



Eye of the Eagle



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THE CARTER CENTER

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At Annual Meeting, Country Staff Urged to Use District Data to Form Trachoma Elimination Plan

The Carter Center convened its 11th annual Trachoma Control Program review, March 29–31, 2010, at the Center in Atlanta, Ga. The year 2010 marks a major milestone in the global effort to eliminate blinding trachoma by 2020, with only 10 years remaining for endemic countries to reach program targets. Under the theme “Planning for Trachoma Elimination, District by District,” national programs were encouraged to develop detailed strategies using

district-level data to plan and scale up SAFE-strategy interventions in each district. Delivered by the ministries of health in Ethiopia, Mali, Niger, Nigeria, and Sudan, in partnership with The Carter Center, SAFE-strategy interventions include surgery, antibiotics, facial cleanliness, and environmental improvements.

During the 2010 review, Carter Center–assisted national programs presented SAFE program intervention data from 2009 and ultimate inter-

vention goals. The existing trachoma prevalence data were also presented for each country, and these data were used to guide program planning. The national programs also presented their 2010 targets, which were reviewed in conjunction with long-term plans for elimination.

In addition, the meeting included presentations from partner organizations such as the Lions Clubs International Foundation, Helen Keller

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THE CARTER CENTER



Waging Peace. Fighting Disease. Building Hope.

Center Reviews River Blindness

Held March 23–25, 2010, the 14th annual review of the Carter Center River Blindness Program covered Carter Center–assisted onchocerciasis (river blindness) control and elimination in five African countries—Cameroon, Ethiopia, Nigeria, Sudan, and Uganda—and six Latin American countries—Brazil, Colombia, Ecuador, Guatemala, Mexico, and Venezuela. More than 60 field staff, experts, and donors gathered at Carter Center headquarters in Atlanta to review program perfor-



D. Hakes

Dr. Frank Richards addresses participants in the River Blindness Program review. Dr. Richards directs the Carter Center’s river blindness, lymphatic filariasis, schistosomiasis, and malaria programs.

mance and special research projects. Participants discussed the integration of river blindness with other disease

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Trachoma

Program Review

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International, Pfizer Inc, Research Triangle Institute International, and the International Trachoma Initiative. Dr. Saul Rajak of the London School of Hygiene and Tropical Medicine and Dr. Jeremy Keenan of the Francis I. Proctor Foundation at the University of California San Francisco presented findings from operational research activities in Ethiopia.

Furthermore, recent prevalence survey data from Mali were discussed in the context of long-term surveillance for trachoma. A new trachoma preva-

lence survey toolbox was presented by Dr. Jeremiah Ngondi. This resource will provide materials to assist with each stage of a survey, from training to data management. Dr. Silvio Mariotti of the World Health Organization (WHO) affirmed WHO's commitment to provide national programs with technical assistance to help them meet elimination targets.

The results from this year's review are encouraging, with many national programs having met and exceeded their 2009 intervention targets. National program accomplishments reported for 2009 are listed below (also see Tables 1 and 2).

Ethiopia

- 72,123 people received surgery for trichiasis
- 15,695,222 doses of azithromycin distributed nationally
- 3,432 communities reached with ongoing health education in the Amhara region
- 544,205 household latrines built in the Amhara region

Mali

- 11,196 people received surgery for trichiasis
- 6,290,754 doses of azithromycin distributed nationally

Table 1 Summary of National Data from Trachoma Control Program Interventions (Carter Center–Assisted Countries) National Data as Reported for 2009 at the 11th Annual Program Review, Atlanta, Ga., March 29–31, 2010

	Mali	Niger	Sudan		Ethiopia	Nigeria	Total
			GOS**	GOSS***			
Surgery (S)							
Surgeries	11,196	6,743	1,974	1,558	72,123	13,500	107,094
2009 Target	17,100	15,650	3,000	5,000	207,480	8,000	256,230
Percent Coverage	65.5%	43.1%	65.8%	31.2%	34.8%	168.8%	41.8%
Antibiotics (A)							
<i>Azithromycin</i>							
Doses	6,290,754	7,341,878	284,783	370,431	15,695,222	0 (see note)	29,983,068
2009 Target	7,245,423	9,491,097	292,164	515,788	25,100,000	14,358,000	57,002,472
Percent Coverage	86.8%	77.4%	97.5%	71.8%	62.5%	N/A	52.6%
<i>Tetracycline</i>							
Doses	125,883	184,198	5,510	15,799	403,099	15,000	749,489
2009 Target	147,866	194,164	5,743	20,730	512,000	40,000	920,503
Percent Coverage	85.1%	94.9%	95.9%	76.2%	78.7%	37.5%	81.4%
Facial Cleanliness and Health Education (F)							
Villages with Health Education	10,491	571	239	3,441	3,432	9,200	27,374
2009 Target	9,000	*	239	4,662	*	13,240	27,141
Percent Coverage	116.6%	N/A	100.0%	73.8%	N/A	69.5%	100.9%
Environmental Improvements (E)							
Latrines	23,701	18,979	N/A	128	544,205	7,500	594,513
2009 Target	16,000	15,000	N/A	500	*	10,500	42,000
Percent Coverage	148.1%	126.5%	N/A	25.6%	N/A	71.4%	N/A

Note: Nigeria did not receive azithromycin in 2009. It will receive its first shipment in 2010.

*National target not presented

**GOS: Government of Sudan

***GOSS: Government of Southern Sudan

N.B. These are national-level data from interventions supported by all partners, not exclusively supported by The Carter Center.

