



Date: January 27, 2005



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

Subject: GUINEA WORM WRAP-UP #150

To: Addressees

KEEP UP THE FIGHT AGAINST GUINEA WORM DISEASE: THE END IS NEAR!

UGANDA BREAKS TRANSMISSION!!!

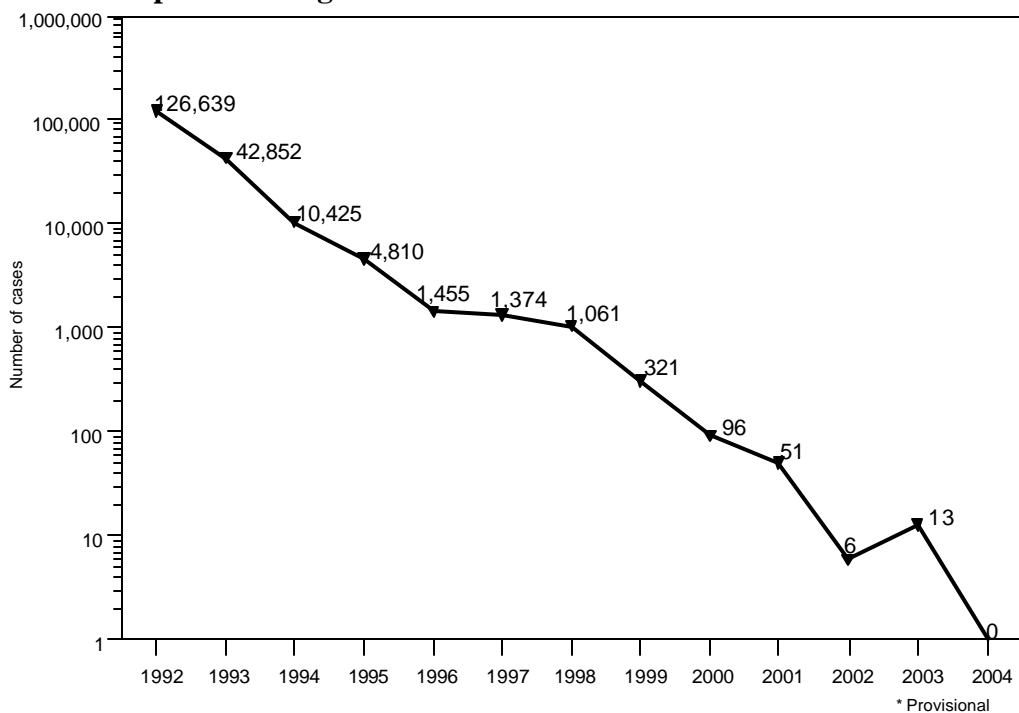


Uganda recorded its first calendar year with no indigenous cases of dracunculiasis in 2004, having reported its last indigenous case in July 2003. CONGRATULATIONS, UGANDA! A total of 3 cases, all of them contained, were imported from Sudan into Uganda in 2004. The current National Program Coordinator of the Uganda Guinea Worm Eradication Program, Dr. Peter Langi, his predecessors, Dr. John B. Rwakimari and the late Dr. Gilbert Mpigika, and all their colleagues, as well as the people and political leaders of Uganda are to be congratulated on this historic achievement.

The Ugandan Guinea Worm Eradication Program recorded 126,639 cases in 2,677 endemic villages of 16 districts during its national case search in 1991-2 (Figure 1). In 1993, Uganda reported the second highest number of cases in the world, 42,852, which was exceeded only by Nigeria (75,752 cases) that year.

Figure 1

**Uganda Guinea Worm Eradication Program
Reported Indigenous Cases of Dracunculiasis:1992 - 2004***



This program benefited from the beginning from the strong support of Uganda's own political leaders, including in the Ministry of Health, by the UNICEF mission to Uganda, and by The Carter Center/Global 2000, which provided a fulltime Resident Technical Advisor in Uganda from 1991 to 1998, in addition to other support. Other external support was provided by two Italian Non-Governmental Organizations, *Associazione Volontari per il Servizio Internazionale* and *Collegio Universitario Aspiranti Medici Missionari*; the governments of Japan, Norway, United Arab Emirates and United States of America; Health and Development International, the Japanese businessmen's consortium *Keidanren*, and the World Health Organization.

Nine of the twenty endemic countries have now interrupted transmission of dracunculiasis, including all three endemic countries in Asia, and four of these (Pakistan, India, Yemen, Senegal) have been certified GW-free by the World Health Organization.

PRESIDENT TOURE OPENS MALI PROGRAM REVIEW, DISSATISFIED WITH SPEED OF PROGRESS SO FAR



Lutte contre le ver de Guinée
LE PRÉSIDENT TOURÉ
EST MÉCONTENT ET
LE FAIT SAVOIR

Amadou Toumani Touré dont l'engagement est connu dans le combat contre le ver de Guinée, a jugé décevants les résultats affichés par notre pays
 Lire en page 4



Fight Against Guinea Worm
 PRESIDENT TOURÉ IS DISSATISFIED AND HE'S
 MAKING IT KNOWN

Amadou Toumani Touré, whose involvement in the fight against Guinea Worm is well known, was disappointed by the results in our country

In a stern address that was interrupted repeatedly by applause, Mali's President Amadou Toumani Touré opened this year's annual national review dramatically, expressing his "profound disappointment" with the progress of his country's Guinea Worm Eradication Program. The exasperated president, who is still chairman of Mali's Intersectorial Committee for Dracunculiasis Eradication (since 1993), said that Guinea worm eradication is a "personal matter" for him, and that if those responsible for the program were "tired" or "incompetent" they should be removed. He said he is "embarrassed" that after all he has done since 1992 to advocate and mobilize people for Guinea worm eradication in Mali and other countries, visiting village after village, his own country is lagging so far behind. He declared that from now on, the national coordinator of the program would have to report directly to him every three months about the status of the program. The president's speech was carried prominently in the next day's government newspaper and on national television. The other speakers at the Opening Ceremony were Dr. Donald Hopkins of The Carter Center, and Minister of Health Mme. Maiga Zeinab Mint Youba.

