Research Report

Intercultural communication challenges between health professionals and immigrants - and the potential of digital and mobile technology

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A Grundtvig EU Lifelong Learning Programme: Harnessing mobiles to address intercultural problems in health care

EXECUTIVE SUMMARY

This exploratory, cross-cultural study examines intercultural communication and associated challenges between patients and health professionals in three European countries: Sweden, Germany and Switzerland. Overall goal of this report is to identify and publicize approaches to challenges in intercultural health communication. The investigation reveals the perspectives of nurses and doctors from pediatric and neonatal care. The treatment of (premature) babies and children is a particularly sensitive and important theme, and children are one of the most central and frequent causes for immigrants to engage with health systems. In addressing the challenges, specific attention is paid to the potential of digital and in particular mobile media - since portable and lightweight devices such as mobile phones and tablet computers include many functions and can support clinical staff in their high spatial mobility of clinical settings.

Data was gathered by means of ten focus groups; the conversations were transcribed and systematic content analysis was conducted to identify central themes. The present report is structured as follows: first, an overview of intercultural communication practices and associated challenges is provided: beyond overcoming language barriers, health professionals and immigrants need to address a number of cultural challenges, and in particular gender issues: in intercultural communication contexts, a common or similar understanding of illness or therapeutic practices cannot be taken for given but needs to be established and (re-)negotiated. The building of mutual understanding and trust was said to require time and in-depth engagement; a very rare resource in today's clinical contexts. In addition, it was deemed difficult to engage in conversations with mothers (of patients) for a number of gender-related reasons; however, mothers are central actors in pediatric and neonatal care.

In the second part of the report, different measures and means used by health professionals to address these challenges are discussed: in the contexts observed official and formal support was mainly restricted to professional translation services; a service that was valued but reported being limited, mainly with respect to availability. As a response, health professionals have established a number of creative practices: they use co-workers, the immigrant's family or media artifacts such as pictograms as cultural, language and "gender" mediators according to situated needs. Beyond speech, they attach great importance to non-verbal, gestural communication. Only in rare cases health care professionals were aware of intercultural training courses.

In the final part of this report, three scenarios are presented of how digital and in particular mobile media can be further developed and more systematically used in order to address the challenges indicated: mobile, multimodal media involving text, audio, images and video can be used (1) to establish trust and to build an emotional basis (2) to support immediate, verbal and non-verbal patient communication and (3) to serve as a means for patient education.

In view of the scope and the results of this research project, it is suggested that future projects should draw on the present findings and more systematically and research the phenomenon at hand. Similarly, this report reveals little about media practices of immigrants in health contexts; this is also a topic worthy of future exploration.

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INTRODUCTION

Rationale, scope and overview

This exploratory, cross-cultural study examines intercultural communication between patients and health professionals in three European countries: Sweden, Germany and Switzerland. The research focus is on practices and challenges of communication between health professionals and migrants or immigrants. In addressing the challenges, specific attention is paid to the potential of digital and in particular mobile media - since portable and lightweight devices such as mobile phones and tablet computers include many functions and can support clinical staff in their high spatial mobility of clinical settings.

The investigation reveals the perspectives of nurses and doctors from pediatric and neonatal care. The treatment of (premature) babies and children is a particularly sensitive and central theme, and children are one of the most central and frequent causes for immigrants to engage with health systems.

The report is structured as follows: first, communication practices and associated challenges yielded by the analysis are outlined. Second, a range of formal but mainly informal approaches that health professionals use to address problems in intercultural solutions are presented. In the final part, three scenarios and recommendations of how digital and in particular mobile media can be further developed and more systematically used are suggested - in order to better tackle the intercultural health challenges.

Background Literature

Current research clearly illustrates that immigrants have a high risk profile in developed health care systems and have been identified as a vulnerable population, but there is heterogeneity in the degree to which they are vulnerable to inadequate health care (Ipsiroglu et al., 2005). Higher rates of perinatal mortality and accidents/disability observed in many immigrant groups compared to the native population are linked to their lower entitlements in the receiving societies. The immigrants also have reduced access to health care for a number of political, administrative and cultural reasons, which are not necessarily present for the native population (Bollini et al., 1995). In particular children are vulnerable to these healthcare inadequacies. Each year, tens of thousands of children seek asylum in Europe. Children arriving from abroad are usually members of minority ethnic communities. These communities, even when well established, do not have equality of access to health services in their new countries (Webb et al., 2005).

Communication barriers represent a main risk factor, which is tackled comparatively easily by the use of professional translators in case of language barriers and of social workers with appropriate sociocultural and language competences. However, even if language barriers are overcome with the assistance of professional translators and interpreters, psychological and cultural communication barriers will persist (Ipsiroglu, et al., 2005). For instance the challenges of communicating with non-natives speaking parents of children with cancer. For oncologists, these concerns included the accuracy and completeness of interpretations, complexity of information, and loss of confidence and control over the communication process. For interpreters, they included complexity of information, information overload, and lack of clinician sensitivity toward the cultural and socioeconomic backgrounds of limited native language proficiency families. Parent concerns included difficulties comprehending information and anxiety over the possibility of missing out on important information

(Abbe et al., 2006). Paediatricians struggle to find solutions to their needs of health and medical care within different societal and political contexts on a common platform of children's rights and medical ethics (Hjern et al., 2004).

