



Date: Sept. 23, 2013

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

Subject: GUINEA WORM WRAP-UP #221

To: Addressees

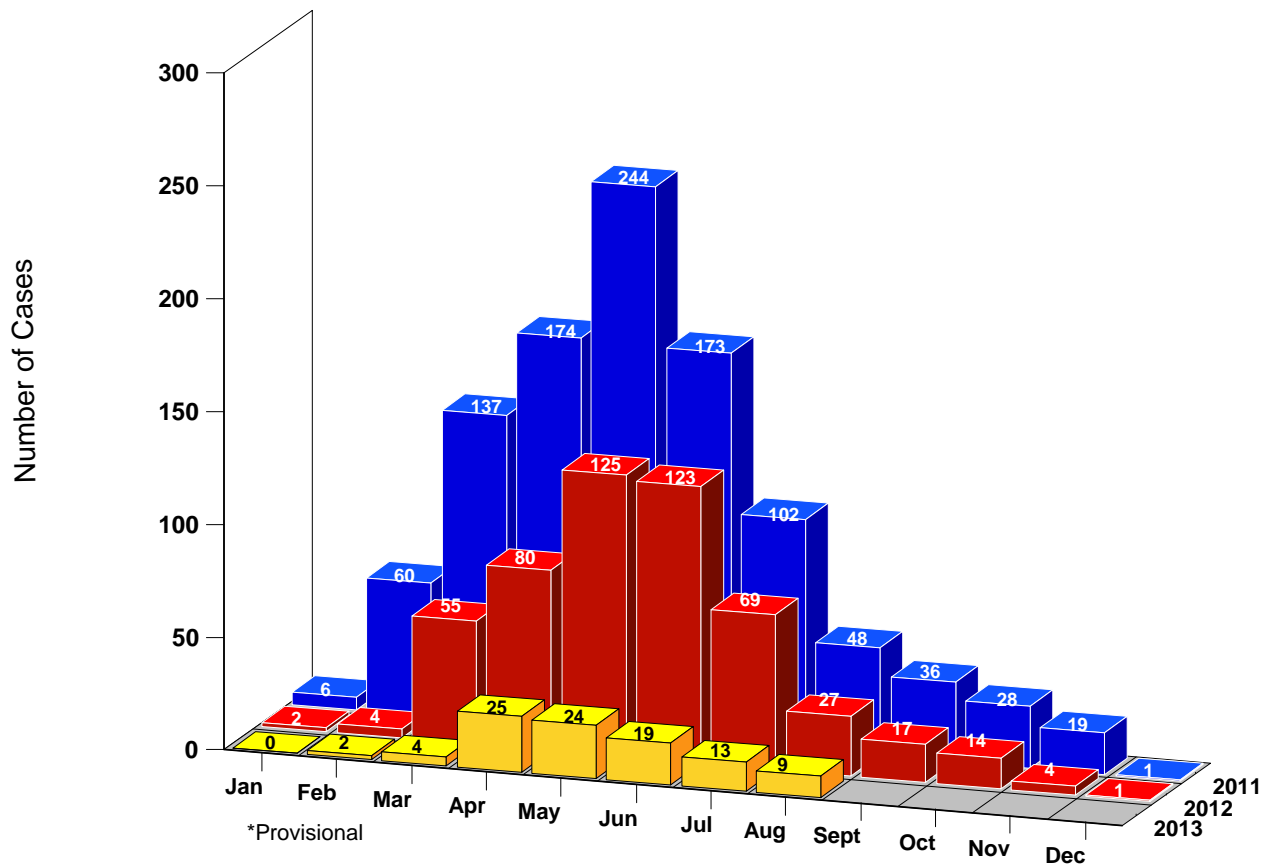
Detect every case! Contain every worm! Trace every source!

SOUTH SUDAN LEADS THE CHARGE TO ZERO CASES



The 96 cases reported in South Sudan during January-August 2013 is an 80% reduction in cases compared to the 485 cases reported during the same period in 2012 (Figures 1 and 3 and Tables 2 and 6).

Figure 1 South Sudan Guinea Worm Eradication Program
Cases of Dracunculiasis Reported by Month, 2011 - 2013*



Only 5 of the country's 80 counties have reported indigenous cases and 2 counties reported only imported cases so far this year. Sixty-five (65), or 68% of the 96 cases were contained (Tables 2 and 6). Ninety-four (94) of the 96 cases were from known endemic areas. Dr. Ernesto Ruiz-Tiben, Mr. Craig Withers, and Mr. Adam Weiss of The Carter Center participated in the South Sudan Guinea Worm Eradication Program (SSGWEP) mid-year review at Kapoeta on August 29-30. While in Juba, they and undersecretary of health Dr. Makur Matur Kariom, and the SSGWEP director Mr. Samuel Makoy Yibi met with the President of South Sudan, the Honorable Salva Kiir, and separately with the Minister of Health, Dr. Riek Gai Kok. Table 1 is an update of the 32 cases reported in June and July to continue the line listing of cases reported for January-May in previous issues.

The circumstances pertaining to one of the Guinea worm patients detected in Kauto West Payam of Kapoeta East County in June 2013 illustrate the thoroughness and dedication that are now hallmarks of the SSGWEP. LAL is an 11 year old girl who is the sister of a 9 year old female case and the sister-in-law of a 25 year old female case, both of whom also were detected in June 2013, and all three of whom were from the same home village called Achakar, in Kauto West Payam (district): *"LAL was detected in Namertiaba Cattle Camp (CC) in Lorus Etuko Boma (sub-district). She was detected as a suspect in Lokoriwon CC where her family members became cases, but her worm did not emerge until her moving group had arrived to their next destination in Nameritaba CC area. Because all containment measures were put in place early, her case was deemed contained. LAL lost her ability to walk and Program Officer (PO) James Kerebino and his porter Lino carried Lorika on their back for 2 days so that they could admit her at the mobile Case Containment Center located in Kuron Village. Both Lino and PO Kerebino were in a tremendous amount of pain upon their arrival..."* From report by Regional Coordinator Ms. Isha Nirola.

