

# EYE of the EAGLE

THE  
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## Carter Center Celebrates 500 Million Treatments

The Carter Center has surpassed a major milestone: assisting with the distribution of a half-billion doses of donated medication to combat five neglected tropical diseases in 14 countries in Africa and Latin America.

An event to celebrate the achievement was held in Gidan Gimba village in Karu local government area, Nasarawa state, Nigeria. Forty-two percent of the half-billion treatments have been administered in Nigeria, and Carter Center–assisted programs recently eliminated blinding trachoma and lymphatic filariasis from Nasarawa state.

Dr. Umoh Enebong, Nigeria's acting director of public health, and Geoffrey Onyeama, federal minister of foreign affairs, were present, as were local government officials, traditional leaders, and some 1,000 local residents. The Carter Center delegation was led by Ambassador (ret.) Mary Ann Peters, CEO; Dr. Dean Sienko, vice president for health; and Dr. Emmanuel Miri, Nigeria country representative. Other attendees included Ambassador (ret.) Howard Jeter, Sir Emeka Offor Foundation; Michael T. Harvey, mission director for the United States Agency for International Development (USAID); Dr. Ben Nwobi, resident program advisor for USAID's ENVISION project in Nigeria with RTI International; and Chris Ogoshi, chairman of a coalition of

Atlanta artist Sherri Richards designed this logo to commemorate the occasion.



Ruth McDowall

Jude Musa, 13, is measured by Yusuf Maikieffi, his village's volunteer drug distributor for 20 years, to determine the proper dosage of Mectizan, a microfilarial drug donated by Merck, used to prevent and treat onchocerciasis (river blindness).

nongovernmental development organizations.

To commemorate the half-billion treatments, Enebong gave Gidan Gimba resident Jude Musa, age 13, Mectizan® tablets (donated by Merck) for river blindness; Peters administered praziquantel tablets (donated by Merck KGaA) for schistosomiasis; and community drug distributor Yusuf Maikieffi gave an albendazole tablet (donated by GSK) for soil-transmitted helminths. These medications can be administered together safely.

Maikieffi serves about 200 people in his role as Gidan Gimba's trained community drug distributor. "I enjoy this work because it protects my community," he said.

Musa swallowed the tablets with a sip of water and a smile. He said he previously had blood in his urine, a symptom of urinary schistosomiasis, but that the blood has been gone ever since he started receiving

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Electronic  
Edition

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## IACO 2016: Guatemala Verified by WHO as Onchocerciasis-Free

**The 26th InterAmerican Conference on Onchocerciasis** (IACO), convened Dec. 7–8, 2016, in Guatemala City, celebrated Guatemala's achievement as the fourth country in the world verified free of onchocerciasis. Over 40 percent of



Jimmy Morales (left), president of Guatemala, and Dr. Lucrecia Hernández Mack (center), minister of health, receive the verification plaque from Dr. Carissa Etienne, director of the PanAmerican Health Organization.

the population initially at risk in the Americas resided in Guatemala; now some 230,000 people are no longer threatened by the disease.

To celebrate Guatemala's success, President Jimmy Morales attended the inaugural ceremony, where he and Dr. Lucrecia Hernández Mack,

Guatemala's minister of health, received a commemorative plaque of the country's victory over onchocerciasis from Dr. Carissa Etienne, director of the PanAmerican Health Organization. In his acceptance speech, President Morales recognized the many partners, including The Carter Center, who contributed to the achievement. In particular he commended the health workers in the audience, whom he referred to as angels—those who brought medicine to the communities in need year after year. Ambassador (ret.) Mary Ann Peters, CEO of The Carter Center, and José Bastos, president of MSD Latin America, Merck's affiliate in the region, also spoke at the inaugural event. Since the disease was discovered in the country by Guatemalan physician Dr. Rodolfo Robles, 101 years have passed. His grandson, who is Dr. Robles' namesake, and other family members were guests of honor.

