

Perspective

The COVID-19 pandemic offers a key moment to reflect on travel medicine practice

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Coronavirus disease 2019 (COVID-19) demonstrates the importance of infectious diseases and vaccinations also for travel health. The worldwide lockdown provides an opportunity for the travel health community to reflect on the needs of our clients. As much as infectious diseases and vaccinations are priorities, non-infectious disorders are also important factors affecting the well-being away from home. This perspective is a plea for more research on non-infectious health problems and for balancing pre-travel advice in collaboration with general practitioners (GPs) and other specialists.

Travel restrictions due to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) resulted in an unexpected gap in travel medicine practice. The fear to experience serious consequences of COVID-19 abroad and respective travel restrictions or quarantine regulations are likely to keep many people and especially risk populations such as golden agers, asthmatic patients, people with cardiovascular disorders and other chronic diseases from even planning such trips for months or years. Once more, an infectious disease dominates travel health considerations, this time much stronger than usual because of the pandemic nature. Pandemics and epidemics in the past 20 years show various patterns: the miraculously disappearing SARS-CoV-1 (2002–2004), a relatively mitigated course among humans with the avian (from 2003 onwards) and swine influenza (2009/10), very serious situations, mainly confined to low-resource settings during the Ebola crisis (2014–2016), and the ongoing Middle East respiratory syndrome (MERS) epidemic (since 2012). The two siblings (SARS-CoV-1 and MERS) of the presently spreading virus have not caused the amount of disturbance and attention that the coronavirus is now ravaging in the entire world. In the ongoing situation, potential travellers will expect to receive detailed practical information on preventive and regulatory measures, travel restrictions and country-specific requirements such

as testing for protective antibodies, ‘immunity passports’ and later the proof of vaccination.

Time for reflection

The lockdown of almost all touristic (overseas) activities offers the opportunity to reflect on health associated with international travel and subsequent health advice to customers.

The main reason why travellers consult advisors is the perceived and objective need for vaccinations and medications to prevent or manage infectious diseases in risk countries. Time must be dedicated to these issues, both because they are important for the customers, and because the customers expect to get the best updated information. A critical, informed shared decision on the risks must precede the decision on vaccinating based on national and international guidelines.

Risk of yellow fever, Japanese encephalitis and rabies

Vaccine-preventable diseases such as yellow fever, Japanese encephalitis and rabies are very rare among travellers. Deciding for or against such vaccines depends on legal requirements, expected exposure risk and customers’ perceptions. Yellow fever vaccination is often mandatory on entry of endemic countries. Japanese encephalitis may occur even during short-term stays, but mosquito bite prevention and behaviour (not sleeping under the open sky near water bodies) substantially reduce the risk of infection. Rabies exposure can also be reduced by behaviour. The statistical risk to acquire and die from it is minimal (3 out of 70.000.000 travellers), but the estimated incidence of 0.4% of potential rabies exposure per month of stay,¹ which has been underestimated in the past,² is substantial and requires

immediate post-exposure prophylaxis under laborious and often costly conditions.

Innovative research

Recent studies have shown that immunological priming of travellers with simplified pre-exposure rabies vaccination³ can contribute to a reasonably better and less expensive coverage of travellers in the future. Safe boosting with simple dosing schemes after potential rabies exposure rules out the rare but stressful search for immunoglobulins in countries with limited health resources. Given the considerable risk of potential exposure, the authors suggest that a pre-exposure vaccination against rabies should be recommended to almost all travellers.

The need to include non-infectious health issues in travel health advice

Years ago, we initiated research about the perceived threats of Swiss travellers.⁴ Not surprisingly, those perceptions were influenced by the coverage of risks in the media. Possibly—at least slightly—overrated risks of infectious diseases transmitted by arthropods ranked very high. This fact prompted us to speak about the ‘monstrously big mosquito’ that people appeared to be afraid of. Further, the divergence of perceived threats by travel clinic customers and of respective risks assessed by travel medicine specialists surprised us. We then became more interested in what the reality of health disturbances among travellers abroad might be. Rather than only rehearsing threats, which are partly related to the preventative offers such as vaccines and medications against pathogens of varying incidence, we wanted to know what health issues—mild or severe—our travellers are experiencing overseas in order to help avoiding them. Not entirely trusting the value of retrospective interviews of returned travellers, we embarked on a study recording behaviour and health events daily during travel in a smartphone app, called ‘tracking of urgent risks in Swiss travellers’ (TOURIST) among clients of two travel clinics.⁵ The results of the first attempt to quantify health issues provided us with an abundance of information among <100 tourist travellers in Thailand. The first, not surprising finding was that the incidence of infectious diseases was low. The exotic touch of health issues fades when we realize that headaches due to dehydration or sunburn as a consequence of inappropriate behaviour are usually mild but frequent and can be very disturbing, whereas dangerous evolutions of disease such as in Japanese encephalitis or malaria are exceedingly rare.

