



Date: November 21, 2014

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

Subject: GUINEA WORM WRAP-UP #230

To: Addressees

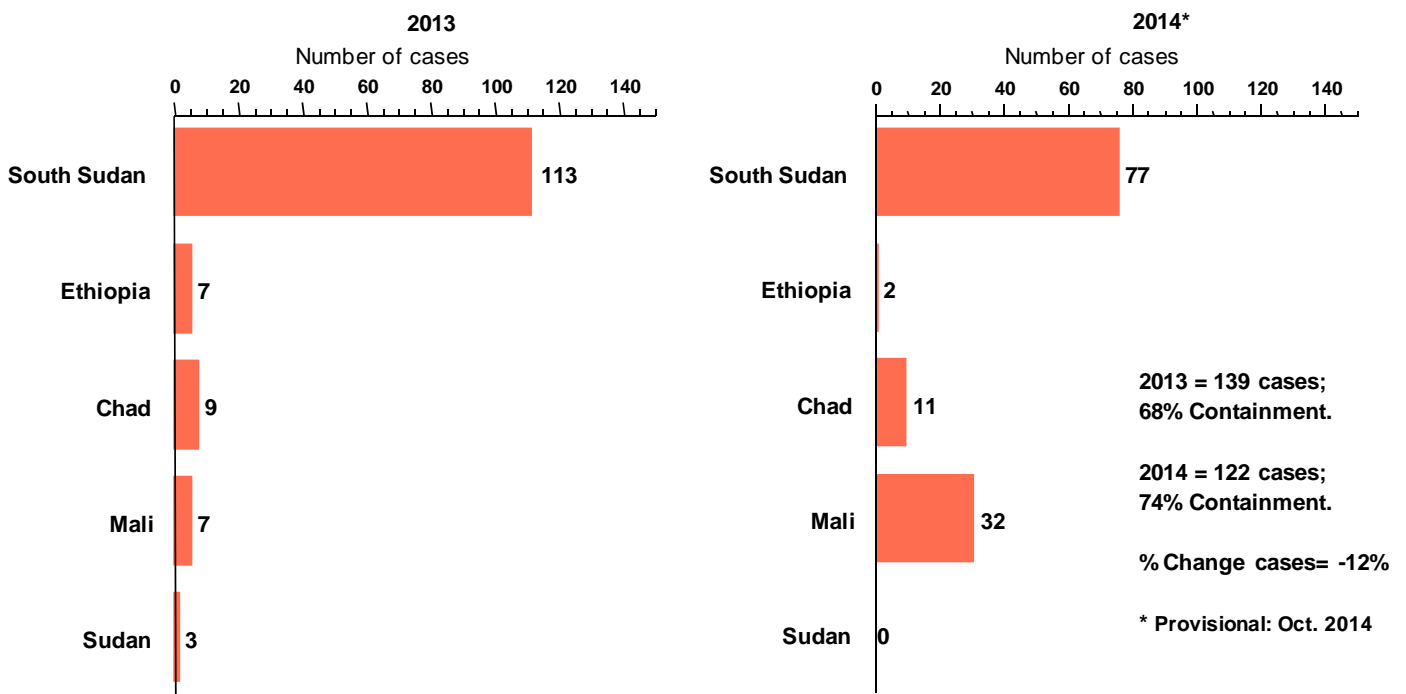
Contain Every Worm! Trace Every Case!! Raise Reward Awareness!!!

OUTBREAKS IN SOUTH SUDAN AND MALI SHRINK CASE REDUCTION IN 2014

As a result of the outbreaks of cases in South Sudan and Mali during 2014, the momentum in the first 10 months of 2014 (January-October) (Figure 1) has slowed a modest 12% reduction in cases compared to the same period in 2013 (which observed a 71% reduction compared to the same period in 2012) (Table 2 and Figure 4). Although both outbreaks are relatively modest in size, their effect on the percentage change in cases is substantial because the numbers of remaining cases are so small. Overall, 74% of cases in 2014 have been contained, vs. 68% of cases contained in the same period of 2013.

Figure 1

Reported Cases of Dracunculiasis by Country During January - October 2013 and 2014*



All 32 of this year's cases (84% contained) in Mali have occurred in relatively accessible areas (Ansongo district/Gao Region, Gourma Rharous/Timbuktu Region and Tominian/Segou Region), and all but one are in two previously known endemic villages, where interventions have now been intensified. One laboratory-confirmed and uncontained case of unknown origin reported from Segou Region is still being investigated. No case has been reported from Kidal Region, where surveillance is incomplete due to insecurity but does include the known endemic areas from 2013.

