DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
And Prevention (CDC)

Memorandum

Date: March 9, 2018

From: WHO Collaborating Center for Dracunculiasis Eradication, CDC

Subject: GUINEA WORM WRAP-UP #253

To: Addressees

Every uncontained Guinea worm from any source can spread infection!

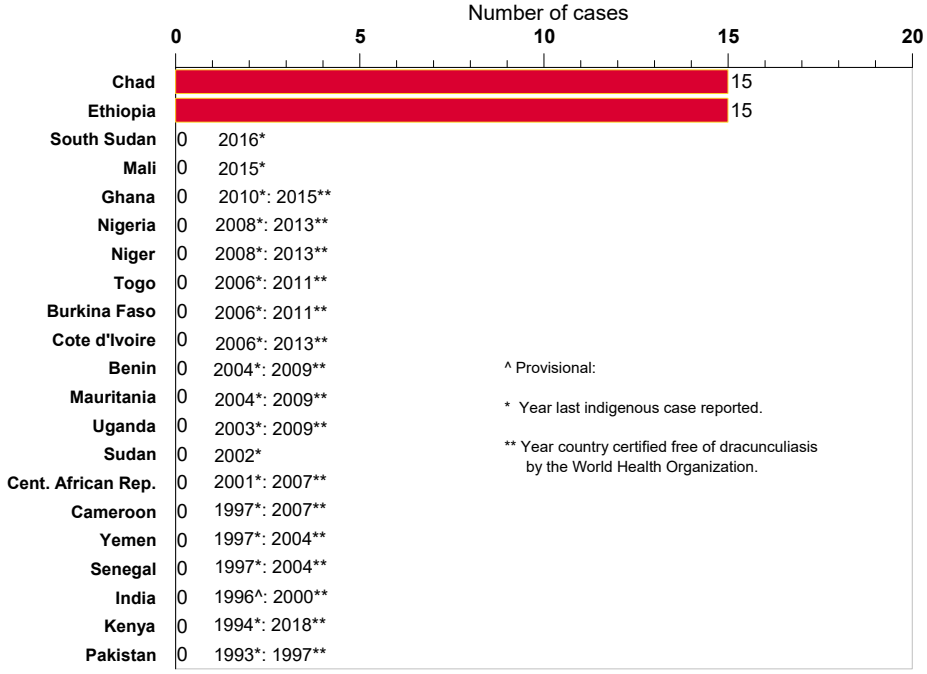
AND NOW THERE ARE TWO

THE CARTER CENTER
Waging Peace. Fighting Disease. Building Hope.

