

Table 1

Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2015*
(Countries arranged in descending order of cases in 2014)

| COUNTRIES WITH ENDEMIC TRANSMISSION | NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED | | | | | | | | | | | | TOTAL* | |
|-------------------------------------|--|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-----|
| | JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE | JULY | AUGUST | SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER | | |
| SOUTH SUDAN | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | / | / | / | / | / | / | / | 0/0 | 0 |
| MALI [§] | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | / | / | / | / | / | / | / | 0/0 | 0 |
| CHAD | 0/0 | 0/1 | 0/2 | 0/1 | 0/0 | / | / | / | / | / | / | / | 0/4 | 0 |
| ETHIOPIA | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | / | / | / | / | / | / | / | 1/1 | 100 |
| TOTAL* | 0/0 | 0/1 | 0/2 | 0/1 | 1/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1/5 | 20 |
| % CONTAINED | | | | | | | | | | | | | | 20 |

*Provisional

| | 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 | 1/3 | 0/0 | 0/0 | 47/70 | 67 |
| CHAD | 1/1 | 1/1 | 1/1 | 1/1 | 0/1 | 0/1 | 1/3 | 0/1 | 1/1 | 0/0 | 1/1 | 1/1 | 8/13 | 62 |
| MALI [§] | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 1/1 | 14/18 | 12/13 | 8/8 | 0/0 | 35/40 | 88 |
| ETHIOPIA | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 2/2 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/1 | 2/3 | 67 |
| TOTAL* | 1/1 | 1/1 | 4/4 | 4/5 | 3/5 | 8/11 | 14/25 | 15/23 | 19/24 | 13/16 | 9/9 | 1/2 | 92/126 | 73 |
| % CONTAINED | | 100 | | | | | | | | | 100 | | 73 | |

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

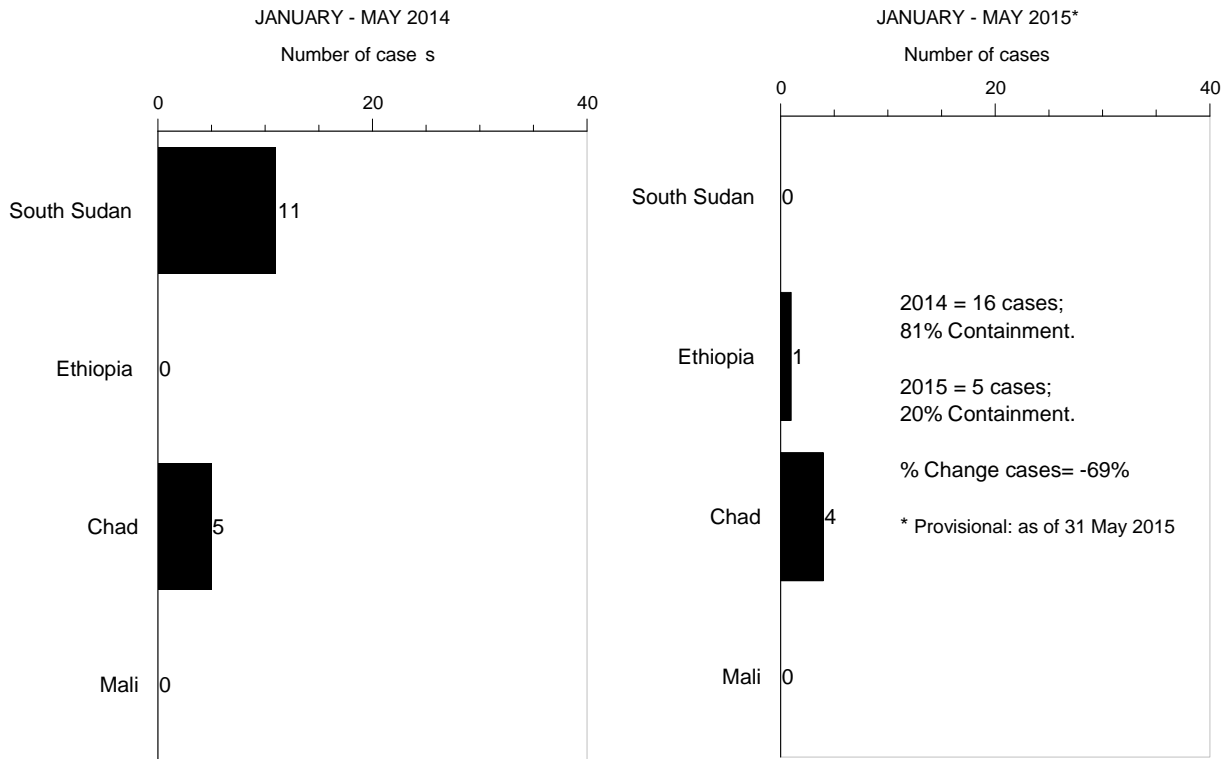
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ICCDE WARNS CHAD, ETHIOPIA, MALI AND SOUTH SUDAN: START PREPARING FOR STRICTER CERTIFICATION PROCESSES NOW