Trachoma

- 10,491 villages reached with ongoing health education
- 23,701 household latrines built nationally

Niger

- 6,743 people received surgery for trichiasis
- 7,341,878 doses of azithromycin distributed
- 571 villages reached with ongoing health education
- 18,979 household latrines built nationally

Government of Sudan

- 1,974 people received surgery for trichiasis
- 284,783 doses of azithromycin distributed

Government of Southern Sudan

- 1,558 people received surgery for trichiasis
- 370,431 doses of azithromycin distributed in 16 counties
- 3,441 villages reached with ongoing health education

Nigeria

- 13,500 people received surgery for trichiasis
- 9,200 villages reached with ongoing health education
- 7,500 household latrines built nationally

The operating model of The Carter Center working in partnership with ministries of health enables the national programs to lead planning and implementation of program activities. The output of each program is then presented at annual review meetings hosted by The Carter Center, where national programs can share experiences among each other and

meet partner and donor agencies. Over the three days of the review meeting, participants discuss program strategies and new opportunities. The national programs also have an opportunity to meet public health experts from the U.S. Centers for Disease Control and Prevention, the World Health Organization, Emory University, and other public health institutions.



A. Mosher

Program review participants included Salissou Kane, Carter Center Niger resident technical adviser; Teshome Gebre, Carter Center Ethiopia country representative; and Dr. Emmanuel Miri, Carter Center Nigeria country representative.

Table 2 National Trachoma Control Program Annual Targets 2010 (Carter Center–Assisted Countries)
Targets as Presented at the 11th Annual Program Review, Atlanta, Ga., March 29–31, 2010

	Mali	Niger	Sudan		Ethiopia	Nigeria	Total
			GOS**	GOSS***			
Surgery							
People to receive surgery for trichiasis	12,910	13,900	3,000	6,500	235,374	10,000	281,684
Antibiotic							
Doses of azithromycin to distribute†	3,764,289	4,749,941	300,327	803,000	27,270,000	1,247,332	38,134,889
Doses of tetracycline ointment to distribute	70,847	76,015	6,000	17,000	556,000	40,000	765,862
Facial cleanliness							
Villages to reach through health education	12,000	571	477	4,762	*	13,240	31,050
Environmental change							
Household latrines to build	25,000	15,000	*	411	*	10,500	50,911

*Target not presented

**GOS: Government of Sudan

***GOSS: Government of Southern Sudan

†Antibiotic targets do not reflect International Trachoma Initiative–approved allocations of Zithromax.

River Blindness

Program Review

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and public health initiatives, including lymphatic filariasis, malaria, schistosomiasis, trachoma, and vitamin A supplementation.

Carter Center staff were joined by representatives from ministries of health of Cameroon, Ethiopia, Nigeria, Sudan, and Uganda; Merck & Co., Inc. and the Mectizan® Donation Program; the Bill & Melinda Gates Foundation; Lions Clubs and Lions Clubs International Foundation; GlaxoSmithKline; Emory University; U.S. Centers for Disease Control and Prevention; African Program for Onchocerciasis Control; Sightsavers; Universidad del Valle de Guatemala; Clarke Mosquito Control; Vestergaard Frandsen; Izumi Foundation; and the World Health Organization. Dr. Frank Richards, director of the Carter Center's malaria, river blindness, lymphatic filariasis, and schistosomiasis programs, chaired the meeting.

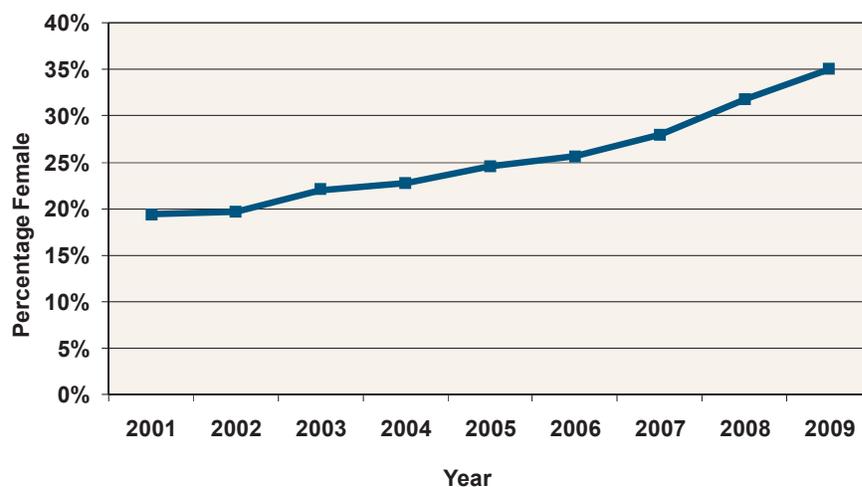
Working with national ministries of health for the safe and sustainable distribution of Mectizan® (donated by Merck & Co., Inc.) and provision of health education to either control or eliminate onchocerciasis, The Carter Center assisted in more than 14 million Mectizan treatments (14,115,910) in 2009, the greatest level achieved in one year by the 14-year-old program (see Table 3). Over 130 million cumulative treatments have been provided since the River Blindness Program was launched in 1996. In 2009, the Center assisted with treatments in 11 countries, reaching 97 percent of the 2009 targeted treatment-eligible population, known as the ultimate treatment goal

(UTG). Treatments are made possible by a grassroots network of community-directed ivermectin distributors. About 225,000 distributors were trained in 2009, managed by more than 35,000 supervisors. The Carter Center-assisted programs have tried to increase the number of women in these training sessions; in 2001, 19 percent of distributors

Table 3 River Blindness Treatments Assisted by The Carter Center in 2009

	Treated	Eligible population	% Achieved
Elimination Programs (semiannual)			
OEPA	626,146	672,366	93%
Sudan	197,865	200,658	99%
Uganda	1,609,746	1,673,820	96%
Subtotal	2,433,757	2,546,844	96%
Control Programs (annual)			
Cameroon	1,642,612	1,826,082	90%
Ethiopia	3,163,181	3,343,558	95%
Nigeria	5,354,573	5,281,705	100%
Sudan	152,218	171,732	89%
Uganda	900,333	931,236	97%
Subtotal	11,212,917	11,554,313	97%
Mass Treatment Total	13,646,674	14,101,157	97%
Passive Treatments	469,236		
TOTAL TREATMENTS	14,115,910		

Figure 1 Increasing Percentage of Community Distributors Who Are Female in Carter Center-Assisted River Blindness Programs in Africa, 2001–2009



were women, and in 2009, 35 percent were women (see Figure 1).

