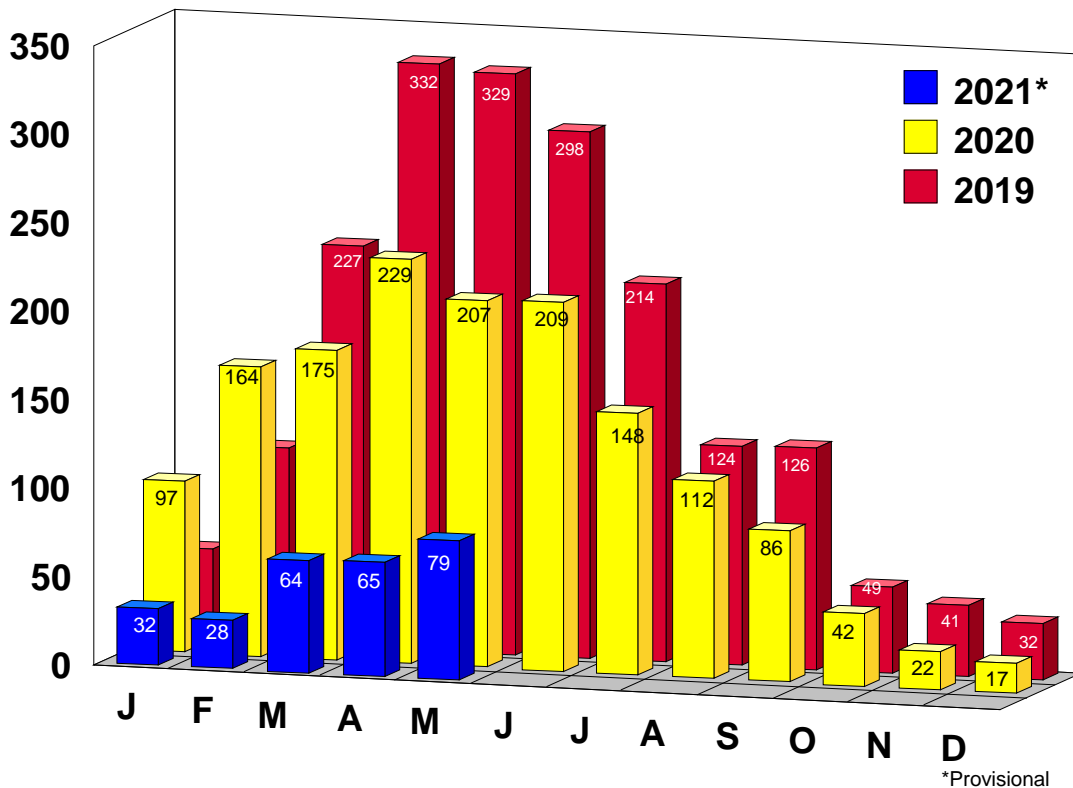




Date: June 28, 2021
From: WHO Collaborating Center for Dracunculiasis Eradication, CDC
Subject: GUINEA WORM WRAP-UP #278
To: Addressees

When it is obvious that the goals cannot be reached, don't adjust the goals, adjust the action steps.
 Confucius

Number of Dog Infections in Chad by Month: 2019 -2021*



CHAD: INTERVENTIONS + INNOVATION = IMPACT



After improving containment rates of Guinea worm infections in dogs and coverage of endemic villages with Abate over the past three years, in March 2020 Chad’s Guinea Worm Eradication Program (CGWEP) introduced proactive tethering of all dogs in at-risk communities--an innovation pioneered in 2018 by Ethiopia’s Dracunculiasis Eradication Program. The benefits of those actions are increasingly manifest this year.

Chad has provisionally reported 268 dogs (81% contained) with Guinea worm infections in January-May 2021 compared to 872 infected dogs during the same period of 2020 (**Figure**

1), 7 infected cats (86% contained) compared to 20 cats in January-May 2020, and 4 confirmed Guinea worm cases in humans (75% contained) in January-May 2021, compared to 9 human cases in the same period of 2020. The overall reduction of Guinea worm infections in animals and humans in Chad in January-May this year is 69%. **Table 2** is a line list of Chad's confirmed human cases in 2021. All three human cases were contained, and the presumed sources of all three cases are known.

