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

DEPARTMENT OF HEALTH & HUMAN SERVICES

Memorandum

Date: November 12, 2001

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

Subject: GUINEA WORM WRAP-UP # 118

To: Addressees

Detect Every Case (within 24 hours), Contain Every Worm (immediately)!

FRANCOPHONE COUNTRIES REDUCE CASES AND ENDEMIC VILLAGES

The annual Program Review for endemic francophone countries met in Cotonou, Benin on October 29-31. The major results of reports provided by seven endemic countries are summarized in Table 1. These seven countries have reduced their total cases reported by -39%, from 3,771 cases during January-September 2000 to 2,319 cases reported during the same period of 2001. Moreover, whereas these countries' cases occurred in 777 villages during all of 2000, the cases reported in January-September this year have occurred in only 430 villages, and 218 of those villages have had only one case each, so far. These figures do not, however, reflect the reality of several tiny hamlets that are the foci of disease in many of these villages.

As shown in Table 1, most key interventions are in place in most countries, with some exceptions. Filter coverage appears to be excellent in all of the countries, with 96% of known endemic villages reportedly having nylon filters distributed to all households (Benin did not distribute filters to all households in some villages with only 1 case where all were not at risk). Abate is being used in substantial amounts, but the quality and completeness of coverage cannot be judged from the data provided. More than three-fourths of remaining endemic villages have at least one source of safe water in four of the seven countries. Only Benin, Burkina Faso and Togo report case containment rates at a satisfactory level. The status of health education and community mobilization was reported in the line-listings provided by Benin, Mauritania and Niger. Mali and Cote d'Ivoire did not provide a line listing of interventions.

Table 1

Cases of Dracunculiasis Reported and Percentage Contained, Number of Villages Reporting Cases, New Endemic Villages, and Percent Coverage with Interventions Against Dracunculiaisis in the Seven Endemic Francophone Countries in West Africa: January -September 2001.

Country	Cases		Villages					
	Number reported	% contained	Reporting 1+ cases	Reporting 1 case only	New	% with filters	% treated with Abate	% with safe water
Burkina Faso	826	71%	125	85	42	100%	87%	78%
Togo	488	80%	112	35	26	100%	100%	52%
Mali	392	58%	73	27	19	88%	15%	Unknown
Niger	299	55%	54	40	1	100%	78%	25%
Cote d'Ivoire	185	45%	26	11	8	100%	73%	89%
Mauritania	80	55%	21	10	11	100%	43%	76%
Benin	49	88%	19	10	8	58%	74%	79%
Total	2319	67%	430	218	115	96%	73%	62%

Of these countries, Niger has so far reported the most improvement this year, having raced past Togo and Mali. Benin and Mauritania appear ready to join Ethiopia and Burkina Faso at the end of this year in the "under 100 cases" category, for which the World Health Organization (WHO) has lead responsibility. Togo has so far failed to progress as expected, apparently owing to localized, but still significant lapses in supervision and lack of active surveillance. Mali's unexpected setback is the subject of a separate article (see page 6).

Recommendations were made for each of the countries, including Central African Republic and Chad, which also participated in the review. Two of the most important general recommendations were that all of the endemic countries should use line-listings to monitor the status of interventions and report those results monthly , and that they should work with WHO to strengthen surveillance for dracunculiasis in areas that are already apparently non-endemic. Representatives of The Carter Center (Global 2000), UNICEF and WHO addressed the Opening Ceremony, in addition to former Mali head of state General Amadou Toumani Toure and the minister of health of Benin, the Honorable Celine Kandissounon. Dr. Donald Hopkins of The Carter Center stressed that all of the countries represented need to redouble their efforts, in order to stop transmission of dracunculiasis by the end of next year, when funding provided by the Gates Foundation for those activities is scheduled to end. General Toure pledged that whether he decides to run for the presidency of Mali next year or not, he intends to finish the struggle to eradicate dracunculiasis. Representatives from the Centers for Disease Control and Prevention (CDC), U.S. Peace Corps, Health and Development International and MAP International also participated in this Program Review.