Now that Colombia, Ecuador, Mexico, and Guatemala—four of the six originally endemic countries—have been verified by the World Health Organization as having eliminated onchocerciasis transmission, IACO's primary focus was on the last active transmission zone in the Americas, populated by the indigenous



Yanomami people, and straddling the Brazil-Venezuela border area in the Amazon rainforest. Because the population is hard to reach and migratory, the program must use creative means to traverse the difficult terrain and identify communities in need. Most recently this included clearing and rehabilitating old landing strips in Venezuela so that planes may access the area more readily, and the use of satellite imagery to help the program find any endemic communities not yet receiving treatment.

The Carter Center's Onchocerciasis Elimination Program for the Americas (OEPA) works with the ministries of health of the six countries and coordinates the regional initiative to eliminate river blindness from the Americas. Major OEPA partners include Merck and the Mectizan Donation Program, the U.S. Agency for International Development, the Carlos Slim Foundation, the U.S. Centers for Disease Control and Prevention, Lions Clubs International Foundation, and the Bill & Melinda Gates Foundation, among others. 



Guatemalan health workers who delivered treatments year after year to the afflicted populations receive plaques of recognition at the IACO meeting. Pictured with the health workers are Dr. Etienne (center) and Ambassador (ret.) Mary Ann Peters (far right), CEO of The Carter Center.

500 Million Treatments

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praziquantel every year from Maikeffi.

“If you take this medicine, it will help you,” Musa, one of six children of a retired police officer, told the crowd.

The half-billion treatments targeted onchocerciasis, trachoma, lymphatic filariasis, soil-transmitted helminths, and schistosomiasis, and were distributed in

Brazil, Cameroon, Colombia, Ecuador, Ethiopia, Guatemala, Mali, Mexico,

Niger, Nigeria, South Sudan, Sudan, Uganda, and Venezuela. [E](#)

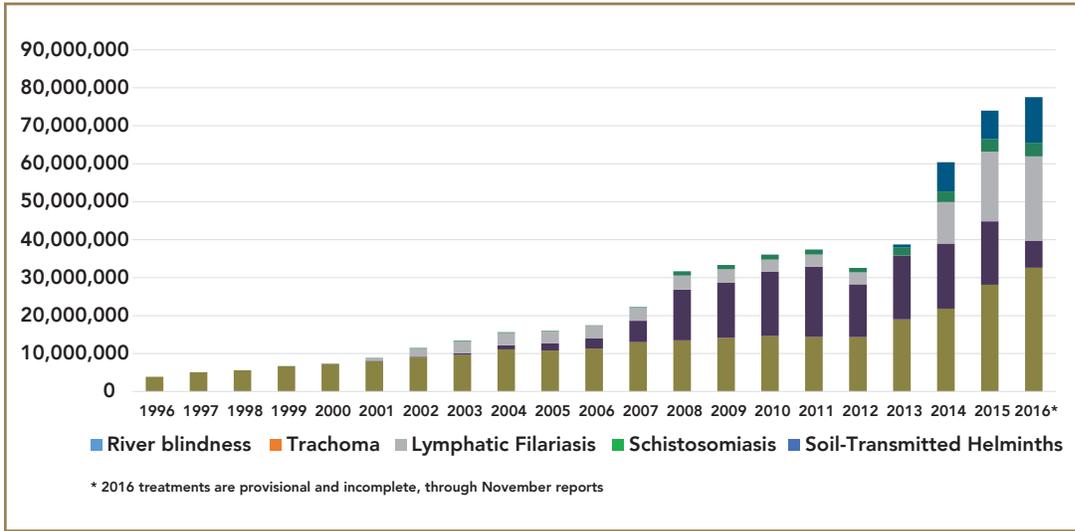


Figure 1. Carter Center-assisted annual NTD treatments (1996–2016\*), totaling 555,599,941 as of November 2016

Four Uganda Foci Complete Post-treatment Surveillance

At a meeting Aug. 2–4 in Kampala, the Uganda Onchocerciasis Elimination Expert Advisory Committee (UOEEAC) determined that four foci in Uganda had successfully finished post-treatment surveillance for river blindness transmission and now meet World Health Organization criteria for elimination.

