



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
and Prevention (CDC)
Memorandum

Date: Aug. 17, 2007



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

Subject: GUINEA WORM WRAP-UP #175

To: Addressees

Countdown to Glory

Consecutive months with zero indigenous cases:

Ethiopia 13

Cote d' Ivoire 10

Burkina Faso 8

Togo 7

Nigeria 4

SOUTHERN SUDAN REPORTS – 69% REDUCTION IN CASES SO FAR IN 2007

Southern Sudan Guinea Worm Eradication Program (SSGWEP) held its Coordination Meeting in Juba on July 31 – August 1, 2007. SSGWEP coordinator Mr. Samuel Makoy reported that the program has recorded 3,324 cases of Dracunculiasis in January-June 2007, with 61% of reports received, compared to 10,804 cases reported during the same period of 2006, with a reporting rate of 63% (see Figs 2 and 5). This is a dramatic reduction of -69% (see Figs 2 and 3). Forty-six percent (46%) of the cases so far this year were reportedly contained, compared to 41% containment rate in 2006 (Table 1). A total of 3,488 villages have reported at least one case since January 1, 2006, of which 1,132 villages have reported one or more case(s) in January-June this year. Key intervention indices as of June 2007 reported at the meeting are as follows: 96% of the 3,488 villages have a trained village volunteer, 70% received one or more health education sessions, 61% of villages has cloth filters in every household, 16% have had at least one safe source of drinking water, and ABATE® Larvicide has been used in 320 (9%) of the villages, mostly in Kapoeta and Terekeka Counties, at least once this year (Figure 2).

Highly endemic Kapoeta North, Kapoeta East and Kapoeta South Counties of Eastern Equatoria State, which together reported 13,674 of Sudan's 20,582 cases in 2006, have reduced their number of cases reported in January-June 2007 by -71% (from 7,810 to 2,252 cases), with 88% reporting rate in 2007. 68% of the endemic villages in these counties have cloth filters in all households, 49% has been treated at least once with ABATE® Larvicide, and 86% of the population has a pipe filter so far this year.

GHANA: MINISTRY OF HEALTH GIVES MID-YEAR STATUS REPORT

The *Deputy Minister of Health*, Dr. (Mrs.) Gladys Ashitey, held a mid-year briefing for the press at a media workshop in Accra on July 18 to give an update on the status of the Ghana Guinea Worm Eradication Program. Noting that so far this year, 98% of Ghana's cases of dracunculiasis were reported from the Northern Region, she also observed that the authorities were taking stringent measures to help fight the disease, including appointment of dam guards and fines for contamination of drinking water sources or for selling drinking water contaminated with Guinea worm larvae. Analysis of Ghanaian data

shows that while the country has reported 9% more cases of Guinea worm disease in January-June 2007 than in the same period of 2006, there was a -45% reduction of cases in all of Ghana outside of Savelugu-Nanton District, a -33% reduction in the cumulative number of villages reporting one or more cases (from 299 to 200), and that ten villages in the Northern Region reported 66% of all cases. Ghana's reported average rate of case containment rose from 70% in the first six months of 2006 to 84% in the first seven months of 2007. All endemic villages reportedly now have cloth filters in all households (same as in 2006), 63% have received at least one treatment with ABATE (vs. 52% in 2006), and 43% have at least one source of safe drinking water (44% in 2006).

At the opening ceremony of the national Guinea worm mid-year review meeting in Tamale on July 25, the *Minister of the Northern Region*, Alhaji Mustapha Ali Idris, said he was "inwardly shaken and highly disappointed that we can not yet announce a breakthrough in our eradication effort", and national program coordinator, Dr. Andrew Seidu-Korkor commended the Parliamentary Select Committee on Government Assurances for its commitment to help eradicate the disease. That same day, in Accra, the *Member of Parliament for Savelugu*, Hajia Mary Salifa Boforo, appealed to the government to expedite work on the Tamale Water Project, and told newsmen in Parliament that the disease was threatening the health of her constituents and leading them to poverty. Also on July 25, the *Deputy Minister for Water Resources Works and Housing*, Ms. Cecelia Abena Dapaah, answered a question before a parliamentary committee by saying, "you have touched a raw nerve in me by the mere mention of Guinea worm infestations because I'm passionate about it and should I be given the nod [to be promoted to minister of state in the same ministry] I will work hard to ensure its total eradication". During a visit to Brong Afoofu Region the week before, Ghana's *Vice President*, The Honorable Aliu Mahama, urged the chief at the town of Prang in Pru District to lead the efforts to eradicate Guinea worm disease in that area.