MINISTER OF HEALTH PLEDGES 1000 NEW WELLS AND CHALLENGES NIGERIA'S GUINEA WORM ERADICATION PROGRAM

During a high-spirited visit to the Opening Ceremony of the annual review of Carter Center-assisted health programs in Nigeria, the Nigerian Federal Minister of Health, Prof. A.B.C. Nwosu, announced that Nigeria's head of state, President Olusegun Obasanjo, had authorized provision of 1,000 new wells to Guinea worm endemic villages in Nigeria. Declaring that he had not come to the ceremony to "listen to more speeches," the minister challenged the Nigerian Guinea Worm Eradication Program to think of what it should do differently in order to get rid of dracunculiasis in the rest of the country by the end of 2003. "Not business as usual!" he insisted. He said he would consider it a "personal insult" if a case of Guinea worm disease occurred in Nigeria after that date. He urged the program to begin a "short, sharp, intense" period of interventions to "search, find & destroy" every remaining case of the disease over the next two transmission seasons. As commissioner of health for Anambra State, Prof. Nwosu inaugurated the first state task force for Guinea worm eradication in Nigeria in 1986. As a university-based parasitologist before that, he published a seminal paper documenting the negative effects of dracunculiasis on health, agricultural production, and school attendance.

The annual review at which the federal minister spoke was held at Jos, in Nigeria's Plateau State on October 22-26. The first two days were devoted to a review of Guinea worm eradication activities (by National Program Coordinator Dr. K. Ojodu and Global 2000/Carter Center zonal consultants), followed by reviews of the onchocerciasis, lymphatic filariasis, schistosomiasis, and trachoma activities that are being assisted by The Carter Center in Nigeria. Representatives of the Federal Ministry of Water Resources, UNICEF, the United Nations Development Program, and other Nigerian health workers and officials also participated in the review of the Guinea worm eradication activities.

Nigeria has reported 33% fewer cases in January-October this year (4,679) compared to the same period of 2000 (6,933 cases) 16 of Nigeria's 37 states (including the Federal Capital Territory) are now Guinea worm-free, as are 681 of 774 Local Government Areas, and three other states have reported no cases in the first ten months of 2001. Only 690 Nigerian villages have reported cases in January-September 2001, compared to 906 villages that reported one or more cases during all of 2000, and 173 of the villages in 2001 have had only one case each so far. 441 of Nigeria's endemic villages in 2000 reduced their combined cases by 50%, from 5,160 cases in January-September 2000 to 2,601 cases in the same period of 2001. Another 398 Nigerian villages that reported 1,472 cases in 2000 reduced their cases to zero this year. So far, 97 villages that reported no cases in 2000 have reported a total of 1,639 cases this year.

Table 2

Number of cases contained and number reported by month during 2001*
(Countries arranged in descending order of cases in 2000)

COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SUDAN	897 / 2423	1121 / 2295	958 / 2320	1354 / 3146	1940 / 5101	2802 / 5767	3296 / 6198	2376 / 4288	1939 / 3498	/	/	/	16683 / 35036	48
NIGERIA	675 / 1044	621 / 1031	423 / 730	170 / 267	208 / 248	214 / 317	247 / 368	245 / 332	143 / 195	108 / 147	/	/	3054 / 4679	65
GHANA	612 / 844	665 / 903	369 / 474	324 / 442	276 / 378	172 / 198	80 / 101	56 / 69	14 / 17	/	/	/	2568 / 3426	75
BURKINA FASO	18 / 20	25 / 29	35 / 37	38 / 61	116 / 188	138 / 194	83 / 125	56 / 70	76 / 102	/	/	/	585 / 826	71
NIGER	1 / 2	2 / 2	0 / 0	1 / 2	9 / 13	7 / 12	33 / 62	53 / 101	58 / 105	40 / 66	/	/	204 / 365	56
TOGO	108 / 119	63 / 91	58 / 66	43 / 48	16 / 20	23 / 44	25 / 25	27 / 36	29 / 39	/	/	/	392 / 488	80
MALI	3 / 6	0 / 0	0 / 0	0 / 0	1 / 2	1 / 2	21 / 55	114 / 193	88 / 134	/	/	/	228 / 392	58
COTE D'IVOIRE	18 / 40	18 / 60	11 / 38	5 / 6	4 / 11	7 / 8	4 / 5	8 / 9	8 / 8	/	/	/	83 / 185	45
BENIN	12 / 17	13 / 14	7 / 7	3 / 3	1 / 1	0 / 0	1 / 1	0 / 0	6 / 6	/	/	/	43 / 49	88
MAURITANIA	1 / 1	0 / 0	1 / 1	0 / 0	0 / 1	3 / 3	17 / 25	7 / 20	15 / 29	/	/	/	44 / 80	55
UGANDA	0 / 0	0 / 0	0 / 0	3 / 3	6 / 19	15 / 17	5 / 9	1 / 1	3 / 4	/	/	/	33 / 53	62
ETHIOPIA **	0 / 0	0 / 0	0 / 0	1 / 1	2 / 5	4 / 7	2 / 2	2 / 3	5 / 5	4 / 4	/	/	20 / 27	74
C.A.R.	0 / 0	0 / 0	0 / 0	0 / 1	0 / 1	2 / 5	2 / 4	1 / 1	0 / 1	/	/	/	5 / 13	38
KENYA	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	1 / 1	1 / 1	4 / 4	/	/	/	/	7 / 7	100
TOTAL*	2345 / 4516	2528 / 4425	1862 / 3673	1943 / 3981	2579 / 5988	3389 / 6575	3817 / 6981	2950 / 5127	2384 / 4143	152 / 217	0 / 0	0 / 0	23949 / 45626	52
% CONTAINED	52	57	51	49	43	52	55	58	58	70			52	