The four foci are Imaramagambo, Itwara, Mt. Elgon, and Mpamba-Nkusi, which have a population of 821,230 people who now are no longer at risk of acquiring onchocerciasis. Until now, only the Victoria focus had achieved elimination as a result of a large vector-control program conducted from the 1950s to 1970s.

Uganda steadily made progress in 2016; six foci have interrupted transmission of the disease: Kashoya-Kitomi, Maracha-Terego, Obongi, Nyamugasani, Wadelai, and Wambabya-Rwamarongo. Three of these foci (Maracha-Terego, Obongi,

and Wadelai) are also endemic for lymphatic filariasis (LF) and still receive ivermectin and albendazole for LF mass treatment. The Obongi focus, however, has successfully completed the first LF transmission assessment survey (TAS1), meaning that LF treatment will be stopped. The UOEEAC recommended that coordinated LF-onchocerciasis post-treatment surveillance be launched in Obongi in 2017.

The four foci of Bwindi, Lhubirihha, Nyagak Bondo, and West Nile pose a challenge to the elimination program due to potential cross-border transmission with the Democratic Republic of the Congo and South Sudan. Two Ugandan foci still have

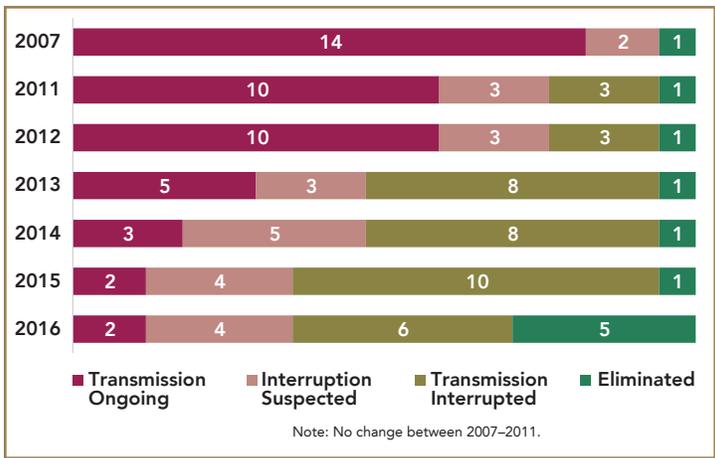


Figure 2. Uganda: Change in Endemic Status in Foci (n = 17) 2007–2106

ongoing transmission of onchocerciasis, the most important of which is the very large Madi-Mid North focus in northern Uganda on the border with South Sudan. More than 1.4 million people live in the Madi-Mid North focus, posing the largest challenge to reaching Uganda’s goal of eliminating river blindness nationwide by the year 2020. [E](#)

## Uganda Recognizes Key Partnerships on World Sight Day

**Uganda's national trachoma program** held a SAFE promotion week in conjunction with World Sight Day on Oct. 13, 2016, in the Karamoja region, the most trachoma-endemic region in the country.

Following World Sight Day's theme of "Stronger Together," the events held in the Karamoja region's subcounty of Nabilatuk in Nakapiripirit district focused on partners working together for trachoma elimination and assisting the Uganda Ministry of Health. All aspects of the SAFE strategy—surgery, antibiotics, facial cleanliness, and environmental improvement—were highlighted.

Partner organization CBM conducted a surgical campaign, screening 561 individuals for signs of trachomatous trichiasis (TT), the blinding stage of the disease that warrants surgery. Of those screened, 59 needed TT surgery and 38 agreed to receive it. In addition, 94 people were found to be cataract patients and referred to a nearby hospital. The remaining individuals with other eye conditions were

provided treatment when possible or, for more complicated cases, referred to another clinic or hospital.

USAID's ENVISION project led by RTI International launched a mass drug administration campaign with Zithromax® to increase awareness of the importance of taking the drug to control infection. Facial cleanliness and environmental improvement health education activities were demonstrated by Water Aid, Johns Hopkins University, and Welthungerhilfe in one of the villages, focusing on the importance of washing one's face and using latrines.