In addition to the usual recommendations for improved surveillance, supervision and case containment, etc., participants at the review meeting in Tamale also urged the Government of Ghana "**to develop and implement an emergency plan for provision of safe water in Tamale and its environs during the African Cup Events [to be hosted there] in January and February 2008 to prevent the spread of Guinea worm to spectators and participants**". Meanwhile, Barclay's Bank is sponsoring an 80,000-kilometer Walk throughout Ghana to help support Guinea worm eradication, with the goal of raising 33,000 pounds sterling (~US\$66,000). The Northern Region minister, director general of the Ghana Health Service Dr. Elias Sory, national coordinator Dr. Andrew Seidu-Korkor, The Northern Regional police commander, district chief executives from the endemic districts, and Miss Beauty with a Purpose/Miss Ghana 2005, Ms. Lamisi Mbillah, joined residents of Tamale in a 10 kilometer walk there on July 28. The walk in Tamale was the fourth in the series after walks in Accra, Kumasi and Tema.

GHANA GWEP: HOW COMMON ARE RE-INFECTED VILLAGES?

Indiscipline about the use of the international definition for a re-infected village distorts the real status of surveillance system in areas where cases are detected by that very system and can be a source of confusion about the real status of Ghana's GWEP. For example, too often it is assumed that villages that report one or more cases of Guinea worm disease in one year, including cases imported from other known endemic villages, but which reported zero cases in the previous year, are "re-infected" villages. The actual definition a re-infected village is "a previously endemic village reporting indigenous cases after at least one calendar year of zero reporting, where interventions need to be re-instated (World Health Organization, Weekly Epidemiological Record, No. 37, 2003)", meaning villages that were once endemic, then reported zero cases for at least one full calendar year, then became endemic again by virtue of reporting one or more cases of GWD indigenous to that village. Analysis of Ghana's GWEP data for 2004, 2005 and 2006 below, explains the actual number of villages that were re-infected during 2006 relative to 2005. (see figure 1):

- In 2005, Ghana had 224 “Group III” villages that reported zero cases in 2004 and 652 cases in 2005 (potentially “re-infected” villages)
- Of the 224 “Group III” villages (reporting zero cases in 2004), 110 (49%) reported 149 imported cases in 2005 according to the GWEP. Of the 110 villages in 2005, 83 reported zero cases, and only 27 of those villages reported 49 cases in 2006. Of the 27 villages in 2006, 19 reported 23 cases imported from other known endemic villages, and 8 villages reported 26 indigenous cases. Of the 8 villages reporting indigenous cases only one village was re-infected (see above definition) and 7 were newly infected villages, i.e., “villages appearing on the list of endemic villages for the first time since records have been kept, where interventions and surveillance activities need to be initiated” (World Health Organization, Weekly Epidemiological Record, No. 37, 2003).
- The remainder of the 224 “Group III” villages, or 114 (51%), reported 503 cases in 2005 and all were considered endemic villages by the GWEP. However, of these 114 villages 74 actually reported zero cases in 2006 and the remaining 49 villages reported 360 cases. Of the 49 villages in 2006, 9 villages reported 12 cases imported from other known endemic villages, and 40 villages reported 348 indigenous cases. Of those 40 villages, 24 villages were actually re-infected (reporting 256 cases of GWD), while the remaining 16 villages (reporting 92 cases of GWD) were newly infected (see above definition).

Therefore, of the 224 villages that reported zero cases 2004, but had one or more cases in 2005, only 25 (11%) were re-infected, i.e., were known to have had reported indigenous cases before, reported zero cases in 2004, reported indigenous cases again in 2005, and then resumed indigenous transmission in 2006.

The distinction between villages that are truly endemic (foci of indigenous transmission of guinea worm disease), that are re-infected, and that only harbor imported cases is very important and such designations should be used correctly to avoid confusion and in order to focus programs’ attention on the real endemic villages. Most cases and annual transmission of Guinea worm disease occur in known endemic villages.