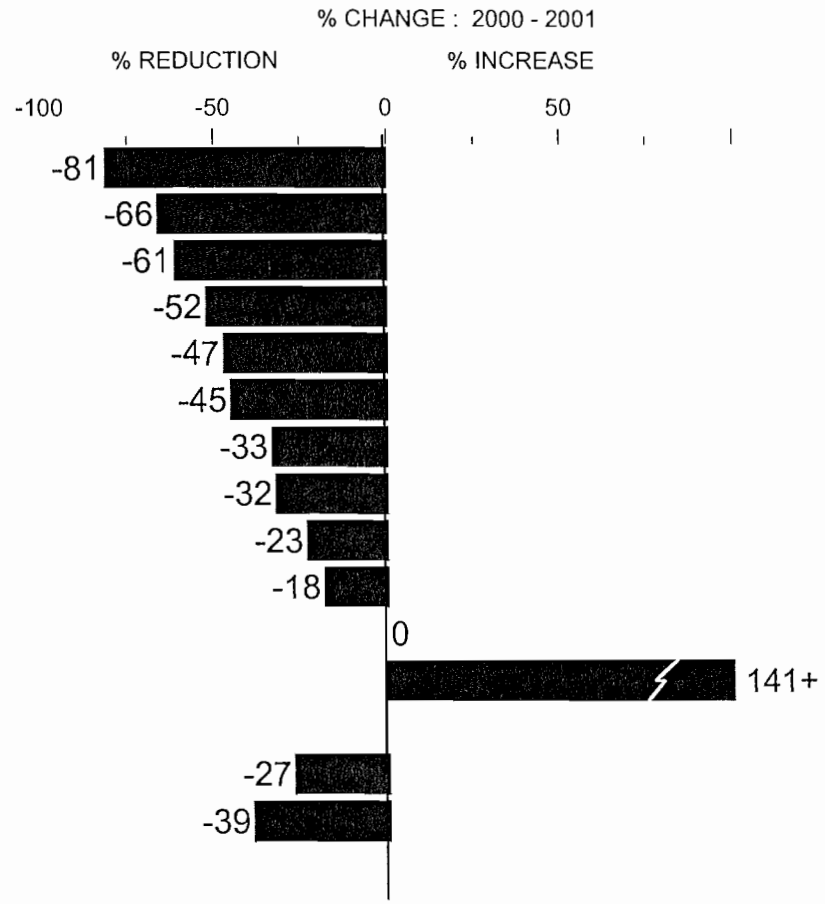
* PROVISIONAL

** 1 / 1 case reported in April, 3 / 5 cases in May, 5 / 6 in June, 1 / 2 in July, 4 / 5 in September, and 2/4 in October were imported from Sudan.
Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported that month.

