Practices of telemedicine in travel medicine in Austria

Introduction

> "… Ubiquitous Internet access has enabled patients around the world to seek the best care available and facilitates efficient communication of medicine globally (Crisp 2010). But how to ensure the patient safety, quality of care, ethical issues, and legal concerns remain inadequately addressed, for patients, healthcare providers, and policy makers across borders" (Hong 2016:115).

Telemedicine is a form of diagnosis and treatment supported by the use of communication and information technologies where contact between doctor and patient (and between doctors) become independent of time and place. It is a complex phenomenon that has the potential to change the landscape of health care: the way of making a diagnosis, the accessibility of health care, the question of responsibilities (Oudshoorn 2008, Mort et al. 2003) and legal accountabilities. In the European Union there is no uniform law regulation for telemedicine. "Probably such standardization will never take place, since the European Union does not have, until now, a common set of norms regarding tort and criminal liability, much less specific legal norms on medical liability" (Raposo 2016:1).

While phone consultation within the same country has existed for a long time, new forms of communication (like smartphones, videochats etc.) have dramatically broadened the possibilities of remote diagnosis and treatment. This development coupled with a virtually worldwide access to the Internet has eased the communication between doctor and patient, even beyond frontiers. In Austria, despite of these developments, the legal situation of telemedicine has not been adjusted up until now. More than ever, telemedicine lies between the poles of restrictive legal regulations and actual practices.

During an informal conversation with a travel doctor I got familiar with the importance of telemedicine as a tool for remote diagnosis and treatment, particularly in urgent medical problems. On the basis of this information I explored the usage of telemedicine in one specific medical field – travel medicine – in Austria and encountered a tense relationship between practice and the legal and medical framework. Therefore, I further investigated why travel doctors in Austria provide remote consultations, what these consultations look like exactly and which implications and limitations they imply.

This paper addresses two fields of medicine – travel medicine and telemedicine. The following explains how travel medicine should be practiced in theory and how telemedicine is thought about in Austria where the adoption is still in the early stages of development.

Travel medicine

In travel medicine, doctors deal with the prevention and treatment of diseases of travelers. People usually present themselves to travel doctors in a healthy condition before their journey and are therefore considered clients who may become patients over the course of time. During a pre-travel consultation the doctor informs the client about risks and prevention measures according to his or her medical history and itinerary.[1] The doctor also checks the vaccination history, updates routine immunization if necessary and immunization related to the geographic area.

According to the website for Centers for Disease Control and Prevention

> "(...) prescribing certain medications in advance can empower the traveler to self-diagnose and treat common health problems (…) Pre-travel counseling may actually result in a more accurate self-diagnosis and treatment than relying on local medical care in some areas (Chen et al. 2015).

Thus, pre-travel consultation should empower the client to care for him- or herself during the stay abroad.

Telemedicine

According to the website of the Austrian ministry of health, telemedicine is the provision or support of health care services with the help of information- and communication technology. Patient and health care provider (as doctors, pharmacies, hospitals and nursing staff) or two health providers are not physically present at the same location. The premise is a secure transfer of medical data for prevention, diagnosis, treatment and further care of patients in form of text, audio and or picture (Austrian ministry of health and women 2016).

Telemedicine is taking place on two hierarchical levels. On the one hand, telemedicine can foster the exchange of expertise between doctors. On the other hand, telemedicine enables remote communication between doctor and patient. In Austria, contemplated fields of application for telemedicine are chronic or age related diseases - diabetes mellitus, cardiovascular disease (Austrian ministry of health and women 2016).[2]
In Austria telephone consultation is a voluntary service by the doctor. In other countries, for example Germany and Denmark, this service is paid by social insurances and time frames for consultations via telephone are listed in the telephone book (Fuchs 2017).