CHAD, ETHIOPIA, AND MALI EACH HOPING TO BEAT SOUTH SUDAN

Chad reported 3 cases, all contained, in July-August, for a total of 8 cases (7 contained) so far in 2013, which is one more case than Chad reported during the same eight months of 2012 (Table 3). All of the cases reported so far this year are from villages that had not reported a case of Guinea worm disease before. This program also has reported several instances of similar worms emerging from dogs without any correlation in time and location between worms in dogs and people. Drs. Donald Hopkins and Ernesto Ruiz-Tiben of The Carter Center visited Chad during the last week in July to join the national coordinator Dr. Mahamet Tahir Ali in a meeting with the Minister of Health Dr. Ahmed Didja Mahamat and others to brief them on the status of the program. Dr Dieudonné Sankara of WHO visited Djamena and Mayo Kebbi East regions in Chad from the 8-19 August 2013. He reviewed the level of implementation of surveillance activities in areas free of the disease and provided technical assistance aimed at strengthening surveillance in the GW-free areas using mass media, as well as town criers in markets and villages. A search for cases of GWD and social mobilization aimed at promoting awareness about the disease and reward modalities was implemented in conjunction with the polio immunization campaign in the region of Lac. The search was completed on 25-26th of August. Planning for another survey to assess the awareness levels in communities was initiated and is expected to be conducted during November 2013. As of the last quarter of 2013, training for all

surveillance focal points in the country will be completed which will include GWD surveillance. The Ministry of Health/Chad GWEP will now hold a stakeholder's meeting on October 11-12 and an annual GWEP review meeting during the last quarter of 2013 to increase the level of commitment and support from regional and district authorities in GW-free areas to increase awareness about the disease and rewards and to improve overall surveillance for and response to alleged cases of GWD.

Ethiopia reported no cases during July-August 2013, for a total of 6 cases (3 contained) in January-August 2013, vs. 3 cases reported during January-August 2012. Five of the 6 cases are residents of Batpoulo Village in Abobo Woreda (Table 4 and Figure 2). The sixth case is a former resident of Wichini Village in Gog Woreda. The sources of these 6 infections remain unknown. Five of the 6 cases are males. In July Federal Minister of Health Dr. Kesetebirhan Admassu requested The Carter Center to expand its assistance to include Abobo Woreda, in addition to its current assistance in Gog Woreda. As a result, Ms. Jessica Flannery of The Carter Center joined the director of the Ethiopia Dracunculiasis Eradication Program, Mr. Gole Ejeta, and WHO Guinea Worm officer, Dr Zeyede Kebede in a re-investigation of the six cases and in preparations for the expansion of Carter Center assistance. Carter Center Country Representative Dr. Zerihun Tadesse made a supervisory visit to Gog and Abobo Woredas on August 6-9. WHO representative of Ethiopia, Dr Pierre Mpele-Kilebou made a follow up visit in Gambella during August. 25 – 27, 2013 and discussed the implementation of various recommendations with local authorities and also made a field visit to Batpoulo village in Abobo district.

Currently two WHO field officers are deployed in Nanyangaton district bordering South Sudan to enhance the surveillance system in the area and improve community awareness. Dr. Andrew Seidu-Kokor of WHO-AFRO visited the districts of Abobo, Gog and Itang in Ethiopia from 17 August to 3 September. During the visit, activities were reviewed as a follow-up to the high-level advocacy mission undertaken by the Honourable Minister of Health in June. Activities were reviewed with officials of the Regional Council, Regional Health Bureau, District Health Offices, Village volunteer, old cases and members of Batpulo community. Concerns remain in the area of increasing awareness of the reward outside of Gog and Abobo woredas, especially in South Omo areas which are at risk of importation of cases from South Sudan. An assessment of awareness levels planned for last quarter of 2013. EDEP is in the process of a revised cash reward scheme.

Mali reported no cases in July-August, for a total of 4 cases (1 contained) in January-August 2013, vs. the same number of cases reported during the same eight months of 2012. (Table 5).

