



Eye of the Eagle



Volume 5, Number 2

THE CARTER CENTER

July 2004

Center Hosts Annual Review River Blindness Program Assists in 9.7 Million Treatments in 2003

During the eighth annual River Blindness Program review meeting, held in Atlanta March 1-3, 2004, local and field staff of The Carter Center reported on the status of each program and analyzed impediments to program implementation. Dr. Donald Hopkins, acting technical director of the River Blindness

Program, chaired the meeting.

The Carter Center assisted in providing treatments with Mectizan® in 11 countries in 2003, with 96 percent of the annual treatment objective attained. The 2003 accomplishments represented an increase of 8 percent over treatments assisted in 2002. Of the treatments assisted in 2003, 97 percent were accomplished in partnership

with the Lions Clubs International Foundation and the help of local Lions. Most treatments in Africa were also in collaboration with the African Program for Onchocerciasis Control (APOC). Table 1, page 2, provides a summary of the 2003 treatment activities.

The African focus of presentations and discussions was sustainability of programs post-APOC and integration of health programs. An in-depth look at sustainability prospects can be found in the article on page 5. Other topics included 2003 treatment returns (see Figure 1, page 3), training activities, 2004 annual treatment objectives,

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Waging Peace. Fighting Disease. Building Hope.

Clean Faces: Where the F and E of SAFE Come Together

The Carter Center's annual Trachoma Control Program review meetings are structured to encourage program coordinators and other technical experts in trachoma control to exchange ideas, looking both forward and backward—reviewing data, sometimes identifying missed opportunities, and always planning for the future. The 2004 program review was no exception, and the discussions on how to evaluate and improve hygiene in trachoma endemic villages were rigorous and exciting.

When assessing trachoma control program progress from 1998-2003, it became clear how powerful a tool

measurements of *clean faces in children* could be. Aside from reductions in TF (which also may result from treatment with antibiotics), nothing indicates how well F and E interventions are working than tracking changes in facial cleanliness. Village-based health education, school health programs, latrine promotion, and water projects all come together in the clean faces of children. Facial cleanliness measures how well preventive interventions are working (i.e., keeping faces free of discharges and flies).

Most programs have collected facial cleanliness data in baseline

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River Blindness

River Blindness Review

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ultimate treatment goals, Mectizan logistics, epidemiological assessment activities, operations research, and administrative issues.

Overall, programs maintained excellent coverage in 2003. Given the current or approaching end of many African projects' APOC funding, the programs have begun to consider other funding resources. (See *Sustaining Mectizan Distribution in the Post-APOC Era*, page 5.) Areas where funding has ceased are already experiencing problems. These programs and their allies will need to continue to seek innovative solutions and advocate strongly for additional sustained support from their governments, development agencies, and nongovernmental development organizations. Front-line health care facilities are believed to be an important component in sustainability. Across the board, these facilities need

to be strengthened. It also would benefit the programs if onchocerciasis were shown to be eradicable in Africa.

Summary of Treatment Reports

Nigeria

The River Blindness Program, in collaboration with Lions Clubs International Foundation and APOC, assisted in treating 5,076,541 people with Mectizan in 2003. This number was 99 percent of the annual treatment objective and roughly equal to the number of treatments given in 2002. Treatment activities in Plateau and Nasarawa states continued to show the advantages of integrating the onchocerciasis, lymphatic filariasis, and schistosomiasis treatment programs, although the program is still awaiting clearance from the World Health Organization before it can administer simultaneously the three drugs concerned, when necessary.

Uganda

The program in Uganda treated 990,194 people with Mectizan in 2003 in collaboration with the Lions Clubs International Foundation. This number was 99 percent of the ultimate treatment goal, a 4 percent increase over 2002 treatments.

Cameroon

A total of 1,360,833 people were treated in Cameroon in 2003 with River Blindness Program/Lions Clubs International Foundation assistance. This number was 108 percent of the annual treatment objective and a 2 percent increase in treatments over 2002. Of the 2003 treatments, 80 percent, or 1,089,383, were achieved in collaboration with the Lions Clubs International Foundation and APOC in the West province, and the other 271,450 in the North province project were supported by APOC.

Table 1

Onchocerciasis: 2003 Mectizan treatment figures for Global 2000 River Blindness Program (GRBP)-assisted areas in Nigeria, Uganda, Cameroon, Ethiopia, and collaborative programs in Latin America (OEPA) and Sudan

