

Introduction

My summer internship was with the Pan American Center for Food-and-Mouth Disease (PANAFTOSA), a specialized center of the Pan American Health Organization (PAHO) for veterinary public health. One of PANAFTOSA's divisions is Food Safety, and my summer preceptor (Dr. Tirado) is a Food Safety Advisor with PAHO. My projects then related to foodborne illnesses with a focus on Latin America and the Caribbean (LAC).

My main project focused on foodborne parasites and was based on a global ranking exercise for foodborne parasites conducted by the Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO).

The study's objective was to apply the methodology used by FAO/WHO to a regional analysis of foodborne parasites in LAC, many of which are relatively neglected diseases in the developing world.

Methods & Materials

Steps of Risk-Ranking Methodology:

1. Defining Criteria
 - Criteria relate to public health impact, such as disease burden (number of illnesses, morbidity severity) and impact on economically vulnerable populations
 - FAO also interested in int'l trade
2. Determining Weights
 - Relative importance of each criterion (sum=1.0)
3. Scoring Parasites
 - Score assigned for each criterion, depending on bin
4. Ranking Parasites
 - Criteria scores and weights are plugged into a formula to calculate single rank score (see right; parasites are then ranked in descending order)

Public Health Impact of Foodborne Parasites

Many of the foodborne parasites are associated with conditions of poor sanitation and hygiene and close contact with animals. The parasitic diseases disproportionately affect people of poorer communities due to these risk factors. There may also be impacts on long-term health due to chronic diseases and disability. The diseases have the potential to cause malnutrition, stunting, and mental retardation and thus decrease mental and physical potential, all contributing to the cycle of poverty.



Neighborhood of Duque de Caxias, Rio de Janeiro, Brasil



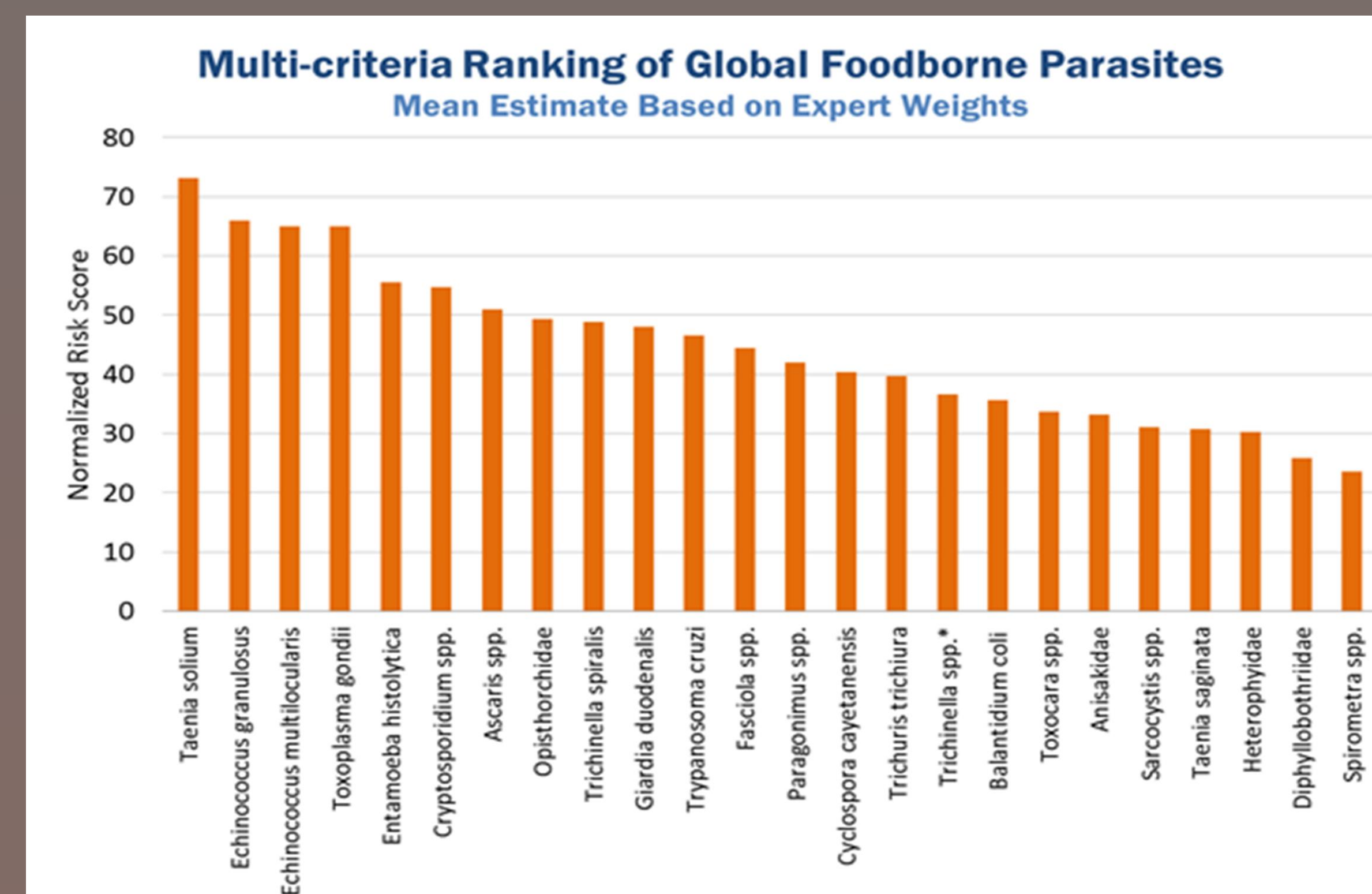
Food Safety and Library colleagues at PANAFTOSA

Internship at PANAFTOSA/PAHO

My internship provided me with a great opportunity to learn new content and skills and meet others in the global health community. I also assisted with a report on the incidence of foodborne diseases in LAC member countries since 2000, which required me to coordinate communications with countries to request data. Between both projects, I was able to learn many things about global health:

- A new epidemiological methodology outside of my classes
- How PAHO communicates with its member countries
- Challenges of obtaining epidemiological data from countries with poorly developed surveillance systems

Results of Risk Ranking Exercise



Note: For privacy purposes, I cannot show any results based on data provided by WHO that have not been officially cleared by WHO. These data are provided as an example of the final results of the LAC regional ranking analysis.



Dr. Cosivi (PANAFTOSA Director), me, and Dr. Tirado

Conclusions

The results of the risk ranking exercise can be used by policy makers to most effectively target foodborne disease control and prevention efforts. The global ranking exercise is helpful for policy making, but the ranking of foodborne parasites in Latin America and the Caribbean may be more relevant and influential for governments in the region.

Multicriteria-based risk ranking is a useful method that can be adapted in many ways according to the interests of risk managers and stakeholders. In my study on LAC, I was particularly interested in parasitic foodborne diseases as being neglected diseases, so I was able to include an additional criterion related to the effect of diseases on the loss of human capital and perpetuation of poverty.

References

FAO WHO. (2012) Multicriteria-based Ranking for Risk Management of Foodborne Parasites. Available: http://www.fao.org/fileadmin/user_upload/agns/news_events/Parasite%20report%20final%20draft-25October2012.pdf. Accessed 1 August 2013.

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