Following the dramatic Opening Ceremony, the remainder of the annual review meeting, which lasted from January 13-15 in Bamako, was serious and specific. The program developed draft national objectives for 2005 and confirmed a list of the highest endemic villages, following a report on the status of its objectives for 2004. During work groups on the second and third day, the responsible staff

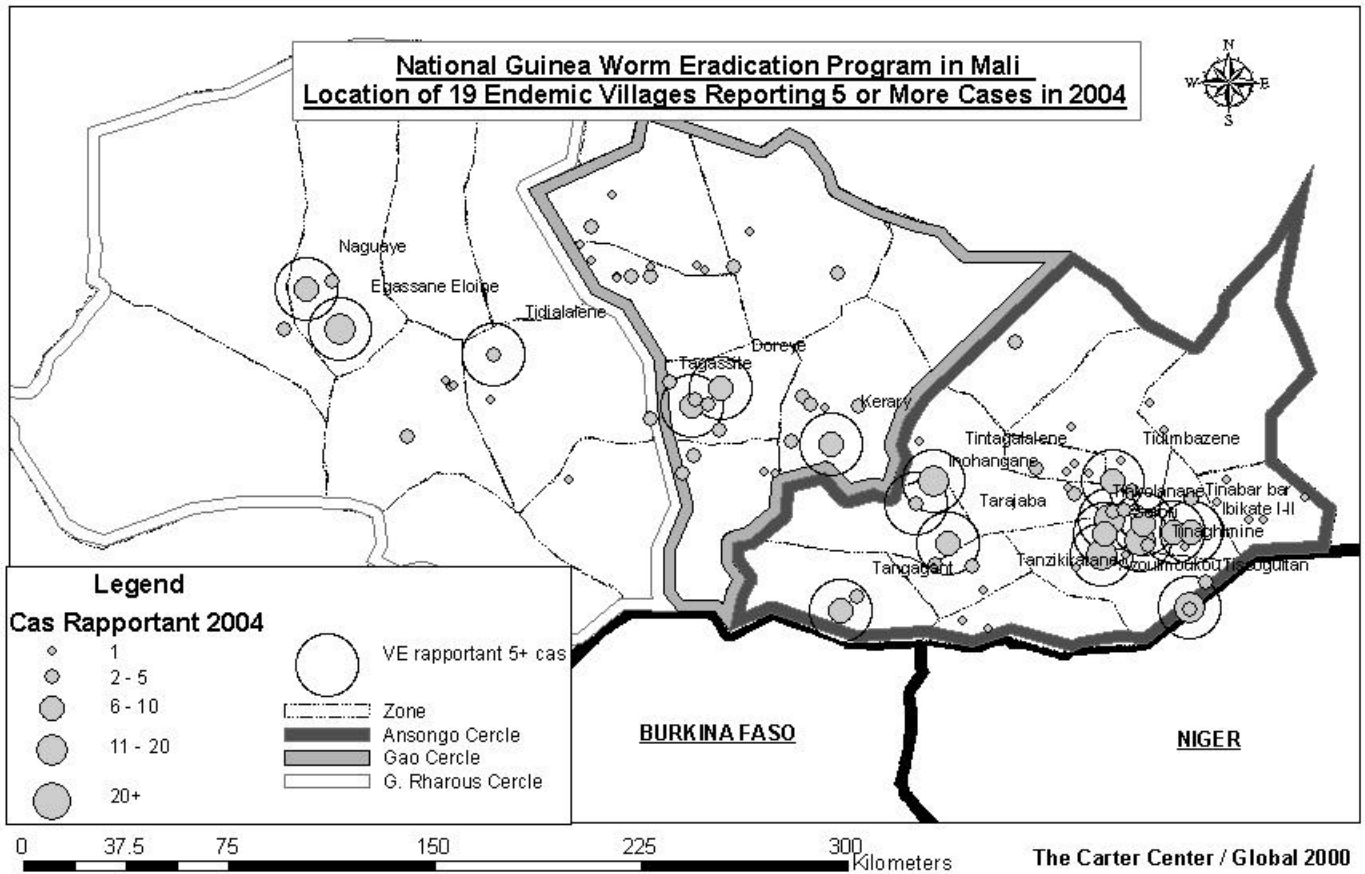
from the key endemic districts and regions prepared detailed objectives and work plans for 2005, building on the draft national objectives. Participants were happy to be informed on the last day of the review that the \$305,000 to UNICEF/Mali from the Contingency Fund of the Gates GW Grant, to be used for drinking water supply projects in endemic localities of Ansongo, Gao and Gourma Rharous Districts in 2005, had arrived in Bamako from New York the day before. The national director of health, Dr. Mamadou Traore, remarked during this meeting that although he has only been in his current position for six months, from the very beginning he has declared that Guinea worm eradication is his number one priority and that eradication will occur on his watch. The national GWEP coordinator from Burkina Faso (Dr. Dieudonne Sankara) and Niger (Mr. Harou Oumarou) also attended Mali's review.

Mali has reported 352 cases from 115 localities for 2004, of which 233 (66%) cases were contained. Three of the cases were imported (2 from Burkina Faso, 1 from Niger), and 93% of the cases were reported from only three districts: Ansongo (54%), Gao (26%), and Gourma Rharous (13%). Only one other district reported indigenous cases in 2004: Mopti. Thus Gao, Timbuktu and Mopti Regions are the only endemic regions remaining; Mali's other five regions have interrupted transmission of the disease. Nineteen villages reported 5 or more cases each in 2004, of which 13 were in Ansongo District, and three each in Gao and Gourma Rharous Districts (Figure 2). Ninety-three percent of the cases were ethnic Black Tuaregs. One new water source was developed in 2004, in Tinaghighi village (Ansongo District), which reported 23 cases in 2003. The list of Mali's objectives for 2005 is included below.

