Summary of the Twenty-Third Meeting of the International Task Force for Disease Eradication (II)
April 28, 2015

The twenty-third meeting of the International Task Force for Disease Eradication (ITFDE) was convened at The Carter Center from 8:30 am to 5:00 pm on April 28, 2015 to discuss the global campaign to eradicate Guinea worm disease (dracunculiasis). The Task Force members at the time of this meeting were Sir George Alleyne, Johns Hopkins University; Dr. Stephen Blount, The Carter Center; Dr. Mickey Chopra, UNICEF; Dr. Dirk Engels, World Health Organization (WHO); Dr. Donald Hopkins, The Carter Center (Chair); Julie Jacobson, Bill & Melinda Gates Foundation; Dr. Adetokunbo Lucas, Harvard University; Dr. Montserrat Lorenzo, The World Bank; Professor David Molyneux, Liverpool School of Tropical Medicine (retired); Dr. Mark Rosenberg, Task Force for Global Health; Dr. Laurence Slutsker, Centers for Disease Control and Prevention (CDC); Dr. Harrison Spencer, Association of Schools of Public Health; Dr. Roberto Tapia, Carlos Slim Foundation; Dr. Ricardo Thompson, National Institute of Health (Mozambique), and Dr. Dyann Wirth, Harvard School of Public Health. Six Task Force members (Blount, Jacobson, Lucas, Rosenberg, Slutsker, Thompson) attended this meeting (Hopkins participated by telephone), and one was represented by an alternate (Dr. Gautam Biswas for Engels).

Presenters at the meeting, which was chaired by Dr. Julie Jacobson, included Dr. Mark Eberhard, Centers for Disease Control and Prevention (retired); Dr. Dieudonne Sankara, World Health Organization; Dr. Donald Hopkins, Dr. Ernesto Ruiz-Tiben and Mr. Adam Weiss of the Carter Center.

The ITFDE reviewed the status of the global Guinea Worm Eradication Program twice previously, in 2003 and 2008.

Global Overview of the Eradication Program and Certification of Eradication

Guinea worm disease (dracunculiasis) is caused by the parasite Dracunculus medinensis, which infects people who drink stagnant water from open ponds or wells containing immature stages of the parasite that have been ingested by tiny copepods (water fleas). After one year without any symptoms, the thin two to three foot long mature female worms emerge slowly and painfully through the skin of infected people. There is no curative treatment or vaccine for the illness, which can, however, be prevented by filtering drinking water through a fine cloth, teaching people to avoid entering sources of drinking water when the worms are emerging, by treating contaminated water with a mild insecticide, ABATE®, or by providing safe drinking water from borehole wells, for example. Prompt palliative treatment and bandaging of wounds caused by

the emerging parasites (case containment another means to prevent contamination of drinking water sources by infected persons. Two important biologic constraints are a one year long incubation period and a potential reproductive rate of over 80. Formerly widespread in part Asia and Africa, an estimated 3.5 million persons were infected by the disease in 1986[1].

previously unaffected area, Kidal, in 2007 was a major setback that was compounded by inadequate support for the program at peripheral levels by insecurity before and especially after a coup d'etat in 2012. Currently, the northern regions of Kidal, Timbuktu, and Gao are extremely insecure, while Mopti and Segou are moderately insecure and Kayes, Koulikoro and Sikasso regions are relatively secure.

Mali doubled the amount of its cash reward for reporting a case to the equivalent of US$100 in October 2014, and awareness of the reward averaged over 90% of persons sampled in 2014. A few NGOs and UN/WHO humanitarian missions have helped conduct surveillance for GWD in parts of the insecure regions. A total of 574 villages are under active surveillance nationwide. At the time of this meeting, this program had not established a national task force or interagency group to help coordinate activities and support of various government ministries and external partners. Mali hosted the annual meeting of Skas2(t)-22(y)10(be)4(f)3-4(ar)-1(004 Tc 0.084
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Ethiopia

Ethiopia counted 1,120 cases of GWD in 113 villages during its active case search in 1993. The cases were distributed in two endemic areas: one in South Omo (SNNP Region) and the other in Gambella Region. The focus in South Omo was eliminated in 2001 and has remained free of the disease since then. Gambella Region has reported less than 50 cases per year for the past 14 years. Since October 2013, the Ethiopia Dracunculiasis Eradication Program (EDEP) has had 173 villages under active surveillance in the recently endemic districts of Gambella Gog, Abobo, and Itang. Ethiopia increased the amount of its cash reward for reporting a case of GWD to the equivalent of US$100 in October 2014. Reward awareness averaged 59% overall in 2014 but was significantly higher in the recently endemic districts.