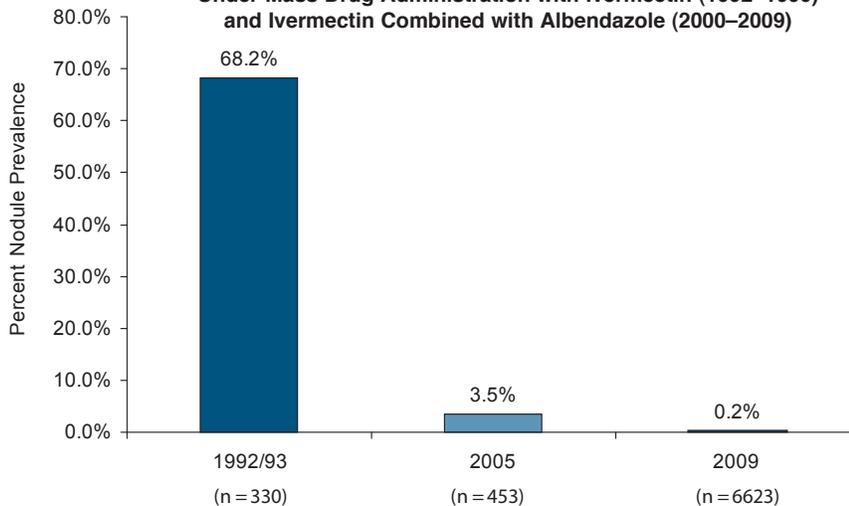
The distinction between control and elimination objectives in river blindness is important. In the former, Mectizan® distribution may need to continue indefinitely because onchocerciasis transmission persists;

sustainability of programs is vital, and integration with other similar disease control activities is important. In the case of elimination, Mectizan® treatment is used more intensively so that it eventually can be halted when evidence indicates that the parasite population has disappeared. Trying to elimi-

River Blindness

Figure 2

Reduction of 99% in Onchocercal Nodule Prevalence in Sentinel Villages of Plateau and Nasarawa States (Nigeria) Under Mass Drug Administration with Ivermectin (1992–1999) and Ivermectin Combined with Albendazole (2000–2009)



nate onchocerciasis where feasible is a goal of the River Blindness Program, and current elimination efforts include all six countries in the Americas and designated foci in Uganda and Sudan. In 2009, control program areas assisted in 11.7 million annual treatments, while elimination program areas assisted in about 2.4 million treatments.

Results from the individual country programs for 2009 are presented below.

Nigeria

Over 5.3 million Mectizan® mass treatments were assisted by the River Blindness Program in Nigeria in 2009 (100 percent UTG), as well as 463,044 passive treatments, which were provided through clinics. Nigeria trained or retrained 60,047 community-directed distributors to accomplish the distribution. An evaluation of program impact of annual treatment activities performed in 2009 in Plateau and Nasarawa states (see Figure 2) showed a 99.7 percent reduction in infection (nodule) rates since 1992–1993. Of particular importance was that infection rates in children were nonexistent,

which suggests elimination of onchocerciasis transmission may have been achieved. Notably, in these same two states, the River Blindness Program is integrated with the Lymphatic Filariasis Elimination Program, with funding from the Bill & Melinda Gates Foundation and GlaxoSmithKline, and Mectizan treatments for river blindness were combined with albendazole to interrupt lymphatic filariasis transmission; about 3.5 million combined treatments with Mectizan and albendazole were provided in 2009. It is possible that combination therapy for lymphatic filariasis elimination has had additional benefits in simultaneously interrupting onchocerciasis transmission.

For the second year in a row, Nigeria exceeded 1 million praziquantel treatments in the three states that have a schistosomiasis control program. Praziquantel donated to The Carter Center through the World Health Organization by Merck KGaA of Germany (E-Merck) since 2008 has allowed treatment figures to climb to five times their 2007 level. In addition, about 80,000 long-lasting insecticide-

treated bed nets were distributed in four states by Carter Center–assisted programs. Half of these were purchased with support from the Bill & Melinda Gates Foundation and distributed in Imo and Ebonyi states. The other half were provided in Plateau and Nasarawa states by the Nigerian government and a donation by Clarke Mosquito Control. Nets were distributed in Plateau and Nasarawa by community-directed distributors and likely have an impact on malaria and lymphatic filariasis transmission because both diseases are transmitted by anopheline mosquitoes.

Ethiopia

The Lions–Carter Center partnership in Ethiopia assisted in treating 3,163,181 people to prevent onchocerciasis in 2009, 95 percent of the UTG. The Carter Center–assisted malaria program continued integrated efforts with the River Blindness Program in 2009 as part of the Maloncho project, with community-directed distributors trained to monitor bed net use and provide health education on their use and care. During 2009, 40,532 distributors were trained. Thanks to GlaxoSmithKline support, for the first time, combined Mectizan-albendazole treatments were provided for lymphatic filariasis elimination in onchocerciasis-endemic areas of Gambella region. With this funding, the Ethiopia program assisted in 77,442 combined treatments in 2009, 93 percent of the UTG.