Figure 1

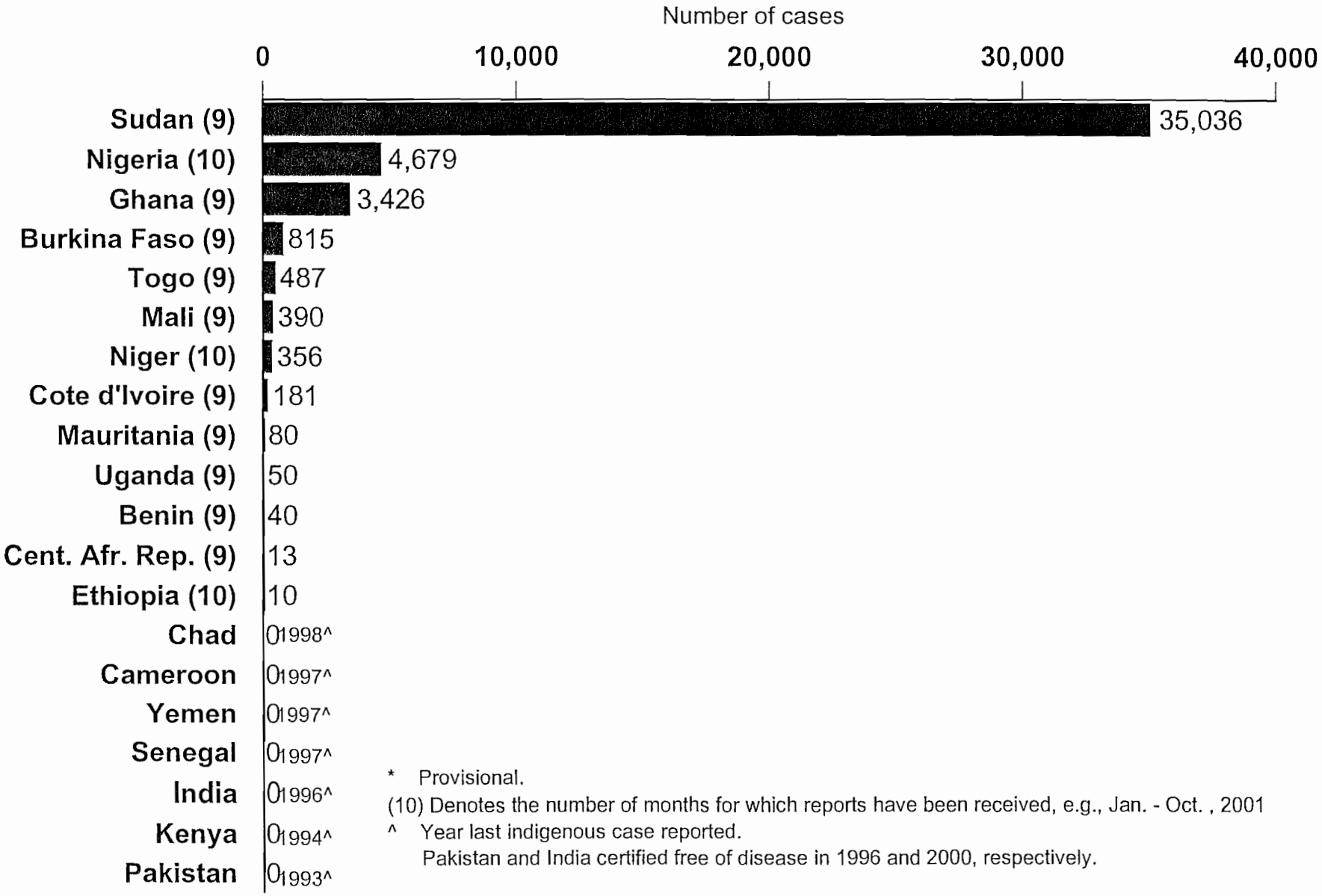
Percentage of Endemic Villages Reporting and Percentage Change in Number of Indigenous Cases of Dracunculiasis During 2000 and 2001*, by Country