Mali Objectives 2005 (Draft)

1. Detect all cases within 24 hours of worm emergence in 19 villages that reported 5+ cases in 2004.
2. Contain 100% of cases detected in Mali in 2005.
3. Ascertain source of 100% of cases detected in Mali in 2005.
4. Ensure 100% household filter coverage in all 87 endemic villages by May 2005 and during peak transmission season.
5. Distribute pipe filters to all who need them by May 2005.
6. Apply Abate® larvicide monthly to all eligible localities during the transmission season.
7. Conduct Worm Weeks in the 40 most endemic localities of Ansongo, Gao, and Gourma Rharous Districts in April-May 2005.
8. Broadcast health education messages by radio weekly or radio cassette twice monthly during the transmission season
9. Ensure that new borehole wells from UNICEF/Gates Foundation and other sources are functional in highest priority endemic villages by December 2005.
10. Reach 100% supervisory coverage of all endemic villages by VVs, ASZ, and medical point focal by May 2005
11. Conduct 2 supervisory visits per month in endemic villages during transmission season by ASZ.
12. Cross-notify 100% of imported cases of dracunculiasis immediately on receiving information at district and national level.
13. Publicize reward system and pay rewards within 2 weeks of confirmation of a case of dracunculiasis.
14. Maintain case registers and investigate all rumored cases in 2005.
15. Organize a mobilization visit by the Minister of Health and/or head of state to the endemic zone to kick off Worm Weeks in April or May 2005.
16. Train and/or retrain supervisors by February 2005.

Has your program established quantifiable objectives for 2005?



Priority Zones

RANK	REGION	CERCLE	ZONE	CAS_2004
1	Gao	Ansongo	Tinhamma I	40
2	Gao	Ansongo	Ouatagouna I	38
3	Gao	Ansongo	Tessit II	32
4	Tombouktou	G. Rharous	Rharous Est	29
5	Gao	Gao	Intillit Sud II	22
5	Gao	Gao	Zinda/Gabero	22
6	Gao	Ansongo	Tinhamma III	14
7	Gao	Ansongo	Tessit I	13
8	Gao	Gao	Doro	10
9	Gao	Gao	Intillit Sud I	9
10	Gao	Gao	Intillit Nord	8

Priority Endemic Villages

CIRCLE	ZONE	VILLAGE	CAS_2004	LAT	LONG
G Rharous	Rharous Est	Egassane Eloine	20	16.00997	-1.66977
Ansongo	Tessit 2	Tintagalalene	18	15.50846	0.27204
Ansongo	Outagouna 1	Tissoguitan	14	15.09609	1.11462
Ansongo	Tinhamma 1	Tinaghimine	14	15.31681	0.94913
Ansongo	Outagouna 1	Tanzikiratane	14	15.38359	0.84958
Ansongo	Outagouna 1	Sorori	12	15.27155	0.82284
Ansongo	Tessit 1	Tangagant	9	15.0848	-0.02775
Ansongo	Tessit 2	Tarajaba	9	15.30793	0.32225
Ansongo	Tinhamma 1	Tinabar bar	9	15.34288	1.0596
Gao	Zinda/Gabero	Kerary	8	15.62904	-0.06228
Ansongo	Outagouna 1	Tinkolanane	7	15.33986	0.8325
Gao	Intillit Sud 2	Tagassite	7	15.75615	-0.51896
Ansongo	Tinhamma 1	Ibikate I-II	6	15.34163	1.11626
Ansongo	Tinhamma 1	Azoulmoukou	6	15.36814	0.96181
Ansongo	Tinhamma 3	Tidimbazene	6	15.5124	0.85851
Gao	Intillit Sud 2	Doreye	6	15.81375	-0.42099
G Rharous	Rharous Est	Naguaye	6	16.14155	-1.77639
Ansongo	Tessit 2	Inohangane	5	15.43836	0.21903
G Rharous	Gossi Est	Tidialalene	5	15.92193	-1.16373

GHANA REPORTS -12% CASES IN 2004, -44% IN JULY-DECEMBER



Ghana has reported a provisional total of 7,257 dracunculiasis cases for 2004, of which 4,519 (62%) were contained. This is a reduction of -12% from the 8,290 cases Ghana reported in 2003. Whereas cases were reduced by only -3.9% in January-June 2004, the rate of reduction in July-December was -44.1%. More than one-third of Ghana's cases occurred in two districts: Tolon-Kumbungu (1,260 cases, an increase of 412%) in Northern Region and Nkwanta (1,269 cases, a reduction of -2%) in Volta Region. All but 113 of Ghana's cases were reported from 14 of the country's 110 districts. Ghana's overall case containment rate increased slightly from 59% in 2003 to 62% in 2004, the number of case containment centers increased from 21 to 23; the Ghana Red Cross extended to help cover 16 districts (from 15), and the number of intensive "Worm Weeks" rose from 16 in 2003 to 28 in 2004. A major improvement in interventions during 2004 was Government of Ghana's provision of improved drinking water sources in endemic areas, with at least 28 new borehole wells providing clean water in Northern Region and 24 in Volta Region. Major deficiencies that are still apparent include inadequate monitoring of interventions (including the status of GWD in villages receiving new water sources), the low case containment rate, and inadequate surveillance in formerly and non-endemic areas of the country. Ghana continues to be a concern to its neighbors, having exported more cases of dracunculiasis in 2004 (57) than any other country: 46 to Togo, 7 to Burkina Faso, 3 to Cote d'Ivoire and 1 to Niger.

“EXPLAIN [the source of] & CONTAIN” EVERY CASE IN 2005!