Table 1

**SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
LINE LISTING OF CASES OF GWD DURING 2013***

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?	
	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?
56.1	LODUKIO	1		LOTIMOR	KAPOETA EAST	24	M	26/05/13	NO	NA DID NOT ENTER WATER	2	ARIKIEKORI		2	NO	AT FIRST IT WAS THOUGHT TO BE IMPORTED FROM NARUS, BUT FURTHER INVESTIGATION SUGGESTS INFECTION IN A FARMING AREA OR WHILE HERDING CATTLE AROUND THE NAKUDOCHUA- UP VILLAGE FARMING AREA	YES AND NO	PLATEAU ON HIGH ALERT- INTERVENTIONS IN PLACE
57.1	LOTEYO	1		LOTIMOR	KAPOETA EAST	35	M	30/05/13	NO	NA DID NOT ENTER WATER	2	LOTEYO	1		YES	GRAZING AREA AROUND VILLAGE	YES	FULL INTERVENTIONS IN PLACE- LOTEYO IS ALWAYS ON HIGH ALERT
58.1	LONGAIMO		2	JIE	KAPOETA EAST	8	M	01/06/13	YES	NA	1	DOCHA	1		YES	SPECIFIC SOURCE NOT IDENTIFIED BUT THOUGHT TO BE ATTRIBUTED TO FARMING AREAS IN DOCHA VILLAGE OR GRAZING AREA NEAR LOOSUT VILLAGE ASSOCIATED WITH BROTHER OF ANOTHER 2012 DOCHA VILLAGE CASE.	YES	FULL INTERVENTIONS ARE IN PLACE AT THE HOME VILLAGES AND THE TECHNICAL ADVISOR IS WORKING ON UPDATING ENDEMIC VILLAGE MAPS, GARDEN MAPS, AND GRAZING AREAS
59.1	KACHALAKIENY	1		KARUKOMUGE	KAPOETA NORTH	18	M	07/06/13	NO	NA DID NOT ENTER WATER	2	KACHALAKIENY	1		YES	SPECIFIC SOURCE NOT IDENTIFIED BUT THE VILLAGE IS IN THE SAME COMPOUND AS A 2012 UNCONTAINED CASE	YES	FULL INTERVENTIONS ARE IN PLACE
60.1	NALUKPETA	1		MOGOS	KAPOETA EAST	56	M	07/06/13	YES	NA	2	NALUKPETA	1		YES	FROM SAME AREA AS OTHER CASES, CONSIDERED INDIGENOUS BUT STILL UNDER INVESTIGATION	YES	FULL INTERVENTIONS IN PLACE
61.1	NAGIRAKAI CC		2	KAUTO	KAPOETA EAST	29	F	07/06/13	NO	NA	1	LOPUSINGOLE	1		YES	GARDENS- NABWELENKINE/BURUTAN VILLAGES	YES	FULL INTERVENTIONS IN PLACE
62.1	NAKWARE	1		JIE	KAPOETA EAST	13	M	08/06/13	YES	NA	2	NAKWARE	1		YES	SPECIFIC SOURCE NOT IDENTIFIED BUT THOUGHT TO BE ATTRIBUTED TO GARDENS/GRAZING AREA NEAR DOCHA/NAKWARE- POSSIBLY ATAPARS IN LOOSUT HUNTING, GRAZING AND GATHERING AREA	YES	FULL INTERVENTIONS IN PLACE
63.1	DOCHA	1		JIE	KAPOETA EAST	45	M	09/06/13	YES	NA	2	DOCHA	1		YES	KOSURU GOAT HERDING/GARDEN AREA	YES	FULL INTERVENTIONS IN PLACE
64.1	LOKARIWON CC		2	MEOUN	PIBOR	9	F	12/06/13	NO	24.6.13	1	ACHAKAR	1		YES	LOPUSINGOLE BOMA- NABWELANGAKINEI- BURUTAN GARDENS	YES	FULL INTERVENTIONS IN PLACE IN ACHAKAR
65.1	NAMUSEAT	1		JIE	KAPOETA EAST	18	M	13/06/13	YES	NA	2	NAMUSEAT	1		YES	KOSURU NAMASURU GRAZING AREA	YES	FULL INTERVENTIONS IN PLACE AT HOME VILLAGE- GARDEN. A MEMO REQUESTING URGING INCREASED COVERAGE WAS SENT OUT FOR IMPLEMENTATION
66.1	LOPUSINGOLE	1		KAUTO	KAPOETA EAST	7	F	15/06/13	YES	NA	2	LOPUSINGOLE	1		YES	NAKAI- BURUTAN GARDEN SOURCES	YES	ALL INTERVENTIONS WERE APPLIED
66.2	LOPUSINGOLE	1		KAUTO	KAPOETA EAST	7	F	30/07/13	YES	NA	2	LOPUSINGOLE	1		YES	NAKAI- BURUTAN GARDEN SOURCES	YES	ALL INTERVENTIONS WERE APPLIED
67.1	NAITAMORU CC		2	KAUTO	KAPOETA EAST	16	F	15/06/13	YES	NA	1	KOTAMO	1		YES	MOGOS SOUTH BUT NO CASES DETECTED IN THAT VILLAGE THIS YEAR	YES	ALL INTERVENTIONS WERE APPLIED
68.1	NAPUSIRIET	1		MOGOS	KAPOETA EAST	5	F	19/06/13	YES	NA	2	NAPUSIRIET	1		YES	GARDEN STREAMS IN NAKWALEMU GARDENS	YES	ALL INTERVENTIONS WERE APPLIED
69.1	LOKARIWON CC		2	MEOUN	PIBOR	25	F	19/06/13	YES	NA	1	ACHAKAR	1		YES	BUYANGOLE VILLAGE- TBD BUT SUSPECTED SOURCES AROUND ACHAKAR-NABS ROCK POND & SPRING, ERONYIT ATAPAR (POND), NAPASEMARET, LONYANGAKIPI	YES	ALL INTERVENTIONS WERE APPLIED IN ACHAKAR VILLAGE
70.1	AMUKAT	1		KAUTO	KAPOETA EAST	14	F	22/06/13	YES	NA	2	AMUKAT	1		NO	STILL UNDER INVESTIGATION- PATIENT MOSTLY IN VILLAGE LAST YEAR	NA	NANYANGNWA CLUSTER WILL BE TREATED AS ENDEMIC CLUSTER
71.1	KHOR-ARDEP		2	KASSINGOR	PIBOR	18	F	24/06/13	NO	FLOWED	1	NATELENGOREIT		2	YES	LOOSUT (GARDENS/NAMUSIA GARDENS IN LOPEAT)	YES	FULL INTERVENTIONS IN PLACE IN LOPEAT