COUNTRY	ENDEMIC VILLAGES		CASES REPORTED		% CHANGE : 2000 - 2001
	REPORTING 1+ CASES 2000	% REPORTING**	2000	2001	
ETHIOPIA (10)	18	100	54	10	-81
NIGER (10)	95	100	1050	356	-66
BENIN (9)	61	95	103	40	-61
BURKINA FASO (9)	336	81	1689	815	-52
UGANDA (9)	39	100	95	50	-47
GHANA (9)	981	99	6246	3426	-45
NIGERIA (10)	906	100	6993	4679	-33
COTE D'IVOIRE (9)	54	100	266	181	-32
SUDAN (9)**	3386	33	45492	35036	-23
MAURITANIA (9)	22	100	98	80	-18
TOGO (9)	147	100	488	487	0
MALI (9)	62	85	162	390	141+
CENT. AFR. REP. (8)	NR	NR	34	13	
TOTAL*	6129	56	62708	45563	-27
TOTAL (without Sudan)*	2743	99	17216	10527	-39



* provisional
** 2,523 (31%) of 8,269 endemic villages are not accessible to the program
(10) Indicates month for which reports were received, i.e., Jan. - Oct. 2001
NR No Report

Distribution by Country of 45,563 Indigenous Cases of Dracunculiasis Reported during 2001*



* Provisional.

(10) Denotes the number of months for which reports have been received, e.g., Jan. - Oct. , 2001

^ Year last indigenous case reported.

Pakistan and India certified free of disease in 1996 and 2000, respectively.

Eighty-nine percent (89%) of endemic Nigerian villages now have cloth filters in all their households, 29% are using Abate, and 52% have at least one safe source of drinking water. NIGEP plans to increase use of radio messages, begin implementing "Worm Weeks," start using WHO comic books to promote teaching about dracunculiasis in schools, distribute more pipe filters for personal use, and pilot test voluntary isolation of patients in special containment houses or primary care facilities in selected endemic areas. A consolidated national line-listing of endemic villages and the status of their drinking water supplies has been prepared for use in placing the 1,000 new wells. The Government of Japan has also agreed to provide 100 new borehole wells to help eradicate Guinea worm disease in Oyo State.

MALI'S PROGRAM SUFFERS SETBACK IN GAO REGION, THREATENS BURKINA & NIGER

News regarding the explosion of cases in northern Mali that was first mentioned in the September issue of *Guinea Worm Wrap-Up* has gotten worse. In the period of January-September 2001, Mali has reported 131% more cases than in 2000: 392 cases this year, vs. 170 cases reported in the same nine months of 2000. This already exceeds the total of 290 cases reported by Mali for all of 2000. Although progress in the remainder of the country has been good this year, fully 288 of this year's cases were in Gao and 61 cases were in Timbuktu Region. Within Gao Region, 215 of this year's cases were in Ansongo District and another 71 cases were in Gao District (figure 2). 58% of this year's cases so far were reportedly contained.