Insights provided by the study included a high frequency of non-infectious health issues, e.g. the still not fully understood mental health issues and surprisingly often reported accidents of various causes. Reported mental health disturbances included ‘lethargy’, feeling ‘tense or irritable’ and ‘anxious/restless’ in up to four-fifths of the participants, rated on a severity scale from mild to severe. Given the self-reported and subjective nature of these symptoms, it is difficult to interpret what it might mean for mental health before and during travel, but it points to a research gap on where and why travellers might suffer from issues such as severe anxiety that they perceive as disruptive to their trips. One may interpret those as usual dramatizing minor issues as

we see them in the social media where any event is likely to be exaggerated. We think that such results merit in-depth analysis and further research as it may influence the *feel at ease* with traveling expectations. Is there a more or less constant background level of anxiety in an unfamiliar surrounding among a good number of travellers? Are we, the travel medicine advisors, even co-responsible for such uneasiness because we have filled the travellers’ minds with all potential threats during the trip, such as the ‘monster mosquito’ mentioned above? Or does travel simply involve a greater intensity of feelings, with more extreme lows, but also highs?

Although cuts and wounds are only worth mentioning in relation to prescribe disinfectants and bandaids[®], the avoidance of accidents is likely to be more relevant as Farnham et al.⁴ have shown. Various types of accidents were reported by almost one quarter of the study participants.⁶ A previous data extrapolation of a Swiss accident insurance company indicated that one Swiss citizen dies each month of a sports or traffic accident in Thailand.⁷ Even if the exact number found in the insurance study might be overestimated, such estimations are shocking. Simple behavioural tips to prevent road accidents, such as *look right—look left* before crossing a street—especially when the traffic means driving on the ‘wrong’ side—can save lives. Wearing helmets and seat belts, and appropriate sports gear appear to be logical but remain essential topics during travel advice consultations. Asking about behavioural patterns at home can help to identify people who are at special risk, as the DOSPERT questionnaire indicated in the Thailand study.⁸

Requirements, approaches and expectations for future travel advice

Little is still known about travellers’ behaviours. The frustration of travel advisors on how to deal with it is well known. Using mainly digital techniques and tools to assess behaviours and risk taking of travellers starts with a history of what people are doing at home. Information on previous (sports) injuries, combined with the age of the traveller and actively asked experience from previous travel, with the traditionally collected information about the length, style and seasonal conditions of the trip are relevant issues. Electronically collected information can eventually be available to physicians and will help them to provide personalized pre-travel advice, and a matrix for counselling individuals during and after travel to diagnose and manage health problems.

The limited time of the travel consultation appears to be a stumbling block for combining information on infectious and non-infectious health issues on top of the basic history taking. More collaborative research is warranted to provide better evidence-based medical advice. However, there is a growing body of knowledge available, and a considerable amount of information such as itinerary, pre-existing diseases, allergies and many more can be collected before the consultation online, and on site digitally or by questionnaire. Such information can save consultation time, which can instead be used for prioritizing advice according to the needs.

General practitioners, cardiologists, pneumologists, gastroenterologists, rheumatologists and other specialists are often challenged with questions on specific issues pertaining to the health

of their clients while abroad. Golden agers' travel plans may sometime overstrain the practical travel health knowledge of the general practitioners. Specialized travel advisors can play an important and highly appreciated support role by initiating joint research and by providing practical hints on the need for vaccinations and specific medication, on health requirements for flights or cruises, availability of services in destination countries, or preventative measures for patients with immunomodulatory medications. Especially managing pre-existing diseases and their potential exacerbations during travel should be an important topic during pre-travel advice. Not infectious diseases but non-infectious risks like heart disease pose the highest risks during travel.⁹ Thus, additional research and addressing non-infectious health problems, often combined with infectious issues, are vital to give traveller-centred advice. Such advice will best be provided by both, the treating physician and travel medicine specialists.

Digitalized information on weather conditions, air pollution, risk areas for malaria and other infectious diseases or hotspots of road accidents can be assessed and provided to travellers.¹⁰ More information is warranted on the exposure conditions, individual health risks, behavioural aspects and perceived health events of our travellers beyond infectious disease. Such information is now easier to obtain than ever before, thanks to the advances in digital health collection even during travel. It is available in part already, but more research will be necessary to provide the travellers in digital or analogue form in the future. Given that travel medicine practice is necessarily in a holding pattern while the current pandemic has grounded international travel, this moment is the perfect time for travel medicine practitioners, together with treating internal medicine specialists and GPs who know their clients well, to take stock of current practice and debate how we can move the field forward to a new era of personalized, evidence-based travel health advice that addresses the full range of risks that travellers face. Apps and other tools can be envisaged for travellers to receive individually targeted and informed pre-travel advice, possibly also in the light of restarting international travel during the current pandemic. Moreover, by using digital tools, travellers can be offered medical help in case of health problems during and after travel.

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