Cameroon

A total of 1,642,612 people in North and West regions received Lions–Carter Center–assisted mass Mectizan treatments in 2009, 90 percent of the UTG. Trained distributors numbered

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River Blindness

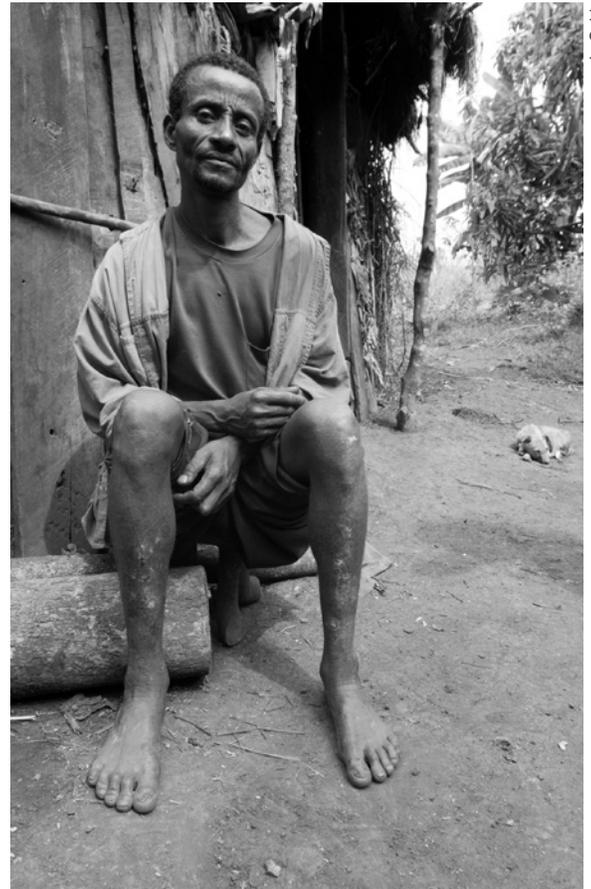
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43,970. An onchocerciasis impact study was conducted in North region in 2009 to evaluate 17 years of annual Mectizan treatment. From 2000 to 2009 (10 of the 17 years of annual distribution), UTG coverage has been above 90 percent. The study included an evaluation of ocular morbidity attributable to onchocerciasis (see Figure 3). Significant reductions of onchocercal eye disease occurred compared to the baseline, but ocular morbidity remained above 1 percent, the WHO threshold goal for elimination of ocular disease. The study also found that a small percentage of children were still positive for microfilariae, and black flies were positive for larval stages of *Onchocerca volvulus*, indicating that annual treatment had not interrupted transmission.

Uganda

The Lions–Carter Center Uganda treatment figures continue to climb as more areas move to an elimination (twice-per-year treatment) strategy,

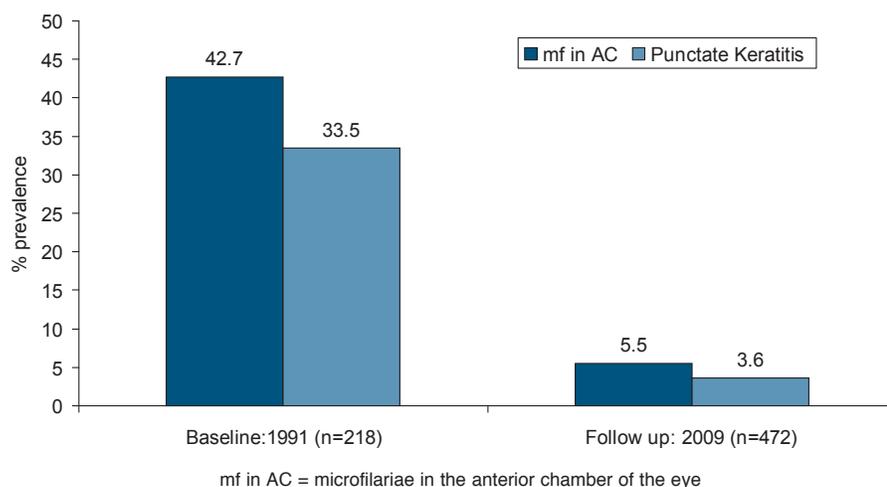
supported by Ministry of Health policy. The program assisted in 2,510,079 treatments in 2009, up 18 percent from 2008. Of these, 900,333 were in control areas, and 1,609,746 were in elimination areas. The Uganda program achieved 96 percent of its treatment targets. During 2009, Uganda's program trained 77,600 community-directed distributors. The second Uganda Onchocerciasis Elimination Committee meeting was held in August 2009. The committee compared data to the 2001 World Health Organization elimination guidelines and concluded that transmission of onchocerciasis in three foci (Itwara, Mt. Elgon, and Wadelai) had been interrupted. Ministry of Health interventions in those foci, however, have continued.



L. Gubb

Zeynu Aba Gojem, 45, shows the leopard-like skin on his legs that resulted from river blindness. The Ethiopian farmer receives annual treatments of Mectizan to control the disease.

Figure 3 Ocular Morbidity Impact: 1991 Baseline (6 Communities) and 2009 Follow-up (8 Communities) in the Vina Valley of North Cameroon