MALI



Mali has reported no human Guinea worm cases and 2 dogs with confirmed Guinea worm infections in Macina and Markala districts of Segou Region so far in 2021 (see line list in **Table 2**). Both dogs' infections were contained, but the presumed sources of their infections in 2020 are not known. This compares to one human case (uncontained) in Baroueli district of Segou Region and no infected dog reported in January-May 2020.

Mali's National Committee for Certification of Dracunculiasis Eradication met for the first time in 2021 on June 9th. Nine of the 12 members attended the meeting, which discussed a visit by some committee members to Sikasso Region on November 22-December 3, 2020, and the results of workshops held with veterinary services and with the Department of Education. The steering committee of the Peace through Health Initiative met at the Ministry of Health in Bamako on May 19; a meeting with the community representatives of Tenenkou district/Segou Region and training sessions for youth organizations, women's association, chiefs of villages, and traditional communicators were held in Tenenkou on May 26-28 and were well received. Participants also discussed micro-planning of activities. Technical advisors and Guinea worm focal points in Macina, Tominian, and San districts of Segou Region met with dog traders in their respective districts in April.

ANGOLA



Following discovery of indigenous Guinea worm transmission in Cunene Province of Angola, in 2018, a Community Based Surveillance System was initiated in 54 villages at risk starting in August 2020. WHO assisted the surveillance and response capacity of the Ministry of Health's GWEP by providing a full time technical staff and a data manager in Cunene province to accelerate and expand and roll out the active community-based surveillance. A national cash reward scheme (US\$ 450) for reporting of human cases was set up and is advertised nationwide with health education messages on reporting and prevention of dracunculiasis. Sensitization about dracunculiasis increased the level of awareness of the reward from 6.9% in 2018 to 38.2% in 2019. In 2020, 57 volunteers and community health workers, and 1455 health professionals were trained, among others.

During the first semester of 2021, active surveillance was expanded to include 7 more villages making the total number of villages under surveillance 61. Despite improvement of active surveillance, no human cases or infected animal have been reported in 2021. A total of 4 rumors were reported and investigated within 24 hours, three of which were reported during supervision visits. None turned out to be Guinea worm.

In May 2021, regular field visits were pursued in all four Municipalities in Cunene Province, three of which are endemic (risk level 1: Namacunde, Cuanhama and Cuvelai). Cahama municipality is risk level II. The visits focused on supervision, monitoring and training of community health workers in the villages. All 61 villages under active surveillance were visited by the provincial team, which performed case searches and hands-on training on how to conduct house-to-house surveillance for 50 community volunteers. Training on Guinea worm surveillance was provided to 74 health professionals, 126 education professionals and 29 data management/survey technicians.

A total 1,113 community members, including administrative authorities and professionals from different sectors, were sensitized through advocacy, communication, and social mobilization. The United Nations System Resident Coordinator was briefed on the GWEP during her visit to Cunene. Guinea worm case searches were (1) performed during mass drug administration (MDA) with Praziquantel in Cunene province organized by the Provincial Health Authority; (2) integrated into impact assessment surveys of MDA organized by the National NTD Control Program and MENTOR INITIATIVES NGO in the provinces of Uíge and Zaire; and (3) integrated into the joint MOH-WHO Angola Emergency Missions. Guinea worm case searches were also carried out during Malaria knowledge/attitude/practice (KAP) surveys organized by JC Flowers NGO in Cuando Cubango province, where a total of 84/912 persons reported seeing GW in a human and/or dog in the past 12 months in 13 villages. These rumors are being followed up. A total of 273 additional filters were distributed to 114 families. The cash reward for voluntary reporting of Guinea worm cases and infections is being broadcast through radio and TV as well as door-to-door in all localities under active surveillance.