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	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?
72.1	LORIWO	1		JIE	KAPOETA EAST	4	F	26/06/13	YES	NA	2	LORIWO	1		YES	GARDEN WATER SOURCE OF 2012 CASE NEXT TO MOTHERS GARDEN	NO	AREA IS BEING TREATED AS ENDEMIC- FULL INTERVENTIONS ARE IN THE WORKS. TRANSITION FROM IMPLEMENTING INTERVENTIONS AS CC TO VILLAGES BEING MADE
73.1	NAKWARE	1		JIE	KAPOETA EAST	13	M	26/06/13	YES	NA	2	NAKWARE	1		YES	SPECIFIC SOURCE NOT IDENTIFIED, BUT GRAZING AREA NAMAMSURU CC (VISITED DAILY), AND GARDENS AT AKALI ARE SUSPECTED LOCATIONS OF INFECTION.	YES	FULL INTERVENTIONS IN PLACE IN LOPEAT
74.1	NAMERITABA CC		2	KAUTO	KAPOETA EAST	11	F	28/06/13	YES	NA	1	ACHAKAR	1		YES	LOPUSINGOLE NABWELANGAKINEI-BURUTAN	YES	FULL INTERVENTIONS IN PLACE
75.1	MORUOSE		2	MARUO	PIBOR	6	M	13/06/13	NO	NA	1	NAKWARE	1		YES	NAMAMSURU GRAZING AREA	YES	FULL INTERVENTIONS IN PLACE
76.1	NAPUSIRIET	1		JIE	KAPOETA EAST	24	M	01/07/13	YES	NA	2	NAPUSIRIET	1		YES	NAMAMSURU/LOSURU GRAZING AREA	YES	FULL INTERVENTIONS IN PLACE
77.1	LOTOPOJO	1		MOGOS	KAPOETA EAST	17	F	04/07/13	YES		2	LOTOPOJO	1		YES	LOTOPOJO VILLAGE- LONGURO STREAM	YES	FULL INTERVENTIONS IN PLACE- HIGHLY ENDEMIC FROM 2012
78.1	NAPUSIRIET	1		JIE	KAPOETA EAST	30	M	09/07/13	YES	NA	2	NAPUSIRIET	1		YES	NAMAMSURU/NANYANGABEI CC AREA/KOSURU CCC	YES	FULL INTERVENTIONS IN PLACE
79.1	MAYOM		2	TOCH EAST	GOGRIAL EAST	50	F	13/07/13	NO	15.7.13	1	MAYOM		2	NO	UNKNOWN	NA	NA
80.1	LOTIKITOE CC		2	KAUTO	KAPOETA EAST	15	M	15/07/13	YES		1	LOPUSINGOLE	1		YES	IMPORTED FROM LOPUSINGOLE- GARDEN AND OTHER DETAILS UNDER INVESTIGATION. KNOWS AND RELATED TO OTHER LOPUSINGOLE CASES	YES	FULL INTERVENTIONS IN PLACE
81.1	ALTABARA		2	LONGELEYA	KAPOETA SOUTH	18	M	16/07/13	YES		1	NAKAABUK		2	YES	SPECIFICS UNDER INVESTIGATION- THOUGHT TO BE IMPORTED FROM JIE NAKAABUK 2012 UNCONTAINED CASE	NO	LAST YEAR'S CASE WAS IMPORTED BUT THERE WAS AN UNCONTAINED CASE IN THE VILLAGE
82.1	ILA-JESH		2	LONGELEYA	KAPOETA SOUTH	17	M	17/07/13	NO		1	NAKWARE	1		YES	PROVISIONALLY NAKWARE	YES	FULL INTERVENTIONS IN PLACE
83.1	NAPUSIRIET	1		JIE	KAPOETA EAST	30	F	21/07/13	YES	NA	2	NAPUSIRIET	1		YES	INDIGENOUS TO CLUSTER- SPECIFICS STILL BEING INVESTIGATED- NANYANGABEI FRUIT GATHERING	YES	FULL INTERVENTIONS IN PLACE
84.1	NAKOKOSOWAN CC AREA		2	KASSINGOR	PIBOR	37	F	22/07/13	YES	NA	1	NAKWARE	1		YES	NAKWARE GARDENS- LOKAT STREAM	YES	FULL INTERVENTIONS IN PLACE
85.1	NANAKANAK		2	LONGELEYA	KAPOETA SOUTH	12	M	22/07/13	NO		1	NASIMARAN		2	NO	CURRENTLY ASYING NASIMARAN IN LOOI	NO	FULL INTERVENTIONS IN PLACE IN LOOI BOMA
86.1	NYIN JONG	1		AYAT CENTER	AWEIL WEST	42	M	24/07/13	NO	WATER SOURCES NOT IDENTIFIED	2	NYIN JONG	1		NO	UNKNOWN- STILL UNDER INVESTIGATION	UNKNOWN	UNDER INVESTIGATION
87.1	NANYANGAMOR CC AREA		2	MARUO	PIBOR	35	F	28/07/13	YES	NA	1	NAKWARE	1		YES	NAKWARE GARDENS	YES	FULL INTERVENTIONS IN PLACE
88.1	KOCHOBUA CC AREA		2	JIE	KAPOETA EAST	20	M	31/07/13	NO	2.8.13	1	NAPUSIRIET	1		YES	NANYANGABEI CC AREA (GRAZING AREA)	YES	FULL INTERVENTIONS IN PLACE
89.1	NAKALIOIT	1		KATODORI	KAPOETA EAST	29	F	01/08/13	YES	NA	2	NAKALIOIT	1		YES	SHE POSSIBLY INFECTED HERSELF ON WAY WHEN MISSING FOR 3 DAYS ON WAY TO KAPOETA SOUTH LAST YEAR OR NEAR MINING AREA	NO	FULL INTERVENTIONS IN PLACE AT VILLAGE- NEARBY MINING AREAS UNDER INVESTIGATION
90.1	LOYEPIO	1		KAUTO	KAPOETA EAST	26	F	01/08/13	YES	NA	2	NGIRO		2	NO	UNDER INVESTIGATION	NA	UNDER INVESTIGATION
91.1	DOCHA	1		JIE	KAPOETA EAST	29	M	02/08/13	YES		2	DOCHA	1		YES	NANYANGABEI CC AREA (GRAZING AREA) FROM DOCHA	YES	FULL INTERVENTIONS IN PLACE
92.1	NAOYAGULE		2	JIE	KAPOETA EAST	6	F	05/08/13	NO	13.8.13	1	NAOYAGULE	1		YES	NAKWARE- THERE ARE SOME AREAS UNDER TREES THAT ARE SMALL AMOUNTS OF WATER- SMALL WATER SOURCE (NAKWAKPEL) - FAMILY GARDENS- ALSO CLOSE TO NAMAMSURU GRAZING AREA	YES	FULL INTERVENTIONS IN PLACE

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?	
	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?
93.1	CHARKOU CC		2	BUNAGOK	AWERIAL	12	F	10/08/13	NO	16.8.13	1	DAK BUONG		2	YES	WARCHUEI OR WAR PAN MAKAL PONDS AROUND VILLAGE- 2012 CASE RETROSPECTIVELY ADMITTED ENTERING PRIOR TO DETECTION AND WAS LIKELY IMPROPERLY RECORDED AS CONTAINED IN 2012	YES	NEIGHBORS WUMKUM VILLAGE- FULL INTERVENTIONS IN PLACE
94.1	WUNKUM	1		ABUYONG	AWERIAL	7	F	11/08/13	NO	14.8.13	2	WUNKUM	1		YES	WARCHUEI OR WAR PAN MAKAL PONDS AROUND VILLAGE- 2012 CASE RETROSPECTIVELY ADMITTED ENTERING PRIOR TO DETECTION AND WAS LIKELY IMPROPERLY RECORDED AS CONTAINED IN 2012	YES	NOW, YES, IT IS RESPONSIBLE FOR FOUR CASES AND FULL INTERVENTIONS ARE IN PLACE
95.1	LOTHIRA	1		KAUTO	KAPOETA EAST	16	F	13/08/13	YES	NA	2	LOTHIRA	1		YES	KIMUSUT- NAPESEMORET STREAMS WITHIN NAWOYAPETA GARDENS	YES	FULL INTERVENTIONS IN PLACE
96.1	NAOYAKOMUA	1		MOGOS	KAPOETA EAST	13	F	16/08/13	YES		2	NAOYAKOMUA	1		YES	LOKITELA GARDENS - SMALL POND IN THAT GARDEN	YES	FULL INTERVENTIONS IN PLACE