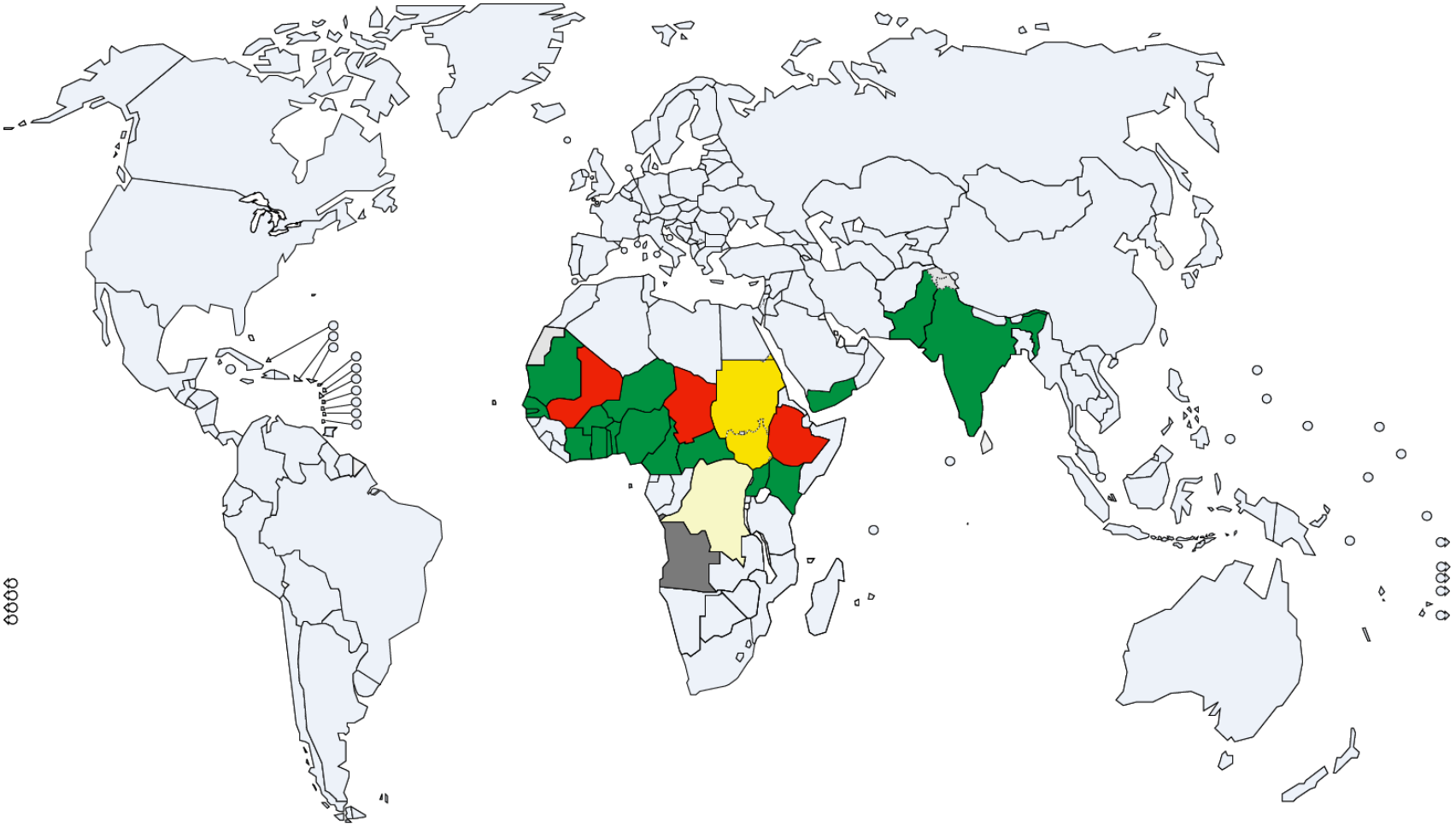
For the first time since the global Guinea Worm Eradication Program began, only two countries, Chad and Ethiopia, reported cases of Guinea worm disease (dracunculiasis) in humans during 2017 (Figure 1).

Figure 1.

Distribution of 30 Indigenous Cases of Dracunculiasis Reported during 2017^



Status Of Certification Of Dracunculiasis Eradication, February 16, 2018



Countries currently endemic for dracunculiasis
Countries at precertification stage
Previously endemic countries certified free of dracunculiasis
Other countries and territories certified free of dracunculiasis
Countries with known or possible history of endemic dracunculiasis before 1980
Countries and territories not known to have dracunculiasis but yet to be certified
Not applicable

The boundaries and names shown and the designations used on maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Guinea worm Eradication
World Health Organization

World Health Organization

© WHO 2018. All rights reserved

The presumed source of infection is known for all 15 cases (3 contained) reported in Ethiopia last year, but none of the presumed sources for the 15 persons (10 contained) reported in Chad are known (Figure 2). However, Mali reported 9 infected dogs (8 contained) plus 1 infected cat (contained) in 2017. South Sudan has reported no infected animal in 2016 or 2017. All four recently endemic countries launched intensive nationwide communication campaigns during 2017 in March (Mali), July (Chad), October (South Sudan) and December (Ethiopia) to publicize the reward for reporting a case or infected animal and other preventive measures.

