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Rethinking the fight as surge of malaria deaths in conflict zones threatens to upend progress

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Ten years of progress globally in the fight against malaria have masked the rapid rise of infections and deaths in African countries experiencing conflict and famine, though new strategies implemented in places like the Central African Republic, South Sudan, and northern Nigeria could provide a way forward, according to research presented this week at the 7th Multilateral Initiative on Malaria (MIM) Pan African Malaria Conference.

"The global battle against malaria is going to fail unless we get real about where the malaria burden is today and expand the tools and techniques we use to fight it," said Richard Allan, head of an NGO called The Mentor Initiative, which focuses on fighting malaria in areas experiencing humanitarian crises.

Globally, malaria deaths have fallen from 655,000 in 2010 to 445,000 in 2016, but data recently compiled by the World Health Organization (WHO) shows that while malaria is present in 91 countries, at least 80 percent of malaria infections and deaths are now concentrated in just 18 of them. And researchers presented WHO data showing that over this same six-year period, many of these countries—including Nigeria, Ivory Coast, South Sudan, the Central African Republic and other regions experiencing armed conflict—saw infections and deaths surge.

WHO Director General Tedros Adhanom has warned that "if we

continue with a business as usual approach," these malaria hot zones could reverse hard-fought progress against the disease. In a sign of how conflict can intensify malaria, at MIM, Allan and his colleagues presented evidence from a new assessment of war-torn Yemen where in just the first 19 weeks of 2017, the number of reported malaria cases "significantly exceeded" the total for all of 2016.

But Allan pointed to a number of studies to be presented at MIM that he said reflect his experience fighting malaria in conflict zones: that "with the right mix of tools and tactics, you can drive down malaria infections and deaths even in very chaotic circumstances."

A study at MIM presented by Dr. Christian Lengeler of the Swiss Tropical and Public Health (Swiss TPH) and led by his colleague, Dr. Laura Ruckstuhl, looked at an effort in the Central African Republic that involved working in communities caught in the crossfire of a civil war to establish a network of community members specially trained to diagnose and treat malaria. These health workers learned how to use rapid diagnostic tests and administer malaria drugs—including rectal administration for children who were very sick and could not take drugs orally. The workers also carried a full cache of supplies in a backpack so they could move quickly with the community if there was a need to flee.

The study found that of the 200,000 people treated by these health workers, 81 percent tested positive for malaria and in almost all cases—98.9 percent—they were "appropriately treated."

Ruckstuhl noted that the program showed that it could reach those most vulnerable to malaria and continue some level of care at all times, and that even malaria surveillance can be maintained in conflict zones.

An analysis presented by Allan noted that having access to a minimal, but appropriate, level of care is critical to reducing deaths from severe

malaria. He said in many instances, the community workers focus on treatments that can stabilize the patient so they can be transported—often my motorbike or bicycle—to a better equipped medical facility, such as one run by relief organizations in a camp for displaced persons.

"In conflict zones we find that many malaria deaths occur while people are on the road trying to get to treatment," Allan said. "Saving their life requires embracing pragmatism in places where medical perfection is a distant dream."

Allan noted that new tools also are needed. For example, he said long-lasting insecticide treated mosquito nets (LLINs), which have been effective at reducing the burden of disease in more stable settings, are much less effective in conflict zones. One problem is simply more wear and tear. A 2012 study from Chad found that after 14 months, only about a third of LLINs distributed to people displaced by conflict were still usable. But LLINs also are weakened by rising resistance in malaria-carrying mosquitos to class of insecticides known as pyrethroids.

At MIM, researchers from the Mentor Initiative will discuss an ongoing study in South Sudan that is evaluating the effectiveness of a new type of LLIN that has been treated with both pyrethroids and a second type of insecticide that mosquitoes have not yet overcome. The study involves distributing 15,000 of the new mosquito nets to residents of a camp for displaced persons that now houses more than 100,000 people and is considered at high risk of experiencing malaria outbreaks and epidemics. The researchers note that this is the first study to examine the efficacy and durability of the new mosquito nets for people fleeing conflict.

Allan said there is also evidence that building temporary housing with plastic sheeting treated with insecticides, spraying insecticides inside living quarters, and distributing insecticide-treated blankets can be safe

and effective alternatives to LLINs for fighting malaria in conflict zones.

Meanwhile, in a separate presentation at MIM, Emmanuel Odjidja from the AVSI Foundation presented evidence from a study in South Sudan that found mobile clinics appear to be effective in humanitarian settings at helping to prevent malaria infections in pregnant women, which can be dangerous both for the mother and the developing fetus.

Another study, presented by Olivier Briet of Swiss TPH, found that in the aftermath of the Boko Haram attacks in Borno State of Nigeria, rapidly treating large populations of children with malaria drugs—regardless of whether they have been tested for the disease—coupled with widespread distribution of LLINs have the potential to "avert a large part of malaria mortality" in the region. The assessment was based on a mathematical model. But a large mass drug administration (MDA) campaign targeting 1.2 million children was launched in the region in July of 2017, and Briet reports that "early results" suggest a reduction in malaria infections.

Allan noted that waging effective anti-malaria campaigns in areas experiencing conflict and crisis requires studying what works, embracing a wider assortment of tools and tactics, and being willing to spend more than it costs to fight the disease in relatively stable settings. He noted that global progress against malaria over the last 10 years, while substantial, is partly the product of "harvesting the low hanging fruit." Allan also noted that the burden of malaria that persists in Africa could get worse, and not just because of conflict. He said drought and famine that is becoming more widespread in the region is also an issue, as it leads to malnutrition, which weakens the immune system and, especially in children, limits absorption of anti-malaria drugs.

The Pan African Malaria Conference is organized every three-to-four years by the MIM secretariat in collaboration with a group of African

institutions. This year's malaria conference in Dakar is running parallel to The Malaria Summit, Ready to beat malaria, which is taking place alongside the Commonwealth Heads of Government Meeting (CHOGM) in London on 18th April 2018. This will bring together business leaders, philanthropists, scientists, Heads of States and civil society to announce significant new commitments to mobilize domestic resources, increase investment and develop new innovation and approaches towards beating malaria. The commitments sit alongside a call to action urging the Commonwealth as a whole—who represent citizens making up six out of ten malaria cases globally—to commit to accelerating progress against malaria, the world's oldest and deadliest disease.

Provided by Burness