CHAD: ON-GOING CHALLENGE



Approximately 50 persons participated in the annual Program Review of Chad's Guinea Worm Eradication Program (GWEP), which was held at the Hotel Modern in Bongor, Mayo Kebbi Est Region, on November 4-6, 2014. The Governor of Mayo Kebbi Est, the Honorable Mahamat Ali Hassaballah, opened the meeting, accompanied by the Regional Sanitary Delegate, Dr. Hissene Mahamat. The minister of health was represented by ministerial advisor Dr. Jean Briere De L'Isle.

The Review engaged key actors in Chad's GWEP, including the national program coordinator of the program, Dr. Ali Mahamat Tahir, his deputy Dr. Tchonfienet Moundai, Carter Center Country Representative Ms. Melinda Denson, and the former director of the program, Dr. Gagde H.D. Epainete. External participants included Drs. Donald Hopkins and Ernesto Ruiz-Tiben from Carter Center headquarters, Dr. Dieudonne Sankara of World Health Organization headquarters, and International Commission for the Certification of Dracunculiasis Eradication (ICCDE) member Dr. Mark Eberhard. The former Carter Center Country Representative, Ms. Corey Farrell, also attended this meeting.

For almost five years (2010-2014), cases of Guinea worm disease (GWD) in humans in Chad have ranged between only 10-14 cases per year, while the number of cases reported annually in dogs in Chad has risen from 27 (2012) to 54 (2013), to 109 cases (2014) (vs. 11 cases in humans in 9 villages), amounting to ten times as many cases in dogs as in humans so far this year (Figure 2), including, for the first time, an infected dog (3 worms) in N'Djamena. Surveillance for infections in dogs was comparable in 2013 and 2014. There has been an average of 1.1 worms per infected human in Chad in 2014 and an average 1.37 worms per infected dog. The distinct peak in monthly incidence of Guinea worm infections in dogs in Chad at the end of the dry season in May-June coincides with the mass fishing season (*peche collective*), and supports the hypothesis that dogs are infected by eating raw fish entrails that are most abundant at that time of year (Figure 3).

Given the special circumstances in Chad, the Review meeting established a new description and definition instead of "endemic" to denote affected villages in Chad: "1+ case village": *a village with one or more indigenous and/or imported case of Guinea worm infection in a human, dog, and/or cat in the current calendar year and/or the previous year. These 1+ case villages require immediate interventions to interrupt or prevent transmission.* There were 90 such villages in Chad as of October 31, 2014.

A total of 691 villages in Chad are under active surveillance. The program is stressing health education to urge residents of these villages to cook or smoke fish thoroughly, to not let dogs eat raw fish entrails, to prevent infected dogs from contaminating water, and to be aware of the cash reward for reporting a case of Guinea worm disease. Complete numbers for all of these indices are not yet