GOVERNMENT OF SUDAN AND SPLM SIGN HISTORIC PEACE ACCORD

On January 9, 2005, representatives of the Government of Sudan and the Sudan People's Liberation movement (SPLM) signed a peace accord with great fanfare in Nairobi, before an audience that included several African heads of state. The accord legally ends the civil war that has ravaged the country, especially the southern states, for the past twenty-one years. Former US President Jimmy Carter issued a statement declaring that *“It is with great joy that I congratulate the government of Sudan and the Sudan People's Liberation Movement/Army on their peace accord signed today . . . An essential aspect of strengthening communities and rebuilding ordinary everyday life in Sudan will be giving all the people of Sudan the basic human right of access to health care. Carter Center-assisted health programs working in Sudan to help prevent the unnecessary suffering caused by Guinea worm disease, river blindness and trachoma look forward to reaching areas previously inaccessible due to conflict.”*

Sudan's Guinea Worm Eradication program has provisionally reported 6,560 cases of the disease in January-November 2004, which is a reduction of -67% from the 19,729 cases reported during the same period of 2003. It remains to be seen whether Sudan will report fewer cases than Ghana for 2004. The Sudanese program also distributed over one million cloth filters and held 165,942 health education sessions throughout the accessible endemic areas in January-November 2004. The new peace agreement sets the stage for completing the eradication of dracunculiasis and poliomyelitis from Sudan.

NIGERIA REPORTS LESS THAN 500 CASES, EVEN TIGHTER INTERVENTIONS



Nigeria has reported a total of 495 cases of dracunculiasis for 2004, which is a substantial reduction of -66% from the 1,459 cases reported in 2003. The Cases in 2004 were reported from 93 villages, of which 84 were endemic (the rest reported imported cases), in 35 of the country's 774 Local Government Areas, and 7 of the 36 states. And as illustrated in Figure 4, Nigeria's program strengthened coverage of endemic villages with cloth filters and safe water supply even more during 2004. Of the 495 cases, 449 (91%) were admitted to 21 Case Containment Centers within 24 hours of worm emergence, and 85% of all cases were fully contained.

Figure 3

**NUMBER OF CASES OF DRACUNCULIASIS REPORTED:
GHANA AND NIGERIA, 1989-2004***

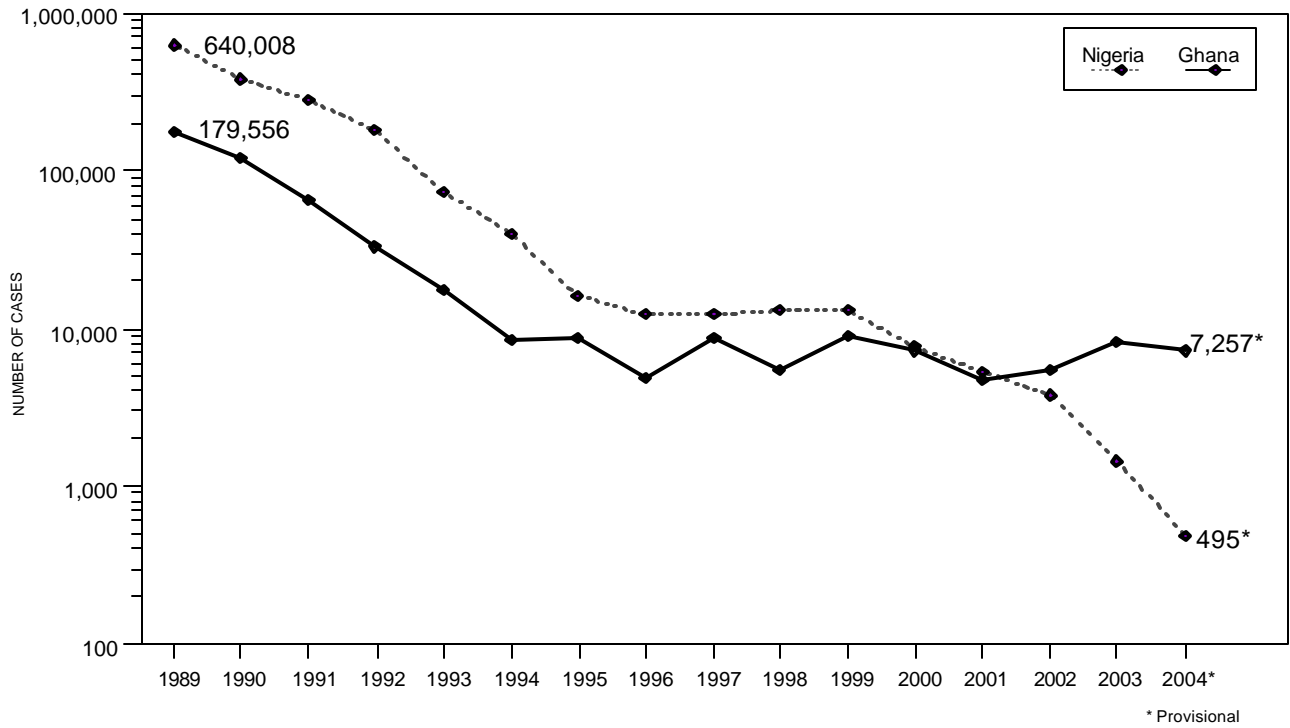


Figure 4

**NIGERIA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES REPORTED, AVERAGE OF ENDEMIC VILLAGES WITH FILTERS,
SAFE WATER, AND CASES CONTAINED: 1999 -2004***