Engineer John Byabagambi, the honorable minister for Karamoja affairs, joined about 800 residents in the celebrations and activities. Government representatives from the national Ministry of Health and Karamoja affairs, members of Parliament, resident district commissioners, chief administrative officers, health district officers, Local Council V chairpersons from the Karamoja region, Ministry of Health district officials, and representatives from the South Sudan

and Kenya ministries of health were also present. Trachoma partners highlighted during the celebrations included The Carter Center, CBM, Concern, Johns Hopkins University, Lions Clubs of Uganda, The Queen Elizabeth Diamond Jubilee Trust, ENVISION, Sightsavers, Water Aid, Water Mission, World Vision, and Welthungerhilfe.

The event not only motivated residents to participate in SAFE activities but also created awareness among government officials about trachoma in their communities. Thus the partners used World Sight Day to advocate for both community and government leaders to work together with implementing partners and to recognize that Uganda has the power and resources to eliminate trachoma. **E**



A young woman demonstrates proper hand and face washing in Nakapiripirit, Uganda.



An eye-care worker facilitates screening of patients during the surgical campaign conducted by partner organization CBM in Nakapiripirit.

## Initiative Employs New Approaches to Eliminate Surgery Backlog

**Ethiopia's Fast Track Initiative** saw its first full year of implementation in 2016. Introduced in 2014, the initiative aims to clear the national surgical backlog of trichomatous trichiasis (TT) cases in 18 months.

A six-month pilot, conducted in four regions in 2015, including the

Amhara region where The Carter Center assists, demonstrated success in implementing new strategies to reduce the TT backlog. One novel approach enabled integrated eye-care workers, health care providers trained to conduct TT surgery, to support TT surgical activities full time, rather than

dividing time among a host of activities. Although piloted in only one of the 10 zones of the Amhara region, the success of the 2015 pilot contributed to surpassing the annual regional surgical target for the first time in the history of the program.

New strategies for the Fast Track

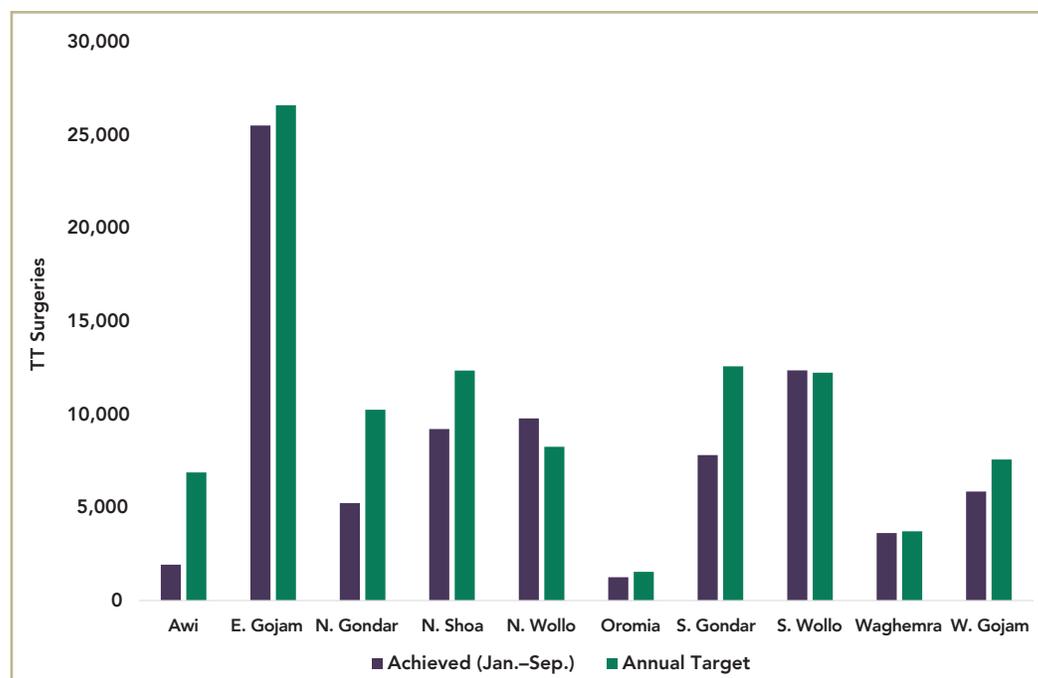
Initiative pilot have been extended throughout the Amhara region. As of September 2016, the initiative had been launched in 106 of 152 districts in the region, with zonal and district-level trachoma task force committees established to monitor activities and review progress.