As of the end of February 2018 Mali has reported no case of Guinea worm disease for 27 consecutive months since November 2015, and South Sudan has reported no case for 15 consecutive months since November 2016 (Figure 3). In January and February 2018 one case (contained) was reported provisionally worldwide, in Chad. Notably no case was reported in Ethiopia in January or February following the outbreak there in September-December 2017, and as of the end of February, Gog district in Ethiopia's Gambella Region had been 17 consecutive months with zero reported cases of Guinea worm disease. Chad has reported 69 dog infections during January-February 2018 with a total of 112 Guinea worms emerging in 40 villages, where 80% of infected dogs were contained. This is a provisional increase of 2% in villages reporting dog infections and no change in number of dogs infected, but a 20% reduction in GWs emerging from infected dogs, compared with the 69 dog infections reported in 39 villages, and 140 Guinea worms emerging from infected dogs during January-February 2017. No infected animals have been reported so far this year in Ethiopia, Mali or South Sudan.

World Health Organization

Meanwhile, at its Twelfth Meeting on February 15-16, 2018, the International Commission for the Certification of Dracunculiasis Eradication (ICCDE) recommended, and the World Health Organization (WHO) accepted, certification of Kenya as having interrupted transmission of dracunculiasis. As of now, WHO has certified 199 countries, territories and areas as free of dracunculiasis transmission, leaving only Angola, Chad, Democratic Republic of Congo, Ethiopia, Mali, South Sudan, and Sudan still to be certified (Figure 4). The ICCDE also proposed new definitions of elimination and eradication of dracunculiasis. WHO Director-General Dr. Tedros Adhanom Ghebreyesus joined the ICCDE meeting for 45 minutes. He pledged his support for the eradication program and indicated he plans to attend the Informal Meeting with ministers of endemic and formerly endemic countries during the World Health Assembly in May 2018. Dr. Dean Sienko represented The Carter Center and Dr. Sharon Roy represented the WHO Collaborating Center for Dracunculiasis Eradication Centers for Disease Control and Prevention (CDC) at this meeting.

Chad held its annual in-country program review at N'Djamena on January 23-24, which was opened by Dr. Wadak Anour, the Health Advisor at the Ministry of Health. Drs. Dieudonne Sankara (Team leader GWE/WHO Headquarters), Andrew Seidu Korkor (focal point GWE/WHO Regional Office for Africa) and Honoré Djimressengar (WHO Country Office) attended the meeting. Table 1 summarizes key indices from Chad's GWEP in 2016 and 2017 (see also Figure 5). Chad appointed a new Minister of Public Health in January: the Honorable Mr. AZIZ Mahamat Saleh. Drs. Dean Sienko (Vice President), Ernesto Ruiz-Tiben (Director GWEP), and Hubert

Figure 2

Cases of Guinea Worm Disease in 2016: Containment Status and Source Detection

Case #	Date Guinea Worm Emerged	Village Where Detected / District (or County)	Case Contained?	Presumed Source of Infection Identified?
Chad #1	28 Feb 2016	Sarh / Sarh	YES	NO
Chad #2	29 Apr 2016	Nagara/Bailli	YES	NO
Chad #3	25 May 2016	Gole / Onoko	YES	NO
Chad #4	2 June 2016	Mama / Korbol	NO	NO
Chad #5	7 July 2016	Kombol / Haraze	NO	NO
Chad #6	30 July 2016	Dankolo / Danamadji	YES	NO
Chad #7	10 Aug 2016	Al-Ardep /Aboudeia	NO	NO
Chad #8	16 Aug 2016	Kombol / Haraze	YES	NO
Chad #9	31 Aug 2016	Al-Ardep / Aboudeia	NO	NO
Chad #10	24 Sept 2016	Waitan / Sarh	NO	NO
Chad #11	28 Sept 2016	Ndimti / Haraze	YES	NO
Chad #12	11 Oct 2016	Dankolo / Danamadji	YES	NO
Chad #13	12 Oct 2016	Al-Ardep / Aboudeia	YES	NO
Chad #14	15 Oct 2016	Madoc / Bessao	YES	NO
Chad #15	20 Oct 2016	Gozdjamir / Amtiman	NO	NO
Chad #16	07 Dec 2016	Lai / Tandjile	NO	NO
South Sudan #1	4 Jun 2016	Rumchieth / Tonj East	NO	Rumchieth
South Sudan #2	9 June 2016	Angon / Jur River	YES	Angon
South Sudan #3	25 June 2016	Angon / Jur River	YES	Angon
South Sudan #4	27 June 12016	Angon / Jur River	YES	Angon
South Sudan #5	11 Sept 2016	Parieng CC / Tonj East	NO	NO
South Sudan #6	20 Nov 2016	Khor Jamus / Jur River	NO	NO
Ethiopia #1	20 May 2016	Olane / Gog	YES	NO
Ethiopia #2	30 Jun 2016	PRC Agnuak / Gog	YES	NO
Ethiopia #3	20 Sept 2016	Kubri / Lare	NO	NO