Legal situation of telemedicine in Austria

"Unfortunately, there is no clear-cut answer to your inquiry". This is the statement of a lawyer, specialized in medical law cases, whom I contacted for information on Austrian legal issues regarding telemedicine. He provided me with documents that give an idea about the complexity of the topic. The most important paragraphs for this study are the following:

Pursuant to paragraph 49 of the medical law "the doctor has to fulfill his duty in person and immediate, if necessary in collaboration with other doctors or representatives of other disciplines or professions (…)."[3]

Further, a distinction is made between doctor-doctor and doctor-patient-communication, especially if the patient actively seeks remote advice:

[1] It has to be mentioned that car accidents are the most common cause of death for travelers (WHO 2017).
[2] In this paper I use the term telemedicine when referring to remote doctor-patient communication on health-related issues delivered over telephone, email and messaging services like WhatsApp. In all cases patients seek for a medical opinion, diagnosis, support or directives.
[3] § 49 Abs 2 Ärztegesetz: „(2) Die Ärztin/Der Arzt hat ihren/seinen Beruf persönlich und unmittelbar, erforderlichenfalls in Zusammenarbeit mit anderen Ärztinnen/Ärzten und Vertreterinnen/Vertretern einer anderen Wissenschaft oder eines anderen Berufes, auszuüben (...)"

> "A remote treatment on request is understood as diagnosis and instructions for therapy that a doctor makes due to a request by the patient. Therefore, there is a difference to telemedicine especially with regards to the acting person (…) While in telemedicine the patient is not actively involved because the communication takes place between at least two or more doctors, the patient is the actor of the interaction in case of a remote treatment on request." [4][5]

According to Austrian medical law there is an explicit prohibition of remote treatments on request. Requested diagnoses and instructions for therapies are therefore forbidden.[6]

In the case of travel medicine the lawyer explained:

> "If my doctor knows my medical history and I send him via WhatsApp a picture of a recent insect sting from Sri Lanka, it probably lies in his field of responsibility to evaluate if the information given allow for a diagnosis" (email to lawyer, April 18, 2017).[7]

[4] „Unter einer Fernbehandlung auf Anfrage versteht man eine auf Anfrage des Patienten abgegebene individuelle Diagnosestellung und Therapieanweisung durch den Arzt, die sich somit von der Telemedizin vor allem im Bezug auf die agierenden Personen unterscheidet."

[5] „Während in der Telemedizin im Regelfall mindestens zwei oder mehr Ärzte miteinander kommunizieren und der Patient daher aktiv nicht in Aktion tritt, ist dieser bei Fernbehandlungen auf Anfrage unmittelbarer Akteur der Interaktion."

[6] „De [sic] als Verordnung zu qualifizierende und zur Konkretisierung von § 53 ÄrzteG 1998 (Werbebeschränkung und Provisionsverbot) ergangene Richtlinie „Arzt und Öffentlichkeit" 11 der Österreichischen Ärztekammer, die auch Bestimmungen hinsichtlich des Umgangs mit dem Internet beinhaltet, normiert ein ausdrückliches Verbot für „Fernbehandlungen auf Anfrage. So bestimmt Art. 5 dieser Richtlinie, dass auf Anfrage abgegebene individuelle Diagnosestellungen und Therapieanweisungen (Fernbehandlungen) unzulässig sind."

[7] "Wenn ich meinem Arzt, der mich z.B. als Hausarzt kennt (und damit meinen generellen Gesundheitszustand beurteilen kann), per WhatsApp ein Foto von einem aktuellen Insektenstich aus Sri Lanka zusende, so liegt es wohl im Verantwortungsbereich des Arztes zu beurteilen, ob die vorliegenden Informationen eine Diagnose zulassen."

Methods

In Vienna, travel doctors share premises and consult patients with private medical insurance. I wrote an email to five health centers addressing all doctors who worked there. Two health centers declined to participate and one did not reply at all despite of several requests.

Over a period of five months (between November 2016 and April 2017), I conducted two in-depth interviews with travel doctors in their offices in Vienna and one outside of Vienna. Conversations took between 30 to 45 minutes, were held in German and were transcribed right after the interview. In the transcription and in the findings interviewees are named travel doctor A, B and C so that they cannot be identified. I stayed in touch with two doctors and had informal conversations after the formal interview with one of them.

The doctors provided me with seven email conversations, four WhatsApp communications and several pictures that patients sent asking for advice. One email conversation with an Austrian lawyer specialized in medical topics also took place. I also studied blog entries, websites and (international) Internet forums where travelers posted their health concerns, urgent questions and advises.

I analyzed the material using principles of Mayring's qualitative content analysis. Following this, I reduced all text to relevant information and generalized into statements. For the main part categories were generated on the basis of the data that was gathered (inductive) through repeated examination and comparison. Overall themes included legal and medical grey zones and motivation for providing remote service free of charge (with personal motivation, mistrust in foreign medicine and responsibility for the patient as subthemes).