Table 1

Number of Laboratory-Confirmed Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2021*
(Countries arranged in descending order of cases in 2020)

COUNTRIES WITH TRANSMISSION OF GUINEA WORMS	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED												% CONT.	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		TOTAL*
CHAD ^a	0 / 0	1 / 1	0 / 0	2 / 3	0 / 0	/	/	/	/	/	/	/	3 / 4	75%
ETHIOPIA	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	1 / 1	100%
SOUTH SUDAN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	0 / 0	
ANGOLA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	0 / 0	
MALI	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	0 / 0	
TOTAL*	0 / 0	2 / 2	0 / 0	2 / 3	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	4 / 5	80%
% CONTAINED		100%		67%										

*Provisional

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many cases were contained and reported that month.
Shaded cells denote months when one or more cases of GWD did not meet all case containment standards.

Number of Laboratory-Confirmed Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2020*
(Countries arranged in descending order of cases in 2019)

COUNTRIES WITH TRANSMISSION OF GUINEA WORMS	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED												% CONT.	
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER		TOTAL*
CHAD ^a	1 / 1	0 / 2	0 / 3	1 / 2	2 / 2	0 / 0	0 / 1	0 / 1	0 / 0	1 / 1	0 / 0	0 / 0	5 / 13	38%
SOUTH SUDAN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	100%
ANGOLA	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0%
ETHIOPIA	0 / 0	0 / 0	0 / 0	7 / 7	0 / 0	0 / 0	0 / 0	2 / 2	1 / 1	1 / 1	0 / 0	0 / 0	11 / 11	100%
MALI ^b	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0%
TOTAL*	1 / 1	0 / 2	0 / 5	8 / 9	2 / 2	0 / 0	1 / 2	2 / 3	1 / 1	2 / 2	0 / 0	0 / 0	17 / 27	63%
% CONTAINED	100%	0%	0%	89%	100%	100%	50%	67%	100%	100%	100%	100%		

*Provisional

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many cases were contained and reported that month.
Shaded cells denote months when one or more cases of GWD did not meet all case containment standards.

^b Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Timbuktu and Gao Regions; contingent on security conditions during 2018, the GWEP continued to deploy one technical advisor to Kidal Region to oversee the program.
^a Cameroon reported one case in February that was most likely infected in Chad.

Table 2

Chad Guinea Worm Eradication Program
Cases of Dracunculiasis: January - May 2021 *

Case #	Age	Sex	Ethnicity	Occupation	Village of Detection	Zone	District	Region	Date (month/day/year)						Imported Local/int'l (Yes/No)	Isolated (Yes/No)	Local/int'l (Yes/No)	Localisation of Worm	Presence of safe water in village	Village Under Active Surveillance
									Detection	Emergence	Confirmation	Admitted to Health Center	Extraction	Discharged from Health Center						
1.1	22	F	Arabe	Household	Amdabri	Gozdjarat	Amtiman	Salamat	1/9/2021	2/1/21	2/1/21	2/9/21	2/2/21	2/19/21	Yes	No	Left leg	Yes	Yes	
2.1	3	F	Sara Kaba	child	Bodobo 1	Marabe	Kyabe	MC	3/30/2021	3/30/21	3/30/21	3/30/21	4/24/21		Yes	Yes	Left leg	Yes	Yes	
3.1	7	M	Arabe	child	Bogam	Liwi	Aboudeia	SIM	4/12/2021	4/14/21	4/12/21	4/12/21	4/12/21	4/12/21	Yes	No	Testicle	Yes	Yes	
4.1	7	M	Nar	Student	Balimba	Beboro	Moissala	Mandoul	4/19/2021	4/19/21	4/20/21	4/20/21	4/20/21	4/26/21	No		Abdomen		Yes	

Mali Guinea Worm Eradication Program
Animals with Guinea Worm Infection: January - May 2021 *

Case #	Age	Sex	Ethnicity	Occupation	Region	District	Health Area	Village	Date (month/day/year)						Imported Local/int'l (Yes/No)	Isolated (Yes/No)	Localisation of Worm	Presence of safe water in village	Village Under Active Surveillance
									Detection	Emergence	Confirmation	Admitted to Health Center	Extraction	Discharged from Health Center					
1.1	3	M	Touareg	Imam	Segou	Macina	Macina Central	Nemabougou	1/13/21	1/14/21	Yes		Yes		No	Yes	Front left leg	yes	yes
2.1	3	M	Bozo	fisherman	Segou	Markala	Babougou	Barakabougou	5/3/21	5/4/21	Yes		No		No	Yes	front right leg posterior right leg	yes	yes