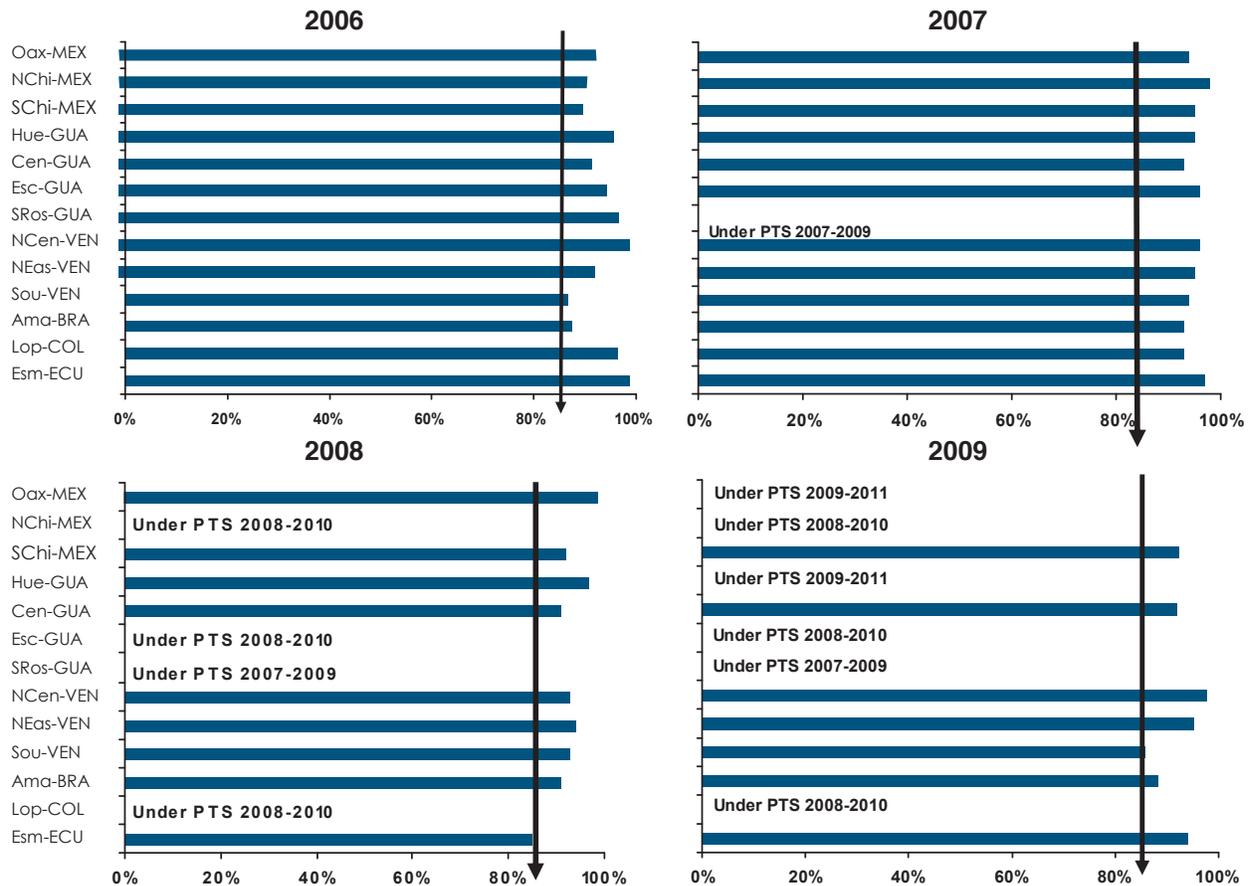
Sudan

The Sudan Lions–Carter Center effort, based in Khartoum, reported Mectizan treatment figures that included annual treatments in control areas and twice-per-year treatments in the Abu Hamad elimination focus, in accord with the policy of the Ministry of Health. The reported 152,218 treatments in 2009 in control areas and 197,865 treatments in the elimination focus of Abu Hamad achieved 94 percent of overall treatment targets. Sudan trained 3,448 community-directed distributors, more than twice the number in 2008. Of these, 42 percent were women, impressive for

River Blindness

Figure 4

Treatment Coverage Among the 13 Foci with River Blindness in the Americas; Transition from Treatment to Post-Treatment Surveillance as Transmission Is Interrupted and Mass Treatment Halted (2006–2009)



a program that had not had a single female distributor from 1998 to 2005.

The Americas

The aim of the Onchocerciasis Elimination Program for the Americas (OEPA) is to interrupt onchocerciasis transmission in the Western Hemisphere by 2012. Of the 13 endemic foci in six countries, six foci were no longer providing Mectizan treatments. Five countries were treating in seven foci in 2009, and 626,146 treatments were given, 93 percent of the UTG. The Santa Rosa focus of Guatemala was first to halt treatment in 2007, joined in 2008 by Lopez de Micay in

Colombia, Escuintla in Guatemala, and Northern Chiapas in Mexico. In 2009, Huehuetenango in Guatemala and Oaxaca in Mexico joined the ranks of foci where treatments have stopped, and in 2010, Ecuador will be the second country to have halted treatments, in its single focus of Esmeraldas. Thus, in 2010, only six foci in four countries will be receiving Mectizan treatment. Figure 4 shows treatment coverage since 2006 and the foci that have been able to stop treatment each year. As more foci halt Mectizan treatments after transmission is interrupted, the regional treatment figures

will continue to drop. A three-year post-treatment surveillance (PTS) period follows the cessation of treatment in each focus prior to declaration of elimination and request for World Health Organization certification. The OEPA coalition includes ministries of health of the six countries, The Carter Center, Lions Clubs and the Lions Clubs International Foundation, the Bill & Melinda Gates Foundation, Pan-American/World Health Organization, the Mectizan® Donation Program, and the U.S. Centers for Disease Control and Prevention.

Four Countries Reviewed for Malaria Control Work

The Malaria Control Program at The Carter Center, launched in 2006, had its first program review on March 26, 2010, under the theme “Enhancing Impact Through Integrated Strategies.” The meeting covered activities done in partnership with ministries of health in Ethiopia, Nigeria, and the Caribbean island of Hispaniola. Carter Center staff were joined by representatives from the ministries of health of Nigeria and Ethiopia, the Bill & Melinda Gates Foundation, Emory University, the Task Force for Global Health, Mectizan® Donation Program, U.S. Centers for Disease Control and Prevention, Clarke Mosquito Control, Vestergaard Frandsen, BASF Corporation, Sanofi Aventis, Embassy of France, Ethiopia Lions Club, and University of Gainesville. Dr. Frank

Richards and Dr. Paul Emerson of The Carter Center co-chaired the meeting. Program activities are summarized below.

Ethiopia

Dr. Asrat Genet Amnie, head of the Amhara Regional Health Bureau, presenting on behalf of the federal Ministry of Health, described the increase in long-lasting insecticidal bed net distribution in Ethiopia that was completed in 2007 and discussed current priorities regarding bed net replacement and universal access to free treatment with artemisinin-based combination therapies. A new national malaria strategic plan for 2011–2015

has been developed, with the goal of achieving elimination in some areas by 2015. There were signs of a reduction in in-patient admissions for malaria, especially in Amhara region, over the period 2004–2009. Teshome Gebre, Carter Center country representative in Ethiopia, described how the Carter Center malaria program is implemented



Carter Center staff assess the condition of long-lasting insecticidal bed nets in Addis Ababa, Ethiopia.

through integrated programs: malaria integrated with trachoma (called the Maltra program), and malaria integrated with onchocerciasis (the Maloncho program), involving 46 project staff and over 9,000 community-based staff. Although The Carter Center has helped distribute over 3 million bed nets in Ethiopia in the recent past, future net distributions will be required.