Figure 1

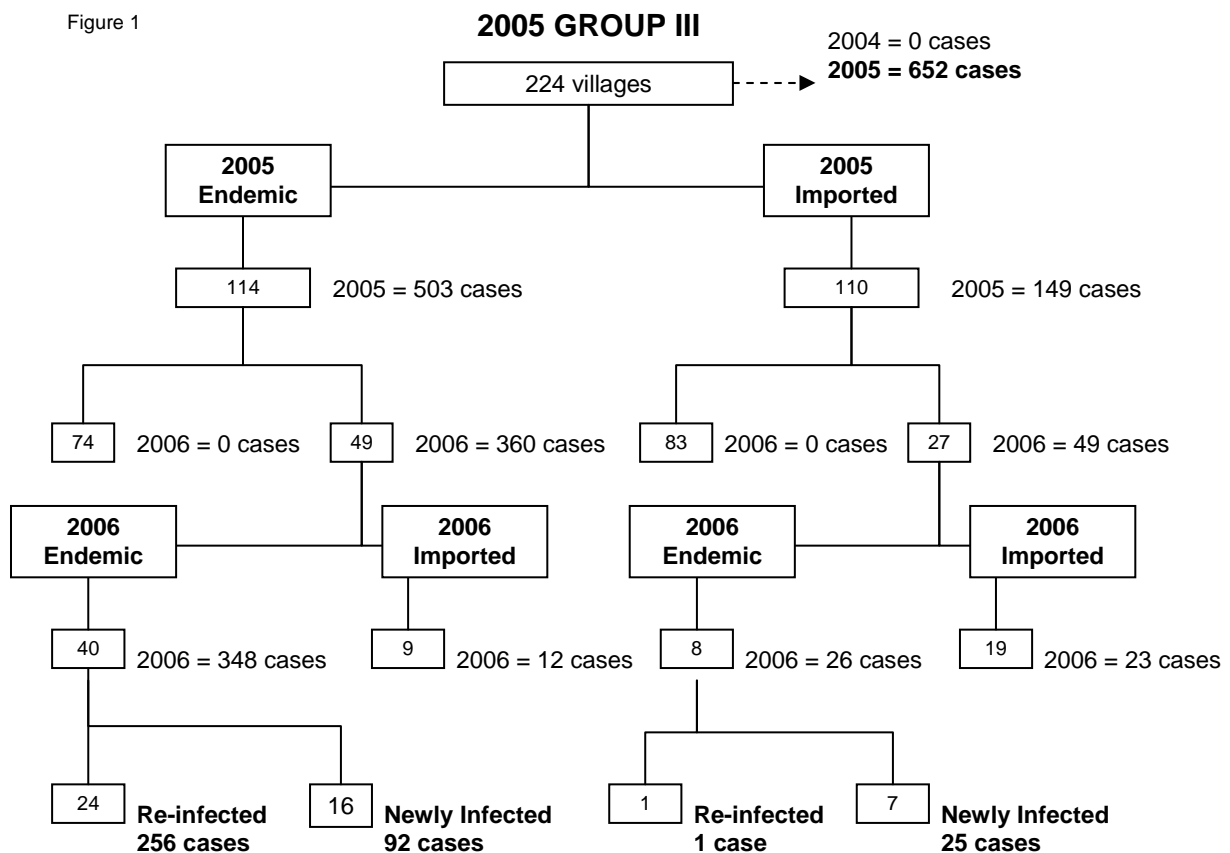


Table 1

Number of Cases Contained and Number Reported by Month during 2007*
(Countries arranged in descending order of cases in 2006)

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	42 / 204	49 / 187	79 / 222	274 / 549	623 / 1177	476 / 985	/	/	/	/	/	/	1543 / 3324	46
GHANA	814 / 1006	633 / 733	441 / 478	250 / 293	232 / 271	188 / 241	91 / 111	/	/	/	/	/	2649 / 3133	85
MALI	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	5 / 7	/	/	/	/	/	7 / 9	78
NIGER	3 / 3	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	1 / 1	/	/	/	/	/	5 / 5	100
NIGERIA	7 / 32	9 / 9	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	17 / 42	40
TOGO	0 / 0	1 / 1	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	/	/	/	/	/	1 / 2	50
BURKINA FASO	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	2 / 2	100
COTE D'IVOIRE	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	0 / 0	0
ETHIOPIA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	0 / 0	/	/	/	/	/	3 / 3	0
UGANDA	0 / 0	0 / 0	1 / 1	0 / 0	1 / 1	0 / 0	0 / 0	/	/	/	/	/	2 / 2	100
TOTAL*	868 / 1247	692 / 930	523 / 703	524 / 843	857 / 1450	668 / 1230	97 / 119	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	4229 / 6522	65
% CONTAINED	70	74	74	62	59	54	82						65	
% CONT. OUTSIDE SUDAN	79	87	92	85	86	78	82						84	

* provisional

Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported and contained that month.

