

**Expanding the Benefit of Ivermectin for Public Health Control of Tropical Diseases**

**Session Date:** Friday, November 3

**Session Time:** 1:00pm – 4:00pm

**Session Location:** Camden

**Session Description:** There is evidence that ivermectin preventive chemotherapy could substantially impact neglected tropical diseases beyond onchocerciasis and lymphatic filariasis, including scabies, strongyloides and soil-transmitted helminthiasis. Furthermore, there is emerging evidence that ivermectin could play a role in malaria control.

The goal of this session is to review the data relating to expanded roles for ivermectin preventive chemotherapy for indications beyond onchocerciasis and lymphatic filariasis, and to explore key questions regarding how these extended benefits could be realized.

**Session Chair:** Jennifer Keiser, Swiss Tropical & Public Health Institute. Basel, Switzerland.

**Session Rapporteur:** Alejandro Krolewiecki

**KEY DISCUSSION POINTS**

Hundreds of millions of doses of ivermectin have been used safely for the oncho and LF elimination programs. The dosage of ivermectin used for MDA has not been optimized to maximize public health benefit. In addition, children (less than 5 years of age or <90 cm in height) and pregnant women are routinely excluded from MDA. Interest in exploring the public health benefits of ivermectin treatment has prompted a number of research teams to conduct carefully designed clinical trials. These studies have documented that ivermectin, alone or in combination with albendazole, provides excellent therapeutic benefit for *Trichuris*, *Strongyloides*, and scabies. In addition, blood levels of ivermectin, especially after multiple spaced doses, provide an important mosquitocidal effect.

**KNOWLEDGE GAPS IDENTIFIED**

- A better understanding of the regulatory landscape is needed in order to determine the barriers that could prevent extension of ivermectin (IVM) MDA to other diseases.
- Broader access to quality assured generic products is a critical component of expanding public health uses of IVM.
- Is there a risk that resistance will develop if use of IVM at community level is extended to other indications? How will we monitor this risk?
- How do we assess the public health benefits of IVM MDA for scabies or *Strongyloides*?
- What is the size of the population at risk that would benefit from the expanded indications of IVM, should they be incorporated into programs?

- What is the safety of IVM in currently excluded populations (pregnant women and children <15 kg)? PK/PD data is needed to guide rational dosing, considering efficacy, safety and logistics of administration.

#### **RECOMMENDED NEXT STEPS**

- Studies are needed to establish the safety of ivermectin treatment in groups now excluded from oncho and LF MDA, namely young children and pregnant women.
- Studies are required to assess the impact of the addition of IVM to benzimidazole based regimens against STH in terms of efficacy, drug resistance and transmission interruption
- Field trials of long lasting formulations of ivermectin are needed to understand the potential impact of MDA on malaria transmission
- Enhanced monitoring of existing MDA programs would increase our understanding of the collateral benefits of IVM MDA.
- Mapping the population at risk for each of the new established and potential indications must be done in order to determine the population size and drug needs.
- Evaluate the market outlook for generic IVM.
- Strengthen interactions with WHO and regulatory agencies to understand and facilitate the process.