Two challenges remain: lack of clear net replacement guidelines and lack of clear definition of high-risk malarious areas. Because net use and care are still lower than desired, the program is focusing on a few key malaria messages and delivering them through both community workers and mobile van mass campaigns prior to the Maltra week campaigns for azithromycin distribution. In these campaigns,

Figure 5 Proportion of Households Owning One or More Long-Lasting Insecticidal Nets in Three Regions of Ethiopia

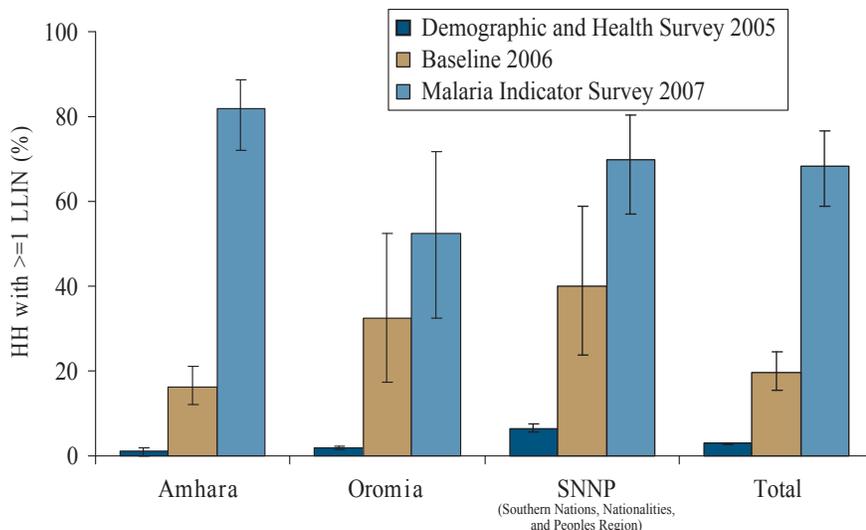
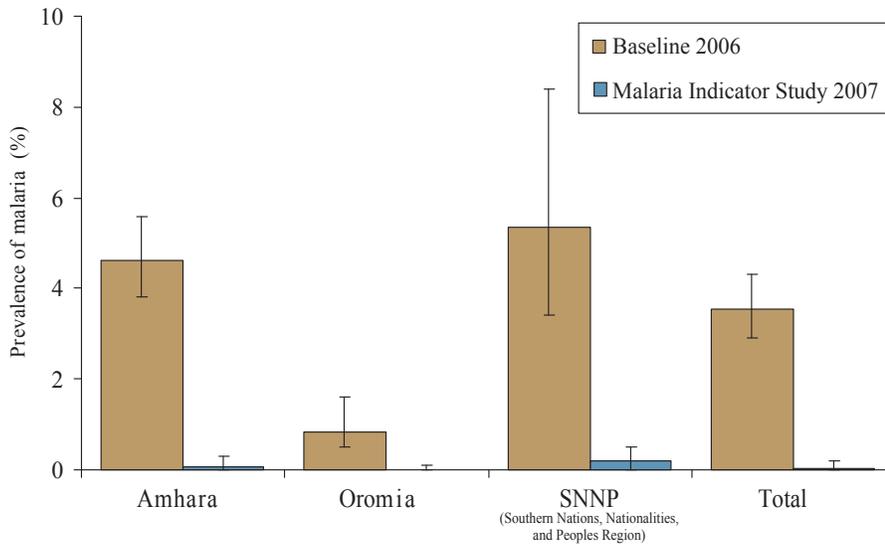
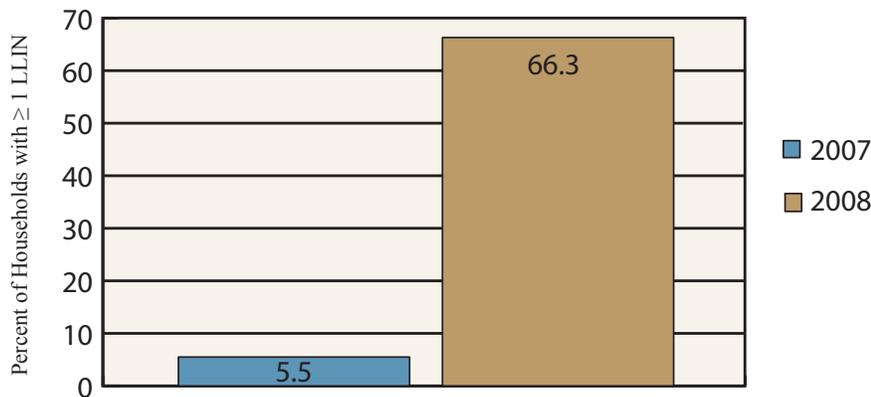


Figure 6 Age-Adjusted Prevalence of Malaria by Blood Slide Microscopy, by Survey and Regional State, Ethiopia



A woman loads nets onto the back of a motorcycle for distribution in Owerri West in southeast Nigeria.

Figure 7 Increase in Long-Lasting Insecticide-Treated Net Ownership in Carter Center–Assisted Areas in Nigeria 2007 to 2008



A bed net hangs in a house in Mmahu village, Imo state, southeast Nigeria.

those with fever are offered malaria testing, diagnosis, and treatment.

Dr. Zerihun Tadesse, director of programs in Ethiopia, reviewed the November 2009 Maltra 3 week in west Amhara, at which 46,401 people presented with fever and 32,110 people were treated for malaria, primarily with artemisinin combination treatment. Dr. Tadesse also described the clinical diagnostic studies performed by Dr. Tekola

Endeshaw in 10 Amhara clinics, which demonstrated the accuracy and suitability of malaria rapid diagnostic tests in the clinical situation, where 20 percent to 35 percent of patients with suspected malaria were found positive using a blood test.

