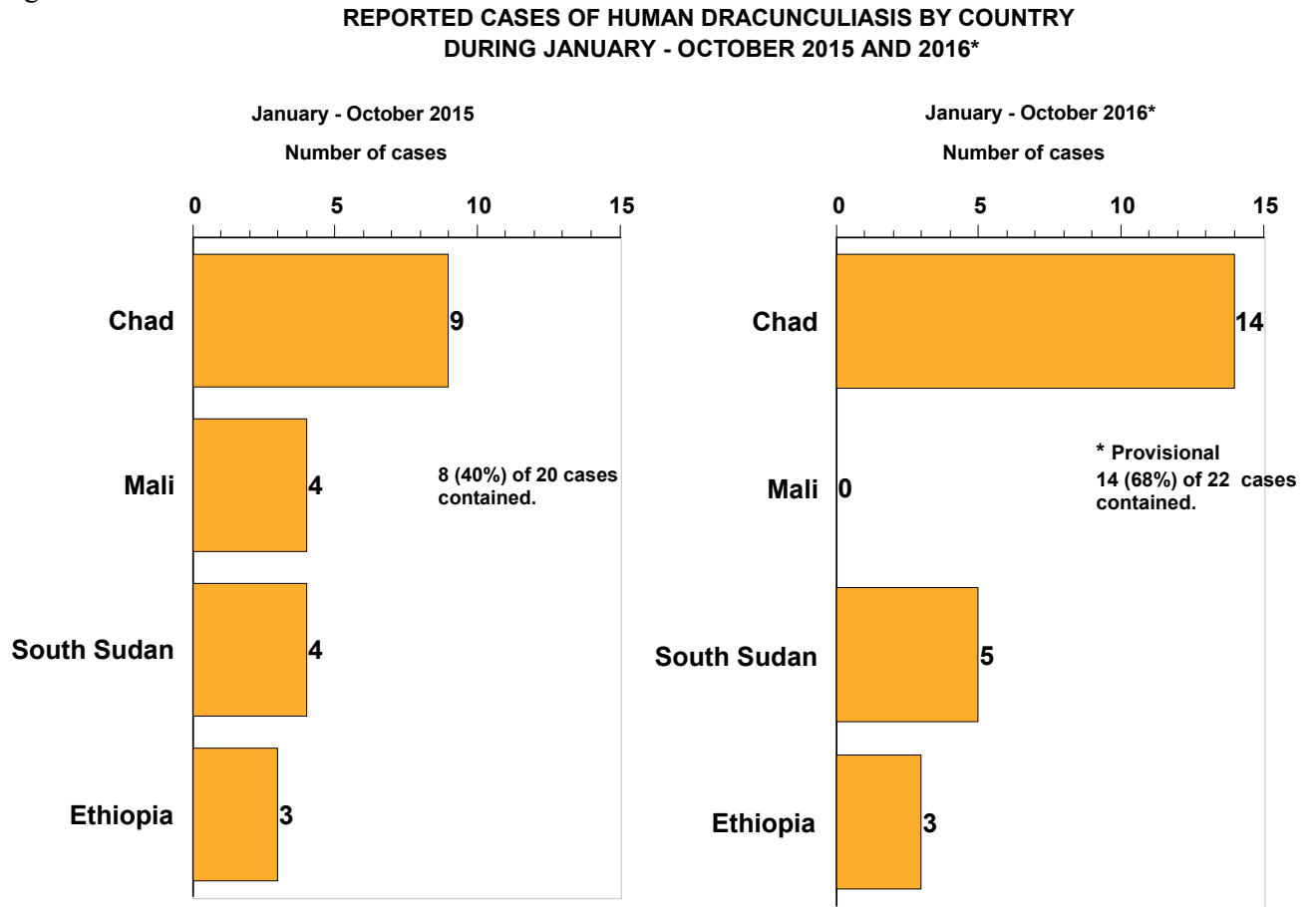


Table 4

Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2016*
(Countries arranged in descending order of cases in 2015)

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*	
CHAD	0 / 0	1 / 1	0 / 0	1 / 1	1 / 1	0 / 1	1 / 2	1 / 3	2 / 2	3 / 3	/	/	10 / 14	71%
MALI §	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	0 / 0	0%
SOUTH SUDAN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 4	0 / 0	0 / 0	0 / 1	0 / 0	/	/	3 / 5	60%
ETHIOPIA	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	0 / 0	0 / 0	0 / 1	0 / 0	/	/	2 / 3	67%
TOTAL*	0 / 0	1 / 1	0 / 0	1 / 1	2 / 2	4 / 6	1 / 2	1 / 3	2 / 4	3 / 3	0 / 0	0 / 0	15 / 22	68%
% CONTAINED	0%	100%	0%	100%	100%	67%	50%	33%	50%	100%			68%	

*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 a case of GWD did not meet all case containment standards.

§Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Tinbuktu, Gao, and Kidal Regions; reports from Kidal Region are contingent on security conditions during 2016 and times when the GWEP is able to deploy a technical advisor to Kidal Region to oversee the program there.

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	0 / 1	0 / 0	2 / 5	40%
MALI §	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	3 / 3	0 / 1	0 / 0	3 / 5	60%
CHAD	0 / 0	0 / 1	0 / 2	0 / 1	0 / 0	0 / 2	0 / 1	0 / 1	0 / 0	0 / 1	0 / 0	0 / 0	0 / 9	0%
ETHIOPIA	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	0 / 0	1 / 1	0 / 0	0 / 0	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 / 2	0 / 0	8 / 22	36%
% CONTAINED	0%	0%	0%	0%	100%	33%	33%	25%	0%	80%	0%	0%	36%	

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, Tinbuktu, Gao, and Kidal Regions; reports from Kidal Region are contingent on security conditions during 2015 and times when the GWEP is able to deploy a technical advisor to Kidal Region to oversee the program there.

MEETINGS

The South Sudan GWEP is considering having its annual in-country review meeting the week of January 9, 2017.

Chad GWEP review: January 19-20, 2017 in N'Djamena.

Mali GWEP review: January 25-26, 2017 in Bamako.

Ethiopia GWEP review: December 13-14, 2016 in Gambella.

The World Health Organization is considering convening the next meeting of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE 11) between the end of April and early May 2017.

PUBLICATIONS

Eberhard ML, Yabsley MJ, Zirimwabagabo H, et.al, 2016. Possible role of fish and frogs as paratenic hosts of *Dracunculus medinensis*, Chad. Emerg Infect Dis. 22:1428-30.

Eberhard, M. L., Cleveland, C. A., Zirimwabagabo, H., Yabsley, M. J., Ouakou, P. T., & Ruiz-Tiben, E. (2016). Guinea Worm (*Dracunculus medinensis*) Infection in a Wild-Caught Frog, Chad. Emerging Infectious Diseases, 22(11), 1961-1962. doi:10.3201/eid2211.161332

Eberhard, M. L., Ruiz-Tiben, E., & Hopkins, D. R. (2016). Dogs and Guinea worm eradication. Lancet Infectious Diseases, 16(11), 1225-1226.

Hopkins DR, Ruiz-Tiben E, Eberhard ML, Roy SL, Weiss AJ, 2016. Progress toward global eradication of dracunculiasis—January 2015-June 2016. Morbidity and Mortality Weekly Report 65:1112-6.

Pai-Dhungat, JV, 2015. Dracunculiasis (Guinea worm): On the Verge of Eradication. Journal of The Association of Physicians of India, Vol 63:91-92.

GUINEA WORM DISEASE IN THE NEWS AND CYBERSPACE

Shayla, Love. (08/25/2016). "The dying days of a parasite that once infected millions." Washington Post, The, 8. Regional Business News,

Michaeleen, D. (08/09/2016). Why The World Isn't Close To Eradicating Guinea Worm. All Things Considered (NPR),

Dr. Mamadou BATHIY: 1959-2016



We regret to report the passing of Dr. Mamadou Bathily, who served as The Carter Center's Resident Technical Advisor [country representative] in Mali from 2001 to 2005. A medical graduate of the National School of Medicine and Pharmacy in Bamako, Dr. Bathily first worked in Mali's Guinea Worm Eradication Program as a *Medecin d'Appui* in the region of Kayes for six years, before being transferred to Gao Region in 1999. After his service as Carter Center RTA he continued to work for Mali's GWEP in Mopti, during 2006-2008. We extend our heartfelt condolences to his family and colleagues.

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 (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 A-06, 1600 Clifton Road NE, Atlanta, GA 30329, 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