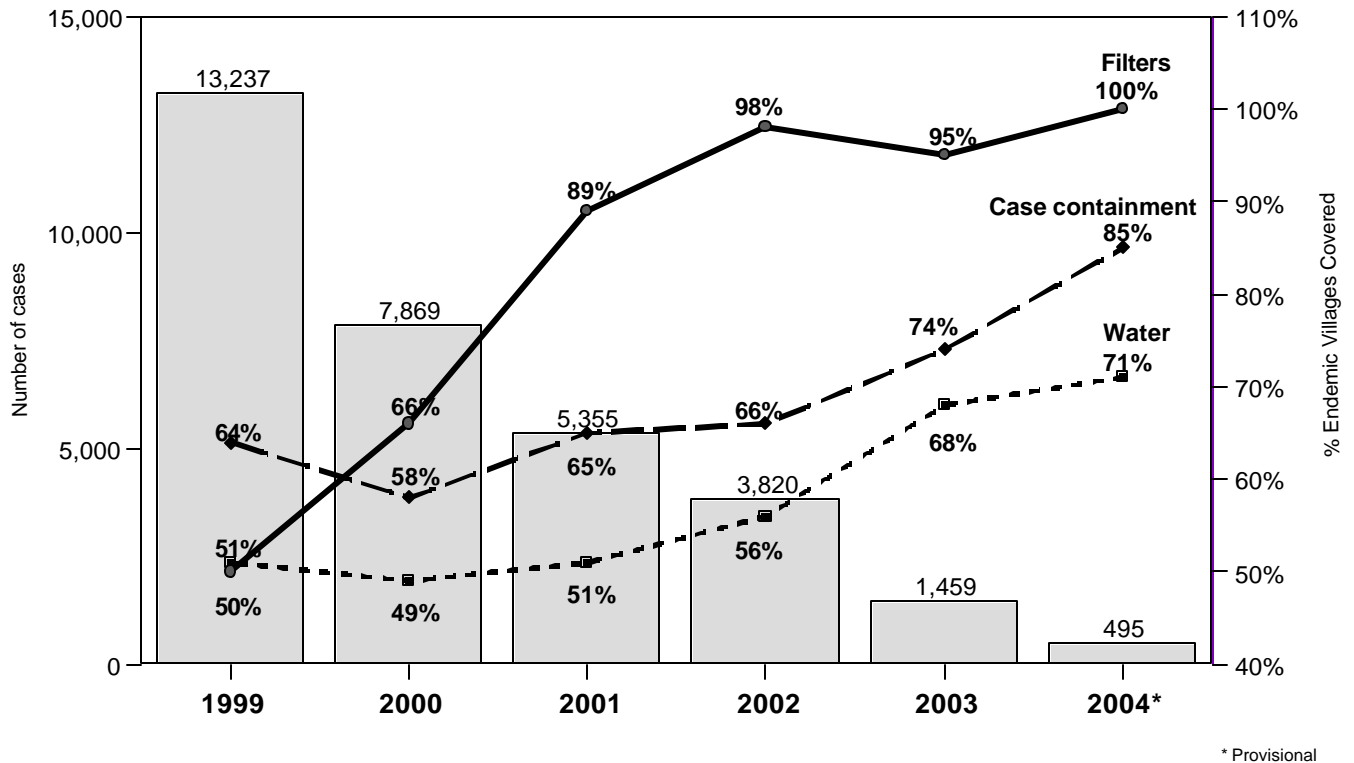


Table 1

Number of cases contained and number reported by month during 2004*
(Countries arranged in descending order of cases in 2003)