Country/Tx Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL	% ATO	% ALL GRBP TX
NIGERIA	*ATO(earp)= 5,110,783		ATO(arv)= 7,921												
TX(earp)	0	5,744	115,628	415,680	1,234,162	559,215	840,015	478,725	568,418	492,079	352,872	216,227	5,076,541	99%	52%
TX(arv)	0	21	121	545	1,575	1,158	1,049	900	887	882	525	180	7,851	98%	41%
UGANDA	*UTG= 998,275		ATO(arv)= 2,351												
TX(earp)	13,387	231,690	189,165	67,251	9,609	11,113	200,148	178,060	82,582	3,219	360	0	990,194	99%	10%
TX(arv)	30	675	728	454	295	227	649	486	824	72	13	0	2,324	98%	12%
CAMEROON	ATO(earp)= 1,265,391		ATO(arv)= 2,708												
TX(earp)	0	0	0	0	123,018	702,402	385,676	146,211	3,526	0	0	0	1,360,833	108%	14%
TX(arv)	0	0	0	0	0	0	0	2,343	583	0	0	0	2,926	108%	15%
OEPA**	**UTG(2)= 879,774		ATO(arv)= 1,934												
TX(earp)	0	0	0	0	0	406,786	0	0	0	0	0	412,780	819,066	93%	8%
TX(arv)	0	0	0	0	0	1,821	0	0	0	0	0	0	1,821	94%	1%
ETHIOPIA	ATO(earp)= 1,119,863		ATO(arv)= 4,250												
TX(earp)	0	0	27,422	139,622	527,149	306,794	6,996	0	0	0	0	0	1,007,983	90%	10%
TX(arv)	0	0	0	0	0	0	4,250	0	0	0	0	0	4,250	100%	22%
SUDAN	ATO(earp)= 716,870		ATO(arv)= 19,164												
TX(earp)	10,693	14,345	8,651	4,621	45,924	69,877	42,745	32,157	6,054	93,529	78,770	32,322	439,798	61%	5%
Totals	ATO(earp)= 10,091,156		ATO(arv)= 19,164												
TX(earp)	24,090	254,779	341,174	627,154	1,939,862	2,029,355	1,238,889	896,525	731,294	527,620	385,354	660,829	9,694,415	96%	100%
TX(arv)	30	699	849	999	1,870	1,383	1,695	3,729	2,294	964	538	180	19,172	100%	100%

GRBP-assisted cumulative treatments = 55,129,996

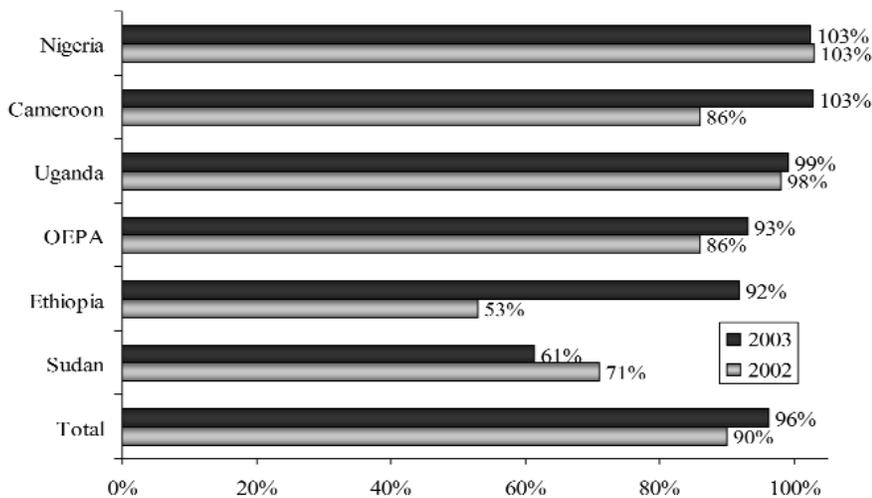
ATO: Annual Treatment Objective, UTG: Ultimate Treatment Goal, Tx: Number Treated, earp: Eligible At Risk Population, arv: At Risk Villages

**OEPA figures reported quarterly, UTG(2) is the Ultimate Treatment Goal times 2, since OEPA treatments are semiannual

River Blindness

Figure 1

GRBP-assisted Programs: Percent of Ultimate Treatment Goals reached in 2002 and 2003



Ethiopia

In its third year of mass Mectizan distribution, Ethiopia treated a total of 1,007,983 people with River Blindness Program/Lions Clubs International Foundation assistance. This represents a 95 percent increase over 2002 and 90 percent of their annual treatment objective for 2003. This was also the first year that the Ethiopian program has exceeded 1 million treatments. The program is expanding into two new regions in 2004, which will more than double its ultimate treatment goal to 2,429,644.

Sudan

The ongoing war in Sudan and inadequate national funding continue to pose obstacles to safe drug delivery by the program. This year treatments decreased by 22 percent to 439,798, or 61 percent of the annual treatment objective. A peace settlement seems imminent, and the

program continues to develop strategies for increased postwar treatments.

The Americas

In OEPA, the strategy is to provide two Mectizan treatment rounds per year in all endemic communities, not only to interrupt transmission of *Onchocerca volvulus* but also to stop all manifestations of disease. In the six countries endemic for river blindness in the Americas, 819,066 treatments were assisted in 2003, 93 percent of the ultimate treatment goal (2), compared to 86 percent in 2002. (See Figure 2, page 4.) The year 2003 was a milestone for OEPA, as it was the first in which every country exceeded the 85 percent target coverage of eligible population in both rounds of treatment. For various reasons, Venezuela was not able to reach this level of coverage in the past. However, extra efforts and involvement of the government have had a strong impact on drug distribution efforts.

Attendees

Attendees included River Blindness Program country representatives Mr. Teshome Gebre, Ethiopia; Ms. Peace Habomugisha, Uganda; Dr. Emmanuel Miri, Nigeria; and the resident technical advisers of Sudan, Mr. Raymond Stewart, Khartoum, and Mr. Mark Pelletier, Nairobi.

Dr. Mauricio Sauerbrey presented progress made in the six river blindness-affected countries in the Americas served by the Onchocerciasis Elimination Program for the Americas.