Figure 2 Localities in Cunene Province of Angola- localities supervised by the Provincial GWEP Team in May 2021

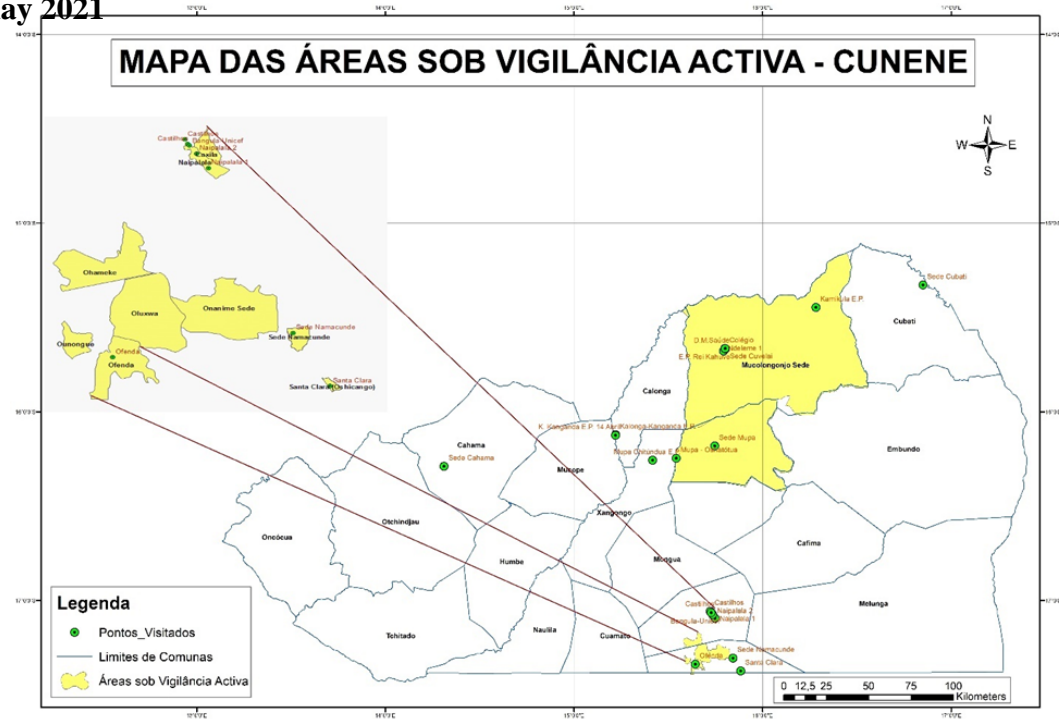
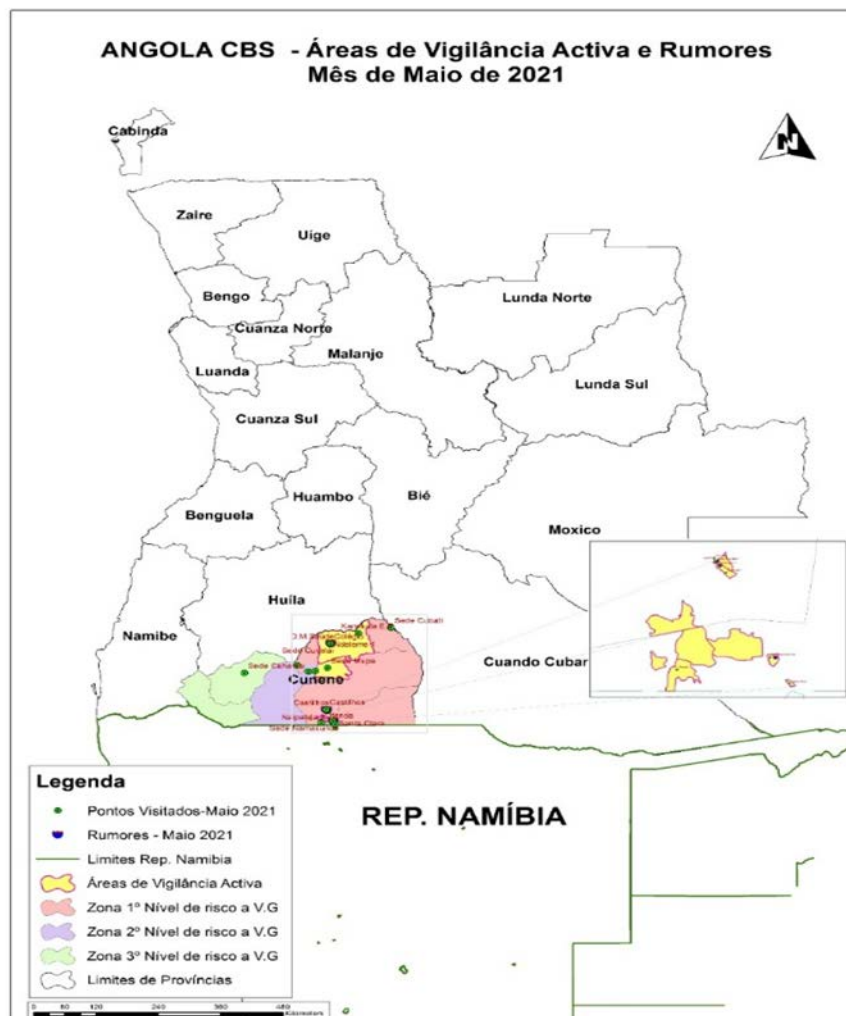