Figure 2

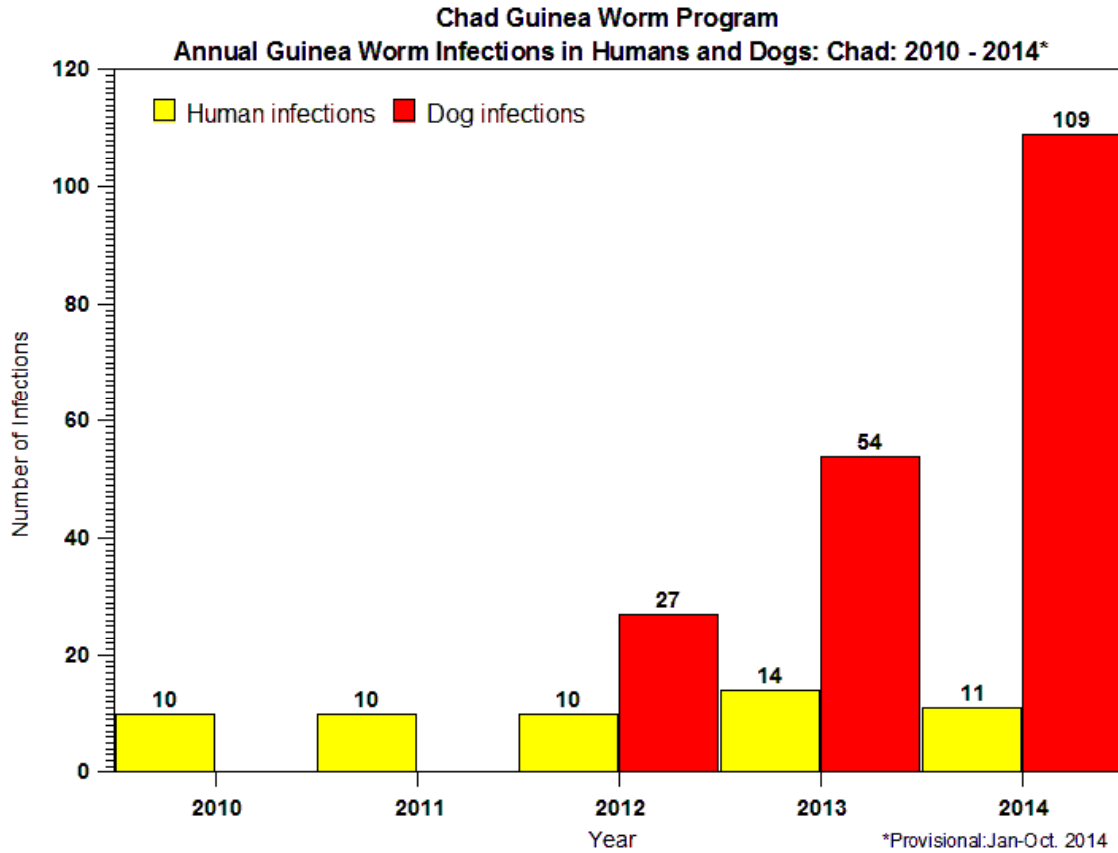
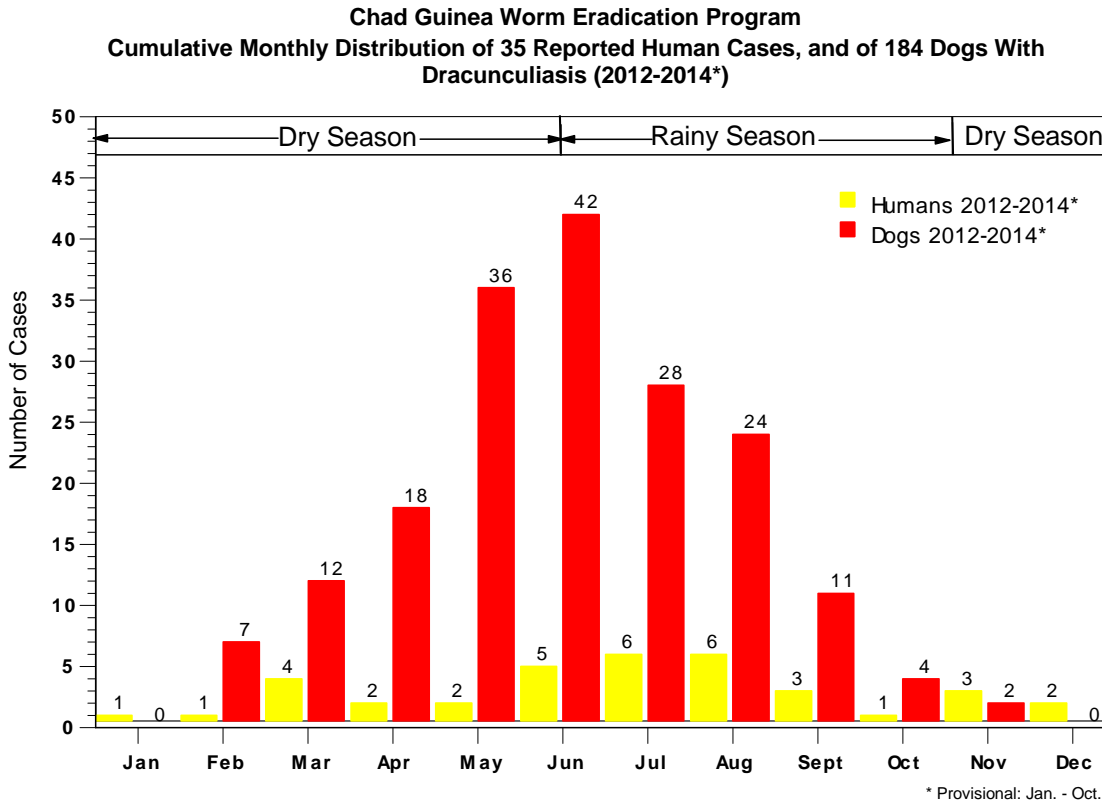


Figure 3



available, but the program already has helped some market vendors to dig deep pits with covers and use them to bury fish entrails. Another incentive for market women is that doing so keeps the market cleaner and less smelly. So far this year 39% of infected dogs have been contained (tied up by villagers until the worm is expelled), and 55% of human cases were contained (all 11 patients were admitted to a case containment center). 73% of 90 “endemic” villages in 2014 have at least one source of safe drinking water, and ABATE was applied monthly in 10% of the “endemic” villages. Spot checks of reward awareness in an endemic area in 2014 found 66% of 133 persons queried had detailed understanding of the cash reward modalities for reporting a case of GWD. The program investigated 96% of 1,191 rumors reported in endemic areas within 24 hours. Only 8 rumors were reported in non-endemic areas and all were investigated within 24 hours. Chad’s Interagency Guinea Worm Task Force will meet on November 18, 2014.

