DEPARTMENT OF HEALTH & HUMAN SERVICES

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

Memorandum

Date July 11, 1997

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

Subject GUINEA WORM WRAP-UP #69

To Addressees

Detect Every Case, Contain Every Worm!

EDITORIAL: How to make case containment more effective

Given that all programs except Sudan are now in the final stages of dracunculiasis eradication, what additional steps might programs take in order to intensify case containment? The need for such additional actions is implied in the low rates of reductions in cases of dracunculiasis (1997 incidence vs. 1996) now being seen in almost all of the remaining endemic countries except Sudan and the five least endemic nations (Cameroon, Chad, India, Senegal, and Yemen) (Figure 1). The expected correlation between rates of reduction of cases and the proportion of cases reported contained the year before is vividly confirmed by data comparing containment rates in 1995 with reductions in 1996 (Guinea Worm Wrap-Up #63, January 1997).

Two important indices suggest that the opportunity to attain the desired increase in case containment efficacy is real. The first is that the reported rates of cases contained outside of Sudan have increased from 56% in 1995 to 65% in 1996, and to 80% so far in 1997. A corollary has been the experience gained by programs in implementing case containment over the past two years. The second is that the number of known endemic villages outside of Sudan has been reduced substantially, from 8,778 in January 1995 to 4,373 in January 1997. The latter figure in particular shows the great increase in efficiency and effectiveness that is now possible if programs focus their attention and resources on the fewer endemic villages remaining. Of the two main components of case containment, namely, rapid reporting and rapid containment of all cases, improved reporting (stimulated in Ghana by offering of small rewards for reporting) may account for some of the apparent increase in cases seen so far in 1997. Ensuring better supervision of the health workers concerned is clearly one key to improving both of those two components of case containment. Another key is for programs to use the information they already have about where cases occurred in the previous year, in order to anticipate and focus on those individuals, households, and villages that were infected last year, since those are the persons, households, and villages that are at greatest risk of infection this year. Increasing social mobilization (and where appropriate, publicizing rewards for reporting) in all areas that are endemic or possibly at risk will help to identify any other previously unrecognized foci of the disease. Among the indices which programs can track, in addition to the proportion of overall cases contained, are the average time between emergence of a worm and reporting of that case, and the average time between reporting of a case and implementation of appropriate containment measures around that case. Programs should remember also that even when a case is reported late, there may still be time to prevent transmission from that case by using Abate to kill any infected copepods in contaminated water sources.

REVIEW TEAM MAKES RECOMMENDATIONS TO BURKINA FASO PROGRAM

On June 10, 1997, representatives from Burkina Faso's Ministry of Health, WHO, UNICEF, and Global 2000 completed a two-week review of the Guinea Worm Eradication Program in that country. The review was conducted at the request of the Government of Burkina Faso, partly to follow up the evaluation of the program which was completed in March 1996. The team reviewed program activities at the national, regional, district, health center, and village levels, and discussed their findings and potential solutions extensively with ministry of health officials. Among the main difficulties of the program that were highlighted by the team were the inability of the program to access funds allocated to it from World Bank loans to the government, as well as from UNICEF grants; frequent absence of a full-time national coordinator; "over-emphasis on decentralization and integration of services contributing to poor management and supervision at the central, regional, and district levels"; and poor detection, reporting, and record-keeping of cases. The team noted some positive features of the program as well, including availability of detailed G.I.S. maps showing the location of known endemic villages; and made recommendations to correct the deficiences cited by its report. The program is now working to implement the recommendations, with assistance from WHO, UNICEF, and Global 2000.

FIVE LEAST ENDEMIC COUNTRIES REPORT ONLY 18 CASES THROUGH MAY

Cameroon, Chad, India, Senegal, and Yemen have reported only 18 cases during the five-month period January-May 1997, as compared to 135 cases reported by those countries during the same period of 1996 (Table 1, Figure 1). This is a reduction of 87%. Of the 18 cases reported so far in 1997, 16 (89%) were contained. Kenya has reported no indigenous cases since May 1994. Among the moderately endemic countries with timely reporting, Mali and Côte d'Ivoire have achieved the highest reductions in cases so far this year: 69% and 60%, respectively (Figure 1).