As the world moves closer to complete interruption of transmission of Guinea worm disease (Figure 2, Table 1), in his remarks to participants at the Informal Meeting for Guinea worm-affected countries during this year's World Health Assembly in Geneva, Prof. David Molyneux, member of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE), reminded representatives of the four remaining endemic countries (Chad, Ethiopia, Mali, South Sudan) that they will need to meet a higher standard in general, and regarding surveillance in particular, in order to be certified as free of Guinea worm disease by ICCDE. The senior representatives of the four countries at the meeting were Honorable Mr. Ngueadoum Assane (Secretary of State for Health, Chad), Honorable Dr. Kesetebirhane Birhanie (Minister of Health, Ethiopia), Honorable Mr. Ousmane Konate (Minister of Health, Mali), and Honorable Dr. Makur Kariom (Undersecretary, Ministry of Health, South Sudan). Approximately 100 persons, including WHO Director General Dr. Margaret Chan, WHO Deputy Director Dr. Asamoah Bah, WHO Assistant Director General Dr. Hiroshi Nakata, and ICCDE member Prof. Robert Guiguemde participated in the meeting, which heard technical overviews presented by Mr. Craig Withers of The Carter Center and Dr. Dieudonne Sankara of WHO. Dr. Matshidiso Moeti, director of WHO's Regional Office for Africa, chaired the meeting.

Figure 2

REPORTED CASES OF DRACUNCULIASIS BY COUNTRY DURING JANUARY - MAY 2014 and 2015*



The three main criteria for certification of dracunculiasis elimination, established by the ICCDE, are: 1) evidence of absence of transmission of the disease, 2) evidence of a functional country-wide surveillance system, and 3) no risk of re-establishment of local transmission from any imported case. Whether the country meets these criteria must be verified by an independent evaluation, by the visit of an International Certification Team (ICT), and by ICCDE review of documents submitted to it by the ministry of health (especially a thorough Country Report about the national eradication campaign), the evaluation team, and the ICT. Beginning these preparations now is urgent for the four remaining endemic countries, because of the extensive time and effort required to assemble the required documentation, especially the records of surveillance, case investigation, and assessment of rumors of cases at local, regional and national levels, and to properly preserve and organize those records for inspection by the evaluation team, the ICT and the ICCDE. As an example of the level of detail already required of Ghana, which was certified by the ICCDE at its Tenth Meeting in January 2015, the Table of Contents of its Country Report on Dracunculiasis Eradication that Ghana submitted to the ICCDE in May 2014 is reproduced below (Figure 3). Those countries that already have a national Certification Committee (i.e., Ethiopia, Mali) are advised to put them to work, and those countries which do not yet have a functional Certification Committee (i.e., Chad, South Sudan) should appoint one soon.

Figure 3

COUNTRY REPORT ON DRACUNCULIASIS ERADICATION GHANA

TABLE OF CONTENTS

- LIST OF MEMBERS OF THE NATIONAL CERTIFICATION COMMITTEE
- FOREWORD
- ACKNOWLEDGEMENTS
- LIST OF ABBREVIATIONS
- LIST OF FIGURES
- LIST OF TABLES
- EXECUTIVE SUMMARY
- CHAPTER 1: INTRODUCTION
 - 1.1. Country Profile
 - 1.1.1. Geography, Location and Borders
 - 1.2. Governance and Administration
 - 1.3. Demography
 - 1.4. The Healthcare System in Ghana
 - 1.4.1. Organization of Health Systems in Ghana
 - 1.4.2. Health Service Delivery in Ghana
 - 1.5. Health Workforce
 - 1.6. Health Information Management
 - 1.7. Safe Water Supply
- CHAPTER 2: GUINEA WORM ERADICATION IN GHANA
 - 2.1. Background
 - 2.2. The Guinea Worm Eradication Program
 - 2.3. Interventions Used During the Intervention Phase of the Program
 - 2.3.1. Public Health Education
 - 2.3.2. National Communication Strategy
 - 2.3.3. Vector control
 - 2.3.4. Promotion of Filter Use
 - 2.3.5. Surveillance and Case Containment