Chad also reported 1,013 infected animals 65% contained*.

South Sudan reported 0 infected animals*.

Ethiopia also reported 14 infected animals 71% contained*.

Mali also reported 11 infected animals 82% contained*.

Cases of Guinea Worm Disease in 2017*: Containment Status and Source Detection

Case #	Date Guinea Worm Emerged	Village Where Detected / District (or County)	Case Contained?	Presumed Source of Infection Identified?
Chad #1	27/2/17	Loumia/Mandelia	YES	NO
Chad #2	22/3/17	Kakale Mberi/Guelendeng	YES	NO
Chad #3	31/3/17	Bougoumene 1/Dourbali	YES	NO
Chad #4	27/4/17	Tarangara/Danamadji	NO	NO
Chad #5	11/5/17	Kira/Sarh	YES	NO
Chad #6	2/6/17	Choukara/Amtiman	YES	NO
Chad #7	10/6/17	Bembaya/Sarh	YES	NO
Chad #8	22/6/17	Ngargue Marche/Bousso	NO	NO
Chad #9	27/7/17	Djoballa 4/Bousso	YES	NO
Chad #10	29/7/17	Gouari/Sarh	YES	NO
Chad #11	25/8/17	Birme/Massenya	NO	NO
Chad #12	4/9/17	Woin/Korbol	NO	NO
Chad #13	21/9/17	Anguitey/Amtiman	NO	NO
Chad #14	1/10/17	Woin/Korbol	YES	NO
Chad #15	26/12/17	Bongoroko/Sarh	NO	NO
Ethiopia #1	25/Sep/17	Mohammed/Itang	NO	Gogi Farm / Abobo
Ethiopia #2	26/Sep/17	Gambella Town/Gambella	NO	Gogi Farm / Abobo
Ethiopia #3	Late AUG to early SEP	Gomi/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #4	12/Sep/17	Gomi/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #5	8/Sep/17	Gomi/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #6	25/Sep/17	Gomi/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #7	12/Oct/17	Gomi/Anfillo	YES	Gogi Farm / Abobo
Ethiopia #8	8/Oct/17	Gomi/Anfillo	YES	Gogi Farm / Abobo
Ethiopia #9	14/Oct/17	Duri/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #10	15/Sep/17	Duri/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #11	23-Sep-17	Duri/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #12	22-Sep-17	Gutok/Abobo	NO	Gogi Farm / Abobo
Ethiopia #13	26-Nov-17	Gomi/Anfillo	NO	Gogi Farm / Abobo
Ethiopia #14	2-Dec-17	Gomi/Anfillo	YES	Gogi Farm / Abobo
Ethiopia #15	20-Dec-17	Amegolo/Goru Gutu	NO	Gogi Farm / Abobo

* Provisional

Chad also reported 820 infected animals 77% contained*.

Ethiopia also reported 15 infected animals 40% contained*.

Mali also reported 10 infected animals 80% contained*.

Zirimwabagabo (Country Representative) of The Carter Center made a courtesy call on the new minister, who received them very cordially at the Ministry of Health on January 22nd.