Figure 2

Distribution by Country of 6,512 Indigenous Cases of Dracunculiasis Reported: January - July 2007*

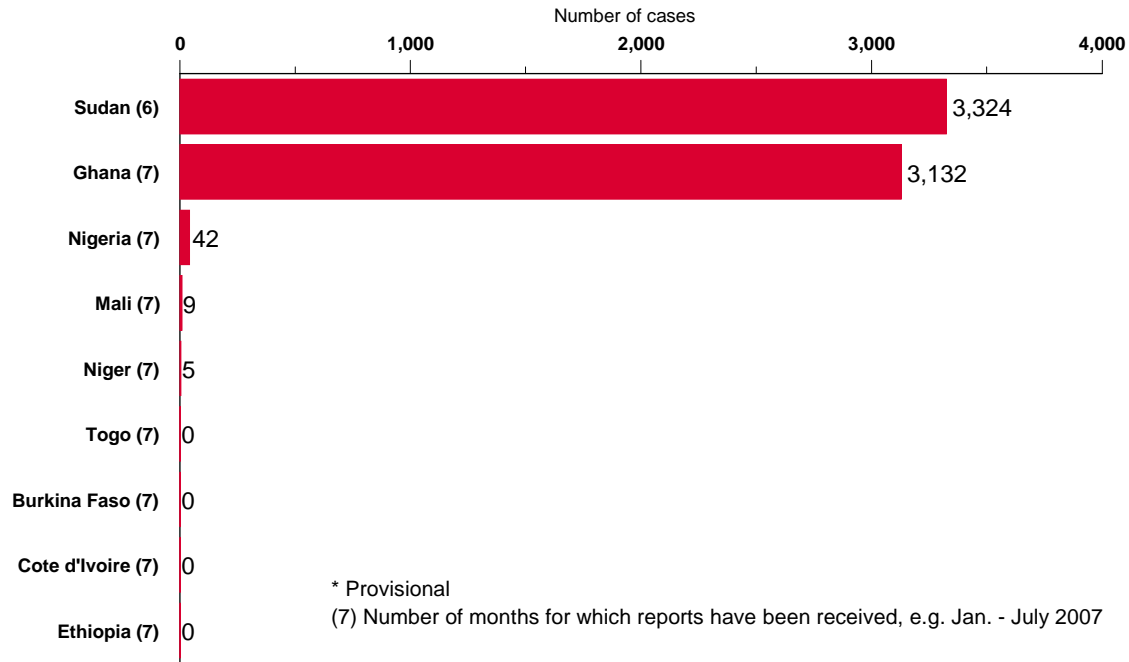


Figure 3

Change in Dracunculiasis Cases in Sudan during Jan. - June 2006 and 2007 and in Ghana, Nigeria, and all Other Endemic Countries During Jan. - July. 2006 and 2007****

