

6) GW cases or infections per year (Table 1). In the three years (2012-2014) before that, South Sudan reported 704 human cases, for an average of 234.7 cases per year.

Table 1. South Sudan Guinea Worm Eradication Program Number of GW Cases or infections, 2019 - 2024

Definitive Host	2019	2020	2021	2022	2023	2024 YTD*
Human	4	1	4	5	2	0
Dog	0	0	0	1	0	0
Cat	0	0	0	0	1**	0***
Total	4	1	4	6	3	0
Uncontained	2	0	3	2	3	0
Total GWs	11	1	4	11	3	1

* January - June, provisional

** Genet (Lafon County)

*** Serval cat (Tonj East County); un-emerged worm

During the past decade South Sudan has seen mostly sparse human cases appearing unexpectedly in areas without recent known endemicity, and without presumed sources of infection identified after careful epidemiological investigation and preliminary genetic analysis, except for a small common source outbreak in Awerial County in 2022. This pattern of sporadic, low-level GW infections from unknown sources suggests the usual mode of transmission to humans and rarely animals in South Sudan in recent years is probably by eating undercooked or raw infected aquatic animals rather than by drinking contaminated water. The exceptionally high detection of Spargana infections in South Sudan, which are also transmitted by eating undercooked aquatic animals, seems to support this hypothesis, even though only 24% of South Sudanese villageh in Ò

The EDEP believes that this baboon found with six un-emerged Guinea worms in April 2024 is probably linked epidemiologically to the wild serval found with three un-emerged subcutaneous Guinea worms about three miles (five kilometers) away in Perbongo sub-district in March 2023. The two animals were within the home ranges of each other (4-12 sq mi/12-32 sq km for the serval cat; 2.5-6 sq mi/4-10 sq km for the baboon), and the likely period of infection of the baboon (February-June 2023) includes the period when the serval's Guinea worms were mature or almost mature. The serval's un-emerged worms were not the source of the baboon's infection, but another undetected infected animal was.

status of interventions in the 10 villages of Chad's Bongor district, which borders Cameroon's Guere district, that reported GW infections in January-May 2024. Only 44% of the 16 GW infections in Bongor district in January-May 2024 were contained (vs. 95% of 99 GW infections in Guere district in January-May), but like Guere district, all 10 affected villages in Bongor district have trained health workers, all received health education in January-May about preventing GWD, all have at least one source of safe drinking water, and Abate was applied in almost all eligible water sources. An average 86% (range: 68%-92%) of eligible animals were proactively tethered in the Bongor district villages and an average 88% (range: 72%-96%) of households practiced safe burial of fish guts. Cloth and pipe filters were distributed to few households, an average 12% (range: 0%-63%), since most had access to safe drinking water.

Figure 3. Infections along the Cameroon-Chad border between January – May 2024

Chad's Guinea Worm Eradication Program (CGWEP) continues to show significant reductions in overall animal infections this year: 144 infected animals (65% contained) and 1 human case in January-June 2024, vs. 220 infected animals (76% contained) and 2 human cases in January-June 2023--a reduction of 35%. In Bongor district, the reduction has been even more significant--46 infected animals (87% contained) in January-June 2023 versus 17 infected animals (44% contained) in January-June 2024; a reduction of 63%. N.B.: The GW case reported in Chad whose single worm emerged on May 30, 2024, is a 60-year-old woman, Sara Kara ethnicity, who resides in Goho village of Kyabe district in Moyen Chari Province. Her infection was not contained.

There is no source of safe water in the village. The patient says she filters her drinking water from the local Goho River. She eats dried or fresh fish almost daily, smoked or grilled.

In Cameroon, where Guere district is the only affected area, the number of reported GW infections soared to 258 animal infections in 2023 and 99 confirmed infections plus 125 provisional infections pending laboratory analysis in January-May 2024. The reported high containment rate and coverages with Abate and proactive tethering in 2024, if accurate, should greatly reduce GW infections in Guere district in 2025. Meanwhile, Chad is planning to host a ministerial-level meeting of Chad, Cameroon, and Central African Republic to discuss cross-border issues on September 16, 2024, supported by p –

Table 2.

We profoundly regret to report the untimely demise of Dr. Youssouf Ali Hagggar (1975-2024), Deputy National Coordinator of Chad's Guinea Worm Eradication Program, who died in a vehicle accident on July 5, 2024, while on an official GWEP mission to Salamat Province. One of Dr. Hagggar's recent contributions to the program was highlighted in the previous [redacted], which reported his representation of the national program at the separate Guinea Worm Eradication Declarations of four endemic provinces,

Table 3

RECENT PUBLICATIONS

Delea MG, Sack A, Eneanya OA, *et. al.*, 2024. Slaying the serpent: a research agenda to expand intervention development and accelerate Guinea worm eradication efforts. *Am J Trop Med Hyg* (pre-publication proof). <https://doi.org/10.4269/ajtmh.23-0889>

Delea MG, Browne L, Kaji S, Weiss AJ, Tchindebet O, 2024. Factors influencing community engagement during Guinea worm and polio eradication endgames in Chad: recommendations for “Last Mile” programming. *Am J Trop Med Hyg* (pre-publication proof). <https://doi.org/10.4269/ajtmh.23-0635>

DeWeerd S, 2024. Even with no drug or vaccine, eradication of Guinea worm is in sight. *Nature* <https://doi.org/10.1038/d41586-024-02306-8>

Eneanya OA, Delea MG, Cano J, *et. al.*, 2024. Predicting the environmental suitability and identifying climate and sociodemographic correlates of Guinea worm () in Chad. *Am J Trop Med Hyg* (pre-publication proof). <https://doi.org/10.4269/ajtmh.23-0681>

Are the right people receiving the Guinea Worm Wrap-Up?

We remind leaders of National Guinea Worm Eradication Programs to make sure all appropriate persons are receiving the Guinea Worm Wrap-Up directly, by email. With frequent turnover of government officials, representatives of partner organizations, and recruitment of new Guinea worm program staff, keeping desired recipients up to date is challenging. Frequent review of who is receiving the newsletter directly is advised. To add an addressee, please send their name, title, email address, and preferred language (English, French, or Portuguese) to Dr. Sharon Roy at CDC (gwwrapup@cdc.gov).

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. Dieudonné Sankara of WHO. Formatted by Mindze Nkanga.

WHO Collaborating Center for Dracunculiasis Eradication, Center for Global Health, Centers for Disease Control and Prevention, Mailstop H21-10, 1600 Clifton Road NE, Atlanta, GA 30333, USA, email: gwwrapup@cdc.gov, fax: 404-728-8040. The GW Wrap-Up web location is <https://www.cdc.gov/parasites/guineaworm/wrap-up>

Back issues are also available on the Carter Center web site in English, French, and Portuguese and 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

http://www.cartercenter.org/news/publications/health/guinea_worm_wrapup_portuguese.html



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