Dr. Albert Eyamba, Cameroon, was unable to attend this year due to visa processing issues. Dr. Moses Katarwa, program epidemiologist, presented the Cameroon report in his stead.

Other technical staff members included Dr. Abel Eigege, Nigeria, and Dr. Assefa Worku, Ethiopia. Special guests included professor Mamoun Homeida, chairman, National Onchocerciasis Task Force, Sudan; Ms. Sonia Pelletreau, Lions Clubs International Foundation; Dr. Jamie Maguire, chief, Parasitic Diseases Branch, Centers for Disease Control and Prevention; Dr. Frank Richards, Division of Parasitic Diseases, CDC; Dr. Steve Blount, director, Office of Global Health, CDC; Mr. Ross Cox, deputy director, Office of Global Health, CDC; Dr. Ed Cupp, professor of entomology, Auburn University, Auburn, Ala.; Dr. Tom Unnasch, professor of immunology, University of Alabama at Birmingham; Dr. Bjorn Thylefors, director, Mectizan Donation Program; and Dr. Mary Alleman, associate director, Mectizan Donation Program, among other observers.

River Blindness

OEPA Exceeds Treatment Goals in All Six Countries Strives To Intensify Efforts

Based on the findings of the January 2002 Conference on the Eradicability of Onchocerciasis, a three-day meeting of 64 experts that

associated with the disease. In 2003, the OEPA program achieved more than 85 percent coverage in both rounds of treatment in all endemic countries

for the first time. (See Figure 2.) Overall coverage of eligible populations exceeded 93 percent.

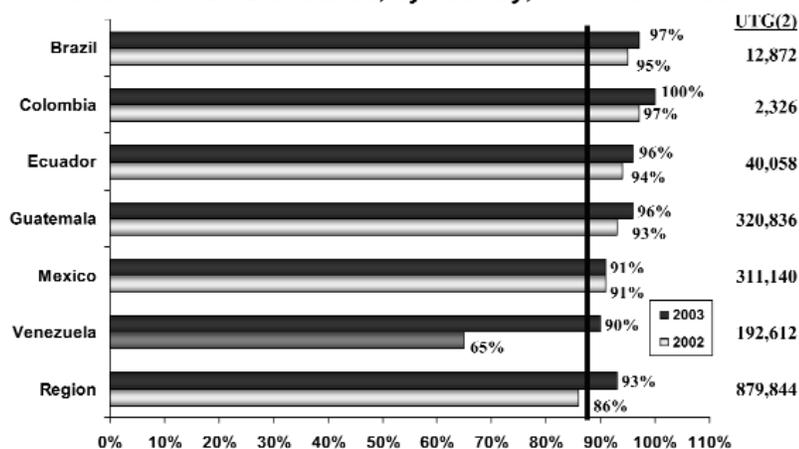
The current goals of OEPA are to:

- Prevent new eye disease attributable to onchocerciasis by 2007 through mass treatment of at-risk populations with ivermectin (Mectizan) donated by Merck
- Interrupt transmission through high coverage; semiannual mass treatments of at least 85 percent of at-risk populations eligible for treatment
- Sustain treatment coverage for a period of about 10 years
- Determine other strategies that might be implemented to hasten the process of elimination, since sustaining the program for such a long time is a major challenge

One such strategy has been implemented in 2003 in the Chiapas focus in Mexico: four-times-per-year treatments. (See Figure 3.) It is believed that more frequent treatments result in a faster

Figure 2

Percentage of the Ultimate Treatment Goal(2) attained in 2002 and 2003, by country, in the Americas*



*UTG(2): UTG multiplied by two.

took place at The Carter Center and was co-sponsored by the World Health Organization, onchocerciasis is believed to be eradicable in the Americas. The Onchocerciasis Elimination Program for the Americas is determined to meet that goal. Containing 1 percent of the world's onchocerciasis in scattered foci, endemic countries in the Americas are intensifying their efforts, using different strategies, in order to rid this hemisphere of the disease.

The OEPA program has a semi-annual treatment approach, with the goal of not only halting transmission but also eliminating morbidity

Figure 3

4 times/year treatment exercises in Chiapas, Mexico 2003

Endemicity	Communities	Population at risk	Eligible population
Hyper	37	3029	2534
Meso	12	2795	2426
Total	49	5824	4960

1st Round		2nd Round	
Population treated	Coverage (%)	Population treated	Coverage (%)
2,215	87.4	2,189	86.4
1,932	79.6	2,054	84.7
4,147	83.6	4,243	85.5

3rd Round		4th Round	
Population treated	Coverage (%)	Population treated	Coverage (%)
2,236	88.2	2,255	89.0
2,110	87.0	2,133	87.9
4,346	87.6	4,388	88.5

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end to disease morbidity and transmission in the targeted population and earlier death of the adult worms. OEPA hopes to test this hypothesis in Chiapas

and in other areas that are accessible and have strong facilitators. Another effort under consideration in the push to eliminate onchocerciasis in the

Americas is undertaking combined Mectizan and albendazole treatment in some areas.

Sustaining Mectizan Distribution in the Post-APOC Era

The African Program for Onchocerciasis Control (APOC) has been a key source of funding for the Carter Center's onchocerciasis activities since soon after the beginning of our River Blindness Program. APOC's basic premise is to set up and fund Mectizan distribution operations in endemic areas in 19 countries, in collaboration with The World Bank, WHO, ministries of health, and various nongovernmental development organizations.