SUDAN: WAR REDUCES REPORTING IN SOUTH; NORTHERN STATES REDUCE CASES

Intensified fighting in endemic areas of Upper Nile, Equatoria, and Bahr Al-Ghazal Zones is impeding reporting of cases and implementation of control measures in the southern areas of Sudan during 1997 to a greater degree than has been experienced since before the "Guinea Worm Cease-Fire" of 1995. Whereas reporting rates for endemic villages in the southern states averaged less than 19% in 1995 and 41% 1996, so far the rates of known endemic villages reporting from those states in 1997 (January-May) have averaged only 32%. Although the overwhelming majority of cases are in the affected southern states, it is still heartening to note the 67% reduction in cases reported from the northern states of Sudan, from 217 cases in January-May 1996 to 71 cases in the same period this year. The same states had already reduced their incidence in 1996 by 57%, compared to 1995. In June, Global 2000 of The Carter Center assumed formal responsibility for the coordination of Guinea worm eradication activities in the OLS-accessible areas of southern Sudan, at the request of Operation Lifeline Sudan (OLS). Most of the interventions against dracunculiasis in these areas are conducted by Sudanese health workers and staff of Non-Governmental Organizations.

Table 1

NUMBER OF CASES CONTAINED AND NUMBER REPORTED BY MONTH, 1997*
(COUNTRIES ARRANGED IN DESCENDING ORDER OF CASES IN 1996)

COUNTRY	# OF ENDEMIC VILLAGES: 1/1/97	# OF CASES IN 1996	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
			JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	5114	118578	1965 / 3589	752 / 1114	5035 / 7694	1948 / 5607	734 / 3204	/	/	/	/	/	/	/	10434 / 21208	49
NIGERIA	1288	12282	983 / 1148	1294 / 1332	878 / 1020	797 / 901	970 / 1110	/	/	/	/	/	/	/	4922 / 5511	89
GHANA	602	4877	1498 / 1685	1182 / 1625	904 / 1226	680 / 909	583 / 652	/	/	/	/	/	/	/	4847 / 6097	79
BURKINA FASO	337	3241	1 / 1	16 / 20	0 / 24	45 / 68	1 / 85	/	/	/	/	/	/	/	63 / 198	32
NIGER	416	2956	3 / 7	0 / 0	2 / 4	5 / 14	33 / 59	/	/	/	/	/	/	/	43 / 84	51
COTE D'IVOIRE	216	2794	148 / 156	166 / 177	109 / 140	130 / 171	134 / 153	/	/	/	/	/	/	/	687 / 797	86
MALI	430	2402	25 / 44	11 / 11	4 / 4	8 / 18	23 / 30	/	/	/	/	/	/	/	71 / 107	66
TOGO	249	1626	/ 120	39 / 55	/ 43	/ 52	/ 72	/	/	/	/	/	/	/	39 / 342	11
UGANDA	327	1455	6 / 7	1 / 6	26 / 35	110 / 197	295 / 525	/	/	/	/	/	/	/	438 / 770	57
BENIN	325	1427	98 / 112	37 / 37	15 / 17	69 / 72	10 / 13	/	/	/	/	/	/	/	229 / 251	91
MAURITANIA	143	562	1 / 1	0 / 0	1 / 1	/	/	/	/	/	/	/	/	/	2 / 2	-
ETHIOPIA	57	371	4 / 5	2 / 2	7 / 7	40 / 43	76 / 106	/	/	/	/	/	/	/	129 / 163	79
CHAD	12	127	2 / 2	2 / 2	6 / 6	1 / 1	1 / 1	2 / 2	/	/	/	/	/	/	14 / 14	100
YEMEN	7	62	0 / 0	0 / 0	1 / 1	1 / 1	2 / 4	/	/	/	/	/	/	/	4 / 6	67
SENEGAL	7	19	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	0 / 0	-
CAMEROON**	13	17	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	1 / 1	-
INDIA	3	9	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	0 / 0	-
TOTAL*	9546	152805	4734 / 6877	3502 / 4381	6988 / 10222	3834 / 8054	2862 / 6014	3 / 3	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	21923 / 35551	62
% CONTAINED			69	80	68	48	48	100	-	-	-	-	-	-	62	