IN BRIEF

Ethiopia’s new pamphlet (pocket guide) for Neglected Tropical Diseases includes information about Guinea worm disease and will be translated into Amharic for distribution to over 38,000 registered Health Extension Workers (HEWs). The latest update on levels of awareness about the cash reward is shown in table 1.

Table 1

**Ethiopia Dracunculiasis Eradication Program
Levels of Awareness about Cash Reward by Area: 2014***

Location	Assessment dates	Population interviewed		% Aware	Source
		Number	Aware		
Endemic areas	14-Nov	730	679	93%	Village based survey
Formerly endemic (Itang Woreda, only)	Aug. - Sept. 2014	428	396	93%	Village based survey
Formerly endemic	Jun. - Sept. 2014	1,469	1,182	80%	Polio campaign
Never endemic	Jun. - Sept. 2014	282	95	34%	Surveys
Total		2,909	2,352	81%	

* Provisional

The director of **Mali’s** GWEP Dr. Gabriel Guindo, program data manager Madani Dialle, Carter Center country representative Mr. Sadi Moussa, and driver Madou Diarra visited Mopti, Gossi, Gao, Ansongo and Tominian districts October 27-November 7 to supervise GW activities in the field. In Ansongo district in particular, the district medical officer, Dr. Sissoko, had made numerous supervisory visits to endemic areas of Tanzikratene and Tessit.

Table 2

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	13 / 22	14 / 21	4 / 5	9 / 10	/	/	55 / 77	71
Chad	1 / 1	1 / 1	1 / 1	1 / 1	0 / 1	0 / 1	1 / 3	0 / 1	1 / 1	0 / 0	/	/	6 / 11	55
Mali [§]	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	14 / 18	12 / 13	/	/	27 / 32	84
Ethiopia	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	/	/	2 / 2	100
Total*	1 / 1	1 / 1	4 / 4	4 / 5	3 / 5	8 / 11	14 / 25	15 / 23	19 / 24	21 / 23	0 / 0	0 / 0	90 / 122	74
% Contained	100	100	100	80	60	73	56	65	79	91			74	

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 / 0	/	/	0 / 0	0

Total	1 / 1	1 / 1	4 / 4	4 / 5	3 / 5	8 / 11	14 / 25	15 / 23	19 / 24	21 / 23	0 / 0	0 / 0	90 / 122	70
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*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, Tinbuktu 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
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Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were contained and reported that month.

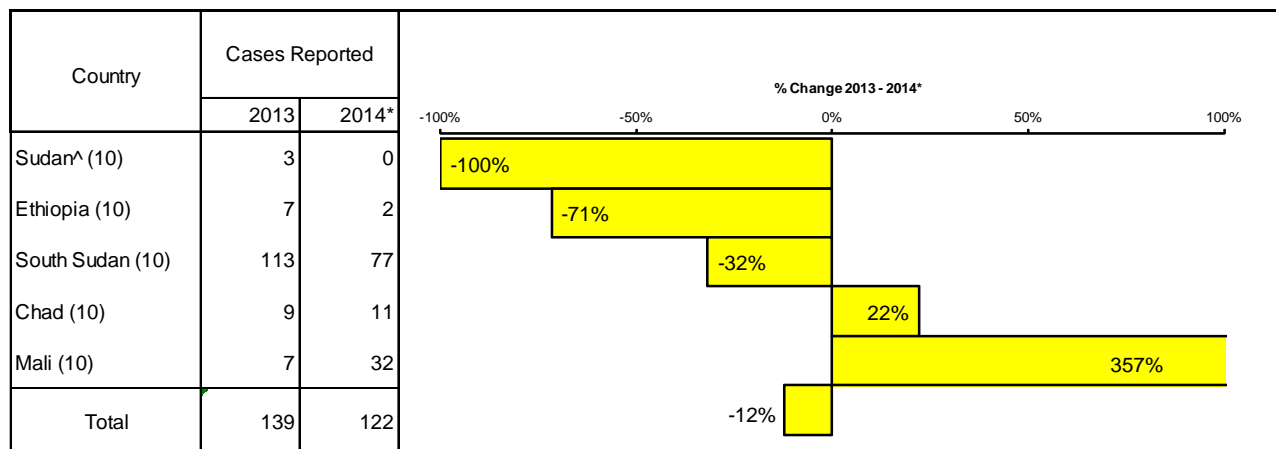
Cells shaded in yellow denote months when transmission of GWD from one or more cases was not contained.