This study should be considered as a basis for further research on this topic. As I wanted to shed light on legal regulations versus practices, I focused on the doctor's point of view. However, to gain full insights into the implications of telemedicine, further research needs to be done on the traveler's point of view and practices.

Findings

> "By no means I offer this kind of services!! Information via telephone/mail/sms on imminent diseases are – to my knowledge – under liability law (*haftungsrechtlich*) very problematic in Austria. In general, remote diagnoses are forbidden. Our potential patients are mostly travelling in areas where modern communication is very restricted – this is also a limit for exchange" (email of a travel doctor, November 15, 2016).[8]

Conversations with travel doctors on their particular use of telemedicine showed a diverse situation: for some doctors telemedicine is an essential part of their daily practice with travelling clients, other physicians are skeptical or reject telemedicine altogether (at least officially) because of the insecure legal situation.
Remote consultations in travel medicine are neither officially practiced, nor legally protected, nor financially remunerated in Austria. However, there are a number of doctors who offer remote consultations for travelers. What is their motivation and how do they deal with these limitations?

Legal grey zone

"Get in contact if you face any troubles", is what doctors tell their clients at the end of pre-travel consultation. All of the interviewed doctors have been offering this service for a long time (some up to eleven years) and people make use of it frequently.
Of particular note is that not only clients, but also worried family members or travelers in search for a travel doctor seek advice before, during and after the travel and in emergency situations. Doctors receive about thousand emails with general questions from clients, travelers and their relatives and at least one emergency query per month (bites by animals like monkeys or dogs and cat scratches).
The work of the doctor ranges from emotional support (especially reassurance), to diagnosis, suspected diagnosis, prescription of medicine, advice on what a person should do or any other guidance like where the patient finds trustworthy local hospitals. The doctor provides this help over telephone, or in written form via messaging services or email.

Legal regulations in Austria forbid doctors to make a diagnosis without immediate (*unmittelbar*) personal interaction. According to the German dictionary Duden *unmittelbar* means: not indirect, not through a third instance, not mediated through a third instance; direct (Duden 2017).
The tool for communication from a distance between doctor and patient (and family member) is in fact a third instance – be it over telephone, mobile message or email or with the help of a picture. This form of communication is often so integrated in the daily practice that doctors do not call what they do telemedicine. Interviews with travel doctors reveal that they consider telemedicine as a professional exchange between doctor and doctor on a sophisticated technolgocial level (high quality readings of images, video conversations via skype, exact descriptions of the problem by experts). However, when asked for email or telephone communication with travelers, they have a lot of stories to tell.

Story one: A patient sent a picture of her eye just before going on a round-the-world-cruise. The travel doctor diagnosed a herpes virus and mandated to approach an ophthalmologist right away due to risk of complications during her travel. The patient was brushed off because she did not have an appointment. Only because of the travel doctor's suspected diagnosis she got an appointment and was treated on time. Her response:

[8] „Ich biete keinesfalls derartige Dienste an und dies aus mehreren Gründen: 1. Telefonische/Mail- oder SMS Auskünfte zu unmittelbaren Erkrankungen sind nach meinem Wissen in Österreich haftungsrechtlich sehr problematisch. 2. Ferndiagnosen sind grundsätzlichverboten. 3. Unsere potentiellen Patienten sind meist in Gebieten unterwegs, wo moderne Kommunikation stark eingeschränkt ist - auch das ist ein limit für einen Austausch."

> "Hello Mr. doctor!! Maaaaany thanks for your spontaneous help! You were 100% right (…) Dr X told me that it was very clever to come straight away because it is, as you said, a herpes virus. Untreated, this can be dangerous even for the eyes (…) Again, many thanks for your immediate help" (WhatsApp communication between travel doctor A and patient, August 4, 2016).[9]

Story two: A patient travelling in a very remote area of Sudan had an undefined skin lesion and asked a local missionary to send a picture of the wound to her Austrian travel doctor. An immediate transfer to a clinic was not possible due to the remoteness of the place. The patient was febrile and the Austrian travel doctor recognized symptoms of a beginning sepsis. The Austrian doctor had no other choice than making a diagnosis and treatment suggestion. He suspected a spider bite and mandated an urgent intake of antibiotics. 48h later the traveler was able to reach a local hospital where the diagnosis was confirmed and the wound further treated.