- 2.3.6. Community-Based Surveillance System
- 2.3.7. Water Supply
- 2.4. Achievements during the Intervention Phase
- CHAPTER 3: PRECERTIFICATION ACTIVITIES
- 3.1. Precertification Surveillance Activities
 - 3.1.1 Types of Surveillance
 - 3.1.1.1 Community-based Surveillance Systems (CBS)
 - 3.1.1.1.1 Village Reporting
 - 3.1.1.2. Integrated Disease Surveillance and Response (IDSR)
 - 3.1.1.2.1. IDSR Reporting
 - 3.1.1.3. DHIMS
 - 3.2. Rumors Reporting
 - 3.2.1. Rumors' registration and investigations
 - 3.3. Diagnosis of Hanging Worms
 - 3.4. Case Searches
 - 3.4.1. Results of recent Case Searches
 - 3.4.1.1. Results of Case Search in Nine Recently Freed Districts
 - 3.4.2. NIDS Case Searches-June and October 2013
 - 3.5. Cash Reward System .
 - 3.6. Reward System Publicity
 - 3.7. School Quiz
 - 3.8. Training
 - 3.7. Stop Transmission of Guinea Worm (STOG)
 - 3.8. Provision of safe water sources to at-risk villages
 - 3.8.1. Safe Water Status in Formerly Endemic Villages Since 2006
 - 3.9. Evaluation and Reviews
 - 3.9.1. External Evaluation
 - 3.9.2. WHO Follow-Up Visits
 - 3.9.3. Ghana Legacy Project
 - 3.10. HW knowledge of appropriate response to GWD rumors and the cash reward -1.8()5.7(hW-te raeUp)--T

contained because the worm was already emerging when he was brought to the health center, although he reportedly did not contaminate a water source. None of the four GW patients detected in Chad so far in 2015 were contained.

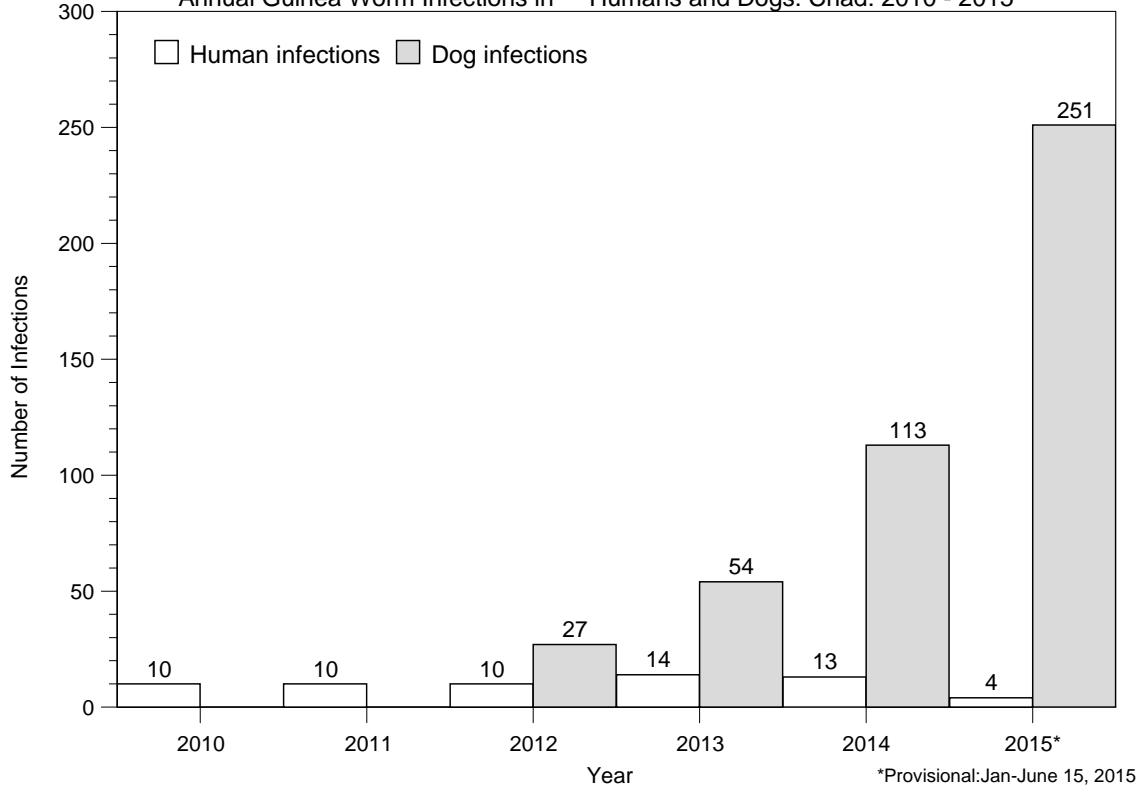
Figure 4

Percentage of Infected Dogs Contained and of Residents and Market Vendors of Villages Under Active Surveillance Burying Fish Entrails, 2015*