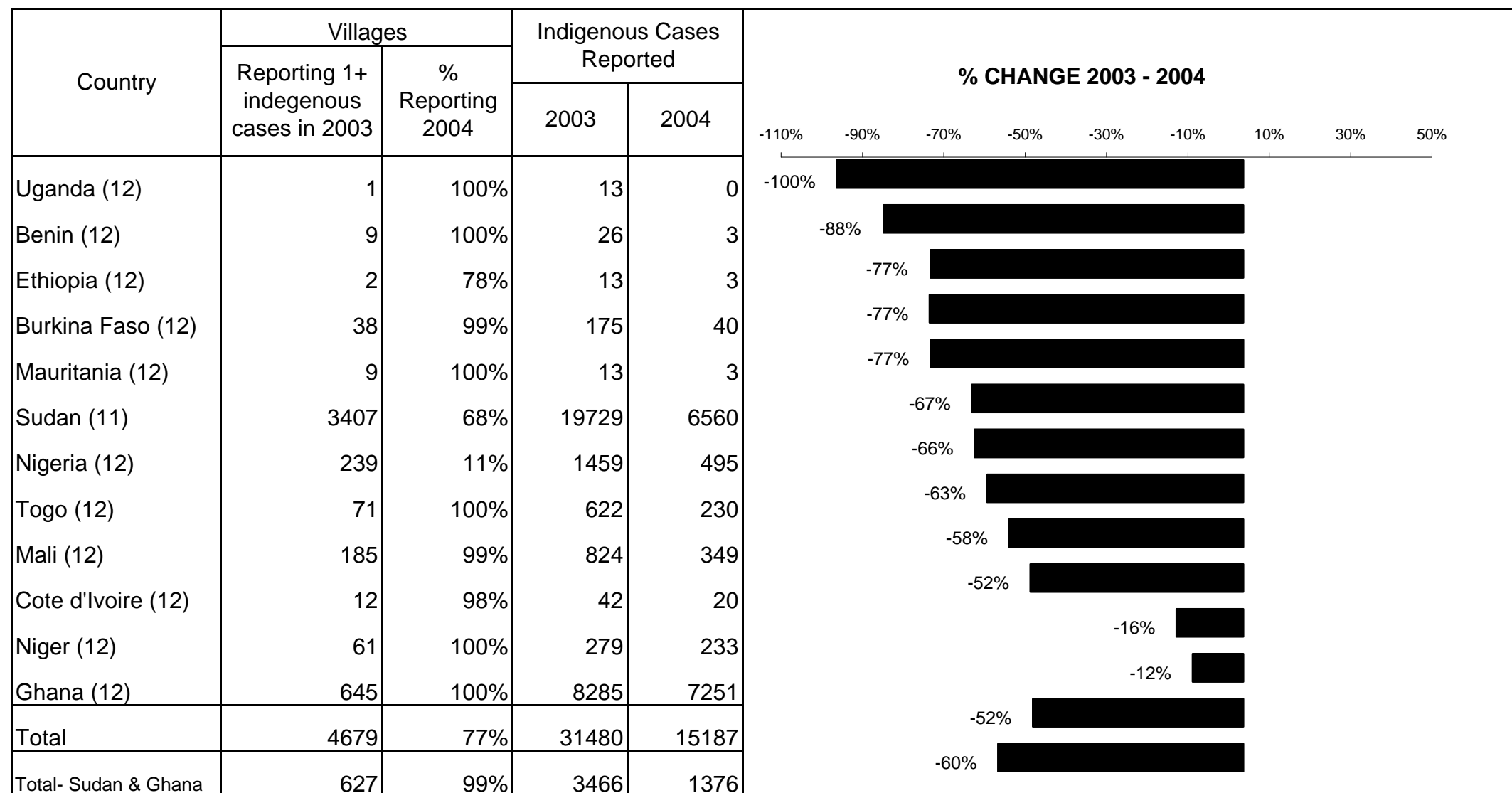
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	35 / 241	46 / 278	31 / 254	62 / 649	158 / 1204	192 / 1313	172 / 1154	98 / 751	44 / 543	16 / 137	6 / 36	/	860 / 6560	13
GHANA	651 / 1220	667 / 1139	624 / 990	590 / 907	677 / 905	377 / 519	183 / 258	93 / 115	21 / 38	157 / 234	296 / 436	183 / 496	4519 / 7257	62
NIGERIA	81 / 102	64 / 73	40 / 48	25 / 31	63 / 69	31 / 37	17 / 23	11 / 12	0 / 0	13 / 15	41 / 45	35 / 40	421 / 495	85
MALI	1 / 1	0 / 1	0 / 1	0 / 0	5 / 5	9 / 12	22 / 27	44 / 62	64 / 111	57 / 73	26 / 54	5 / 5	233 / 352	66
TOGO	35 / 46	20 / 29	18 / 47	12 / 21	17 / 20	16 / 22	4 / 6	1 / 3	9 / 9	19 / 19	27 / 28	20 / 26	198 / 276	72
NIGER	1 / 1	2 / 2	1 / 1	3 / 4	4 / 9	13 / 16	24 / 28	21 / 28	30 / 34	40 / 51	23 / 49	11 / 17	173 / 240	72
BURKINA FASO	1 / 1	1 / 2	0 / 0	2 / 2	5 / 5	3 / 4	7 / 12	5 / 8	10 / 15	4 / 7	2 / 4	0 / 0	40 / 60	67
COTE D'IVOIRE	1 / 2	5 / 5	0 / 5	1 / 4	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0 / 2	0 / 0	7 / 21	33
BENIN	0 / 0	2 / 2	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	100
ETHIOPIA	0 / 0	1 / 1	0 / 0	2 / 2	6 / 6	3 / 5	3 / 3	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	15 / 17	88
UGANDA	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	1 / 1	0 / 0	0 / 0	0 / 0	3 / 3	0
MAURITANIA	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	100
KENYA	/	/	/	/	1 / 1	2 / 2	/	1 / 1	1 / 1	/	/	/	5 / 5	100
TOTAL*	807 / 1615	808 / 1532	715 / 1347	697 / 1620	937 / 2226	648 / 1932	432 / 1511	275 / 981	180 / 752	306 / 538	421 / 654	254 / 584	6480 / 15292	42
% CONTAINED	50	53	53	43	42	34	29	28	24	57	64	43	42	

* PROVISIONAL

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

Figure 5

Number of Villages/Localities Reporting Cases of Dracunculiasis in 2003, Percentage of Endemic Villages Reporting in 2004*, Number of Indigenous Cases Reported During the Specified Period in 2003 and 2004*, and Percent Change in Cases Reported