In both cases the doctor diagnosed the patients over phone on the basis of WhatsApp communication and pictures. Diagnoses were essential - if not life-saving – and led to immediate action in order to avoid complications. Though other queries of travelers are less urgent or more general, the doctor evaluates constantly when to help and when to hand over responsibility.

In case of emergency, a fast medical advice can decide between life and death. When I asked a doctor if he would also consult a person who was not a patient before (e.g. travelers who found the doctor online), he replied:

> "Yes, sure, because it is an emergency. With any other inquiry I can advice to consult someone where he or she is a patient but if it is a medical emergency I have to find a solution" (Travel doctor C, March 30, 2017).[10]

Especially in an emergency situation, the doctor navigates in a legal grey zone, taking decisions from a distance, without having the reassurance to be legally covered. For the doctor it is a legal and ethical question. Due to the Hippocratic oath he feels obliged to help, at the same time he has the duty to rescue.

A question of accountability

However, the situation becomes more complex the more people and sources of information are involved. Adherence to the medical (tele)-advice is often influenced by online searches and input by other people before and after (tele)-consultation.

> "Telemedicine is good but the question is who is interfering over there? And especially when it comes to malaria, that's a huge topic, because on site you have a whole lot of 'experts': the white expatriates who have a house and have been there already three times during summer – 'they know the most'. They know everything because they have never taken anything. Then, local people in countries where there is hardly any good diagnostics, who never receive proper feedback. They do not have any knowledge about malaria, not even those in malaria high-risk areas. And all of these people are 'experts' who persuade the traveler. What we say or recommend over email meets these conflicting advices of local people" (Travel doctor C, March 30, 2017).[11]

[9] „Hallo Herr Doktor! Vieeeelen Dank für ihre spontane Hilfe! Sie hatten zu 100 Punkte recht (...) Dr. X meinte, dass es sehr klug war, sofort zu kommen, denn es ist, wie Sie gesagt haben, ein Herpes-Virus. Dieser kann sogar für's Auge gefährlich werden, wenn man ihn nicht behandelt (...) Nochmals vielen Dank für Ihre sofortige Hilfe."

[10] „Ja, natürlich. Weil, da geht's um Notfall. Bei allem anderen kann ich sagen, bitte wende dich an jemand, der dich kennt, aber wenn es etwas ist, was prinzipiell ein medizinischer Notfall ist, dann muss ich irgendeine Lösung finden."

[11] „(...) Telemedizin ist schön und gut, aber die Frage ist immer, wer redet dann vor Ort noch drein? Und das ist grad wenn es Malaria betrifft, ist das ein riesen Thema, weil sie vor Ort einen ganzen Schwung an super Experten haben (ironischer Ton), die ausgewanderten Weißen, die unten ein Haus haben und auch schon 3x im Sommer unten waren, die kennen sich am

Cases that doctors describe reveal that patients often take decisions based on a mix of information.

Story three: A person travelled in the Atlas Mountains of Morocco and got scratched by a cat. As he was not vaccinated he asked a travel doctor in Austria for urgent advice on what to do. The Austrian doctor informed him that he needed rabies immune globulin, which is not available in Morocco and that he had to catch a flight to a European city within the next 48 hours. He managed to travel to Marrakesh where he got scared not to reach a European city within time. Someone at the hotel informed him about a doctor who would be able to vaccinate him with immune globulin. In his state of insecurity he decided to stay in Marrakesh and got vaccinated by a local doctor with an unknown injection. He travelled back and got the rest of the treatment from the Austrian doctor who found out that his patient got injected a vaccination that was intended for horses.

Story four: "Help, I am on Bali and got bitten by a monkey" was an email request by a traveler. As there is a high risk of rabies in Bali, the Austria doctor advised to get a post-exposure prophylaxis as soon as possible. The traveler decided to ask the wildlife park supervisor who reassured him that his monkeys did not have rabies, a local doctor also advised against vaccination. The traveler decided not to get vaccinated and cut contact with the Austrian doctor.

Asking the Austrian doctor for help, the traveler puts the doctor in a situation where the physician is responsible for the health of the patient. The patient delegates the responsibility to the higher level of authority. Simultaneously, he or she approaches other sources of information. The patient either trusts in the expertise of the doctor or in another less trustworthy source of information. In any case, the doctor is the only instance that can be held (legally) responsible in the worst case.