* Provisional
EVS= Endemic Villages
NEVS = Non Endemic Villages
Gardens = Farming areas of villages
CC = Cattle Camp
CCC = Case Containment Center

Table 2

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
CASES REPORTED AND CONTAINED DURING 2013* BY STATE, COUNTY AND MONTH

State	County	Cases Contained / Cases Reported												% Contained	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
Eastern Equatoria	Kapoeta East	0 / 0	1 / 2	0 / 2	17 / 20	17 / 21	12 / 15	5 / 5	5 / 7	/	/	/	/	57 / 72	79%
	Kapoeta North	0 / 0	0 / 0	0 / 0	1 / 2	2 / 2	0 / 1	0 / 0	0 / 0	/	/	/	/	3 / 5	60%
	Kapoeta South	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 3	0 / 0	/	/	/	/	1 / 3	0%
	STATE TOTAL	0 / 0	1 / 2	0 / 2	18 / 22	19 / 23	12 / 16	6 / 8	5 / 7	0 / 0	0 / 0	0 / 0	0 / 0	61 / 80	76%
Jonglei	Pibor	0 / 0	0 / 0	0 / 0	0 / 3	0 / 1	1 / 3	2 / 3	0 / 0	/	/	/	/	3 / 10	30%
	STATE TOTAL	0 / 0	0 / 0	0 / 0	0 / 3	0 / 1	1 / 3	2 / 3	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 10	30%
Warrap	Tonj North	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	0 / 0	0%
	Tonj East	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	0 / 0	0%
	Tonj South	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	0 / 0	0%
	Gogrial East	0 / 0	0 / 0	1 / 2	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	/	/	/	/	1 / 3	33%
	STATE TOTAL	0 / 0	0 / 0	1 / 2	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 3	33%
Northern Bahr Al Ghazal^	Aweil West	/	/	/	/	/	/	0 / 1	0 / 0	/	/	/	/	0 / 1	0%
	STATE TOTAL	/	/	/	/	/	/	0 / 1	0 / 0	0 / 0	/	/	/	0 / 1	0%
Western Bahr Al Ghazal	Jur River	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	0 / 0	0%
	STATE TOTAL	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0%
Lakes	Awerial	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	/	/	/	/	0 / 2	0%
	STATE TOTAL	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0%
SOUTH SUDAN TOTAL		0 / 0	1 / 2	1 / 4	18 / 25	19 / 24	13 / 19	8 / 13	5 / 9	0 / 0	0 / 0	0 / 0	0 / 0	65 / 96	68%
% CONTAINED		0%	50%	25%	72%	79%	68%	62%	56%					68%	

* Provisional: as of September 10, 2013

^ Under passive surveillance. New indigenous case

Insecurity in area this month, in Boma, Kassinger, Kassinger CC and Maruo.

Table 3

CHAD GUINEA WORM ERADICATION PROGRAM
LINE LISTING OF CASES OF GWD DURING 2013^

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 EVA?		
	Name	1= EVAS	2= NEVAS	3= PSV			Age	Sex	Date GW Emerged	(Yes, No, or Pending)	If No, date of Abate Rx		Name	1= EVAS	2= NEVAS	3= PSV	(Yes or No)	Name	(Yes or No)	Actions?
1	Miskine Banane		2		Mandelia	Chari Baguirmi	3	F	4/2/2013	yes		2	Miskine Banana		2		No			
2.1	Koutoungolo Centre		2		Massenya	Chari Baguirmi	35	F	8/4/2013			2	Koutoungolo Centre							
2.2									28/4/13											
2.3									21/5/13											
2.4									21/5/13											
3	Gassé		2		Massenya	Chari Baguirmi	50	F	9/4/2013	yes		2	Gassé		2		No			
4	Gourlong			3	Guelenden	Mayo Kebi Est	12	M	5/5/2013	yes		2	Gourlong			3	No			
5	Djarbou Choufou			3	Mandelia	Chari Baguirmi	6	M	16/5/13	no	N/A	2	Djarbou Choufou			3	No			
6	Bogomoro		2		Bouso	Chari Baguirmi	25	M	19/7/13	yes		2	Bogomoro			2		No		
7	Madoubou Route*	1**			Mandelia	Chari Baguirmi	8	M	26/7/13	yes		2	Madoubou Route	1**			?		?	
8	Médégué		2		Guelenden	Mayo Kebi Est	10	F	24/8/13	yes		2	Ndjemena			2		No		

^ Provisional

* Patient was a confirmed case of GWD in 2011

1** Locality is part of endemic cluster of villages.

Case number 1.1, 1.2...etc. designates the case number and the number of GWs emerging from same case-patient.