All APOC funding is slated to conclude in 2010.

During the five-year funding period allotted to each project in APOC, a self-sustaining, community-directed treatment structure is to be erected. By the conclusion of APOC funding, the governments of the respective projects are supposed to make up the continuing costs associated with drug distribution. In special cases, APOC will extend funding to a limited degree for up to three additional years. All APOC funding is slated to conclude in 2010. Most Carter Center projects have already reached or will soon reach the end of their APOC funding period.

A few, such as a handful of projects in Ethiopia, are just beginning.

APOC has developed a tool for evaluating the sustainability of its projects. This tool uses a variety of indicators to determine whether a project is approaching a sustainable situation. Project personnel are used to evaluate other projects. As we learned in this year's program review, however, not one project under the APOC umbrella has been graded as fully sustainable with this tool. There are two major reasons for this: inadequate or lack of government funding, and weak front-line health care facilities. Provisional data was gathered from 12 community-directed treatment-with-

ivermectin projects in Cameroon (1), Nigeria (3), Sudan (2), and Uganda (6) that have completed five years of implementation. Overall, APOC released 87 percent of \$5,135,898 approved budget for the projects over the five years, the River Blindness Program released 83 percent of \$2,256,866 approved budget, and national and local governments released 20 percent of \$517,870 approved budget.

Efforts are underway to determine more precisely what a project will need in order to become fully sustainable. Merck & Co. continues its pledge to donate as much Mectizan as needed for as long as necessary. It may soon be up to the endemic countries and their nongovernmental development organization partners in APOC projects to determine how to best continue the struggle against onchocerciasis in Africa.

River Blindness References

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Trachoma

Clean Faces

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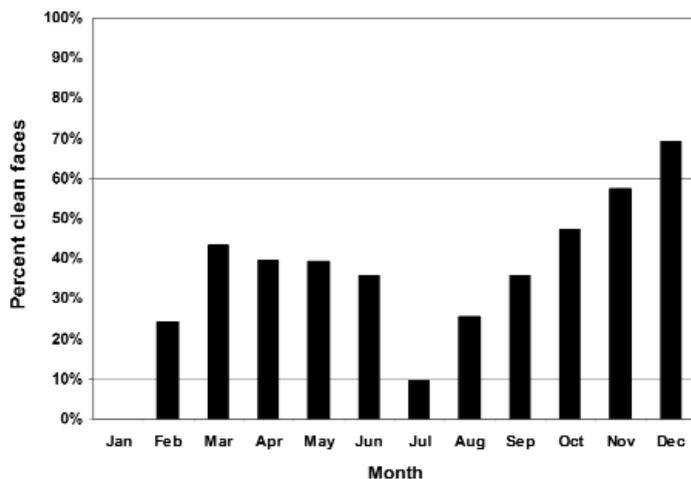
surveys, but few have collected follow-up data for evaluation. Routine village line listings in Sudan and Ghana include facial cleanliness estimates, where children are randomly selected and examined for ocular or nasal discharge. Yet, very little has been done with these data up to now.

The South Gondar Trachoma Control Program in Ethiopia is leading the way in routine use of facial cleanliness data. Ato Zelalem Abera of the Amhara Regional Health Bureau and Dr. Anteneh Woldetensay, The Carter Center, track facial cleanliness data monthly. The routine collection of facial cleanliness data is only in its early development, but we already can begin looking for trends in facial cleanliness and signs of progress in F and E interventions. Figure 4 shows aggregate South Gondar facial cleanliness data in children aged 1-9 years, beginning in February 2003. A total of 21,150 children 1-9 years old were examined. Monthly reports from villages are frequently incomplete and have yet to be validated, but the Trachoma Control Program is working to improve monthly surveillance.

In the coming years, we expect to see monthly data on facial cleanliness to compare with these 2003 reports. With increased experience, our interpretation of facial cleanliness data and our ability to make programmatic decisions based on these data will grow. It will be interesting to correlate facial cleanliness with seasonal changes in temperature, humidity, and fly density. It will be even more interesting to document a steady increase in facial cleanliness as the Trachoma Control Program promotes personal and

environmental hygiene, and it will be exciting to monitor the impact of F and E interventions as facial cleanliness increases, TF decreases, and we move forward to control blinding trachoma.

Figure 4 Facial cleanliness in children aged 1-9 years, South Gondar Zone, Ethiopia, by month, 2003



Ghana Evaluates Impact of Radio Learning Groups

In the July 2003 issue of *Eye of the Eagle* (“Moving From Hearing to Understanding,” volume 4, number 2), we reported on the creation of the first 20 radio learning groups in the Upper West region of Ghana. Radio learning groups, also known as radio listening clubs, are designed to mobilize trachoma-endemic communities to improve personal and environmental hygiene through hygiene education.

Group members gather once or twice each week to listen to radio programs on trachoma control and prevention in two local languages, Dagaare and Sissala. The sessions are followed by group discussions among community members about hygiene-promoting activities, all facilitated by a trained leader.