Table 1

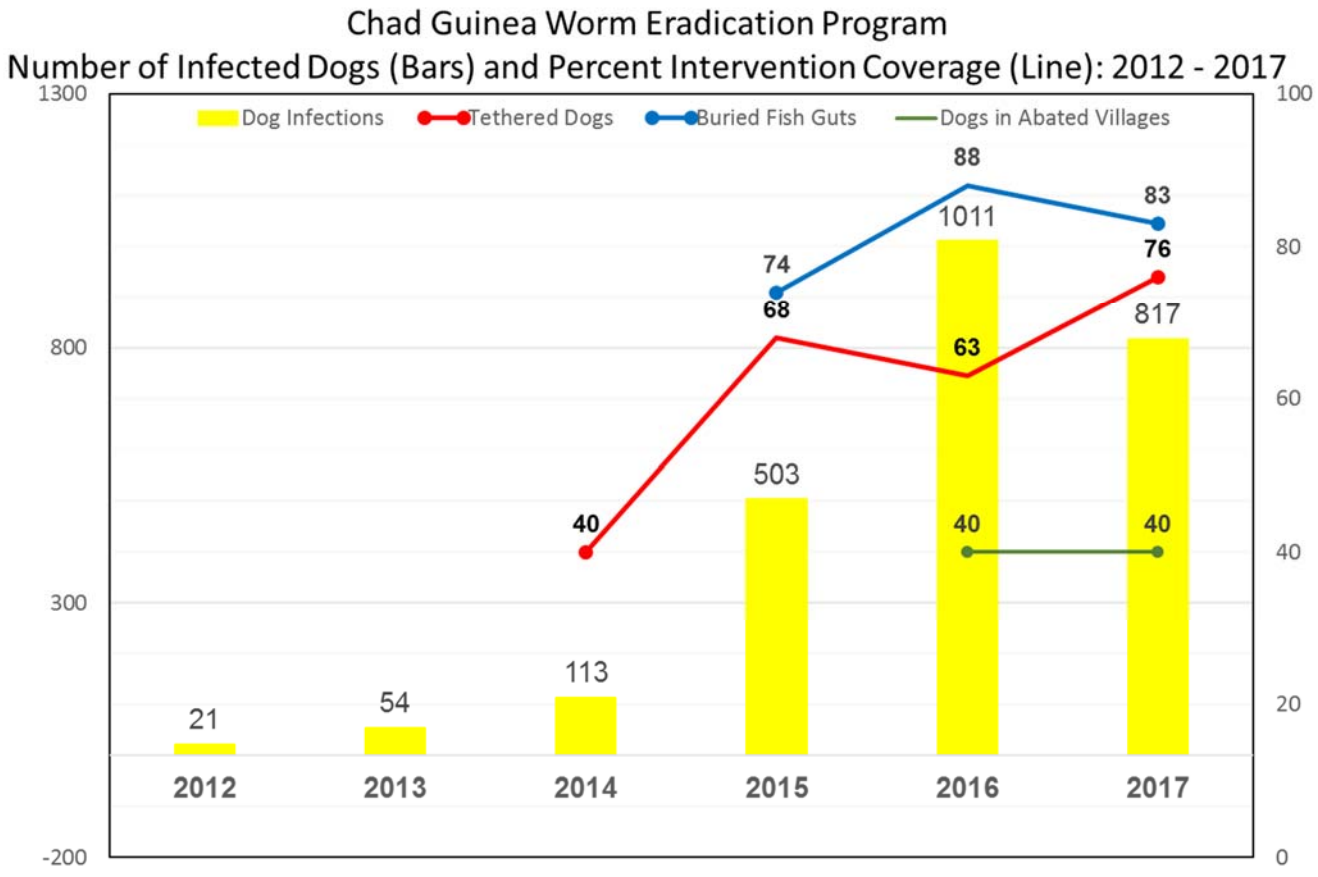
Chad Guinea Worm Eradication Program

Surveillance	2016	2017
# Village Active Surveillance	1799	1860
Reward Awareness (Humans)	47%	55%
Reward Awareness (Dogs)	39%	41%
# Rumors of Cases	3093	3440

Interventions	2016	2017
% Dogs/Cats Contained	63%	76%
% Cases Contained	56%	67%
% H/H Burying Fish Guts	88%	83%
# Villages Abate Used	61%	70

