

# Bridging Health Gaps in Central America: Identifying Prevalent Diagnoses Across University of Toledo Medical Missions for Improving Targeting of Treatment

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**Introduction:** International medical mission trips commonly have a goal to provide care to underserved populations in developing countries. Despite the recent increase in the number of international medical mission trips and the services they provide, there is limited literature outlining the impact of the mission trips and how it aligns with the needs of the countries they serve.

**Objectives:** The main objective of this study was to determine the top diagnoses during recent medical mission trips and compare them with the most prevalent health concerns reported within that country. A secondary objective is to inform preparation for future medical mission trips.

**Methods:** Volunteers from the medical triage team collected basic patient health information on paper print-outs, noting vitals and reason for visit. Care teams updated each patient print-out with diagnose(s), treatment plan, and any relevant prescriptions. Students uploaded each patient record, removing patient identifiers.

**Results:** From January 2022 to July 2023, University of Toledo students collected data on two mission trips to Guatemala and one to Honduras. 2,740 patients were treated in total. In Guatemala, top diagnoses included headache (8.8%), dental conditions (7.5%), parasites (7.4%), and arthritis (7.2%) (ICD-10 codes R51, Z98, B89, and M13.80). As a result, the top treatments focused on pain and inflammation including ibuprofen (11.6%) and acetaminophen (10.3%). In Honduras, pain and GERD easily led the group (18.8% and 17.1%, respectively) with allergies (11.2%) and headache (10.2%) also common (ICD-10 codes M79, K21.9, J30.2, and R51).

**Conclusion:** Our data indicates a high prevalence of disease in Central America that is treatable and amenable to short-term mission-oriented intervention. However, there was little overlap of the most common diagnoses when compared to the CDC's top five priority health conditions listed for Central

America: anemia, Chagas disease, mental health, obesity, and parasite infection. Further studies should explore these differences to address the country's needs more effectively from within and on future medical missions.