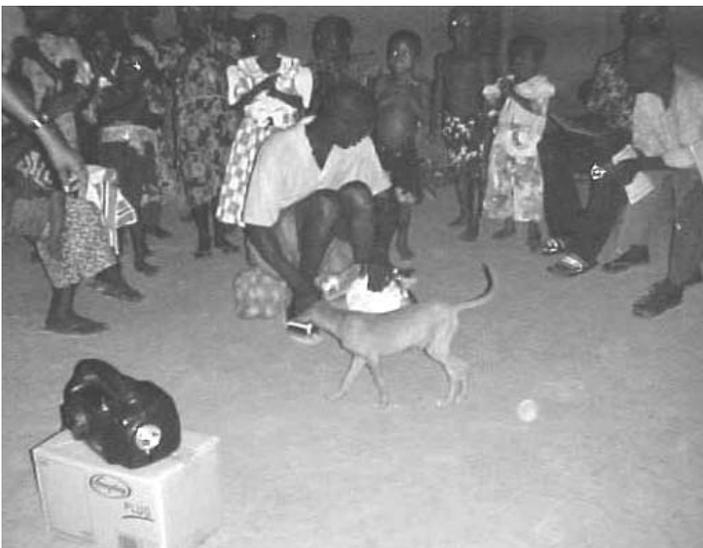
In the first six months, 144 trachoma control programs were produced and broadcast over local

and regional radio stations. The Ghana Trachoma Control Program of the Ghana Health Service and The Carter Center support radio learning groups with technical and material assistance. The Carter Center donated Freeplay windup radios to each of the pilot communities in 2003.

A researcher from the University of Ghana conducted a qualitative study to evaluate radio learning groups in the pilot project communities in November 2003. The study team visited 16 selected communities in Wa district. They held focus discussions with group members and interviewed community health workers about activities in the group as well as knowledge, attitudes, and practices in relation to trachoma and its control. Direct observations of environmental conditions and children’s facial cleanliness were also made.

Trachoma

Group members were able to recall the signs and cause of trachoma and methods of prevention. They reported to have increased their own hygienic behaviors such as face washing, compound sweeping, burying excrement, and the use of latrines. Most importantly, community members reported that radio learning groups motivated them to take action. One participant from the village of Tinabelle said, “Our village is clean because the radio asked us what are we doing to clear trachoma ... so it is mandatory for everyone in this community to join the communal cleaning every Friday.”



A radio learning group in the Upper West region, Ghana, attracts a wide variety of participants.

In other villages, respondents reported that their group inspired communities to fix broken borehole wells and begin new latrine construction. The village chief of Tolle said, “The trachoma radio programs have made my village healthier. Before, you could see filth all around, children’s faces dirty and flies everywhere.” Many communities appear to have changed for

the better, with improved hygienic practices; however, there is still a lot of work to be done. Some community health workers reported that hygiene activities are not always practiced, showing the need for continued supervision.

The Ghana experience has demonstrated that the community members accept radio learning groups and there is a growing demand for expanding the program to include other trachoma-endemic communities. Radio learning groups appear to be a useful way to improve the delivery of key health education messages on tra-

choma control and prevention and motivate community members to make positive hygiene changes.

Based on the findings of this qualitative study and positive reports from villages in the Upper West region, the Ghana Trachoma Control Program expanded radio learning groups to the Northern

region in April 2004. The Ghana program has purchased radios for trachoma-endemic communities. The Carter Center donated 60 additional Freeplay radios and will continue to provide technical assistance to the groups. Carter Center support to the Ghana Trachoma Control Program is made possible through the Conrad N. Hilton Foundation.

Next Step for F and E: Going to Scale *The Fifth Annual Review of Carter Center-Assisted Trachoma Control Programs*

The fifth annual Carter Center-assisted Trachoma Control Program Review was held on March 4-5, 2004, at Carter Center headquarters. Fifty-eight people from nine countries attended the meeting, representing all six Carter Center-assisted trachoma control programs and the program’s major donors, the Conrad N. Hilton Foundation and Lions Clubs International Foundation. Other partner organizations represented included the U.S. Centers for Disease Control and Prevention, Durham University, the London School of Hygiene and Tropical Medicine, the World Health Organization, Helen Keller Worldwide, World Vision International, and the International Trachoma Initiative.

National and regional programs were represented by Drs. Maria Hagan and Daniel Yayemain (Ghana), professor Mamoun Homeida and Dr. Magdi Ali (Sudan), Mr. Zelalem Abera and Mr. Mulat Zerihun (Ethiopia), and Dr. Kadri Boubacar (Niger). Carter Center Trachoma Control Program officers Mr. Yaya Kamissoko, Dr. Nimzing Jip, Ms. Alice Bosibori-Onsarigo, and Ms. Lydia Ajono represented the regional programs with which they work in Mali, Nigeria, Sudan, and Ghana, respectively.

Trachoma

Each presenter reported on their program's progress and challenges in 2003 and targets for 2004. As in the past, country presentations were structured around the SAFE strategy, with F and E presentations on the first day and S and A presentations on the second day. The excellent presentations on F and E demonstrated that impressive progress had been made by each program in promoting personal hygiene and environmental improvement over the past year.

The progress reported by programs in promoting personal and environmental hygiene for trachoma control and prevention allowed the participants to carefully consider the progress made over the past five years and to discuss how the programs will eliminate blinding trachoma by the year 2020. The theme of the program review was *Next Step for F and E: Going to Scale!*

Overall, the programs have made remarkable progress. (See Figures 5 and 6 and Table 2, page 9.)

- 3,580 villages (76 percent annual target) reported having regular health education sessions.
- 8,371 household latrines (92 percent annual target) were built.
- 2,427,980 (96 percent annual target) people received Pfizer-donated Zithromax® treatment.