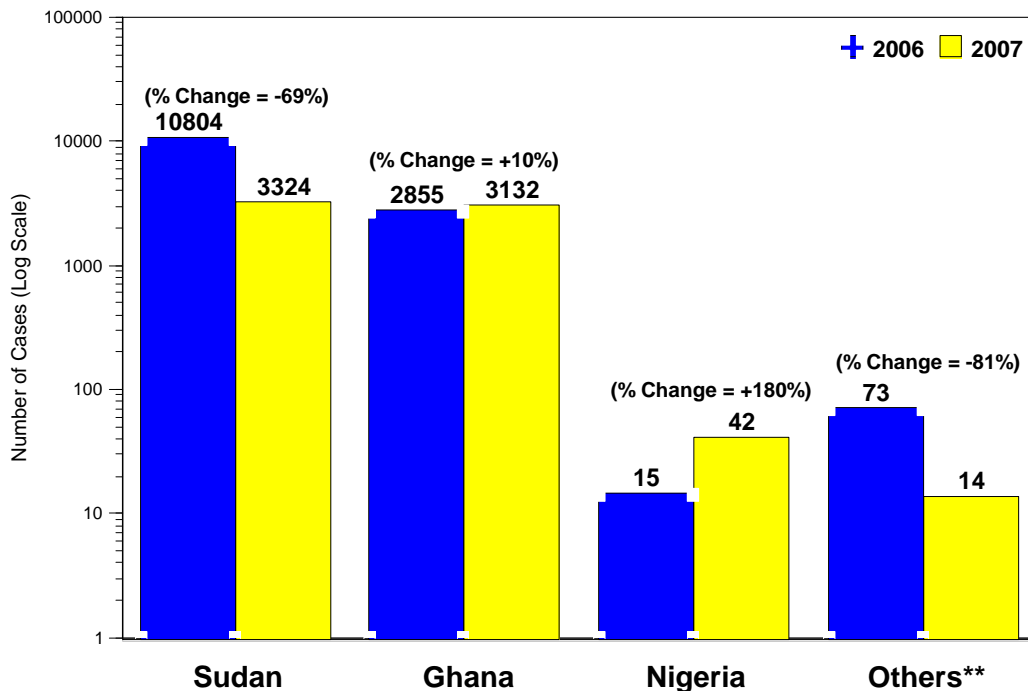
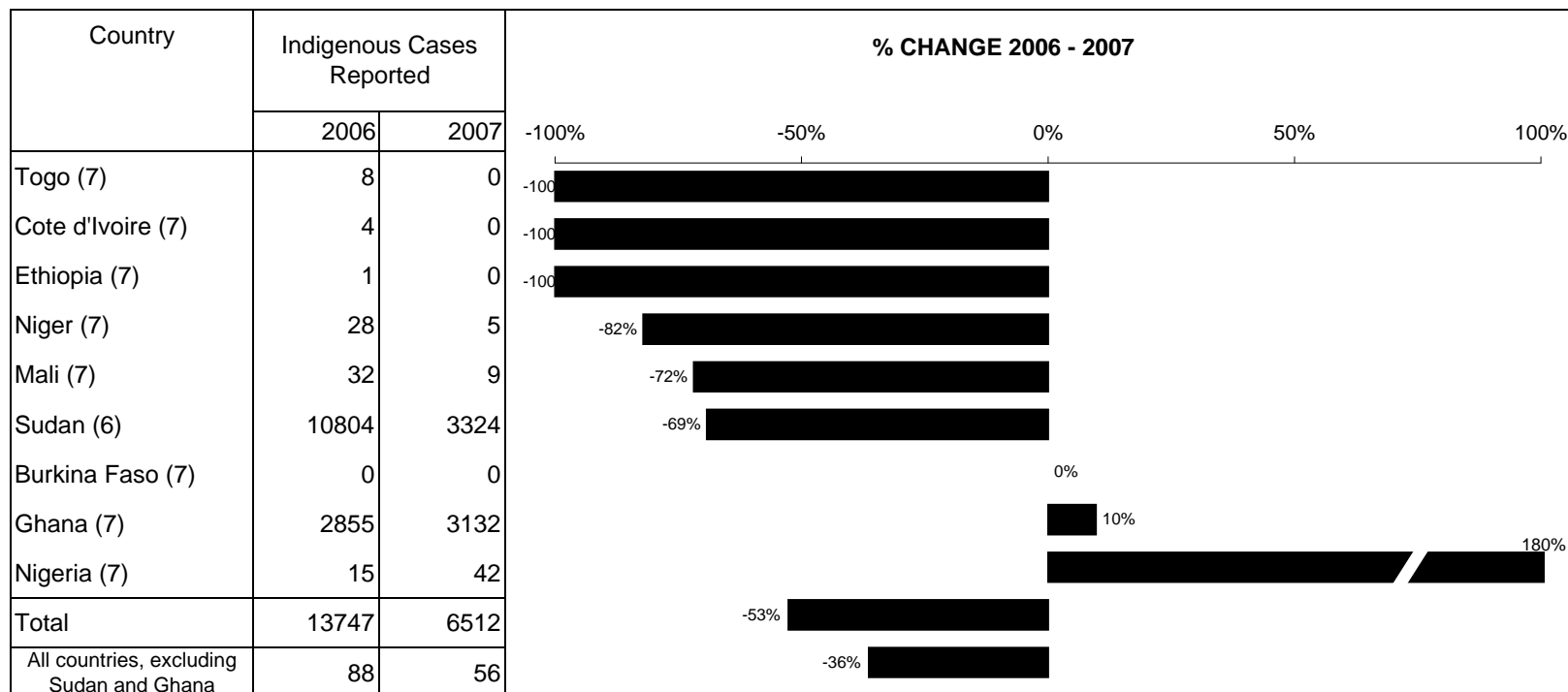


Figure 4

Number of Indigenous Cases Reported During the Specified Period in 2006 and 2007*, and Percent Change in Cases Reported