The EDEP reported only 3 cases in humans in 2014: 2 in June, both of which were contained, and 1 uncontained case in December. In addition, the program reported 3 infected dogs and 1 infected baboon in June–August 2014, and another infected dog in January 2015, but no human infections in January–March 2015. All human and animal infections reported in 2014–2015 were resident in or near four villages located along the same road in Gog district within about 6 miles (10 kilometers) of each other. Abate was applied to the water sources associated with all of these infections within 7 days of the respective infection. All four villages have received health education, two of the villages have cloth filters in all households, and three of the villages have

using existing public health programs (e.g. immunization, mass drug administration) to rapidly assess the possible presence or not of GWD in Angola and the Democratic Republic of Congo.

The increase in cash rewards in Ethiopia and Mali may have improved reporting there in 2014. It was noted that WHO expects to introduce a global cash reward for reporting a case of GWD that is larger than the rewards currently offered by individual endemic countries, starting in 2016. During its tenth meeting in January 2015, the ICCDE discussed whether a global reward should only be announced one year after the last case, and the relation of such a global reward to existing national rewards.

The excellent progress being made by the SSGWEP is remarkable, given the special challenges in South Sudan. Great concern was expressed, however, about the deteriorating political-economic climate and resurgent insecurity in the country.

Mali's GWEP is handicapped by severe insecurity in much of the country, including to some extent all of the known endemic areas remaining, as well as by weak political support of the program by political and public health authorities at all levels. During 2014 and 2015 insecurity prevented provision or repair of mechanized safe water sources in Tanzikratene locality (29 cases), while there is no source of safe drinking water in Nanguaye locality (10 cases) in two villages with all but one of the cases reported in 2014. As well as a ministerial visit to an endemic area, inadequate political will has prevented both formation of an interagency task force to support and coordinate program activities, as well as holding peripheral authorities accountable for their performance.

It is not clear why GWD reappeared in Chad in 2010, or why D. medinensis infections began occurring so frequently among domestic dogs in Chad. Potential explanations that have been put forward include the unusually intense fishing industry along the Chari River, ecological changes in prevalence of local fish and flora associated with climate change, and reported reduction in use of agricultural pesticides in areas along the river. The year-to-year increases in numbers of infected dogs in Chad in 2012-2015 is real and not due to more sensitive surveillance. It is known from older literature that about half of dogs exposed to infective D. medinensis larvae experimentally became infected. It seems likely that D. medinensis larvae in fish are not as hardy as some other larval parasites, such as encysted Trichinella larvae in other animals. Concern was expressed about one case that occurred in 2014 in a Chadian resident near the border with the Central African Republic.

The long delay in stopping transmission of GWD in Ethiopia may be because cases of the disease were relatively few in number and occurred among remote areas

Conclusions and Recommendations

1. The Task Force applauds the great progress since its previous review of the global GWEP. It is also acutely aware of the distinct challenges to completing eradication in each of the four endemic countries remaining. The Task Force expects these last four endemic countries to receive greater scrutiny by the ICCDE, so the documentation supporting elimination of Guinea worm in each country is expected to be much more rigorous. This is now the pivotal end stage of the global campaign, which will require increased and sustained political support and financial resources for the final push to eradication.
2. Endemic countries and their partners are urged to intensify surveillance for GWD, including increasing awareness of the cash rewards for reporting, increasing redundancy of surveillance methods used, and increasing the rates of reported rumors and suspected cases, as well as

8. The Task Force applauds the rapid implementation of several operational and laboratory research activities already undertaken and/or underway in relation to the "peculiar epidemiology" of Guinea worm transmission in Chad and strongly recommends continuation of such research. Research results should be applied quickly, just as relevant program observations should be tested promptly by research.

9. Ethiopia is apparently on the verge of stopping transmission of GWD if it has not stopped transmission already. Any new infections of humans or animals with D. medinensis in Ethiopia should be investigated immediately and treated similarly and aggressively, including use of Abate in local sources of surface water. Unlike Chad, the occasional infection of animals in Ethiopia is very similar to that seen in several other formerly endemic countries before they eliminated the disease.

10. The EDEP needs a full time national coordinator, a national secretariat, a dedicated data manager, and more political support from government officials at all levels. Even if it interrupts transmission, Ethiopia will not achieve certification of Guinea worm elimination with the apparent inattention to the EDEP. WHO, The Carter Center and other stakeholders should push for action on this.

11. WHO and UNHCR are commended for implementing surveillance for GWD among refugees from Mali and South Sudan and urged to continue doing so. Authorities in Angola and the Democratic Republic of Congo are urged to use existing public health programs to conduct nationwide surveys and document the absence or presence of endemic transmission of GWD in their country quickly.