Impact	2016	2017
# GW Cases	16	15
# Infected Dogs/Cats	1022	830
# GWs from Dogs	2019	1386

Figure 3



Ethiopia postponed until April a visit that was scheduled for February 20th by representatives of the Gambella Regional Health Bureau, the Federal Ministry of Health, The Carter Center/Ethiopia and the World Health Organization to the commercial farm in Abobo district of Gambella Region that was associated with the outbreak of Guinea worm disease in September-December 2017. This delay is a concern because of the time that will be necessary for those responsible to react and provide safe drinking water to their laborers before the next peak season for Guinea worm transmission in April-August.

As part of a follow up on the 22nd EDEP-Annual Review Meeting's recommendations, EPHI and WHO conducted an advocacy event for provision of safe and adequate water in investment farms of Gambella region in particular in hotspot areas including Abobo district. The advocacy was made at the WASH cluster through a meeting at the Ministry of Water and Energy which gathered more than 30 WASH partners. As a result, construction of 12 boreholes equipped with hand-pumps for Abobo, Gog and Anfilo districts were included in the Ethiopian Humanitarian Requirement Document (HRD) plan as priority in 2018. The specific locations for these boreholes were provided by EDEP, which will follow up with the respective partners.

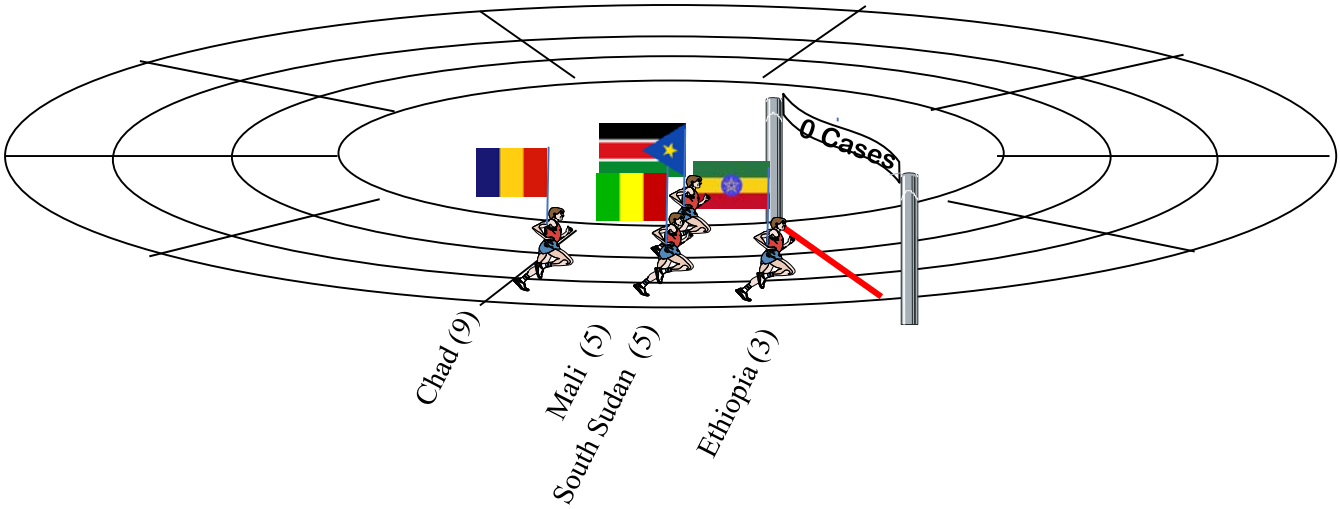
In February 2018, chaired by EPHI director general Dr Ebba Abate, the EDEP conducted a meeting to re-energize the National Certification Commission (NCC) and the Task force Working Group. Membership was reaffirmed and renewed commitment gained to support the eradication effort with unwavering dedication.