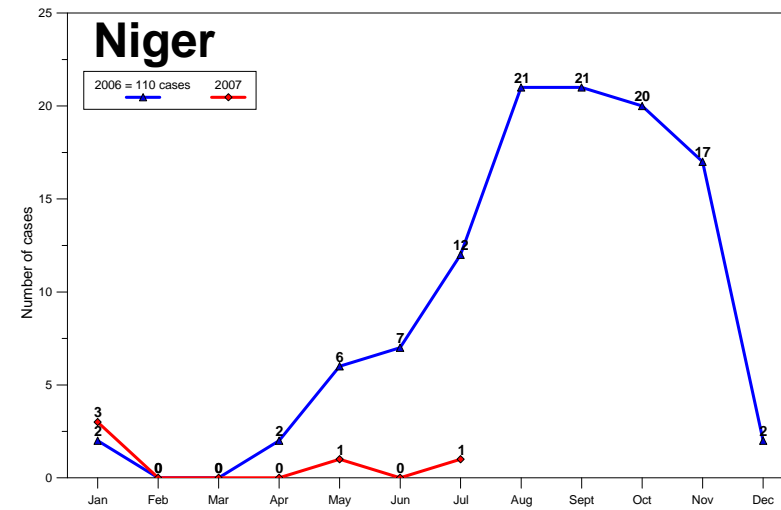
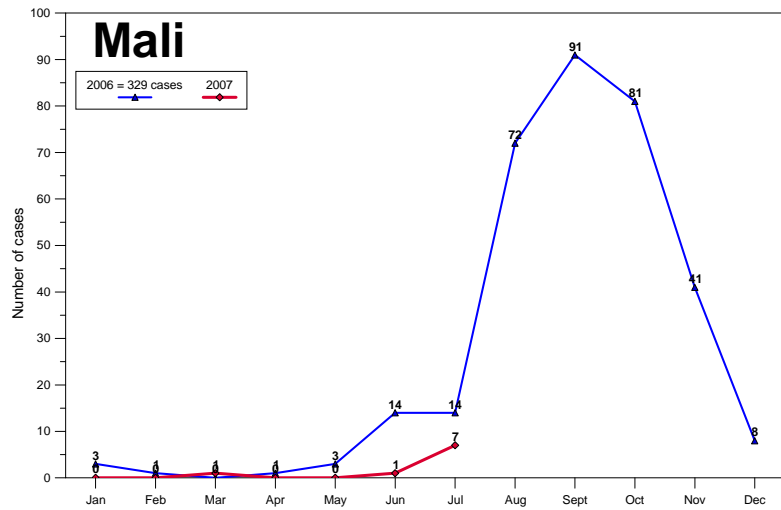
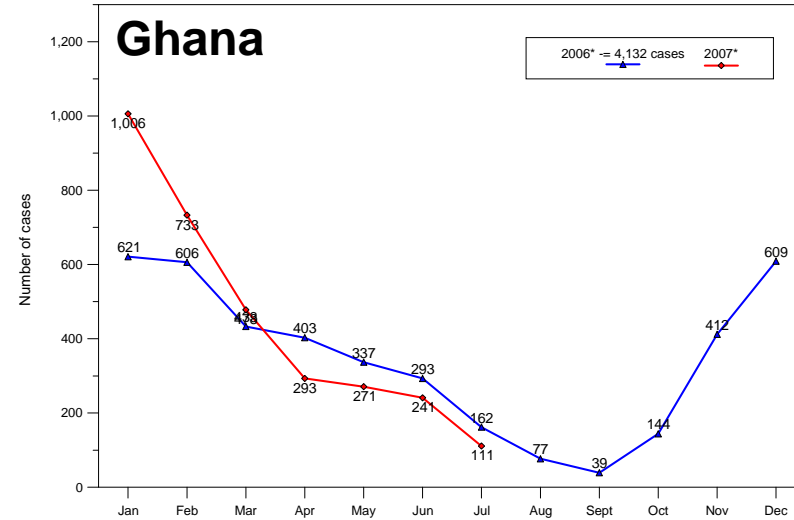
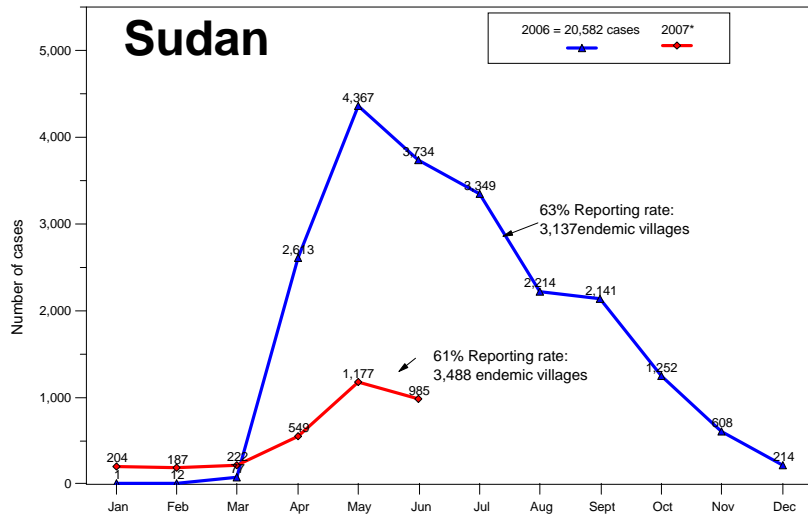
Overall % change outside of Sudan = 8%