Medical grey zone

According to the German clinical dictionary Pschyrembel (2017) a diagnostic - the practice of medical diagnosis – includes the anamnesis, physical examination, laboratory and instrumental diagnostics. However, there are also other forms of diagnosis, among others, suspected diagnosis, which is confirmed by further diagnostic measures.
When not physically present, the doctor assesses a patient's health without being able to use all his senses. Doctors differentiate between diseases that can easily be diagnosed and more difficult cases (e.g. dengue fever and complications of dengue fever or malaria). In general, doctors find it easier to respond to email or message queries when they have a picture included. This applies particularly to diseases that affect the skin. According to the doctors larva migrans and borreliosis are easy to determine visually. "I have weird lines on my thigh", is the content of an email sent with a picture by a traveler staying in Cambodia. "In this case I could say, this is it (*larva migrans*), because that's relatively typical" (Travel doctor B, November 16, 2017).[12] However, patients are not professional photographers and doctors often receive pictures of little or no quality (e.g. blurred pictures). In other cases doctors only rely on the patient's oral or written illness narrative. People have their individual perception of how they feel and doctors do not only have to assess the situation but also a patient's personality. In case the doctor has never met the patient before, this can be a challenge:

> "People are so different in describing things that happen to them (…) when they describe their symptoms over phone it seems like you have to send them an emergency ambulance only to find them

allerbesten aus, die wissen über alles Bescheid, weil sie haben noch nie was genommen. Die Leut vor Ort sowieso, die in Ländern, wo es kaum eine gscheite Diagnostik gibt auch nie das richtige Feedback haben, das heißt die haben überhaupt keine Ahnung von Malaria, auch die im Hochrisikogebiet nicht. Und das sind dann alles die Experten, die den vor Ort bearbeiten und das, was sie aus der Entfernung vorher gesagt haben oder vielleicht per Mail empfohlen haben, trifft dann auf die, vielleicht widersprüchlichen Geschichten."

[12] „Da hab ich schon sagen können, das ist das, weil das relativ typisch ist."

> hanging in front of the TV saying: I just do not feel so good since yesterday" (Travel doctor C, March 30, 2017).[13]

According to doctors, patients often exaggerate but also understate when it comes to their health condition. Especially over phone it needs a lot of experience and knowledge to filter the nuances. This applies to conflicting statements as well. Take for example a mother who sent a picture of her child's skin lesion. The worried mother assured that no insect had bitten her child. However, the doctor diagnosed a Lyme disease by observing the picture. He stated:

> "She could not recall that she was bitten but it is a child! And they did not see a tick, but however, when a tick soaks on your skin and drops down, you will not see a tick, will you?" (Travel doctor A, November 9, 2016)[14]

Data shows that the clarification of symptoms over a third instance like phone, mail or message bring about grey zones in which descriptions by patients are neither exact nor completely incorrect. Added to that, doctors sometimes have not obtained a medical history of the traveler or the exact itinerary.

> „(…) because it makes a difference if I receive a radiological picture and I can say yes, the upper arm is broken or if someone describes his or her symptoms and I have to figure out what it really is. This is clearly a greyer area and medically much more difficult" (Travel doctor C, March 30, 2017).[15]

The communication on an expert level is considered more reliable and medically less questionable. This is because of a sophisticated and objective transfer of medical data and accurate descriptions of the problem. In case of remote doctor-patient communication the doctor cannot touch or see the patient and therefore relies on patient's narrative and pictures. The doctor depends on accuracy of patient's information or otherwise is put in jeopardy when diagnosing without all aspects of physical examination. This implies that telehealth between doctor and patient demands a certain level of expertise from part of the patient, a point that is elaborated on later in this paper.

Motivation for providing remote service free of charge

As mentioned earlier, in Austria telephone consultation is a voluntary service by the doctor whereas in other countries, for example Germany and Denmark, this service is paid by social insurances (Fuchs 2017). All interviewed doctors consider their service as part of travel medicine and therefore offer their remote advice free of charge. One doctor mentioned that he cannot take money for helping on what the patient should do in case of a dog bite. "It is not a diagnosis or therapy in that sense (…) I do not want to ask for money for this kind of service" (Travel doctor C, March 30, 2017).[16]
However, as data shows in other cases, diagnoses *are made*, advices for medication intake *are given* and more than one email exchange/telephone call takes place. The time and effort that is needed by the doctor varies and also depends on the knowledge and preparation from part of the patient.