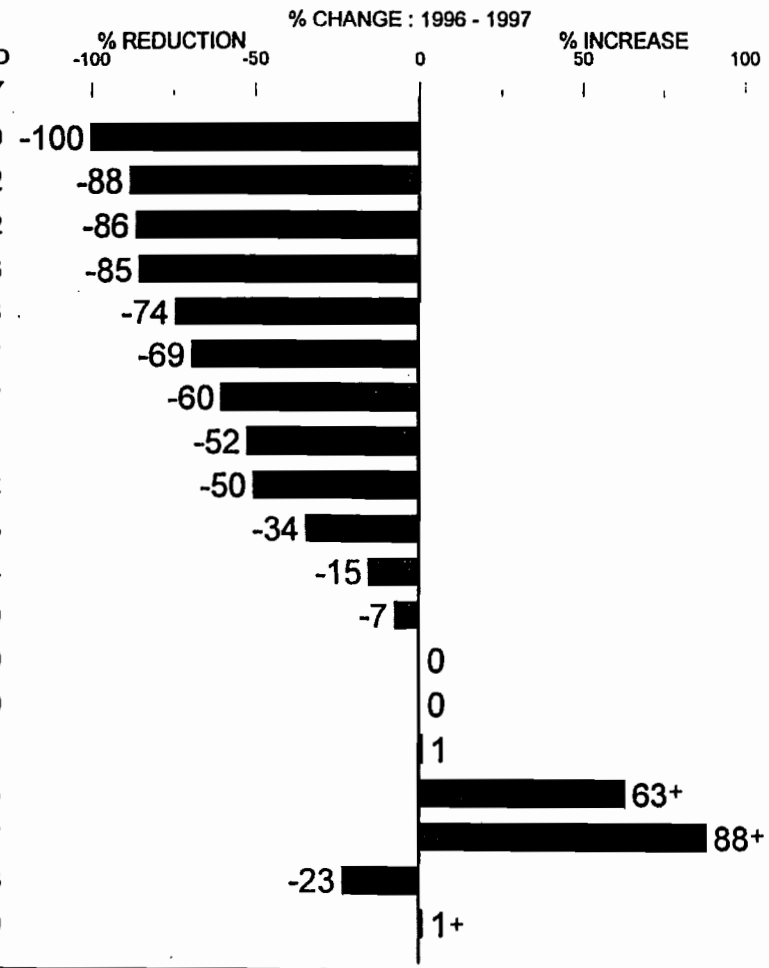
* Provisional

** Reported one case imported form Nigeria in June

Figure 1

PERCENTAGE OF ENDEMIC VILLAGES REPORTING AND PERCENTAGE CHANGE IN NUMBER OF CASES OF DRACUNCULIASIS DURING 1996 AND 1997*, BY COUNTRY

COUNTRY	ENDEMIC VILLAGES: 1997		CASES REPORTED		% CHANGE : 1996 - 1997
	NUMBER	% REPORTING	1996	1997	
INDIA (4)	3	100	2	0	-100
MAURITANIA (3)	142	NR	16	2	-88
CHAD (5)	12	100	88	12	-86
YEMEN (5)	7	100	40	6	-85
BURKINA FASO (5)	349	30	760	198	-74
MALI (5)	430	75	349	107	-69
COTE D'IVOIRE (5)	222	89	1974	797	-60
BENIN (5)	272	55	507	241	-52
TOGO (5)	249	NR	682	342	-50
SUDAN(5)	5249	33	32276	21208	-34
NIGER (5)	416	99	99	84	-15
UGANDA (5)	370	99	830	770	-7
CAMEROON (5)	13	100	0	0	0
SENEGAL (5)	7	100	0	0	0
NIGERIA (5)	1531	91	5455	5511	1
ETHIOPIA (5)	57	100	100	163	63+
GHANA (5)	992	100	3239	6097	88+
TOTAL	10322	57	46417	35538	-23
TOTAL WITHOUT SUDAN	5073	86	14141	14330	1+