EVAS = endemic village under active surveillance

NEVAS = non endemic village under active surveillance

PSV= passive surveillance area village

Table 4

ETHIOPIA DRACUNCULIASIS ERADICATION PROGRAM
LINE LISTING OF CASES DETECTED DURING 2013*

CASE.GW#	VILLAGE OR LOCALITY OF DETECTION			KEBELE	WOREDA	AGE	SEX	DATE OF GW EMERGENCE	CASE CONTAINED		1= INDIGENOUS 2= IMPORTED	HOME VILLAGE OR LOCALITY			PRESUMED SOURCE OF INFECTION IDENTIFIED?		PRESUMED SOURCE OF INFECTION IS A KNOWN EVA?			
	NAME	1 EVAS	2 NEVAS						3 PSV	Y/N/PENDING		DATE OF ABATE RX	NAME	1 EVAS	2 NEVAS	3 PSV	Y/N	NAME	Y/N	ACTIONS?
1.1	Ojwom			3	Elia	Itang	60	M	29-Apr-13	No	May 3 Abongomera Pond; May 10 Abongomera 2 pond, Agulkidi pond.	2	Batpoulo			3	No		No	Depuyi pond as well as ponds around Ojwom village where the patient was detected have been abated
1.2							60	M	15-May-13											
1.3							60	M	16-May-13											
2.1	Batpoulo			3	Perpengo	Abobo	28	M	4-May-13	Yes		1	Batpoulo			3	No		No	Guule, Awude or Depuyi ponds. All three ponds/group of ponds have been abated
3.1	Batpoulo			3	Perpengo	Abobo	24	M	17-May-13	Yes		1	Batpoulo			3	No		No	Guule, Awude or Depuyi ponds. All three ponds/group of ponds have been abated
4.1	Batpoulo			3	Perpengo	Abobo	40	M	20-Feb-13	Yes		1	Batpoulo			3	No		No	Guule, Awude or Depuyi ponds. All three ponds/group of ponds have been abated
5.1	Pugnido Town/PRC Agnuak		2		3	Gog	37	M	22-Feb-13	No		1	Pugnido		2		No		Pending	
5.2							37	M	22-May-13											
5.3							37	M	17-Jul-13											
6.1	Batpoulo			3	Perpengo	Abobo	33	F	10-Jun-13	No		1	Batpoulo			3	No		No	Guule, Awude or Depuyi ponds. All three ponds/group of ponds have been abated

1.1 = Case # 1, First GW

EVAS = Endemic villages under active surveillance

NEVAS= non endemic village under active surveillance

PSV= passive surveillance village

PRC = Pugnido Refugee Camp

* provisional

Table 5

**MALI GUINEA WORM ERADICATION PROGRAM
LINE LISTING OF CASES DETECTED DURING 2013***

Cas #	Age	Sex	Ethnicity	Profession	Village	District	Region	Date			Detected<24hrs? (yes/no)	Contaminated water (yes /no)	Abate applied? (yes/no)	Date of admission to a case containment center		Case contained?	Imported? (yes/no)	Probable source of infection
								Worm emergence	Case containment began	Case confirmed by supervisor				Admission	Release			
1.1	17	F	Tamchek	Housewife	Kouakourou	Djenne	Mopti	02-Mai-2013	?	20-May-13	No	No	Non	20/05/2013	-	No		Unknown
1.2								11-Mai-2013	?						-			
1.3								24/06/2013							-			
1.4								24/06/2013							-			
1.5								25/06/2013							-			
1.6								28/06/2013	?						-			
2.1	30	M	Tamachek	Animal breeder	Iclahane	Kidal	Kidal	10-May-13	10-May-13	30-May-13	No	No	Oui	5/30/13		No		Agabo
2.2								29-May-13										
2.3								30-May-13										
3.1	28	M	Arabe	Animal breeder	Etambar	Kidal	Kidal	11-May-13	31-May-13	31-May-13	No	No	Oui	5/31/13		No		Agabo
3.2								31-May-13										Agabo
3.3								31-May-13										
3.4								31-May-13										
3.5								31-May-13										
4.1	20	F	Arabe	Housewife	Etambar	Kidal	Kidal	1-Jun-13	1-Jun-13	1-Jun-13	Yes	No	No	5/31/13		Yes		Agabo

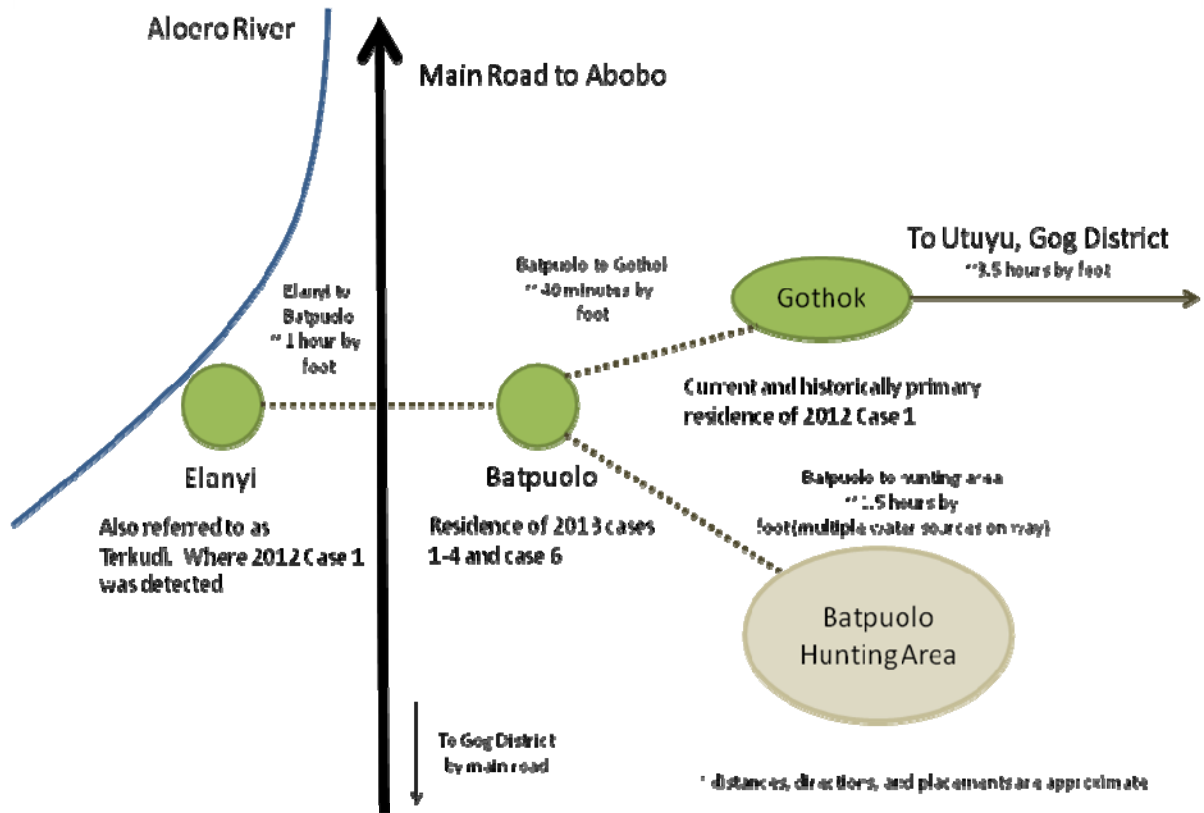
BT = Black Tamachek

WT= White Tamchek

* provisional

Figure 2

Terkudi Area of Abobo District, Gambella Region, Ethiopia *



IN BRIEF

Sudan reported a case of Guinea worm disease in a 35 year old woman at Kafia Kingi village in El Radom Locality of South Darfur State. The case was detected by vaccinators for the polio eradication campaign in June. The patient claims to have contracted her infection about three hours walk from Kafia Kingi village, near the border with the Republic of South Sudan at a water source reportedly used by people from many different areas, allegedly including soldiers from the [South] Sudan Peoples' Liberation Army (SSPLA). The worm specimen was confirmed by the WHO Collaborating Centre at CDC, Atlanta as *D. medinensis*. The actual source of infection is still unknown. However, the woman reported having drawn water from “Hagar Nugara” in a nearby village during the period she is likely to have been infected. The area is on the border between Sudan and South Sudan and presently flooded. The investigation of this case is ongoing.