It is not only travelers who ask for advice but also potential clients who seek information via email before going abroad. Due to the immaterial nature of telemedicine, some people

[13] „Menschen sind so unterschiedlich im Schildern von Dingen, die sie betreffen (...) Wenn Sie von denen geschildert kriegen, was sie für Symptome haben, fahren Sie mit dem Notarzt da rüber, um dann jemanden zu finden, der dann vor dem Fernseher sitzt und sagt, na ja ich fühl mich seit gestern nicht so ganz."
[14] „Sie konnte sich nicht erinnern, aber ist natürlich ein Kind, dass sie von irgendwas gestochen worden ist und Biss sowieso nicht. Und Zecken haben's auch keinen gesehen, na guad wenn der Zeck sich anschmiegt an die Haut und vollfüllt und wieder runterfällt, dann siehst du den in dem Moment auch nicht den Zecken oder!? Der muss ja nicht drauf picken bleiben."
[15] „(...) weil es einfach schon einen Unterschied macht, ob ich ein radiologisches Bild geschickt krieg und dann sage, ja, der Oberarm ist gebrochen oder ob mir jemand selbst seine Symptome schildert und ich daraus versuchen muss, schlau zu werden. Das ist schon eine deutlich grauere Zone und auch einfach medizinisch sehr viel schwieriger."
[16] „(...) mit Ausnahme von einer Direktive was er bei der Tollwut machen kann, wird er auch keine Diagnose oder Therapie in dem Sinn von mir kriegen (...) Dafür verrechne ich ungern was."

exhaust the service by aiming to receive all information for free. It is a balancing act for the doctor to give information but also making an appointment (which can be charged).

> "There is a lot of pressure that people receive complete information via phone or email. And for me it is a balancing act between satisfying their curiosity and unsettling them to make them want to come (…) because I also want to earn money and an in person visit is simply more reliable" (Travel doctor B, November 16, 2016).[17]

Not all travel doctors in Austria offer online advice for their clients. Willingness to provide this service means extra work and implies that doctors are available out of opening hours and on weekends.

> "We discuss that in the team again and again. As I reply to the emails the others are very happy about it because they don't want to do it. They don't have time and they are not with their phone all the time. I don't have any troubles sitting in the metro and replying to emails. The others don't do that. They get nervous and write emails only at home in front of their computer and only every second day (…) I think most don't have the time" (Travel doctor B, November 16, 2016).[18]

As there are no regulations on how to handle online/telephonic consultations it is up to the doctors to decide. For those interviewed, it is the interest in the topic, being an expert in the field, the feeling to be needed, a close relationship to the patient and indirect advertising that drives them to offer this service on a voluntary basis.
However, although not explicitly mentioned as a driving factor, all doctors elaborated on their ambivalent relationship with foreign health systems and their experience that travelers do not/can not take on responsibility for their health.

Mistrust in foreign medicine

Doctors agree that 'in person visits' are more reliable. However, phone consultation (with limitations) is needed as long as medical care in some countries is not reliable (Travel doctor C, March 30, 2017). Data reveals that doctors do not have trust in medical health systems (doctors, medicines and diagnostic equipment) of some foreign countries. According to them, health care is questionable in Africa (e.g. Morocco and Egypt) and India, whereas it depends on where the traveler stays exactly. "There are very, very bad physicians in these countries but maybe also high-end medicine but how may a layperson know the difference?" (Travel doctor C, March 30, 2017)[19]

> „Without having seen a diagnostic statement of typhoid fever (...) I mean I know Indian doctors, I do not trust them. I really want to have it in black and white that it was typhoid fever" (Travel doctor B, November 16, 2016).[20]

> „Egypt doctors are, to serve the prejudice, for sure the worst that exist. Because little education paired with arrogance is always very bad" (Travel doctor C, March 30, 2017).[21]

> "In Thailand I lean back and say, please colleagues, take over! But in Africa, which is to a great extent a malaria high-risk area, doctors have

[17] „Ja. Also der Drang ist sehr sehr hoch, dass die Leute per Telefon, Email eine komplette Auskunft bekommen. Und die Kunst ist für mich, einerseits die Neugierde zu befriedigen (...), aber andererseits so zu verunsichern, dass die Leute herkommen (...) weil natürlich will ich auch Geld verdienen und es ist einfach seriöser, wenn man das persönlich bespricht."

