Appendix 6: Prevention and assessment of Schistosomiasis and Strongyloidiasis infection in refugees and migrants

Rationale

It is estimated that hundreds of millions of people harbour helminth infections which are predominantly soil-transmitted infections followed by schistosomiasis. Moreover, some of these helminth infections such as schistosomiasis are indeed underlying causes of non-communicable diseases (NCD) including cancer and liver disease; which must be taken into account when calculating the burden, injuries and disability-adjusted life year (DALY). *Strongyloides stercoralis* with more than 350 million people estimated to be infected worldwide, has been considered less prevalent compared with the other soil-transmitted helminth infections although global burden studies are scarce and diagnostic methods are poorly sensitive, thus underestimating the real burden of the disease. This helminth infection is of particular importance in immunosuppressed patients because of the risk of developing a severe condition which may be life-threatening. In both cases, the implementation of a screening program would allow an early detection of the infection in individuals at risk, before they develop the severe condition. The rationale for screening of strongyloidiasis and schistosomiasis in non-endemic countries is based on the high estimated prevalence of the infection among migrants, the availability of a sensitive method for detection, and the potential to prevent fatal complications through early case detection.

Objectives

To determine if migrants coming from endemic areas outside the EU be screened for schistosomiasis and strongyloidiasis.

*Key questions:*

a. What is the effectiveness/safety of screening schistosomiasis and strongyloidiasis in Europe?
   i. What is the performance of the different screening tests available?
   ii. What is the effectiveness and safety of the different treatment options for these intestinal parasites?

b. What are migrant’s views about the main outcomes of interest?

c. What acceptability issues of such a screening programme might be relevant from the perspective of the migrants or other stakeholders?

d. What might be the impact of such a screening programme on health equity?

e. What is the cost-effectiveness of screening for these parasites and treatment of migrant populations?

f. What aspects might be relevant for the feasibility of such a screening programme?

*Population important outcomes*

- Mortality
- Morbidity
- Hyper-infection and disseminated disease (*S. stercoralis*)
- Cancer and cirrhosis (Schistosomiasis)
- Disseminated infections - vascular, GI, CNS complications
- Dermatological manifestations
- Immunosuppression and transplant patients
- Adverse effects
- Health equity
- Quality of life
- Cost-effectiveness
- Test accuracy measures: sensitivity, specificity, likelihood ratios, predictive values

Appendix 6 - Figure 1: Logic model, Strongyloidiasis
Appendix 6 - Figure 2: Logic model, Schistosomiasis

Schistosomiasis
- Acute infections
- Chronic infections
- Disseminated infection
  - Intestinal
  - Hepatic
  - Urinary
  - Cardiopulmonary
  - CNS

No screening

Schistosomiasis
Identify population at risk

Screen
- Acute
- Chronic
- Latent

Negative test?

Educate

Positive test?

Treat

Outcome

Risk of Screening
- Acceptability
- Accessibility
- Cost-Effectiveness
- Ethics

Serology
- Effectiveness
- Cost

No Treatment
Outcome
- Morbidity
- Mortality
- Personal cost
- Health system cost
  - (micro-,
    macro-
    economic)
- Cost-Effectiveness

Outcomes
- Morbidity
- Mortality
- Personal cost
- Health system cost
  - (micro-,
    macro-
    economic)
- Cost-Effectiveness

Quality of Life

Transmission

Quality of Life
Health Equity
Cost-Effectiveness

Morbidity
Mortality
Cost-Effectiveness