With dedicated, full-time integrated eye-care workers planning and conducting TT surgical activities throughout the region, the program provided surgery for more than 82,000 TT patients between January and September 2016, reaching 81 percent of its annual target of 102,476 surgeries. Figure 3 shows the number of surgeries conducted from January through September 2016 and the annual target for 2016.

Through an increased emphasis on TT surgeries with the Fast Track Initiative, zones are making significant strides toward their annual targets and, in turn, reaching the highest number of TT patients with surgery in one year in the region. **E**



In East Amhara, Ethiopia, trachoma patients await eyelid surgery (in front and at right) or recover from surgery (at left).



**Figure 3.** Number of TT Surgeries Achieved (January–September) and Annual Target, 2016, Amhara Region, Ethiopia

## Trachoma Grader Sharpens Skills for Annual Survey

In October 2015, Abebe Alemu was standing in an Ethiopian schoolyard full of children, but he wasn't playing a game. He was practicing examining eyelids for trachoma. Trachoma graders like Abebe undergo training before each annual survey in which the prevalence of trachoma in each district is assessed. Abebe had served as a certified trachoma grader in two previous impact surveys and was taking part in the weeklong grader training in preparation for another one in West Amhara, Ethiopia. As a grader, he can identify those who have trachoma and help them get treatment.

When not assisting with impact surveys, Abebe serves his community as a nurse at the local clinic and regularly sees patients with trachoma. Since 2007, he has been performing the eyelid surgery that reverses trachomatous trichiasis (TT), halting the progression of the disease toward blindness. He is the primary TT surgeon at his health center. He has also been involved in mass drug administration of Zithromax®, the medication used to



Abebe Alemu is a certified trachoma grader who examines eyelids to look for evidence of trachoma infection.

prevent and treat trachoma infection, working with health extension workers to distribute the medication throughout the Dembia district of North Gondar.

Abebe grew up in Gondar town and graduated from the local university. He enjoys working on trachoma activities, and in his clinic he takes

a keen interest in his patients. He previously worked in an antiretroviral medicine clinic and served as mentor for those living with HIV.

The annual trachoma assessments rely on a large number of health care workers like Abebe who leave their full-time positions for the duration of the survey.

The trachoma survey in October and November 2015 required certified trachoma graders and their teams to visit 248 villages to examine over 36,000 people for trachoma. Each team consists of the trachoma grader, who, like Abebe, has become certified by passing a rigorous classroom exam and a field-based exam. Abebe works alongside a recorder, who is trained to take a census of each household, ask each household member a series of questions, and record all data accurately on a tablet.

This trained workforce and their hard work allow the trachoma program to carefully track the impact of trachoma interventions across the entire Amhara region. 



To become certified, graders must pass a classroom exam and a field-based exam.



Abebe goes out in the field during grader training.

## New Online Course Reaches 1,000 with Trachoma Training

A new five-week course provides free online training on eliminating trachoma in endemic countries. More than 1,000 people registered for the course, which launched in October 2016 and was focused on people currently working with the trachoma programs in their countries.

The Carter Center's Trachoma Control Program assisted the International Centre for Eye Health at the London School of Hygiene and Tropical Medicine in the development of the course.

The course used articles, mini-lectures, and interviews with experts in the field to highlight key issues and thinking around trachoma. Additionally, an interactive platform was available for students to share their experiences and views.

Modules focused on methods to map the disease, implement the World Health Organization–endorsed SAFE (surgery, antibiotics, facial

cleanliness, and environmental improvement) strategy, and monitor and evaluate activities as programs work toward elimination of trachoma. Representatives from WHO; the London School; nongovernmental organizations; the water, sanitation, and hygiene sector; and trachoma programs around the world assisted in the facilitation of the course. At completion, students could earn a certificate of achievement for professional development.