(7) Indicates months for which reports were received, i.e., Jan. -July

* Provisional

Figure 5

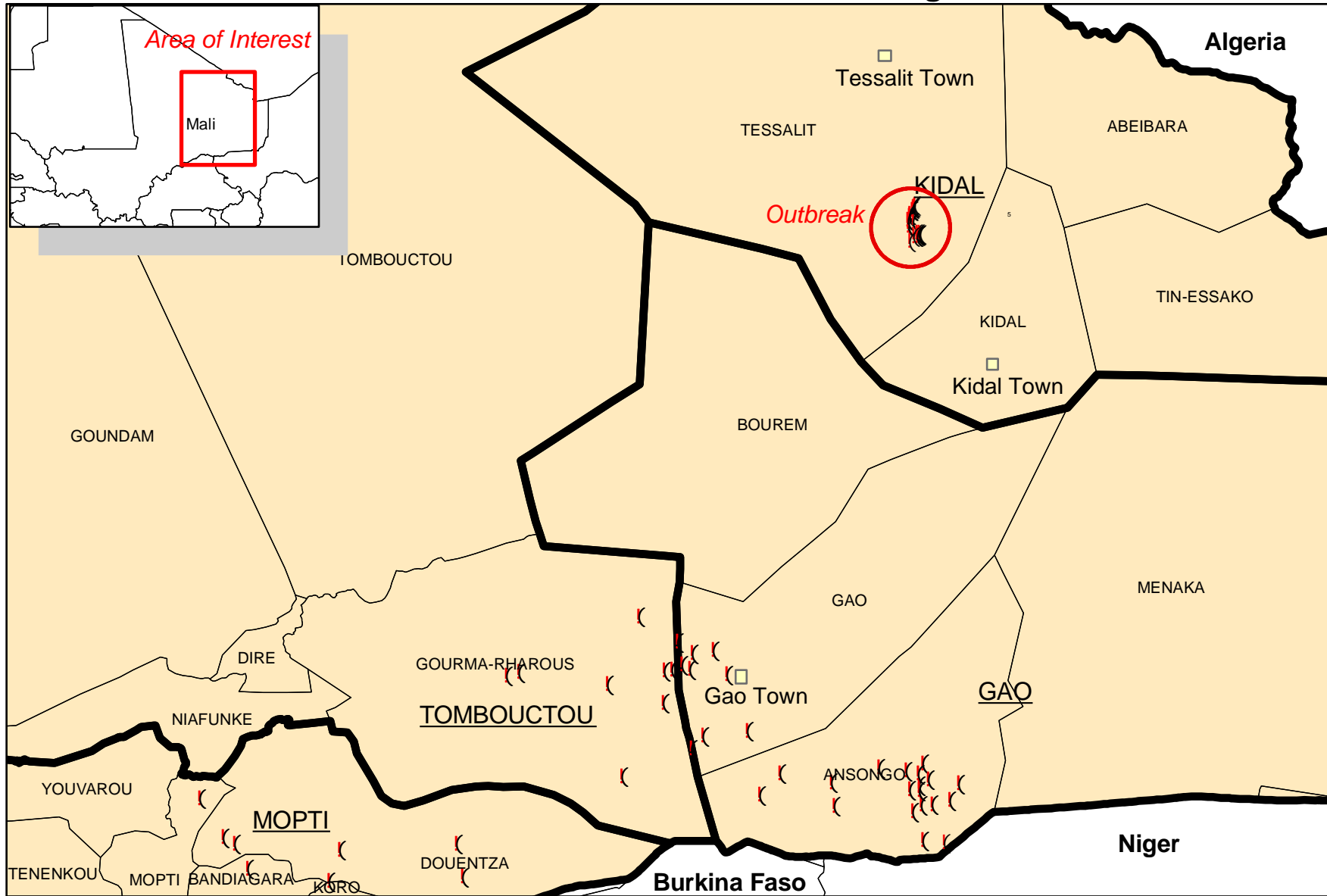
Number of Reported Cases of Dracunculiasis: 2006 – 2007*



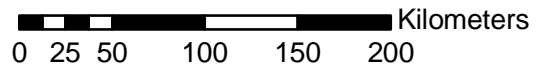
* provisional

Figure 6

Mali Guinea Worm Eradication Program



(Cases reported 2006-07
□ Cercle / District
▭ REGION



This map is provisional and is not an authority on boundaries or roads or exact locations. This map was created for the purpose of the Guinea Worm Eradication Program.