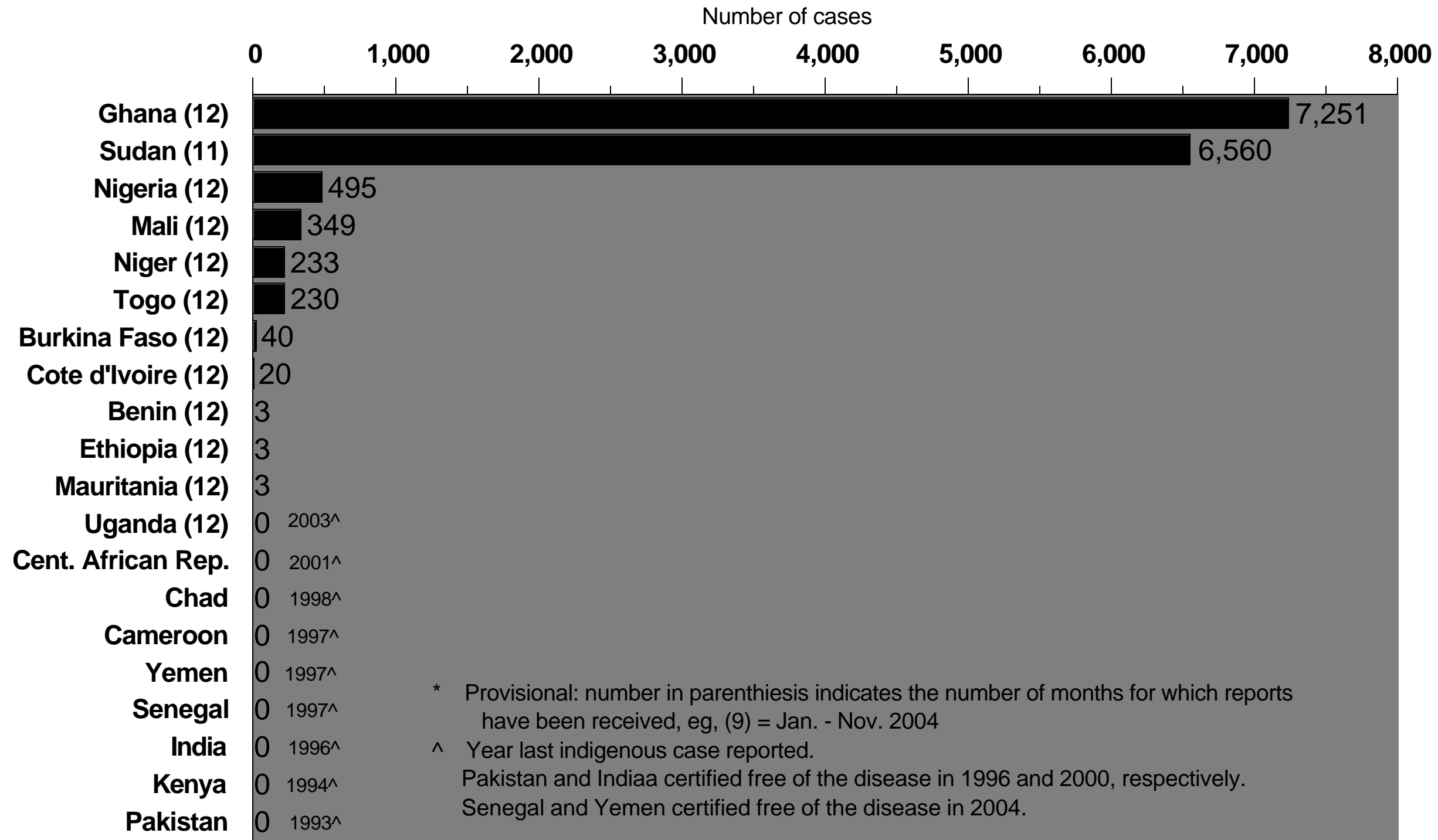


(11) Indicates month for which reports were received, e.g., Jan. - Nov. 2004

* Provisional

Figure 6

Distribution by Country of 15,187 Indigenous Cases of Dracunculiasis Reported during 2004*



ASSESSMENT OF CCCs IN TOGO AND GHANA

In May - June of 2004, Dr. Natasha Hochberg, EIS Officer with the Division of Parasitic Diseases at CDC, Ms. Jennifer Fagan, public health analyst at Health Resources and Services Administration and former Carter Center Technical Advisor, and Mr. Phil Downs from The Carter Center, visited Togo and Ghana to work with members of national Guinea Worm Eradication Programs (GWEPs) to evaluate the use, effectiveness, and perceptions about case containment centers (CCCs) in each country. A total of 884 interviews were performed at 8 centers (4 in each country) and nearby endemic areas. The teams also examined the CCC facilities, evaluated treatment protocols, and interviewed CCC staff.

Inspection of the facilities demonstrated overall cleanliness as well as adequate lodging areas and educational material, although several centers in each country were missing treatment materials and documentation forms. In Ghana, more so than in Togo, there was not a uniform definition of “case containment.” Furthermore, the GWEPs did not have a standard policy for dealing with water sources that may have been contaminated by patients en route to the CCCs.

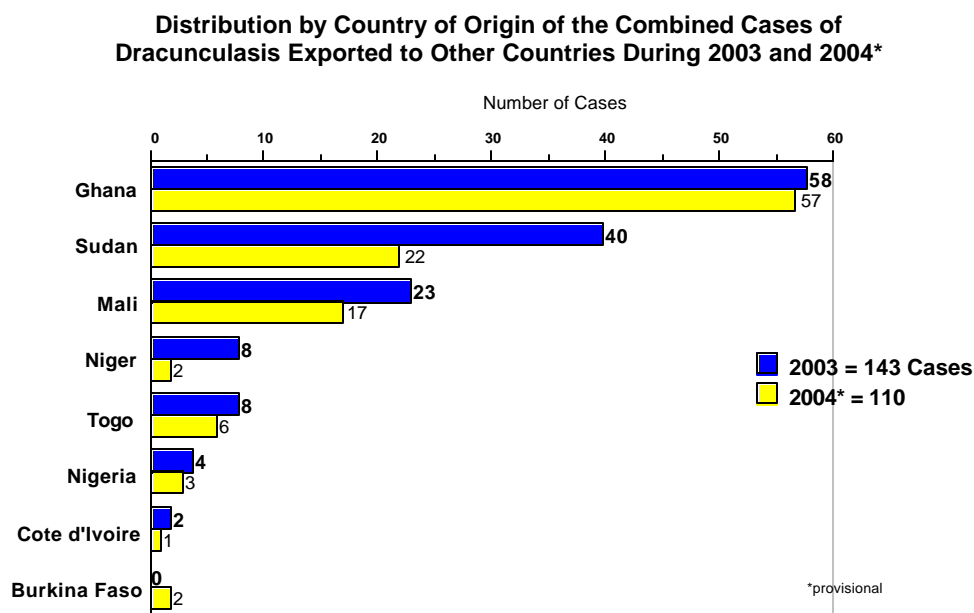
Overall, persons who utilized CCCs were younger than those who did not attend (mean 23 versus 28 years), and more likely to be students than those who did not, but gender, religion, and ethnicity were not significantly associated with CCC attendance. The most common reasons cited for not going to the CCCs were not knowing that the CCC existed (19.5%) and not having money for transportation (11%). Only two people out of the 118 who had heard about CCCs reported distance to the CCC as a reason for not going, although it took significantly longer to get to the CCCs in Togo (mean 2.2 hours) than in Ghana (0.5 hours). Persons who heard about CCCs from the village volunteer or supervisor were more likely than those who heard from another source to go to the CCC.