[^] 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 4

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., (10)= January- October

§ 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.

Table 3

Guinea Worm Disease Surveillance Snapshot: 2014*

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	66% [†]	100% / 753	Yes	Yes	97% /	75	
Ethiopia	81%	100% / 167	Yes	Yes	89% /	830	HEWs, HDA, CDTI
Mali	47%	100% / 573	Yes	No	94% /	63	Polio, CPS
South Sudan	80% ^{††}	100% / 4,701	Yes	Yes	64% /	516	CDTI, Polio

* Provisional: October 2014

VAS = Villages under active surveillance

HEWs = Health Extension workers

NIDS = National Immunization Days

IDSR = Intergrated Desease Surveillance & Response

[†] Awarness about cash reward in areas under active surveillance and based on questions regarding knowledge of exact amounts of the reward. No report about awareness from areas free of GWD

^{††} Awareness about cash reward in endemic areas under active surveillance in Eastern Equatoria State. Assessment of awareness level in areas now free of GWD is currently underway.

[^] 173 VAS in 2014

HDA = Health Development Army

CDTI = Community Directed Treatment with Ivermectin

CPS = Chimioprofilaxie du paludisme saisonnier chez les enfants

MEETINGS

- Ethiopia DEP Annual Review: December 3-4 in Jimma, Ethiopia.
- The tenth meeting of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE) will be held at WHO headquarters in Geneva on January 14-15, following a scientific meeting convened by WHO on January 12-13 to discuss operational research questions relevant to Guinea worm eradication.
- South Sudan GWEP Annual Review: January 21-22, 2015 in Juba, South Sudan.
- Mali GWEP Annual Review: February 16-17, 2015 in Bamako, Mali.
- Annual Meeting of National Program Managers; February 18-20, 2015 in Bamako, Mali.

EXHIBIT

An exhibition on the challenge and successes of eradicating diseases, “*Countdown to Zero*”, will open at the American Museum of Natural History in New York City on January 13, 2015. It will remain on view there until July 12, 2015. The exhibition, which was developed in collaboration with The Carter Center, will feature the campaign to eradicate Guinea worm disease, and also highlight ongoing programs to eradicate polio and to eliminate onchocerciasis, lymphatic filariasis and malaria. More information is available on the museum’s webpage:

<http://www.amnh.org/exhibitions/upcoming-exhibitions/countdown-to-zero>

RECENT PUBLICATIONS

Cotta M, Cotta M, Darby J, Sutherland T, Sheorey H. An experience with dracunculiasis in Melbourne, Australia. Pathology [serial online]. December 2014;46(7):652-653.

Ede A, Nwaokoro J, Iwuala C, Amadi A, Akpelu U. The Provision of Potable Water in Eradication of Guinea Worm Infection in Ezza North, Southeastern, Nigeria. Journal of Community Health [serial online]. October 2014;39(5):980-986.

Hopkins DR, Ruiz-Tiben E, Eberhard ML, Roy SL, 2014. Progress Toward Global Eradication of Dracunculiasis—January 2013-June 2014. Morbidity and Mortality Weekly Report; 63(46):1050-1054.

Litvinov S, Migliorini L, Chernikova E, Lutsevich O. [Global eradication of dracunculiasis is a reality nowadays]. Meditinskaja Parazitologija I Parazitarnye Bolezni [serial online]. April 2014;(2):3-5.

THE CARTER CENTER RECRUITING FOR GW POSITIONS



The Carter Center is recruiting for two full-time Atlanta-based positions for its Guinea Worm Eradication Program: an epidemiologist and an associate director. The summary position announcement descriptions are given below. To be considered for either position, you must apply online: <http://www.hr.emory.edu/eu/carreers/>

- Epidemiologist, GW; #46676BR. Required: doctoral degree (MD, PhD, DVM) in a medical or related field; a public health degree (MPH), or equivalent education and experience; and fluency in French and English. Experience in community-based public health development work in Africa would be an advantage.
- Associate Director Programs, GW; #48554BR. Required: bachelor's degree in field related to Guinea Worm Eradication Program; at least six years of program related combination of experience, education and training; and proficiency in English and French. A Master's degree in a field related to the program and proven ability to work in sub-Saharan Africa would be an advantage.

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 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.