- 18,066 (52 percent annual target) trichiasis patients received corrective surgery.

Special presentations each day highlighted important aspects of trachoma control and allowed the group to brainstorm and challenge one another. The special presentations this year included setting ultimate intervention goals, latrine assessment, radio learning groups, school health programs, and updates on the Trachoma Initiative in Monitoring and Evaluation (TIME) project and trachoma entomology. The participants in the meeting expressed

concern over inconsistencies and difficulties in defining and calculating ultimate intervention goals, so a special session was dedicated to redefining these goals in the context of the programs attending the review.

Some highlights from the program presentations were:

Ghana

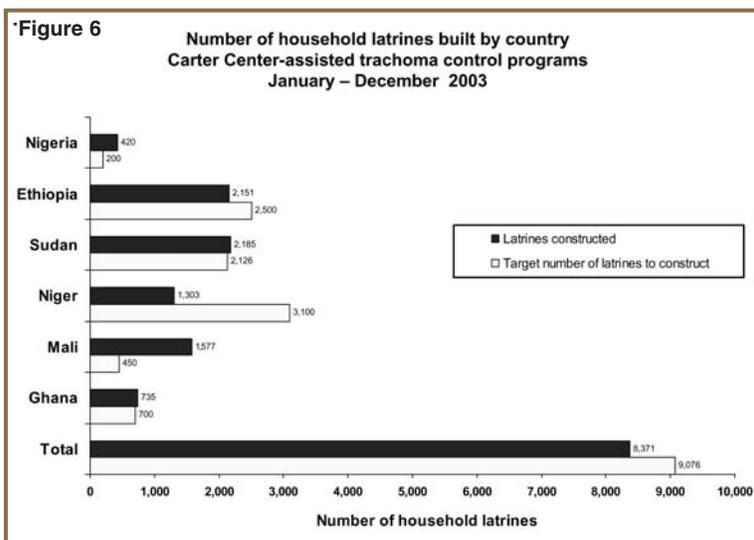
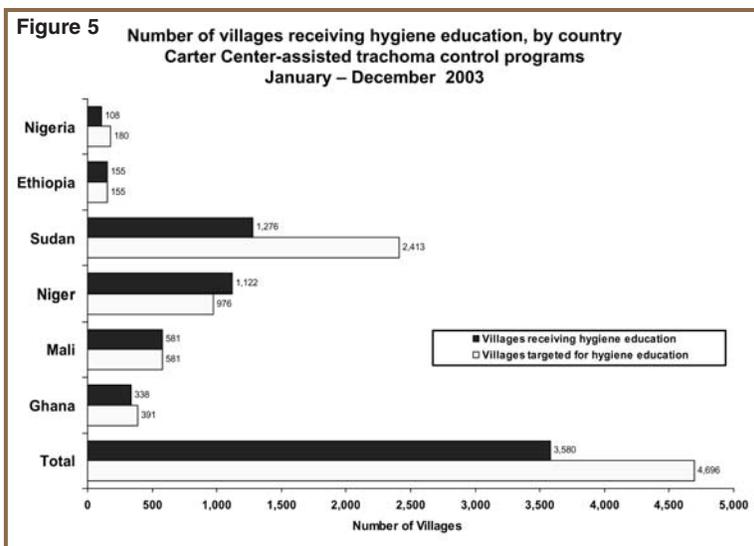
- Held their third annual Trachoma Control Program review meeting, which included all trachoma-endemic districts
- 294 schoolteachers trained in

hygiene education

- 338 villages (86 percent annual target) received regular health education
- 163,931 persons (117 percent annual target) treated with Pfizer-donated Zithromax

Mali

- Latrine promotion project launched in Ségou and Kayes regions
- 254 masons trained and 1,577 latrines constructed
- Approximately 1,150,000 Zithromax treatments delivered (96 percent annual target) to children between 6 months and 15 years old and women over the age of 15 years
- More than 7,000 community-based azithromycin distributors trained
- 4,500 trichiasis patients received corrective surgery



Trachoma

Survey in Amhara Region Confirms High Trachoma Prevalence

Ethiopia may have the highest burden of blinding trachoma in the world. The national prevalence of blindness is estimated to be 1.25 percent, and more than 900,000 people are believed to be blind. The leading causes of blindness are cataract (40 percent), followed by trachoma (30 percent).

In October 2000, The Carter Center, with funding from the Lions-Carter Center SightFirst Initiative, began assisting work on trachoma control in the Amhara region. The first phase of the Lions-Carter Center support focused on four health districts in the South Gondar zone. The first community-based trachoma prevalence survey was done in South Gondar December 2000-January 2001 by the Amhara Regional Health Bureau with support from The Carter Center. That survey found that overall, the prevalence of follicular inflammatory trachoma (TF) among children 1-9 years old was 62 percent. (See Figure 7, page 10.) The South Gondar Trachoma Control Program began in earnest in 2001 and was very successful in implementing the SAFE strategy in an area of over 1,000,000 inhabitants.