Efforts also were made by the SSGWEP during August 17-28, 2013. With assistance from WHO, a team visited most of the areas on the South Sudan side from the Kafia Kingi area in Raja County, Western Bahral Ghazal State. Most of the areas close to the border are under military control. Thirty-three (33) villages were assessed and no cases of GWD were detected. Most residents live in semi-urban areas since they moved from their villages when the SSPLA moved in to the area in 2008. All the SSPLA barracks are supplied with safe water (boreholes). Most of the communities have access to safe water.

Table 6

Number of Cases 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													% CONT.
	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 / 13	5 / 9	/	/	/	/	65 / 96	68
CHAD	0 / 0	0 / 0	0 / 0	3 / 3	1 / 1	0 / 1	2 / 2	1 / 1	/	/	/	/	7 / 8	88
MALI	0 / 0	0 / 0	0 / 0	0 / 0	0 / 3	1 / 1	0 / 0	0 / 0	/	/	/	/	1 / 4	25
ETHIOPIA	0 / 0	0 / 0	0 / 0	0 / 1	3 / 4	0 / 1	0 / 0	0 / 0	/	/	/	/	3 / 6	50
TOTAL*	0 / 0	1 / 2	1 / 4	21 / 29	23 / 32	14 / 22	10 / 15	6 / 10	0 / 0	0 / 0	0 / 0	0 / 0	76 / 114	67
% CONTAINED		50	25	72	72	64	67	60					67	

*Provisional

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

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

Beginning in April 2012 reports include only Kayes, Koulikoro, Segou, Sikasso, Mopti Regions; the GWEP is not currently operational in Timbuktu, Kidal, and Gao Regions.

Number of Cases Contained and Number Reported by Month during 2012*
(Countries arranged in descending order of cases in 2011)

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	2 / 2	3 / 4	37 / 55	50 / 80	79 / 125	84 / 123	45 / 69	14 / 27	10 / 17	9 / 14	2 / 4	1 / 1	336 / 521	64
MALI [^]	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 3	0 / 0	3 / 3	0 / 0	0 / 0	0 / 0	4 / 7	57
CHAD	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0 / 1	2 / 4	1 / 2	1 / 1	0 / 0	0 / 0	4 / 10	40
ETHIOPIA	0 / 0	0 / 0	0 / 0	0 / 1	1 / 1	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 1	2 / 4	50
TOTAL*	2 / 2	3 / 4	37 / 55	50 / 81	80 / 126	85 / 126	45 / 73	17 / 32	14 / 22	10 / 15	2 / 4	1 / 2	346 / 542	64
% CONTAINED	100	75	67	62	63	67	62	53	64	67	50	50	64	

*Provisional

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

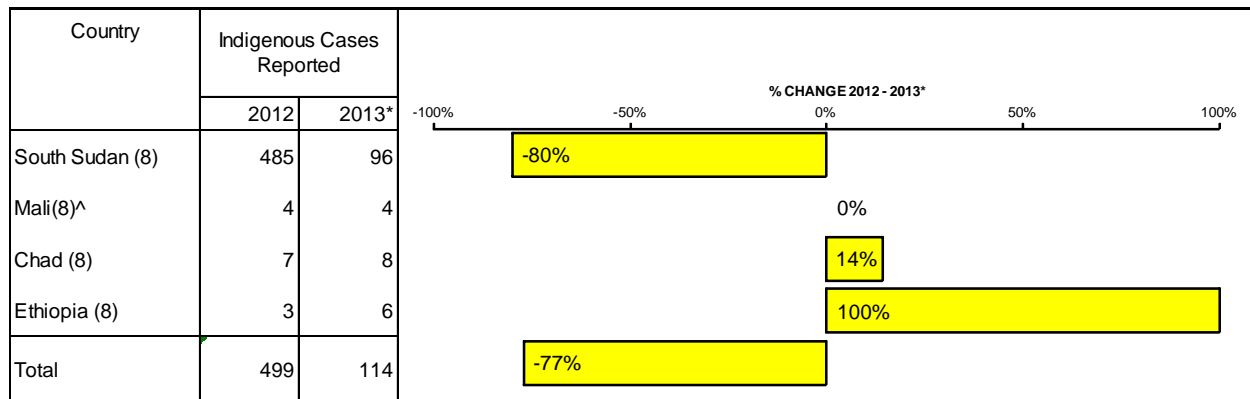
Cells shaded in yellow denote months when transmission of GWD from one or more cases was not contained.

Beginning in April 2012 reports include only Kayes, Koulikoro, Segou, Sikasso, Mopti Regions; the GWEP is not currently operational in Timbuktu, Kidal, and Gao Regions.

[^] Three Malian residents, confirmed as cases of GWD in Niger during September 2012 (shown in italics), are included in Mali's total for the year. Mali has not ascertained the apparent source of these cases

Figure 3

Number of Indigenous Cases Reported During the Specified Period in 2012 and 2013*, and Percent Change in Cases Reported



* Provisional. Numbers in parentheses indicate months for which reports have been received, i.e., (8) = January -Aug. 2013.

^ Beginning in April 2012 reports include only Kayes, Koulikoro, Segou, Sikasso, Mopti Regions; the GWEP is not currently operational in Timbuktu, Kidal, and Gao Regions; the GWEP is not currently fully operational in Timbuktu and Gao Regions, and not at all in Kidal Region.