Figure 5

Chad Guinea Worm Program
Annual Guinea Worm Infections in Humans and Dogs: Chad: 2010 - 2015*



ETHIOPIA: A LONG STRUGGLE JUST GOT LONGER

The Ethiopia Dracunculiasis Eradication Program (EDEP) has reported a case of GWD in a 25 year old male Anuak fisherman and hunter who resides in the village of Gutok in the Gop fishing area of Terkudi kebele of Abobo district in Gambella Region. The patient was detected and admitted to a case containment center in Abobo district on 27 May, the same day that his worm began emerging during controlled immersion. The exact source of his infection is uncertain, but he has a history of travel in a known endemic area (as of 10-14 months ago) of Gog district as well as a known endemic area (as of years ago) of Abobo district. Abate has been applied in all associated surface water sources except a large lake. Abate application also continued in April and May in water sources in Gog district associated with Wichini, Atheti, Ablen and Bator villages, where cases were reported in 2014. One new district

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DEFINITIONS

A case of Guinea worm disease is a person exhibiting a skin lesion with emergence of a Guinea worm, ideally with laboratory confirmation. That person is counted as a case only once during the calendar year, i.e., when the first Guinea worm emerged from that person. All worm specimens should be obtained from each case-patient for laboratory confirmation and sent to CDC. All cases should be monitored at least twice per month during the remainder of the calendar year for prompt detection of possible additional Guinea worms.

A rumor is defined as any information about a possible case of GWD.

A suspect is a person exhibiting sign and symptoms compatible with GWD, i.e., localized or generalized itching and/or a swelling, a painful blister, and/or a skin lesion but no visible Guinea worm.

Endemic village: a village with one or more active indigenous cases during the previous and/or current year.

Chad: Given the special circumstances in Chad, the 2014 GWEP Review meeting established a new description and definition. Instead of using "endemic" to denote affected villages in Chad, the GWEP will use "1+ case village" village with one or more indigenous cases 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. These 1+ case villages are also called "priority villages."

Revised Criteria For A Contained Case: A case of Guinea worm disease is contained if all of the following conditions are met:

1. The patient is detected before or within 24 hours of worm emergence,
2. The patient has not entered any water source since the worm emerged,
3. The village volunteer has properly managed the case, by cleaning and bandaging until the worm is fully removed, and by giving health education to discourage the patient from contaminating a water source (if two or more Guinea worms are present, the

- o Level I surveillance is implemented in communities with endemic transmission within the endemic districts. Multiple searches for cases are conducted each week, usually household-by-household by village volunteers or other GWEP staff in all inhabited places (camps, hamlets, villages) with the aim of detecting cases within 24 hours of the worm's emergence from the skin and immediately implementing control interventions to prevent the patient transmitting the infection to others. Information about the cash reward is disseminated to all residents constantly, by word of mouth and using all other available infrastructures. Levels of awareness are monitored monthly. All rumors are investigated within 24 hours, the outcome of investigations reported and documented, and rumor reporting rates monitored monthly.
- o Level II surveillance is implemented in ~~communities~~ in non-endemic districts at high risk of imported cases (adjacent to endemic districts or share water sources, migration routes, etc.). Outreach and intensive dissemination of information to residents about the cash reward for reporting cases of GWD (via supervisors, village informants, health workers, community leaders, radio, etc.) and monthly assessments of the level of reward awareness are conducted. All rumors are investigated within 24 hours, the outcome of investigations reported and documented, and rumor reporting rates monitored monthly.
- o Level III surveillance is implemented in all other communities in non-endemic districts not at high risk of importation of cases. Dissemination of information to residents about the cash reward is delivered via all available infrastructures, including monthly monitoring of levels of awareness. All rumors are investigated within 24 hours, the outcome of investigations reported and documented, and rumor reporting rates monitored monthly.
- o All three levels of surveillance also include redundant surveillance via special surveys in schools, markets, villages, ~~etc.~~ where indicated, and use of other ongoing outreach activities such as polio immunization days, mass drug administration campaigns, etc. Ministries of health are encouraged to train staff from neglected tropical diseases control/elimination programs about GWD, cash rewards, investigations of rumor and reporting protocols.
- o Once transmission is interrupted (12-14 months after report of the last indigenous case) the risk of importation of cases ~~reduces~~ to zero and all communities nationwide default to Level III surveillance until the country is certified free of GWD transmission.

RECENT PUBLICATIONS

Eberhard, ML; et al. 2015 Thirty-Seven Human Cases of Sparganosis from Ethiopia and South Sudan Caused by Spirometra. Am J Trop Med Hyg 91:1476-1645.

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

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