[18] „Das diskutieren wir immer wieder im Team (...) Da ich es mach, sprich, weil ich es beantworte, freuen sich die anderen sehr, weil sie wollen das nicht machen, einfach weil sie nicht die Zeit haben und nicht ständig am Handy hocken, wie ich. Weil ich hab damit überhaupt kein Problem, in der U-Bahn zu sitzen und was zu beantworten. Das machen die anderen beiden nicht. Das macht die nervös und schreiben Emails prinzipiell nur Zuhause vor dem Computer und auch nur alle zwei Tage (...) Ich glaub vielen fehlt die Zeit einfach."

[19] „Es gibt einfach wirklich ganz, ganz schlechte Mediziner in diesen Ländern und es gibt vielleicht Tür an Tür daneben auch Spitzenmedizin, nur das kann ein Laie vielleicht sehr schlecht unterscheiden."

[20] „Ja. Kann ich, ohne, dass ich die Befunde seh, ob's wirklich Typhus war ... ich kenn indische Ärzte, also denen vertraue ich mal keinen Meter, das will ich wirklich schwarz auf weiß sehen, dass es wirklich Typhus war."

[21] „... ich mein ägyptische Ärzte sind, um jetzt mal die Vorurteile zu bedienen, sicher das schlimmste was es gibt. Weil sich eine schlechte Ausbildung mit einer ziemlichen Überheblichkeit paart und das ist immer ganz schlimm."

> alarmingly little knowledge about malaria because they never receive feedback" (Travel doctor C, March 30, 2017).[22]

There is also little trust in local diagnoses because of poor diagnostic possibilities for certain diseases, like malaria. According to a doctor there is often a lack of reliable laboratory-diagnostic services, few skilled microscopists and poor equipment, which may lead to a higher number of misdiagnoses (and/or over diagnoses). The same accounts for medication, which is either not available, fake or given randomly.
Advising patients to contact a local doctor means for the Austrian doctor to hand over responsibility "… but the doctor on site can be a disaster" (Travel doctor C, March 30, 2017).[23] Consequently, the doctor at home feels the need to guide the patient even when abroad, be it in spelling out a suspected diagnosis, giving medication advice or any other directive like where the patient finds trustworthy medical facilities.
Interestingly, the statement on poor diagnostic possibilities implies that the doctor considers his or her diagnosis via telephone as better than the diagnosis of the local doctor. It needs to be explored whether this assumption reflects a neo-colonial mind-set or has been based on experience.

Responsibility for the patient

Data suggests that some doctors consider their 'remote' feedback as an essential part of travel medicine. They have experienced that patients forget relevant information, panic or need reassurance when faced with severe sickness in a foreign country.

According to the doctors, they duly inform patients about risks and methods of prevention during pre-travel consultation, which takes between 30 and 60 minutes. They also prescribe the most essential medication according to the destination (e.g. Malaria prophylaxis). Written information is additionally provided. Therefore, the traveler should be encouraged and empowered to recognize and treat certain health problems on his or her own. However, in reality people often do not recall what they were told or forget after a certain time „... but the disillusioning truth is what people remember, yes, that's extremely little" (Travel doctor C, March 30, 2017).[24] Consequently, the interviewed doctors do not want to leave patients alone with decisions concerning treatment. Doctors receive emails with statements like: „I have fever for three days now, should I do anything?" (Travel doctor C, March 30, 2017).[25]

> „(...) and I mean (Austrian filmmaker) Glawogger died of malaria, this should not happen. If someone who is travelling in these countries – even though he is not taking a prophylaxis, which is actually recommended – he needs to have knowledge about an alternative way that something like this does not happen. Yes, that's actually frightening" (Travel doctor C, March 30, 2017).[26]

Other patients become nervous or need reassurance in their own language and doctors feel the need to help out, "how should a layperson decide what to take when worst comes to worst?" (Travel doctor A, November 9, 2016).[27]
Telecommunication makes it possible for travelers to consult with a doctor in their home country when faced with an illness abroad. Oftentimes they want to hand over the responsibility for making a decision on how to handle the situation. As I did not interview the travelers, I was unable to determine why. I assume reasons include lack of knowledge, not