In 2003, The Carter Center and Lions International increased their support to the Amhara Regional Health Bureau for trachoma control, allowing the program to expand to include a total of 19 districts in four zones, with a

Table 2
Carter Center-Assisted Trachoma Control Programs
Summary of Trachoma Control Interventions (January - December 2003)

	Ghana	Mali	Niger	Sudan	Ethiopia S. Gondar	Nigeria 2 States
F & E						
Number of villages with hygiene education	338	581	1,122	1,276	155	108
Villages targeted	391	581	976	2,413	155	180
Percent coverage	86%	100%	115%	53%	100%	60%
Number of latrines constructed	735	1,577	1,303	2,182	2,151	420
Target for latrines	700	450	3,100	2,126	2,500	200
Percent coverage	105%	350%	42%	103%	86%	210%
Number of water sources provided	141	50	0	113	-	-
Targeted number of water sources	30	150	25	30	-	-
Percent coverage	470%	33%	0%	377%	-	-
Antibiotics						
Azithromycin intervention villages:	-	670	800	1,250	18	N/A
Treatments (2003)	163,931	1,150,000	710,230	303,563	100,256	-
Target Population	140,000	1,200,000	784,000	315,000	100,000	-
Percent coverage	117%	96%	91%	96%	100%	-
Tetracycline Oint. intervention villages:	-	-	-	1,142	-	108
Treatments (2003)	9,785	-	64,790	77,352	35,106	5,971
Target Population	14,000	-	16,000	25,000	77,000	240,000
Percent coverage	70%	-	405%	309%	46%	2%
Surgery intervention villages:						
Surgeries (2003)	383	4,500	4,858	1,410	6,840	75
Target Population	1,100	5,000	7,500	9,350	11,280	400
Percent coverage	35%	90%	65%	15%	61%	19%

Niger

- 1,274 village volunteers trained in hygiene education
- 2,000 Trachoma Control Program posters and 450 flip charts printed, and 3,000 T-shirts made
- 1,303 SanPlat latrines constructed (42 percent annual target)
- Approximately 710,230 persons treated with Zithromax (91 percent annual target)
- 4,858 trichiasis patients received corrective surgery (65 percent annual target)

Nigeria (Plateau and Nasarawa States)

- Latrine promotion project launched in Plateau and Nasarawa states
- Health education materials printed and distributed to all project villages
- 108 masons trained in F and E activities (60 percent annual target)

Ethiopia (Amhara Region)

- Program expanded from area covering 1 million people to 4 million people

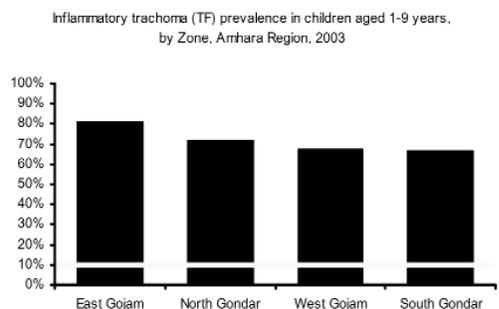
- 2,151 household latrines constructed (85 percent annual target)
- Pilot school health curriculum finalized; it will be translated into Amharic with help from local Lions Clubs
- 100,256 persons received Pfizer-donated Zithromax in first round of treatments
- Trichiasis surgery expanded to reach 6,840 patients (61 percent annual target) with close support from Ethiopian Lions Clubs

Sudan

- National trachoma prevalence survey over 80 percent completed
- First annual program review for south Sudan held in Lokichokio
- 1,276 villages (53 percent annual target) received regular health education
- 2,182 household latrines constructed (103 percent annual target)
- 303,563 persons treated with Zithromax (96 percent annual target)

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Figure 7
Follicular Inflammatory Trachoma in Children 1-9 Years Old by Zone
Amhara Region, Ethiopia 2003



Solid line indicates the level of TF (10%) above which trachoma is considered to be a serious public health problem by the World Health Organization

Figure 8
Trachomatous trichiasis by gender and age group
Amhara Region, Ethiopia 2003

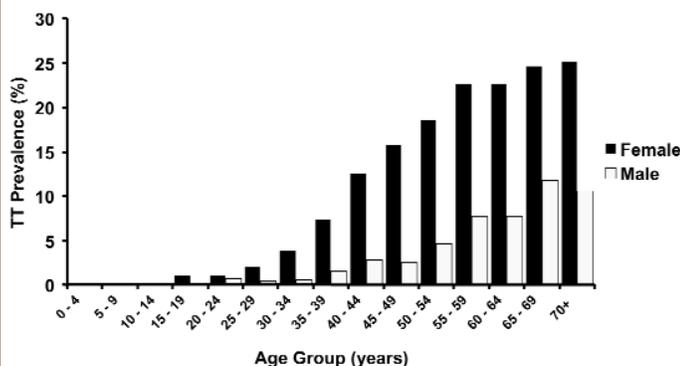


Table 3
Trachoma prevalence in expansion area, by age and zone,
Amhara Region, 2003

Zone	1-9 yrs		15+	40+
	TF	TI	TT	TT
East Gojam	80.8%	60.8%	4.5%	9.9%
North Gondar	71.5%	39.9%	7.5%	17.6%
West Gojam	67.3%	37.1%	5.5%	13.2%
South Gondar	66.6%	35.9%	4.3%	9.4%

The results of the survey are shown in Table 3. These data reveal a very high level of trachoma throughout the expansion area, consistent with the earlier finding in the South Gondar zone. The overall prevalence of follicular inflammatory trachoma among children 1-9 years old was 71 percent. The preliminary analysis

Figure 8 shows that in every age group, most of the trichiasis patients were women. In TT patients over the age of 15 years, women had more than a threefold higher likelihood of having trichiasis than men. Eighteen percent of women over the age of 40 years had trichiasis.