Figure 3 Cunene Active surveillance areas and rumors detected, Cunene Province, Angola, May 2021



PRE-CERTIFICATION UPDATE: DEMOCRATIC REPUBLIC OF CONGO



The Democratic Republic of Congo (DRC) is making steady progress towards submission of the country's final report for certification. During October – December 2020, with technical assistance provided by WHO (virtual consultancy, teleworking and teleconference discussions), the final draft Country Report was submitted to WHO in December 2020, which was subsequently shared with members of the ICCDE for their initial review and comments. After inputs and comments by individual ICCDE members, and recommendations by the International Commission for the Certification of Dracunculiasis Eradication (ICCDE) during the ICCDE15 meeting in March of this year, the national program has stepped up efforts to collect supplementary data/information to enrich the Country Report. Among others, the program is undertaking a few priority activities, including continued awareness creation about the cash reward and assessment of the level of reward awareness, follow-up and investigation of rumors of Guinea worm disease (including among animals) and updating the status of safe water supplies. Data and information collected from these will be used to enrich the latest country report, estimated to be over 98% complete. The Country Report is expected to be finalized and submitted, along with the completed questionnaire and signed Declaration, by the end of 2021.

PRE-CERTIFICATION UPDATE: SUDAN



Sudan continued its efforts to sustain awareness creation about Guinea worm and to strengthen GW surveillance. As recommended by the ICCDE, active case searches in border and at-risk areas as well as in previously endemic areas are being carried out every year. In 2020 active case searches were completed in South Darfur State including the formerly endemic village of Kafia Kingi as well as five other localities and refugee camps.

In 2021, GWD and cash reward awareness activities were ensured through workshops in all 18 states for religious leaders and Imams, who in turn followed up by spreading messages in their weekly meetings. GWD health education materials were distributed in Darfur and Kordofan States during a special leprosy project as an integrated approach. The WHO and the Federal Ministry of Health (FMoH) joint supervision mission to North & South Darfur included a radio talk show that addressed queries on GWD. Meetings were held with religious leaders and Imams in North Darfur with the new NTD focal point of the state.