Angelia Sanders, associate director of the Center's Trachoma Control Program, helped develop and facilitate the facial cleanliness and environmental improvement (F&E) module. Sanders worked with partners in Uganda to showcase the F&E achievements of its national program and share lessons learned through video interviews and written narrative.

“The London School developers of the program worked very hard

to make the lessons easy to follow, understandable, and useful to those working with trachoma in the field,” Sanders said. “Additionally, the course provided a forum for people from all different countries and technical backgrounds to learn from each other, share experiences, and motivate each other to continue to save people from blindness.”

Globally, 200 million people are at risk for trachoma, and over 3.2 million are at immediate risk for blindness from trachomatous trichiasis (TT), the advanced stage of the disease. The online course helped over 1,000 people become better equipped to take action at the community level in the fight against trachoma and be able to download, adapt, and reuse course content for teaching and learning in the future.

Learn more about the course at <https://www.futurelearn.com/courses/eliminating-trachoma>. 

## Carter Center Staff Share Expertise at Atlanta ASTMH Meeting

Staff from the Carter Center's health programs had a strong presence at the annual meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), which took place Nov. 13–17, 2016, in Atlanta. A total of 16 abstracts from the Center's staff were accepted to the meeting and presented as posters, presentations, and symposia, covering work to control and eliminate neglected tropical diseases around the world.

Dr. Scott Nash, epidemiologist in the Carter Center Trachoma Control Program, gave an oral presentation on *Chlamydia trachomatis* infection in the

Amhara region of Ethiopia, focusing on data gathered from 2011 through 2015. The trachoma program also supported 10 posters, with abstracts submitted by staff and students from Atlanta, as well as field staff from Ethiopia.

Ultimately, several of the abstracts accepted will be developed further into manuscripts for publication in peer-reviewed journals.

The ASTMH annual meeting brings together more than 4,000 attendees from the tropical medicine and global health sectors to participate in the educational conference. 

## Guinea Worm Disease Update



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## Dean Sienko Joins Carter Center as New Vice President



Dean G. Sienko

**Dean G. Sienko**, M.D., M.S., was appointed vice president for health programs at The Carter Center, effective June 2016.

Before joining the Center, Sienko was associate dean for prevention and public health at Michigan State University College of Human Medicine, where he directed the

Division of Public Health and the college's Institute for Health Policy, which work to improve health care for Michigan residents.

In his new role at The Carter Center, he will provide leadership for programs working to prevent or eliminate six tropical diseases in 18 nations, as well as efforts to improve mental health care in the United States and abroad. He replaces Dr. Donald Hopkins, who joined the Center in 1987 and remains as special advisor for Guinea worm eradication.

"Dr. Sienko brings a lifetime of experience in disease prevention and public health leadership to the Center's efforts to fight preventable diseases in many of the world's poorest nations," said Ambassador (ret.) Mary Ann Peters, Carter Center CEO.

The Carter Center assists nations in preventing Guinea worm, river blindness, trachoma, schistosomiasis, lymphatic

filariasis, and malaria by using health education and simple, low-cost methods. It leads the international coalition working to eradicate Guinea worm disease.

"Since joining The Carter Center, I have been most impressed with the tremendous good it does around the globe," Sienko said. "I find it extremely rewarding to travel around the globe and hear people tell me about the positive impact The Carter Center is making in their countries and regions."

In his early career, Sienko interned at Cook County Hospital in Chicago, trained as an Epidemic Intelligence Service officer at the Centers for Disease Control and Prevention and completed a preventive medicine residency there, and was a medical epidemiologist at the Michigan Department of Public Health. In 1989, he joined the Ingham County Health Department, serving for nearly 23 years as medical director and simultaneously as director the last five years.

Sienko recently completed a distinguished 33-year career as a U.S. Army officer, retiring in January 2015 at the rank of major general. His last assignment in the Army was as the commanding general of the Army Public Health Command, a 3,500-person organization that provides technical support and expertise in preventive medicine, public health, health promotion, and wellness to military units around the globe.