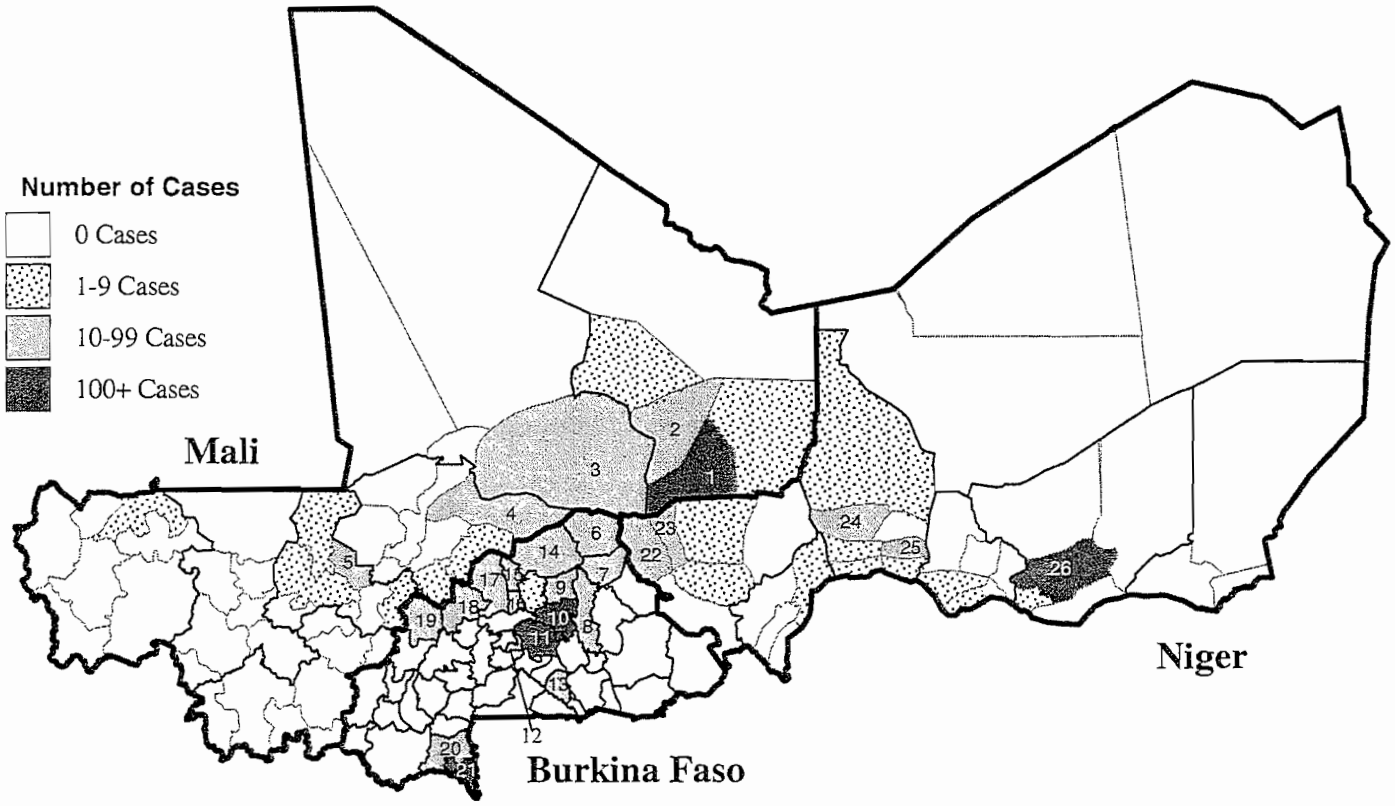
What is now clear is that many more cases occurred in these districts last year than were reported, and that underreporting was apparently due to passive surveillance and grossly inadequate supervision by the program. The embarrassingly late discovery of this outbreak in August 2001 and the lack of interventions before then unfortunately mean that more damage has already been done this year, the consequences of which will not be known until 2002. In addition, Mali's negligence also poses grave dangers to adjacent areas of Burkina Faso and Niger (figure 2), which are visited by the same dispersed, nomadic populations. Mali has now begun putting interventions in place and is actively searching for new cases. The Malian program intends to distribute many more pipe filters and increase the use of Abate wherever possible. The Carter Center has assigned an external consultant to help, and General Amadou Toumani Toure plans to visit the area early in 2002 accompanied by the national program coordinator, Dr. Issa Degoga.

WHAT IS AN ENDEMIC VILLAGE?

The question of exactly when is a village "endemic" has acquired increasing urgency as programs wind down to fewer and fewer cases of dracunculiasis and seek to focus their resources with greater efficiency. In short, *an endemic village is one in which indigenous transmission of dracunculiasis is occurring, or has occurred in the past year.* If, for example, a case of dracunculiasis is imported into a village and is reported there, that village is endemic only if the imported case has contaminated water and transmitted the disease to others. It is obviously necessary to investigate each apparently imported case carefully, and especially to ascertain whether cases of dracunculiasis in villages with only one or few case(s) are the result of effective control measures having reduced incidence of infection in a village that previously had more cases, or are imported from other areas into a non-endemic village. Both situations require vigilance, but only the endemic village requires implementation of control measures, unless the imported case has contaminated a local source of drinking water. Hence, not all villages that report one or more cases of dracunculiasis in a given year are necessarily "endemic," meaning that they contain foci of local transmission. In this context it is important to keep villages for at least three years on the operational list of the GWEP, but these should be clearly identified as villages under surveillance and not as endemic villages. National and local governments and external partners need to assist with the development and /or strengthening of the capacity for surveillance of dracunculiasis in formerly endemic areas. Elsewhere in this issue, it is apparent that an increasing proportion of villages that report one or more cases in a country in fact report only one case in a given year. Such villages are villages with one case of dracunculiasis. They may or may not be endemic villages.