TALES FROM SOUTH SUDAN: EARNING THE TRUST OF FAMILIES OF PATIENTS WITH GWD IN GOGRIAL EAST COUNTY, WARRAP STATE – A report from Carter Center Technical Advisor Chris Bodemeade in Lienthom, Gogrial East County, South Sudan Guinea Worm Eradication Program (SSGWEP)

AMN (age 13, male) was a patient with Guinea worm disease (GWD) in Dhok Pan Magot village in 2012, and subsequently a patient with GWD in Wutaween village, his new home, since January 2013. Like with other patients with GWD in 2012, we had been monitoring AMN on a weekly basis during 2013, when in March a swelling appeared on one heel. During that time however, AMN’s mother and grandmother would often chase away field staff, including on one occasion brandishing a hoe at the Regional Coordinator for the SSGWEP. More commonly AMN just would disappear into the forest whenever we arrived, and we would receive a cold response when asking where he was, or when was AMN returning. AMN would move between his new of village of Wutaween and his old village of Dhok Pan Magot on an almost weekly basis. On one of these occasions while in the forest, his swelling on the heel was cut and later, fragments of worm were retrieved by one of the field officers, who happened to be in Wutaween at the time. AMN was our first case of GWD in Gogrial East County in 2013.

On 8 June 2013 we noticed four large swellings on AMN’s right thigh, making us suspect he was developing GWD. At that point he was in Lorwai village staying at his grandmother’s house. This lady was particularly hostile to SSGWEP staff program owing to her granddaughter having eloped with another patient at the SSGWEP case containment center in 2012. However, over the course of May and June 2013 we had made progress in communicating with and relating to the family, and they were cooperating with the SSGWEP team. Therefore on 18 June 2013 we asked the grandmother if we could take the boy to the Lienthom Primary Health Care Unit for examination. She agreed to accompany us. At the clinic the staff diagnosed AMN to have had an infection causing cellulitis, allegedly from an earlier lesion, and gave him a 5 day course of Cloxacillin. We negotiated with the grandmother to allow AMN to stay on the SSGWEP

compound in Lienthom for observation whilst he was on medication, and she agreed. There was no possibility to take AMN to the SSGWEP case containment center, as it is in Dhok Pan Magot village, and the grandmother believes there is a curse against her and her family in that village. AMN stayed happily on our compound, but on 22 June 2013 his grandmother returned saying that she wished to take the boy immediately for an incision of the swelling, because she had had a dream. We again persuaded her to wait and first let him complete the course of antibiotic. After some time, she relented and said she would return on Monday, 24 June 2013. Surprisingly, she returned the next day whilst we were out of the compound and took AMN to Wutaween for the “cutting” procedure (by the local healer). We alerted the SSGWEP Field Officer covering Wutaween who slept there on 23 June 2013, and we joined him there in the early morning of 24 June 2013. We spoke to the family and the traditional healer, and tried to convince them not to incise the swellings because of the risk of infection, but failed. Nevertheless we were able to convince them that if we were to proceed, the operation should be done under sterile conditions, as far as possible. So, we washed the patient’s leg, had the healer wear latex gloves, and cleaned the blade. When the four swellings were punctured, significant amounts of pus and blood were drained, revealing pieces of a worm that were preserved in alcohol in a specimen bottle *. Our Area Supervisor was able to bandage the boy immediately. The family and traditional healer were grateful for our help and agreed for us to take AMN back to our compound for continuous bandaging until he fully recovered. The boy recuperated well in our compound and there is lots of good will in the family towards us. AMN did not enter water and providing occlusive bandages for him daily until he healed, transmission from this patient was prevented.

I would like to emphasize that we, in no way, condoned or encouraged the cutting of the swellings. But after taking AMN to the primary health care unit and his family’s resolute desire for the local healer to incise and drain the swellings, we thought it be better to attend and assist, than ignore the operation. We had contemplated getting help from the local authorities to prevent the operation, but reasoned this would result in a breakdown of hard earned trust between the family and the SSGWEP, which would have meant the likelihood that we would lose follow-up access to multiple 2012 patients.

Following the experience with AMN and his family during March 2013, we realized we had to make a much greater effort to gain their trust and support. The family had left Dhok Pan Pagot, their village of residence, largely due to the stigma that infection with GWD had caused them in the eyes of their neighbors. Coupled with the elopement of the granddaughter from the case containment center, and some other unfortunate tragedies that had befallen the family, they had come to associate the program with bad luck. Through patience, persistence and politeness on the part of field officers and area supervisors, we were able to convince them to become part of the program.

*the worm specimen was identified as *Dracunculus sp* At the Centers for Disease Control and Prevention on 8 August 2013.

RECENT PUBLICATIONS

Sessou, A. "Le Tchad S'est Dote Dun Plan S'action De Surveillance Active." *Courrier D'Afrique*. Dec. & Jan. 2013.

Siddall M, 2013. An extinction to celebrate. [The New Yorker](#) (Blog, July 29).

World Health Organization, 2013. Monthly report on dracunculiasis cases, January-June 2013. [Wkly Epidemiol Rec](#) 88:365-380.

World Health Organization, 2013. Monthly report on dracunculiasis cases, January-May 2013. [Wkly Epidemiol Rec](#) 88:321-336



PATRICK O'MARA, GUINEA WORM WARRIOR (1930 - 2013)

We report with great sadness and regret the passing of Mr. Patrick (Pat) O'Mara of Atlanta on Saturday September 14, 2013 in Ft. Myers, Florida. After his retirement from the US Air Force, Pat began work at the Centers for Disease Control and Prevention as Public Health Advisor with the CDC's Venereal Disease Control Program in 1960, and served there for 28 years in various capacities in the control and prevention of communicable diseases. After his retirement from CDC, Pat's commitment to public health led him to work with South Florida's immigrant health services. After retiring a second time, he accepted a position with The Carter Center in 1991 as Resident Technical Advisor to Ghana's Guinea Worm Eradication Program, an assignment which lasted 6 years. That seminal work eventually led to the eradication of Guinea worm disease in Ghana. 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

Contributors to this issue were: the national Guinea Worm Eradication Programs, Drs. Donald R. Hopkins and Ernesto Ruiz-Tiben, of The Carter Center, Dr. Gautam Biswas of WHO, and Drs. Sharon Roy and Mark Eberhard of CDC.

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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



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