* Provisional
(3) Reports for Jan. - Mar. 1997
(4) Reports for Jan. - Apr. 1997
(5) Reports for Jan. - May 1997
NR Not Reported

NIGERIA: MORE CASES IN NORTHEAST, SOUTHEAST ZONES; CARTER VISITS

Zonal Facilitator Mr. Ben Nwobi reports an increase of 47% in cases in the Northeast Zone of Nigeria, from 401 cases in January-May 1996 to 590 cases in January-May 1997. Most of the increase is in Nassarawa, Bauchi, and Borno States. So far this year, 75% of this zone's cases were contained. Zonal Facilitator Prof. Eka Braide reports an increase of 11% in cases in the Southeast Zone for the same periods: from 3,087 cases to 3,431, with 97% of this year's cases being contained. Four Local Government Areas (LGAs) in this zone (Abakaliki and Ikwo LGAs in Ebonyi State, and Guma and Ado LGAs in Benue State) reported 44% of Nigeria's cases in the first five months of 1997. However, highly-endemic Ebonyi State had fewer cases in January-May 1997 (2,106 cases) compared to January-May last year (2,380 cases); all of the increase in this zone occurred in Benue and Enugu States. The Zonal Facilitators for the Northwest (Prof. Luke Edungbola) and the Southwest (Prof. Oladele Kale) Zones report reductions of 24% (from 1,035 to 788 cases) and 23% (from 915 to 702 cases), respectively, with case containment rates of 97% and 91%. The reports from the latter two zones also include significant increases in cases reported from Niger State (from 223 cases to 286) and in Orire LGA of Oyo State (from 97 cases to 184) in the same five-month period. The net result of these reports is an increase of 1% in Nigeria's cases overall so far this year (Figure 1).

During a visit to Abuja on June 30, former U.S. President Jimmy Carter discussed the current status of the national Guinea Worm Eradication (NIGEP) and Onchocerciasis Control Programs in meetings with Nigeria's Head of State, General Sani Abacha, and with Federal Minister of Health, Dr. Ihechukwu Madubuike. Also present for the discussion with the minister of health were the NIGEP national coordinator, Dr. K. Ojodu, and the chairman of the NIGEP National Task Force, Prof. O. O. Kale.

IN BRIEF:

Ethiopia's Dracunculiasis Eradication Program reviewed the status of the program in that country's South Omo Region on June 16-18. The review meeting was chaired by national program coordinator Dr. Desta Alamerew. South Omo continues to struggle with dracunculiasis, the incidence of which has not declined in South Omo since the 1994 transmission session (Figure 2). Health and Development International has agreed to continue funding for offering of rewards for reporting of cases in 1997. This program also reported one case imported into Gambella Region from Sudan in May (Table 2).

Ghana, which is also struggling to complete its eradication effort, has steadily increased the proportion of cases contained in that country this year from 73% in February to 89% in May. The proportion of targeted water sources treated with Abate has averaged over 97% in February-May this year. Of Ghana's ten regions, Greater Accra and Upper East Regions have reported no indigenous cases in all of 1997 so far; Western Region has reported no indigenous cases since February.