Figure 2

Distribution of 1,517 Cases of Dracunculiasis Mali, Burkina Faso, and Niger: January – September 2001*



#	Mali	Cases
1	Ansongo	215
2	Gao	71
3	Gourma Rharous	61
4	Douentza	18
5	Macina	12

#	Niger	Cases
26	Mirriah	133
22	Tera	78
23	Tillabery	31
24	Tahoua	24
25	Bouza	14

#	Burkina Faso	Cases
21	Batie	145
11	Ziniare	118
10	Kaya	115
6	Gorom Gorom	66
13	Manga	47
17	Ouahigouya	42
20	Gaoua	35
9	Barsalogho	33
18	Tougan	32
19	Nouna	32
12	Bousse	31
14	Djibo	28
8	Boulsa	25
15	Titao	18
7	Dori	10
16	Kongoussi	9

* provisional

MARITANIA PROVIDES INFORMATION BOOKLET TO EVERY VILLAGE WITH CASES

In anticipation of this year's peak transmission season Mauritania's GWEP intensified social mobilization and health education efforts, particularly among 33 villages which reported cases in 2000 and/or in 2001, by holding National Days for Social Mobilization (NDSMs). Using the WHO comic book, a unique village information booklet, and popular games during these NDSMs, teams visited endemic villages fortnightly in Gorgol, Guidimakha, Assaba and Hodh El Chargui regions to educate people about the origin of the disease, its prevention, and to provide village-based health workers with medical kits, T-shirts, and training about surveillance, case containment and health education. Events during these National Days were covered by national television, radio and newspapers. This is the first time that a GWEP has used a village information booklet (printed in color and in both French and Arabic) to inform villagers about the disease, its prevention, and about the status of dracunculiasis in their village and in all other endemic villages. The booklet is nicely illustrated with color photographs, graphics, tables and drawings. A copy of the village information booklet is left in each village so they can record and observe their own progress towards eradication. Congratulations to Dr. Abdurrahmane Ould Kharchi and his team!

Dr. Alhousheini Maiga, the WHO/AFRO Regional Advisor for Guinea Worm Eradication, visited Mauritania in July to review the program's activities and assist in planning for 2002. Among his four recommendations he urged Mauritania to establish a National Committee for the Certification of Dracunculiasis Eradication. The Government of Japan has completed 204 new wells in 137 endemic or at risk villages between 1999 and 2001.

SUDAN HONORS ELVIN HILYER

In an award ceremony held in Khartoum on November 3, the Vice President of Sudan, acting on behalf of President Omar El-Bashir, conferred the Order of the Two Niles, Sudan's highest civilian honor, on departing Carter Center Resident Technical Advisor Mr. Elvin Hilyer. The award cites Mr. Hilyer's "appreciated efforts in the programs of River Blindness Control, Trachoma Control, and the Eradication of Guinea Worm [disease] in Sudan. And in gratitude to The Carter Center..." Congratulations to Elvin and Nancy Hilyer! Elvin and Nancy arrived in Sudan in September 1996, after having served as Global 2000 (Carter Center) Resident Technical Advisor to Uganda's Guinea Worm Eradication Program for two years. Before then, Mr. Hilyer worked for the U.S. Centers for Disease Control and Prevention (CDC) for thirty years.

The Hilyers have been succeeded in Khartoum by Mr. Mark J. & Natalie Beth Pelletier. Mark was a U.S. Peace Corps Volunteer in Ghana before joining CDC in 1992. He served as Resident Technical Advisor for Global 2000 (The Carter Center) to the Guinea Worm Eradication Program in Uganda in 1997-1998, before being assigned by CDC to work with WHO on polio eradication efforts in Ethiopia and later at the WHO Regional Office for Africa in Harare, Zimbabwe. Mark assumed his new duties in Khartoum in mid-October. Welcome, Mark and Beth!

RECENT PUBLICATIONS

Ruiz-Tiben E., Gutierrez Y., 2001. Dracunculiasis. Essentials of Tropical Infectious Diseases, RL Guerrant, DH Walker, PF Weller Eds. New York: Churchill Livingstone pp.426-428.

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) 488-4532.

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