OUTBREAK OF GUINEA WORM DISEASE IN KIDAL, MALI

During the week of August 6th the Malian GWEP received notification from Kidal's ministry of health staff about alleged cases of Guinea worm disease in a nomadic camp in the Cercle of Tessalit, about 200 kilometers North of Kidal, near Mali's northeastern border with Algeria (see Figure 6). A GWEP team led by Dr. Garibou Bamia, Carter Center Technical Advisor in Gao and Gao Region staff joined ministry of health staff in Kidal to conduct the investigation, which took place during August 10-16. Thirty-three cases of GWD were confirmed by the team, in the township of d'Adiel-Hoc, and particularly in the locality of Anamalan (where more than a dozen camps, circa 300 households were visited), and the locality of Tadjimart (where about 30 of 40 camps were visited, circa 400 households). Allegedly, during 2006 a young man from Ansongo District had his Guinea worm emerge while visiting in Tadjimart and this person is believed to have repeatedly contaminated one or more of the unsafe sources of drinking water in the area. The population of these localities did not know what GWD is and had no knowledge regarding how to prevent it. Of the 33 confirmed cases of GWD, one case was in Anamalan and 31 in Tadjimart. Fifteen persons suspected of being in the pre-patent stage of GWD were also identified (2 from Anamalan and 13 from Tadjimart) and are under observation. The team visited 379 households, distributed 379 cloth filters, 497 pipe filters, treated 32 sources of drinking water with ABATE® Larvicide, trained two village volunteers, sanitary technicians and other Adiel-Hoc government staff about surveillance and reporting (including the use of village case registers), case management and containment, educated the affected population regarding the origin of GWD and how to prevent transmission, and left a stock of filters for future use in the area. Two more regional teams are now on the way to d'Adiel-Hoc to continue the investigation and follow up of suspected cases.

IN BRIEF:

Ethiopia SURPRISE? A case of Dracunculiasis detected by Ethiopia in June 2007 and cross-notified to the South Sudan Guinea Worm Eradication Program (SSGWEP) as apparently imported from a border area of Kapoeta East County in Eastern Equatoria State of Southern Sudan, upon investigation by the SSGWEP appears to be from a village called Loyolo, which may be in Ethiopia. The problem is that it is not clear where the international border is located exactly, relative to the village of Loyolo. According to the SSGWEP, transmission likely occurred in nearby Nasuat cattle camp, which may also be in Ethiopia, the year before. Ethiopian and Sudanese health workers are continuing their investigations.

Burkina Faso has named a new National Coordinator of the Guinea Worm Eradication Program, Dr. Seydou BELEMVIRE, who was previously the *medecin chef* of Bogande sanitary district. He replaces Mdme. Louise DONDASSE, who has been the acting national program coordinator for the past two years. BIENVENUE Dr. Belemvire! The GWEP announced the establishment of a system for in-kind rewards for village health workers who report about cases of GWD, for the patients themselves and for other informants about cases of GWD. Rewards include blankets, straw mats, buckets, t-shirts and GWEP baseball caps. The number of in-kind items awarded will vary according to whether 1) the cases was detected and reported to the primary health care center within 24 hours of the emergence of the Guinea worm, 2) the informant reports an alleged case that is later confirmed to be GWD, and 3) the patient self-reports and willingly remains in isolation to prevent transmission of the disease to others.

Niger. The newly appointed minister of health, Mr. Issa Lamine, kicked off the Guinea Worm Week in the endemic village of Tifrat in Tera District June 15-20. This was the minister's first field visit since taking office. The governor and the regional director of public health were among the approximately 300 participants.

Nigeria. At the request of the Federal Ministry of Health of Nigeria, WHO is organizing a nationwide assessment of the status the surveillance for cases of GWD, including investigations

and outcomes or rumors of alleged cases of the disease, that is required during for at least 3 years after the last indigenous case is reported. Five teams will be formed, including external evaluators representing partner organizations, to conduct the assessment during September 17-28, 2007.

MEETINGS

Meeting for pre-certification countries (Benin, Chad, Mauritania), September 4-5, 2007, Abidjan, Cote d'Ivoire.

Program Review for endemic francophone countries, September 6-7, 2007, Abidjan, Cote d'Ivoire.

Program Review for Nigerian GWEP, October 22-24, 2007, Abuja Nigeria.

Meeting for pre-certification areas (Ethiopia, Kenya, N. Sudan, Uganda), October 30-31, 2007, Addis Ababa.

RECENT PUBLICATIONS

CDC, 2007. Progress toward global eradication of dracunculiasis, January 2005-May 2007. *Morbidity and Mortality Weekly Report* 56: 813-817.

*Inclusion of information in the Guinea Worm Wrap-Up does not constitute
"publication" of that information.
In memory of BOB KAISER*

For information about the GW Wrap-Up, contact the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCZVED, Centers for Disease Control and Prevention, F-22, 4770 Buford Highway, NE, Atlanta, GA 30341-3724, U.S.A. FAX: 770-488-7761. The GW Wrap-Up web location is <http://www.cdc.gov/ncidod/dpd/parasites/guineaworm/default.htm>.



CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.