Uganda. For the third straight year, Kotido District has failed to prepare adequately for the Guinea worm transmission season, with one result being a case containment rate of only 49% of the 418 cases reported from that district in May (vs. 100% containment of 6 cases reported in Kitgum District, and 83% containment of the 99 cases reported in Moroto District). With an increase of 57% as compared to May 1996, Kotido reported 63% of all cases of dracunculiasis in Uganda in May 1997. Global 2000 has named Mr. Mark Pelletier as its new resident technical advisor to this program. Dr. Karl Kappus is assisting the program until Mr. Pelletier, who will be on loan from CDC, takes up his post later next month. Dr. Kappus is also assisting the program in establishing cash rewards for reporting of cases.

Niger. During the second annual "Worm Week" in Zinder, led by Peace Corps Volunteer (PCV) Mr. Michael Kinzer, 21 teams, each comprising one PCV and one Nigerien, worked to intensify interventions in several endemic villages in June. Tera Region implemented a Worm Week for the first time, deploying eight pairs of workers. The Niger GWEP has also taken delivery of its own locally-designed and manufactured version of "Faso Fani cloth", to provide as incentives to workers in the program. Funding for this cloth is being provided by UNICEF/Niger.

Figure 2

Cases of dracunculiasis reported from South Omo Region, Ethiopia: 1994-1996

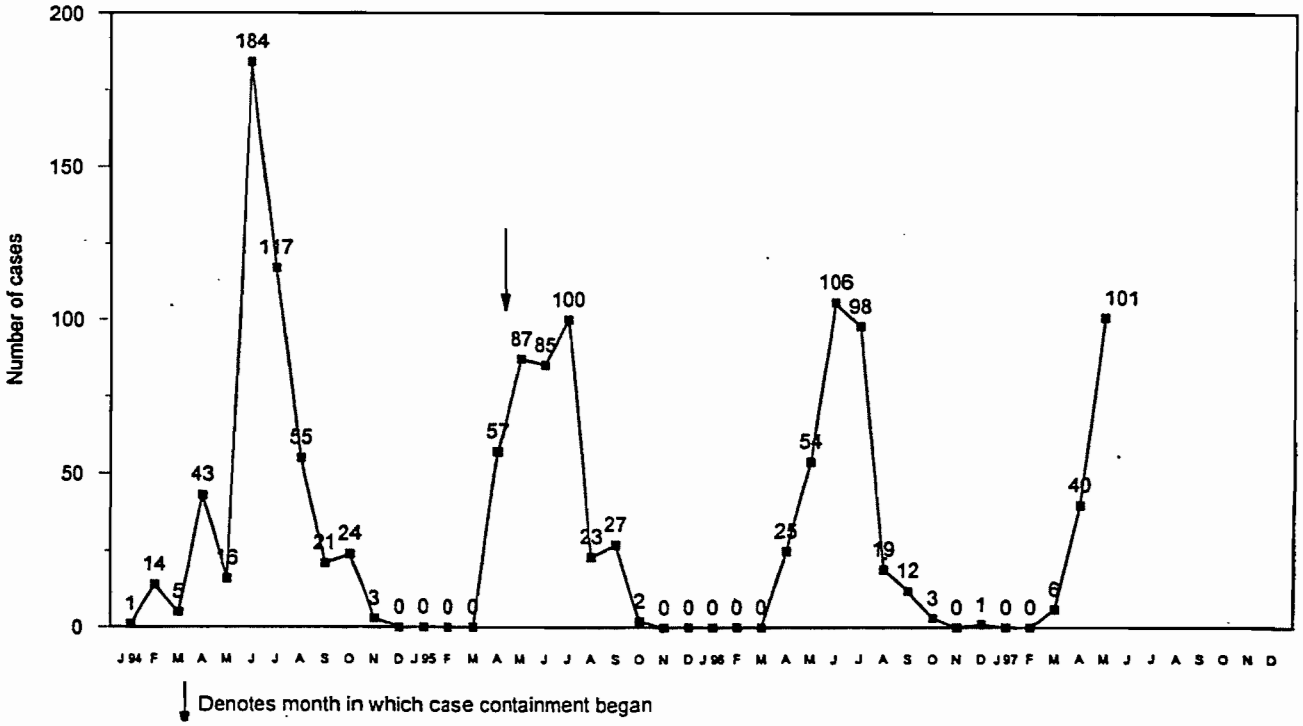


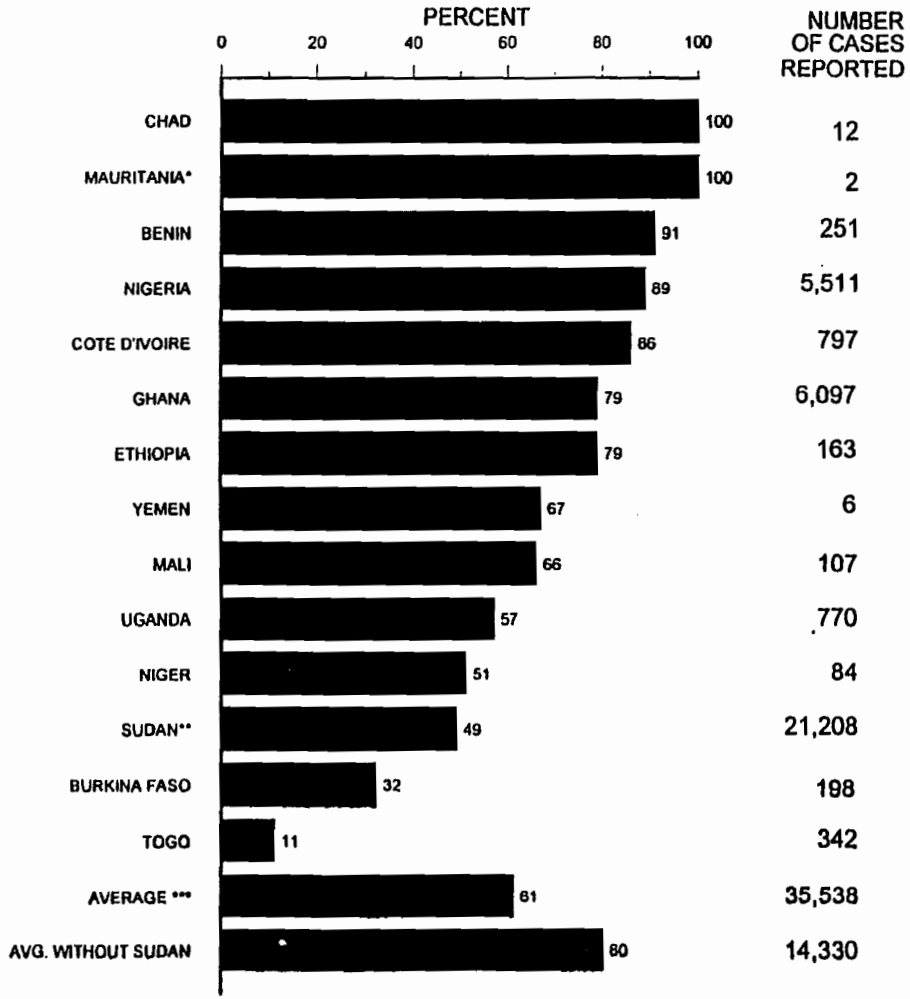
Table 2

Reported Importations of Cases of Dracunculiasis: Jan.- Jun.1997

From	To	Month	Cases		
			Number	Contained	Cross notified
Ghana	Togo	January	3	1	3
Nigeria	Cameroon	June	1	1	1
Sudan	Uganda	March	3	?	?
	Ethiopia	March	2	2	2
		May	1	0	1
Total			10	4	7