The very high levels of trachoma in the Amhara region have set a great challenge to the Amhara Regional Health Bureau, Lions of Ethiopia, and The Carter Center.

population of 4 million. In November 2003, the Amhara Regional Health Bureau, with financial and technical assistance from The Carter Center, collected baseline data on the severity and distribution of blinding trachoma and risk factors for the disease in a community-based trachoma prevalence survey. The survey team was led by Dr. Liknaw Adamu of the World Health Organization and Dr. Jim Zingeser and Dr. Anteneh Woldetensay of The Carter Center and included staff from the Amhara Regional Health Bureau and Gondar Medical College. Approximately 19,500 individuals in 1,500 households were interviewed and examined for signs of trachoma.

of the Amhara data also suggests that children with dirty faces (ocular or nasal discharge) have five times greater likelihood of having TF.

Figure 8 represents the prevalence of trichiasis by gender and age group. Overall, the prevalence of trachomatous trichiasis (TT) in the expansion area was also very high. Almost 12 percent of men and women 40 years of age and older had trichiasis. The World Health Organization considers TT >1 percent to constitute a public health problem. However, more than one quarter of the trichiasis patients were under 40 years of age, and more than 2 percent were less than 15 years old.

Lions and Carter Center Help Fight Trachoma in Ethiopia

With assistance from the Lions-Carter Center SightFirst Initiative, The Carter Center/Ethiopia began assisting the Amhara Regional Health Bureau in trachoma control in October 2000 with a population-based trachoma prevalence survey.

Activities began soon thereafter in four districts of the South Gondar zone. By the end of 2003, The Carter Center expanded its assistance to an additional 15 trachoma-endemic districts of the Amhara region at the request of the

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Amhara Regional Health Bureau. The new districts are in four zones: South and North Gondar and East and West Gojam.

The new Trachoma Control Program area comprises 497 villages, with a total population of 4 million inhabitants. Baseline prevalence and KAP studies were conducted late 2003-early 2004, and a plan of action was developed for 2004-2005. This expansion has increased the total number of intervention communities to 652, with a total population of 4 million people (23 percent of the Amhara region).

In 2003, the Amhara Trachoma Control Program made great progress in implementing all components of the SAFE strategy:

Surgery — Eight trichiasis surgeons in the expansion areas were trained, in addition to 11 trichiasis surgeons in the existing districts (100 percent of annual target). Local Lions Clubs in Ethiopia funded these activities through a grant awarded to them by the Lions Clubs International Foundation in 2002. Nine outreach campaigns for trichiasis surgery were conducted in trachoma-endemic districts. Overall, 6,840 trichiasis surgeries were done (61 percent of annual target). Altogether, 10,267 trichiasis surgeries have been conducted in the four endemic districts since the program began, representing 28.5 percent of the program's ultimate intervention goal for surgery for the four pilot districts.

Antibiotics — The Amhara program treated 35,106 people with active trachoma with tetracycline ophthalmic ointment in health centers and during trichiasis surgery outreach campaigns, using 75,000 tubes of tetracycline ophthalmic ointment

provided by The Carter Center. In 2003, the area received its first donation of Zithromax from Pfizer Inc for mass treatment of communities at risk for trachoma. The first district selected for Zithromax treatment was Ebinat, where 100,256 people received the antibiotic (100 percent of annual target) in a rapid, highly successful campaign.

Facial Cleanliness and Environmental Hygiene — All 155 villages in the four pilot districts

received trachoma health education in 2003 (100 percent of annual target). Routine reports on F and E activities were received quarterly (100 percent of villages) and monthly (71 percent of villages). In March 2004, the expansion districts also conducted hygiene promotion training of health workers, schoolteachers, and village volunteers and distributed community health worker training manuals, flip charts, posters, brochures, booklets for

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Global Health News

In Memory of Mr. Paul Nabaya

We join the national River Blindness Control Program of Uganda in mourning the loss of Mr. Paul Nabaya, onchocerciasis control coordinator in the Sironko district. Mr. Nabaya died on April 14, 2004.

He was known for his commitment and dedication to the growth of a successful program that provided 48,688 Mectizan treatments during 2003, 98 percent coverage of ultimate treatment goal, in the mountainous region of Sironko district. Our sincere condolences to his family.

Lions

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school health program, school health curricula, and videocassettes produced by The Carter Center and BBC during the training.

A total of 2,151 latrines were built (85 percent of annual target) during 2003, with support from The Carter Center. Additional latrines were built at three schools and three health centers. To further expand latrine construction and acceptance, the program is pursuing the use of local materials. Thus far in 2004, 575 latrines have been built in East Gojam zone with local materials.

The impact of some of the above-mentioned interventions is becoming evident in cleaner faces of children. (See article on page 1). The Amhara program has set challenging targets for itself in 2004, including implementing hygiene promotion activities in all 652 villages, building 10,000 latrines, and expanding the trachoma prevention school health curriculum in schools. In addition, the program plans to treat 266,000 and 550,000 people with tetracycline ointment and Zithromax, respectively. Sixty-seven trichiasis surgeons will be trained, and 48,881 trichiasis surgeries done in outreach campaigns and at health centers.

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