Active case searches are scheduled to be carried out in three states (Blue Nile, White Nile and West Kordofan) from the end of June 2021. Two of these states (Blue and White Nile) share borders with South Sudan and Ethiopia while West Kordofan is a previously endemic state. These surveys will be carried out by 85 trained Community Health Workers in 30 localities jointly with the Federal Ministry of Health (FMoH). Health education material (30,000 public leaflets, 7,500 reward posters and identification cards) will be distributed. Guinea worm is a notifiable disease in Sudan and reported through IDSR as a "List-A disease" with immediate reporting and timely verification. GWD surveillance is integrated through point-of-entry trainings and community-based activities that are reported monthly.

Sudan is forming a new National Certification Committee to accelerate the certification process. The 2017 version of the Country Report is being updated considering the new evidence gathered. An

International Certification Team Mission could be carried out at the end of 2021 if COVID 19 restrictions are lifted.

IN BRIEF: Rumor of Guinea worm disease in Ghana



**World Health
Organization**

Ghana reported a suspected case of Guinea Worm Disease in Mepe Agorkope Community in North Tongu District in the Volta Region in early May. The rumor was reported to the District Health Authorities on 7th May 2021 by the local government representative (Assemblyman), who reported that a member of his community had observed a blister on his right foot which burst on 1st of May 2021, with a whitish-like worm emerging from the resultant wound. The district health authorities immediately mobilized to investigate the rumor the following day, with additional technical assistance by the regional team. Further investigations revealed that prior to this blister, two blisters had previously appeared on the left lower limb (ankle) and at the waistline which subsequently ruptured without any worm emerging. Two-three weeks later, on the 1st of May 2021, a third blister appeared at the right lower limb on top of the foot. This ruptured on the 6th of May 2021, with what the patient described as a whitish-like worm emerging out of the superficial layer of the skin. This was observed by staff of Workpoe Community-based Health Planning and Services. The regional and district teams visited the following day (8th of May 2021) and confirmed by seeing the partly emerged worm. Education was provided to the patient and the wound was immersed in water to facilitate further emergence of worm extraction. This formed part of early recognition/preventive messages communicated to the patient and the community. Following a message received on the 13th of May 2021 about the disappearance of the partly emerged worm, a regional team, together with WHO, visited the patient on the 14th of May 2021 and interviewed the patient who said that the partly emerged worm dried up and broke off, the broken piece could not be located after a thorough search by district health staff the previous day. A recommendation was made to have the rest of the worm (assumed to be still inside the foot) surgically removed. The suspected patient was ferried across the Volta River to district hospital the same day where he was admitted. On the 16th of May 2021, a surgical exploration of the wound was carried out at the district hospital under local anesthesia and only scanty pus was seen; no worm seen.

Mepe Agorkpoe community is made up of 14 settlement communities with a population of about 700 people. The main source of water for the community is the Ayiwa stream and when it dries up, they resort to using water from a nearby stream (the Aklapka stream, which never dries up, but is a bit far from the Agorkpoe community). The patient lived in the community for more than 5 years without any travel history. As part of the overall investigations, the Mepe – Agorkope community members were educated on Guinea worm disease.

RECENT PUBLICATIONS

Box, E. K., Yabsley, M. J., Garrett, K. B., Thompson, A. T., Wyckoff, S. T., & Cleveland, C. A. (2021). Susceptibility of anurans, lizards, and fish to infection with *Dracunculus* species larvae and implications for their roles as paratenic hosts. *Scientific Reports*, 11(1), 11802.

World Health Organization, 2021. Dracunculiasis eradication: global surveillance summary, 2020. Wkly Epidemiol Rec 96:173-194.

World Health Organization, 2021. Monthly report on dracunculiasis cases, January-March 2021. Wkly Epidemiol Rec 96:194-195.

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 Adam Weiss (adam.weiss@cartercenter.org), 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, Dr. Donald Hopkins, and Adam Weiss of The Carter Center, Dr. Sharon Roy of CDC, and Dr. Dieudonne Sankara of WHO.

WHO Collaborating Center for Dracunculiasis Eradication, Center for Global Health, Centers for Disease Control and Prevention, Mailstop H24-3 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



CDC is the WHO Collaborating Center for Dracunculiasis Eradication

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