Figure 3

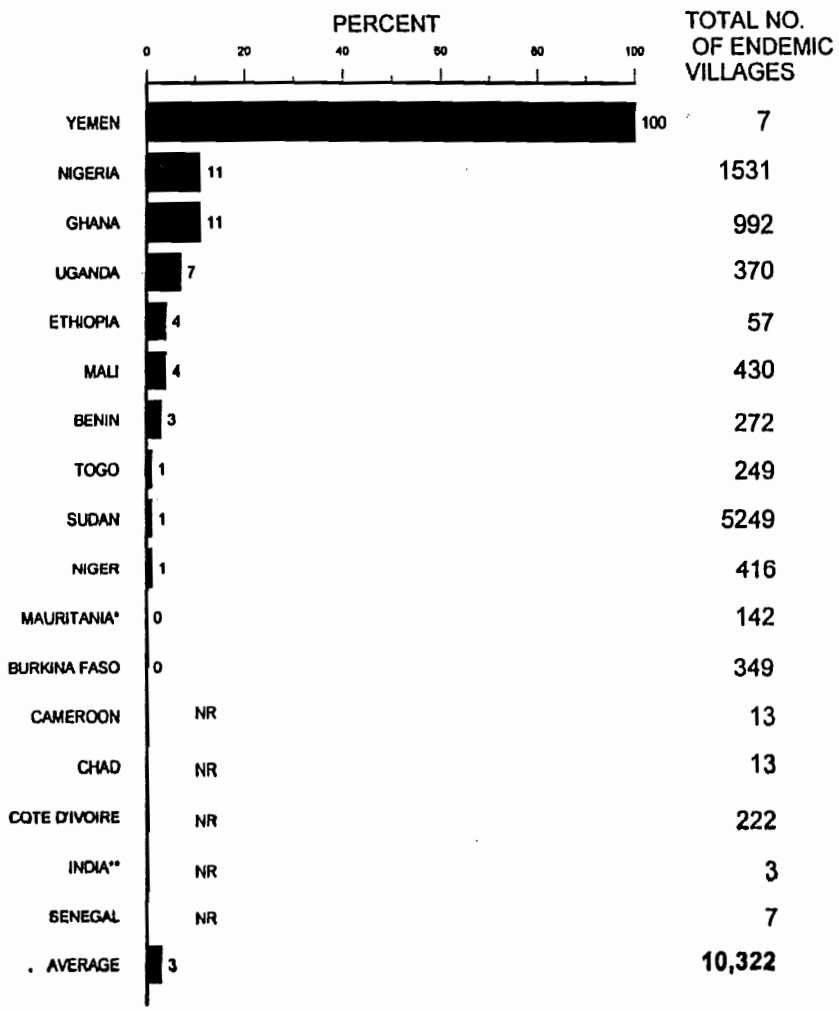
PERCENTAGE OF CASES
CONTAINED BY COUNTRY: JAN. - MAY 1997



* Reports for Jan.-Mar. 1997
** Cases managed or contained
*** Cameroon and Senegal reported 0 cases for Jan.-May. 1997; India reported 0 cases for Jan.-Apr. 1997

Figure 4

PERCENTAGE OF ENDEMIC VILLAGES
UNDER VECTOR CONTROL: JAN. - MAY 1997



* Reports for Jan.-Mar. 1997
** Reports for Jan.-Apr. 1997
NR No report

MEETING

- Interagency Coordinating Group for Dracunculiasis Eradication
  UNICEF/New York, July 22, 1997

PROGRAM REVIEWS

- For anglophone countries: Sana'a, Yemen, September 29-October 2, 1997
- For francophone countries: Abidjan, Côte d'Ivoire, October 20-24, 1997

CONFERENCE

- 7th Conference on Dracunculiasis Eradication, Bamako, Mali, March 1998

RECENT PUBLICATIONS

Hunter JM, 1997. Bore holes and the vanishing of Guinea worm disease in Ghana's Upper Region. Soc Sci Med, 45: 71-89.

> "Following a Ghana-Canada bilateral development project that installed some 2,500 pumps, protection against guinea worm disease may be estimated as 88% in the west, and 96% in the east . . . . Correlative association between pump densities and guinea worm disease are weakened by the large size of areas for which disease is reported in 1990. One preliminary finding is that geographical distance to the pump is a stronger influence than demographic pressure on pumps."

* * * * *

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 Trenton K. Ruebush, MD, 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.