

Northern Exposures: Travel medicine in the changing Arctic

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Travel medicine is an interdisciplinary specialty concerned with the prevention of illness among international travelers, as well as the preservation of health among the people, communities, and environments being visited. Historically, its focus has been travel to low- and middle-income countries in tropical regions. The expansion of large-scale tourism to the Arctic amidst changing climate and epidemiologic conditions poses a novel challenge to travel medicine practitioners and medical resource planners. We conduct a scoping review of travel medicine literature including MEDLINE-indexed journals, professional society publications, US government materials, and industry-standard subscription resources (Travax.com by Shoreland, Inc.), focusing on risks related to increasing tourism in Arctic and near-Arctic regions. We map key risk categories, review mitigation strategies, and identify current knowledge gaps. Major categories include: (1) cold-related injury; (2) respiratory and cardiac emergencies; (3) transmission of respiratory and gastrointestinal diseases among cruise ship travelers; (4) exposure to vector-borne, climate-sensitive diseases (e.g., borreliosis, tick-borne encephalitis, West Nile virus); (5) potential spread of emerging and high-consequence pathogens (e.g., avian influenza, anthrax); (6) impact of cruise ship tourism on the medical sector in coastal communities; and (7) transmission of pathogens from tourists to indigenous communities and increasing stress on vulnerable ecosystems. For most of these, evidence-based guidance and clinical decision support tools specific to Arctic travel are presently scarce. Given the rapid pace of change in the Arctic, it is vital to develop targeted resources to help facilitate safe tourism and exploration in this unique and sensitive environment.