For monitoring and evaluation activities, the program has assisted the Ministry of Health through representative cross-sectional household surveys

and review of data reported routinely to the Integrated Disease Surveillance and Response system. The surveys documented the massive increase in net ownership (see Figure 5) and a decline in malaria prevalence (see Figure 6) over a one-year period. The routine data have been used to develop zone-level maps of malaria incidence. Operational research on net durability indicates good persistence of insecticide for more than two years but rapid appearance of holes in the nets. About 80 percent of the nets have at least one hole by 18 months, but less than 1 percent of nets show evidence of repairs.

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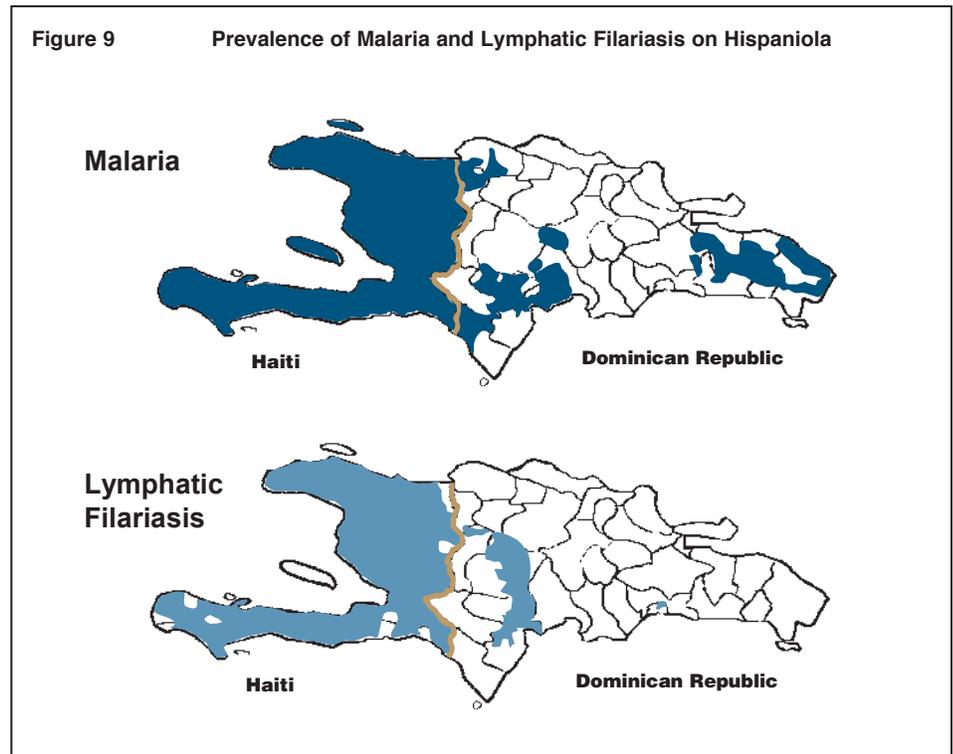
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Nigeria

The Carter Center's efforts against malaria in Nigeria up until now have been related to the Lymphatic Filariasis (LF) Elimination Program. The same *Anopheles* mosquitoes that transmit malaria also transmit LF parasites, so the bed-net component of the malaria program is able to help prevent two diseases at once. The Center has worked with the national malaria program in two states in central Nigeria (Plateau and Nasarawa) since 2004. Between 2004 and 2009, 300,650 nets have been distributed in Plateau and Nasarawa states in integrated campaigns with mass drug administration for LF. Although the vast majority of these nets were provided by the Ministry of Health, 16,550 nets were donated by Clarke Mosquito Control.

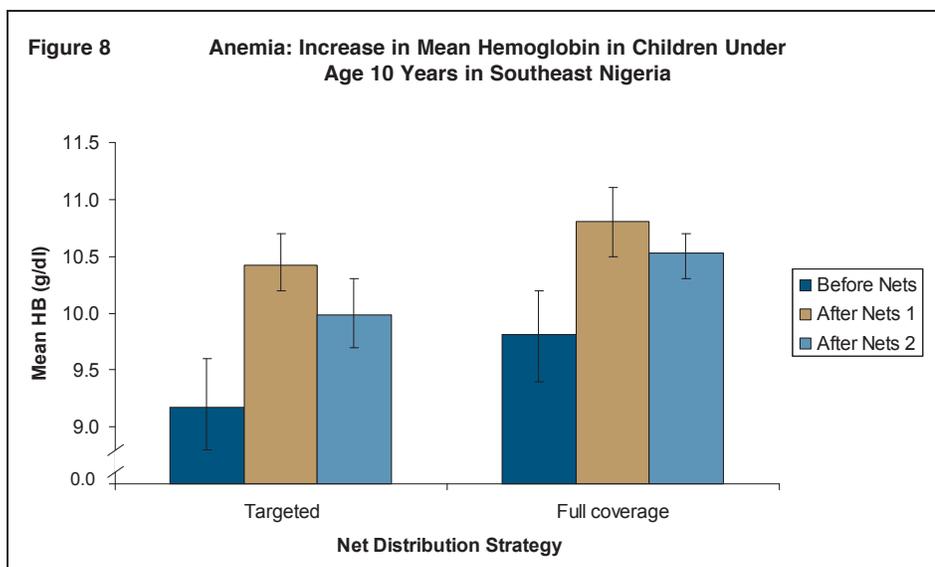
Dr. Emmanuel Miri, Carter Center country representative in Nigeria, noted that behavior-change messages have been developed but, due to challenges associated with effectively delivering these messages during net distribution, more attention to post-bed-net



distribution health education is needed. In two southeast states, 240,000 bed nets have been distributed through a project funded by the Bill & Melinda Gates Foundation that compares the impact of two bed-net distribution designs against malaria and LF: one design to provide full net coverage, the other to distribute nets only to house-

holds with pregnant women or children under 5 years of age. Preliminary analysis of household surveys shows that the proportion of households with at least one bed net increased from 5.5 percent to 66.3 percent in one year in both study designs combined (see Figure 7); however, there was a dropoff in ownership in the second year to 45 percent of households, indicating the need for continued health education. Malaria prevalence dropped significantly from 22 percent to 12 percent (both groups combined) between 2007 and 2008. Anemia in children under 10 improved significantly in both study groups between 2007 and 2008 and remained significantly better than baseline in 2009 (see Figure 8).