Of 145 persons questioned, 98.6% described their stay in a CCC as “good” or “very good.” Although 82.3% described treatment as “good” or “very good”, 13.6% said it was “bad” or “very bad” and complained primarily of the painful nature of the treatment. Despite this, 99.3% of those who utilized CCCs would go again if they were infected, and 95.4% would advise a friend to do so. The primary reasons cited for going to the CCC were faster healing (55.3%) and desire for treatment (28.3%) or pain relief (21%). Of note, the average length of stay at CCC (mean 18 days) was significantly shorter than the average number of school/work days missed by those who did not utilize the CCC (mean 50.5 days).

Over 98% of 543 community members knew what Guinea worm disease (GWD) is and 94.5% knew about the CCCs; of these, 99% would go to the CCC if infected, primarily to benefit from faster healing. In Togo CCCs, which are part of the primary health care system (PHS) clinics were more likely (4/4) to treat other infections/diseases in addition to GWD than those in Ghana (0/4), which are separate from the PHS unit. In Ghana, patients were more likely to have had GWD in the past than patients in Togo (mean 3.7 vs Togo 2.3; $P=0.03$); were less likely to have heard about the CCC from either the village volunteer or the supervisor than in Togo ($OR=0.34$, $CI= 0.15-0.76$); and the length of stay at the CCC was shorter than in Togo (mean=15.4 days vs Togo’s 19.6 days, $P= 0.004$).

Preliminary recommendations based on this study are: 1. Ensure that all CCC staff understand protocols for dealing with water contamination by a patient en route to the CCC as well as definitions of case containment. 2. Maintain adequate treatment supplies and reporting forms at all centers. 3. Continue community education about CCCs by village volunteers and district supervisors with special attention to older persons. 4. Remind community members in Togo that transportation to the CCCs will be paid for by the program.

Figure 7



JAPAN PROVIDES ADDITIONAL SUPPORT FOR GHANA



In early January, representatives of the governments of Japan and Ghana and of The Carter Center signed an agreement in Accra under which the Japan International Cooperation Agency (JICA) will provide a grant equivalent to US \$481,840 for the period 2005-2007 for Guinea worm eradication in Ghana's Northern Region. Beginning in 2005, Japan will also provide the service of two Japan Overseas Cooperation Volunteers (JOCV) to work with the Guinea Worm Eradication Program based in Tamale, and a Japanese water expert. The grant provides for a total of two vehicles, 25 motorbikes, 555 bicycles, and 500,000 pipe filters over the three-year period.

BASF DONATES ABATE® LARVICIDE



The Carter Center is pleased to acknowledge another generous pledge of ABATE® Larvicide by BASF, for use in Guinea Worm Eradication Programs in 2005. With production and sales facilities in more than 170 countries, BASF is the world's leading chemical company. BASF has been a partner to the Guinea worm eradication effort since 2001, contributing in-kind donations of ABATE® Larvicide valued at more than \$986,000.

UNICEF/GATES FUNDS FOR WATER SUPPLY ARRIVE IN MALI, NIGER, TOGO

After finally being transferred to UNICEF headquarters in New York from The World Bank in early December 2004, the funds allocated to UNICEF from the Contingency Fund of the Bill & Melinda Gates Foundation Guinea Worm Grant in July 2004 arrived in Mali, Niger and Togo on January 14, 2005. The funds are for providing safe water sources to priority endemic communities in Mali's Ansongo, Gao and Gourma Rharous Districts, Niger's Tera and Tillaberi Districts, and in the remaining highest affected areas of Togo. The new water sources are to be completed by the end of 2005, but it is hoped that many will be completed before this summer's peak transmission season in Mali and Niger. The amounts of these grants are: US\$305,000 for Mali, US\$257,500 for Niger, and US\$217,500 for Togo.

MEETINGS

ANNUAL MEETING OF PROGRAM MANAGERS TO BE HELD IN GHANA

This year's annual Meeting of Program Managers of Dracunculiasis Eradication Programs is now scheduled to be held near Accra at Akosombo, Ghana on April 5-7, 2005.

CROSS-BORDER MEETING

The 9th Cross-border Meeting for Dracunculiasis for Burkina Faso, Mali, Niger was held in Dori, Burkina Faso from 24 to 26 January 2005. It was organized by WHO and attended by all partners including about 40 representatives from different operational levels. The participants discussed the implementation of cross-border surveillance activities in 2004 and suggested work plans for 2005. The participants stressed the necessity to integrate surveillance activities in dracunculiasis eradication in the nomadic area with those of other priority diseases.

150TH ISSUE OF GUINEA WORM WRAP-UP

On January 31, 1983, the Guinea Worm Wrap-Up was first printed and distributed quarterly, in English only, to a readership of less than 50 persons. Beginning with the 15th issue (March 30, 1987), the Guinea Worm Wrap-Up began to be translated and distributed to interested French-speakers in Africa and Europe, and issue # 52 (January 1996) marked the beginning of monthly issues. There are now 72 consecutive issues of the Guinea Worm Wrap-Up posted on the CDC web page (see web page address below). With the 150th issue this month we mark exactly 22 years of efforts to inform the readership (now close to 1,300) and the coalition of supporting organizations about the status of national efforts to eradicate dracunculiasis in affected countries in Africa and Asia. As the goal of achieving eradication of dracunculiasis looms closer and closer, we re-commit ourselves to continuing to inform all of you about the status of the global campaign. The editor of the Guinea Worm Wrap-Up thanks the national coordinators of eradication programs in all the affected countries who continue to provide much of the substance of this publication and all others who, at one time or another, have helped to chronicle the history of this campaign.

*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 Dr. James H. Maguire, Director, WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCID, 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.