[22] „In Thailand leg ich die Hände zurück und sag, bitte Kollegen, macht's! Aber grad in Afrika, das ein Hochrisikogebiet in großen Teilen ist, haben die Ärzte zum Teil erschreckend wenig Ahnung von Malaria, weil ihnen das Feedback fehlt."
[23] „Arzt vor Ort ist zwar für uns dann immer, ich hab die Entscheidung abgegeben, aber Arzt vor Ort kann einfach eine Katastrophe darstellen."
[24] „(...) die ernüchternde Wahrheit, was dann hängen bleibt, ja, des is extrem wenig (...)"
[25] „(...) ich hab seit 3 Tagen Fieber, soll ich was tun?"
[26] „(...) ich mein der Glawogger ist an der Malaria gestorben, das dürfte eigentlich nicht passieren. Wenn jemand, der in diesen Ländern unterwegs ist, auch wenn der nicht Prophylaxe macht, was eigentlich empfohlen ist, muss er sich mit dem alternativen Weg so gut auskennen, dass sowas nicht passiert. Ja, das ist eigentlich erschreckend."
[27] „(...) aber was soll jetzt der Laie im Endeffekt, wenn's hart auf hart geht, was soll der dann entscheiden was er dort in dem Moment einnimmt?"

being able to comprehend the entire situation, afraid to make a decision and panic due to severe sickness.

Summary

In this small-scale study I found that for some travel doctors, consultation via telephone and email is an essential part of travel medicine. The interviewed doctors provide emotional support, diagnose, prescribe medicine and give advice over telephone and email. Travelers actively seek for such guidance and simultaneously get informed by other sources like local people, local doctors and online forums. The patient makes decisions on the basis of a mix of information which raises questions of accountability.

Especially in emergency situations, the Austrian doctors make decisions from a distance, without having the reassurance to be legally covered. For the doctors it is a legal and ethical question. Due to the Hippocratic oath and the duty to rescue the doctor feels obliged to help even over kilometers of distance. Apart from their need to help, their experiences as well as their assumptions about their patients and certain foreign health care systems drive them to give advices over telephone also out of office hours.

Conclusion

In theory, pre-travel consultation should prepare travelers to self-treat certain diseases. However, the amount of email and telephone consultations suggest that there is huge insecurity in case of medical issues and travelers need further assistance and consultation.
Though some diseases can be diagnosed easily over electronic devices, there are other conditions that demand a doctor physically present. In any case travel doctors are put in jeopardy when diagnosing over phone due to inaccuracy of oral descriptions by patients, little quality of pictures etc. (see also Dedding et al. 2011) and because the doctor is the only instance that can be held (legally) responsible in the worst case. A recent study on tele-health revealed that people use telemedical services *in addition* to doctor appointments, not as a substitute (Ashwood et al. 2017).
Doctors perceive that travelers's responsibility is too narrow for handling difficult situations on their own. Personal responsibility for one's own health includes for example adhering to doctor's instructions, being prepared and informed for the journey, and ready to self-diagnose. However, it needs to be taken into consideration that there are factors influencing the adherence, for example impracticability of advices or complexity of the information given (Steinbrook 2006:755). In addition, when falling ill in a foreign country, patients need reassurance from a higher instance due to fear, uncertainty and nervousness.
Doctors have to diagnose with certain limitations (relying on accounts of patients, without being able to touch or observe the traveler) which implies that there is a heavier burden on patients to correctly use visual devices (in case of pictures) or self-observation (in case of illness narration). This, in turn, again demands personal responsibility and agency of the patient (see also Dedding et al. 2011, May et al., 2005; Oudshoorn, 2008). Findings foster a discussion on personal responsiblity and the question to what extent a patient can be left alone in these situations. Upholding ethical standards, the doctor feels obliged to take over responsiblity for the patient and provide help. The tools of communication like mobile phones, email, websites and messenger create a feeling of presence and proximity no matter how long the distance between doctor and patient may be.

The Austrian ministry of health contemplates the implementation of telemedicine for chronic and age related diseases, other fields of application are not mentioned to date. However, telephonic consultations have already been there for many years, though not labeled as telemedicine. While consultations over a distance is a common practice of travel physicians in the Austrian context, the legal framework for these practices is not adjusted.

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