Dr. Babatunde Ipaye, presenting on behalf of Dr. Folake Ademola-Majekodunmi, national coordinator, Nigeria Malaria Control Program, described the Nigeria national program



and the plan for a massive increase in malaria control efforts, including the distribution of 48 million bed nets in 30 states in 2010, in addition to the 19 million already distributed. Of the nine states in Nigeria where The Carter Center assists, large increases in net distribution are planned for Ebonyi, Enugu, and Nasarawa in August 2010; Plateau in September; and Abia, Edo, and Imo states in October. Anambra state was covered last year, and plans for Delta state are not yet final. The need to improve access to ACTs as first-line drugs (artemether-lumefantrine and artesunate-amodiaquine) and the challenges associated with accomplishing this through the private-sector-dominated drug supply system in Nigeria were also discussed at the program review.

Hispaniola

Dr. Donald Hopkins, vice president for health programs at The Carter Center, gave a brief overview of the Hispaniola project that is fostering collaboration between the two countries that share the island, Haiti and the Dominican Republic, to eliminate malaria and LF by 2020. In doing so, the Caribbean basin would be freed of these two mosquito-transmitted parasites. The Carter Center has been promoting the idea of binational collaboration on Hispaniola since September 2008 through a project in two adjacent border towns, and former U.S. President Jimmy Carter visited the heads of state, ministers of health, and other partners of both countries in September 2009. The greatest burden of disease is in Haiti (see Figure 9). Haiti recently revised its national malaria control policies to provide free diagnosis and treatment for malaria.

In Memoriam: Dr. Vely Jean-Francois

The Carter Center joins the Haitian Ministry of Health in mourning the loss of Dr. Vely Jean-Francois, national coordinator of the malaria and lymphatic filariasis (LF) control programs, on June 6, 2010. Under his leadership, mass drug administration for LF increased threefold from 21 percent coverage of the target population in 2007 to 66 percent coverage in 2009 with the goal of elimination by 2020. Dr. Jean-Francois also collaborated closely with colleagues in the Dominican Republic to develop a binational plan for elimination of malaria from Hispaniola by 2020. He was known for his commitment and dedication to public health, beginning



K. Callahan

Dr. Vely Jean-Francois reviews notes at a binational malaria meeting in April 2010.

his career as an epidemiologist in 1975 at the *Service national des endemies majeures*. He also served as a national consultant for vector-borne diseases with the Pan-American Health Organization. Dr. Jean-Francois trained future generations of health professionals at the

State University of Medicine as professor of community medicine and teacher for the Public Health Management Training Program, offered by the University of Montreal. The Center extends its sincere condolences to Dr. Jean-Francois' family and colleagues.

Guinea Worm Disease Cases Fall

Guinea Worm (*Dracunculiasis*) Eradication Countdown: January—June 2009 versus January—June 2010¹

Country	2009		2010 ¹		% Change in Cases Reported 2009–2010
	Cases Reported	% Cases Contained ²	Cases Reported	% Cases Contained ²	
Sudan	1,184	72%	742	76%	-37%
Ghana	228	94%	8	100%	-96%
Mali	8	100%	1	100%	-88%
Ethiopia	21	86%	12	83%	-43%
TOTAL	1,441	76%	763	76%	-47%
<i>Outside Sudan</i>	<i>257</i>	<i>93%</i>	<i>21</i>	<i>90%</i>	<i>-92%</i>

¹ Provisional

² A case of Guinea worm disease is contained if all of the following conditions are met:

- The patient is detected before or within 24 hours of worm emergence; and
- The patient has not entered any water source since the worm emerged; and
- The village volunteer has properly managed the case, by cleaning and bandaging until the worm is fully removed (if two or more emerging worms are present, the case is not contained until the last worm is pulled out), and by giving health education to discourage the patient from contaminating any water source; and
- The containment process, including verification that it is a case of Guinea worm disease, is validated by a supervisor within 7 days of the emergence of the worm.

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Global Health News

Minister Tedros Honored for Contributions to Health

The Honorable Dr. Tedros Adhanom Ghebreyesus, Ethiopia minister of health, was recently selected by the National Foundation for Infectious Diseases to receive the Jimmy and Rosalynn Carter Humanitarian Award. Established in 1997, the award is presented to “individuals whose outstanding humanitarian efforts and achievements have contributed to improving the health of humankind.”

In his five years as Ethiopia’s minister of health, Minister Tedros has led the effort to protect all Ethiopians at risk of malaria. As a result, 20 million long-lasting insecticidal bed nets were distributed to cover an estimated 50 million people at risk for malaria, one

of the most ambitious and successful efforts in public health history. He also has improved the quality of and access to health services with a campaign that recruited and trained 30,000 health extension workers who live and work in rural Ethiopia, where the vast majority of Ethiopians live. With Minister Tedros’ support, antibiotic treatments for trachoma have increased from 1.7 million in 2005 to 13.4 million annually, and more than 1 million latrines have been constructed in the Amhara region of Ethiopia, the most trachoma-prevalent area in the world.

Former U.S. President Jimmy Carter and former First Lady Rosalynn Carter were the first recipients of this award. Other recipients include Gen.

Frank O. Richards Jr.



The Honorable Dr. Tedros Adhanom Ghebreyesus, Ethiopian minister of health.

Colin L. Powell, former Surgeon General Dr. David Satcher, CNN founder Ted Turner, Sen. John D. Rockefeller IV, Bill and Melinda Gates, former Rep. John

Edward Porter, Henri Landwirth, former U.S. President Bill Clinton, Dr. Paul E. Farmer, Dr. William H. Foege, Dr. Louis W. Sullivan, Ann Lurie, and Dr. Jennifer Howse.