Travel-Acquired Tropical Illness in Children Under the Age of 5: A Scoping Review

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BACKGROUND

◆International travel has been rapidly increasing in the last decade, with approximately 956 million tourist arrivals in 2010 to 1.46 billion tourist arrivals in 2019[1]. This is a substantial increase and the rates of international travel is expected to continue to rise.

◆Accessibility of international travel has become less difficult due to reduction in cost and increase in speed of travel leading to more people being exposed to various travel-related diseases. Of particular note are tropical diseases such as typhoid and dengue, which have seen increased incidence among populations not previously exposed to these types of conditions.

◆With the advent or more accessible travel, there has also been an increase in the number of children travelling. Due to physiological and immunological differences to adults, children face different risk profiles and disease outcomes in comparison to adults while travelling

◆Research into travel-related illnesses is limited, but has experienced a new focus because of the greater volume of travel in recent years. However, there is a noticeable dearth of information about child travel health, as children are rarely studied separately in research about health outcomes while travelling

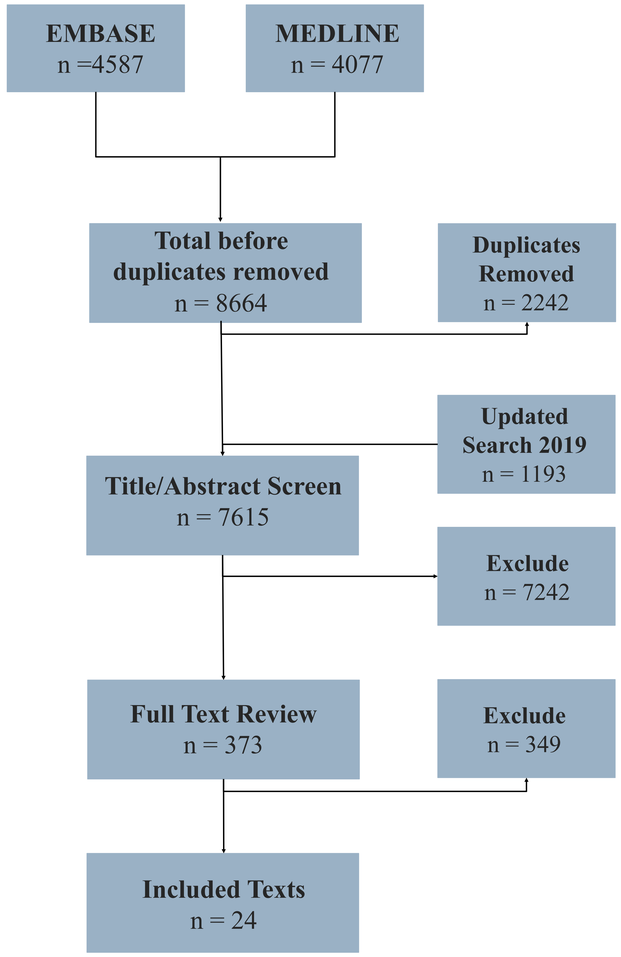
◆As travel continues to increase, more clinicians will be expected to diagnose and manage travel-related illnesses, and it is essential that information on child travel health and evidence-based recommendations are available

◆ **A subgroup of interest in particular are young children who are traveling under the age of 5.** Currently, the amount of travel that is happening by young children is unprecedented and very little is known about their health outcomes while travelling. The little that is known about this topic is in the form of recommendations and clinical guidelines. Previous research has also shown that pediatric travelers are less likely than adults to receive pre-travel medical consultation, leaving them more vulnerable to adverse health outcomes while travelling

STUDY OBJECTIVES

1. **To systematically review the literature on young child travel medicine from 1990 to the present**
2. **To identify gaps in our knowledge about young child health outcomes related to international travel and consolidate what is known and assess health care utilization among infants who are travelling**

METHODS



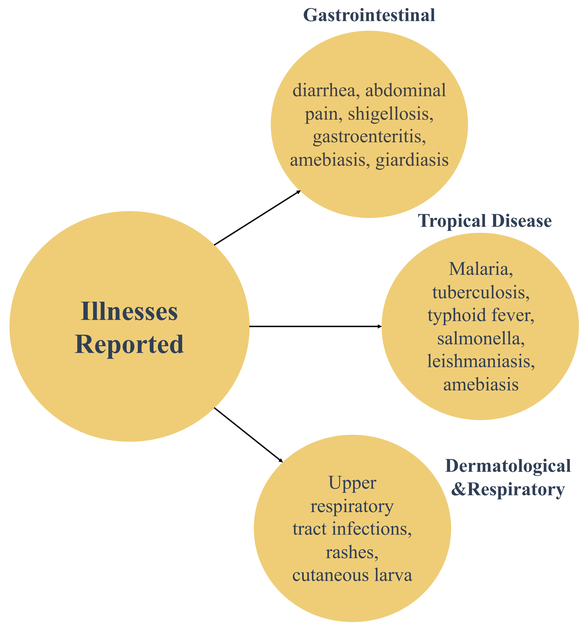
Inclusion Criteria:

◆Time Period, 1990-2019
◆Age, under 5 years old
◆Publications printed in English
◆Peer reviewed publications that focused on health outcomes of young children travelling internationally

Exclusion Criteria:

◆Case reports that included extractable data on less than n=5 young children
◆Research studies that were based in airports or airplanes
◆Research studies that examined domestic travel
◆Primary subjects are immigrants, refugees or pregnant women

RESULTS



Key Findings

◆Imported pediatric malaria in children younger than 2 years old deserve particular attention. <2 years of age was a predictor for severe falciparum malaria (OR = 3.2)[2]

◆Children under the age of 5 visiting friends and relatives (VFRs) in South Asia are at higher risk for typhoid fever[3]

◆Majority of the cases were VFRs travelling to Africa and Plasmodium falciparum was most frequently detected [4]

◆The risk of developing malaria is very high in young VFR children travelling to endemic areas[5]

Key Findings

◆Children in the 0-2 age group have a higher attack rate for Diarrhea incidence compared to the older age groups: 3-14 and 15-20[6]

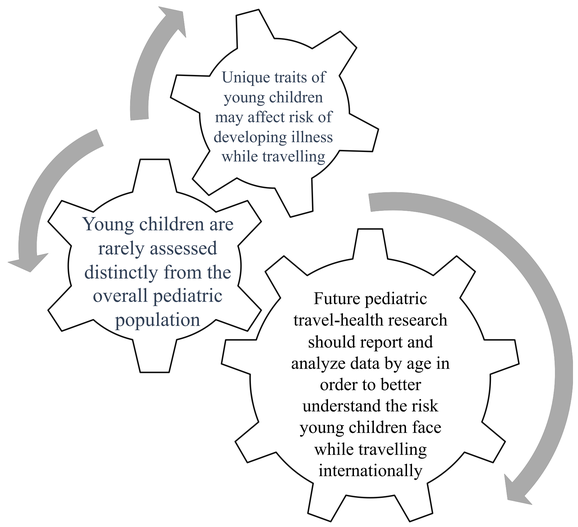
◆children under 5 years are had the highest attack rates of diarrhea in addition to the 15-34-year group [30.6% (95% CI 15.5±45.7%)][7]

◆Compared to other age groups, children <5 had high reports of Cryptosporidiosis[8]

◆Incidence rates for Cambylobacter cases in Michigan were highest in the under 5 age groups from 2004-2013[9]

◆Children <5 made up the largest proportion of pediatric travellers in a retrospective study in Croatia[10]

CONCLUSIONS



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