Mali held its annual in-country program review at Bamako on January 18-19, at which Dr. Ruiz and Carter Center Country Representative Mr. Sadi MOUSSA represented The Carter Center. Drs. Andrew Seidu Korkor of WHO Regional Office for Africa and Boubacar Sidibe of WHO Country Office represented WHO at this meeting. The program review was the topic of discussion by National Program Coordinator Dr. Mohamed BERTHE, Mr. Sadi MOUSSA and World Health Organization Program Officer Dr..Boubhcar SIDIBE that was broadcast on the United Nations Radio MIKADO, which also broadcast Guinea worm messages free of charge three times a day for three weeks as well as three debates with Dr. Berthe, a technical assistant in the field, a KYNE consultant for the mass communication campaign, and Sadi Moussa about the cash reward, animal infections, areas under active surveillance, and certification of eradication. The radio covers Bamako and the regions of Kidal, Gao, Timbuktu, Menaka, Mopti and Segou. Dr. BERTHE was appointed Technical Advisor to the Minister of Public Health as of February. His replacement as national program coordinator is expected to be announced soon. The National Committee for Certification met on February 13th under the chairmanship of Dr. Alhousseini MAIGA to discuss its work plan for 2018.

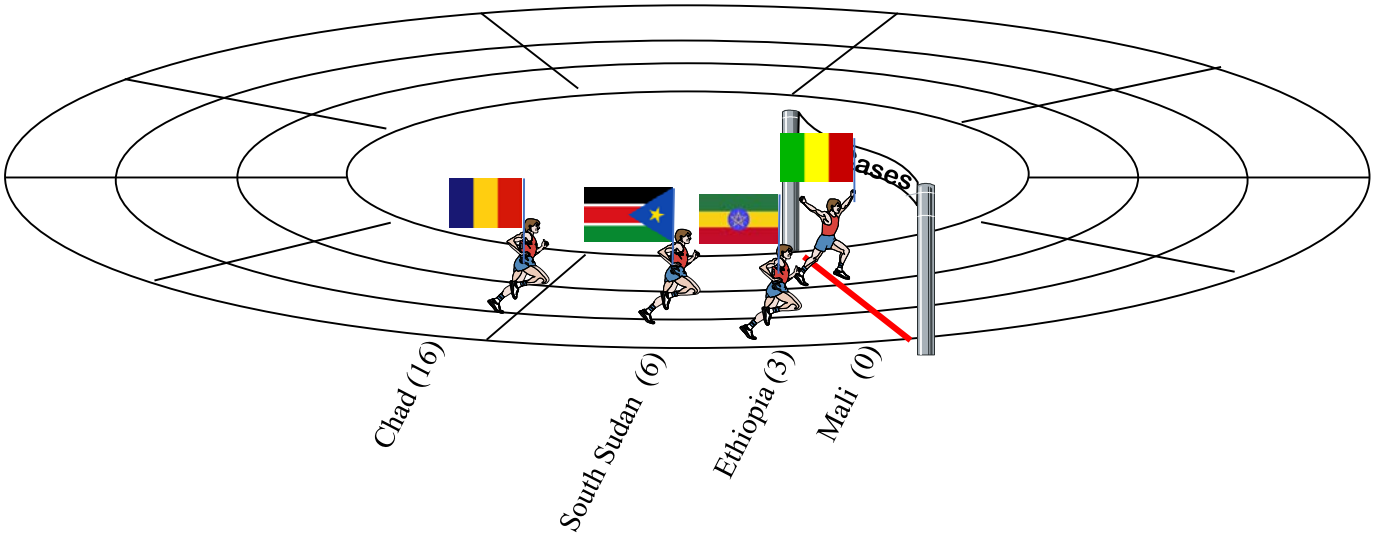
MEETINGS

- A three-person team, Ms. Kendra Palmer, Senior Program Coordinator, NTDs, Dr. Jordan Tappero, Senior Program Officer, NTDs and Dr. Nana-Kwadwo Biritwum, Program Officer, NTDs, from the Bill & Melinda Gates foundation visited The Carter Center on February 12 for a briefing on the status of the global campaign to eradicate GWD.

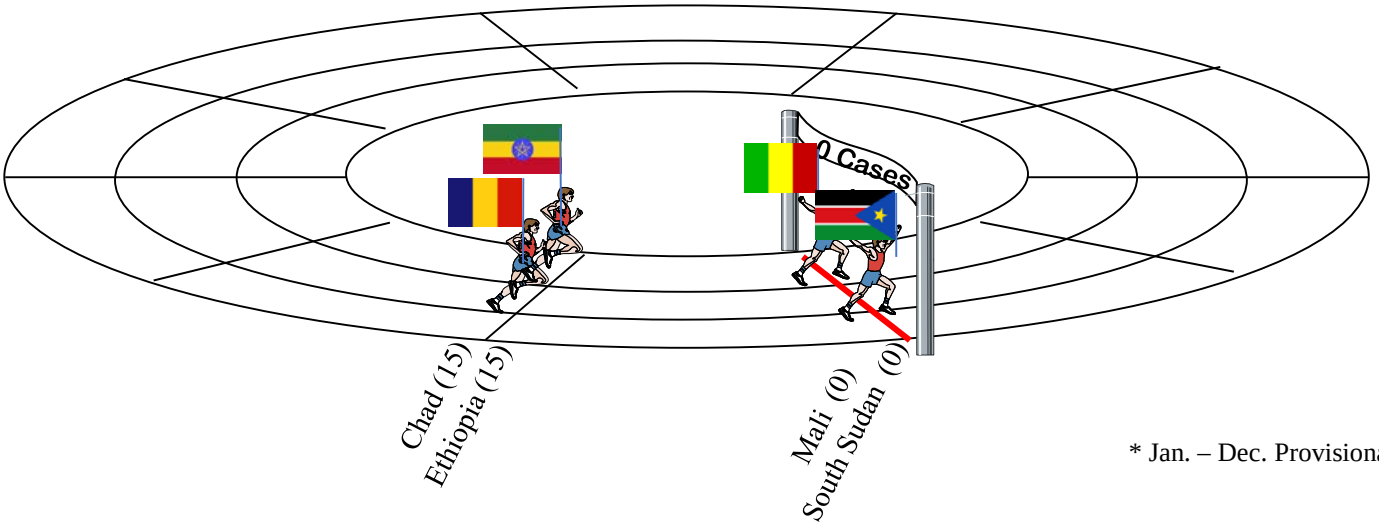
GUINEA WORM RACE: 2015



GUINEA WORM RACE: 2016



GUINEA WORM RACE: 2017*



* Jan. – Dec. Provisional

- The Bill & Melinda Gates Foundation launched an adaptation of the exhibition Countdown to Zero at the Gates Discovery Center in Seattle, Washington on March 1, 2018. The exhibit will be hosted at the Discovery Center from March through August this year.

- The 22nd International Meeting of Guinea Worm Eradication Program Managers will be held at The Carter Center in Atlanta, USA on March 21-22, 2018. It will be followed by a meeting of researchers on March 23rd.

RECENT PUBLICATIONS

Drexler M, 2018. Fierce optimism: Donald Hopkins' quest to eradicate Guinea worm disease. Health Harvard Public Winter 2018:14-25. https://www.hsph.harvard.edu/magazine/magazine_article/fierce-optimism/

World Health Organization, 2018. Meeting of the International Task Force for Disease Eradication. Wkly Epidemiol Rec 93:33-38.

Rubin R. African Countries Move Closer to Eradicating Guinea Worm Disease. JAMA: Journal of The American Medical Association [serial online]. January 23, 2018;319(4):334.

Galán-Puchades M. The Guinea Worm: A Zoonotic Parasite of Dogs. Trends In Parasitology [serial online]. January 2018;34(1):3-4.

Erratum: *We regret misspelling Dr. Joel Breman's last name in issue # 252.*

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, Dr. Sharon Roy of CDC, Dr. Dieudonné Sankara of WHO, and Dr. Mark Eberhard.

WHO Collaborating Center for Dracunculiasis Eradication, Center for Global Health, Centers for Disease Control and Prevention, Mailstop C-09, 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