In a world in which information is increasingly disseminated online or via other ICT-enhanced means, the challenges CALD (culturally/linguistically diverse) communities experience when engaging with technology can negatively impact on their awareness and access to information for health and wellbeing, education, employment, settlement services, banking and other essential services. For many CALD communities, particularly those who arrived as refugees, access to, and use of the Internet is particularly limited (O'Mara 2009).

In summary, the literature reviewed points towards novel opportunities to support immigrants and health care professionals with mobile technologies. Additionally, widespread pervasiveness of the smartphone provides new opportunities for the CALD communities and new tools for healthcare. There is a strong societal need to support immigrants in the European Union and provide them and especially children with better health care. Additionally, new technologies can provide novel ways to solve intercultural communication problems.

Research approach: methods, participants and sampling strategies

While the study included two general practitioners, the majority of participants were hospital nurses and hospital doctors. Table 1 illustrates the breakdown of workshops in the project and provides a legend for the different extracts from the focus groups.

Data was gathered by means of ten focus groups; the conversations were transcribed and systematic content analysis was conducted to identify central themes that are presented in the following sections. Extracts will be used to illustrate the findings.

Data collection:

Nr	Location	Participants	Gender	Duration	Dates
01	Sweden/ Kalmar	1 Nurse, 2 Doctors, 1 health scientist	2f & 2m	.59 min	
02	Sweden/ Kalmar	1 Nurse, 2 Doctors, 1 health scientist	2f & 2m	1:10 Hour	
03	Germany/Augsburg	3 Social Workers, 40 German Integration Students and 3 Teachers	43 f	2 Hours 3 Hours	
04	Germany/Augsburg	2 Nurses, 3 Doctors	2f & 3m	2:15 Hours	
05	Switzerland/Bern	4 Nurses, 1 Doctor	5f	2:35 Hours	
06	Switzerland/Bern	2 Social Workers	2m	1:15 Hour	
07	Switzerland/Bern	2 Migrants	1f, 1m	1 Hour	

Data gathering and validation

Nr	Location	Participants	Gender	Duration	Dates
08	Germany/Augsburg	1 translator, 3 integration/translation managers (SPRINT), 2 integration advisors, 2 nurses, 1 m-health entrepreneur, 2 migrants	10f 1m	2 Hours	14 Feb 2013
09	Germany/Augsburg	5 doctors, 2 medical assistants, 2 nurses	2m, 7f	1.5 Hours	14 Feb 2013
10	Germany/Augsburg	3 migrant/language teachers, 2 immigrants, 2 integration/migration advisors, 2 nurses, 1 m-health entrepreneur	9f, 1m	2 Hours	15 Feb 2013
11	Sweden/ Kalmar	researcher – nurse, 1 immigrant, 1 language teachers, 2 social worker, 1	5f	1.5 hourse	28, May 2013

Table 1 Overview Data Collection

Limitations

The present research was exploratory and non-exhaustive in nature. There might be a selection bias since participation was voluntary - potentially resulting in the participation of medical staff that are more open and sensitive towards intercultural issues.

RESULTS

In the following sections, key findings that were identified in the analysis are presented.

Challenges in intercultural health communication

Overcoming language barriers

The most apparent challenges were language barriers, as exemplified by a Swedish participant: "*language is such a big issue. The rest comes long after that.*" Study participants stressed that problems in communication were bilateral in nature. It was not only that health professionals could not understand needs of their clients; they also deemed it to be challenging to provide even basic information to them. As outlined in the second extract it was perceived as particular critical when parents needed to be instructed in how to further take care of their children after being released from clinical care.

We want to give them some information. Even if the information is not so complex. "Okay we can give you this. You'll stay in the hospital two days and afterwards you can go. (..)" But we are not able to communicate these messages (03)

Participants pointed to particular challenges with people who had psychosomatic diseases that naturally require more intensive and in-depth communication; also, dealing with immigrant clients with literacy issues, where no written communication could be used, or changing and instable patient conditions, where spontaneous communication was required, were considered as particularly challenging.

An immigrant mother from Eritrea – very young – her child is very sick. […] you can neither communicate with her directly nor explain anything to her because this is a situation that changes from day to day, hour by hour. This is a great challenge […] and when there is any improvement or deterioration with the child we´ll tell her that we cannot help. […] That´s a typical situation we are watching now, one we are facing quite often. (05)

It was also found difficult that, in addition to the national languages and local dialects, also medical vocabulary, termed as "medical language", needed to be used - and understood by the clients; a fact that was deemed to further complicate conversations: *we have two languages, the Swedish and the medical language, which can be a problem also. (02).* Moreover, even when children received proper care in hospitals, poor communication very much hindered health professionals providing much needed emotional support for parents - who often suffered from a great levels of stress and uncertainty.

We cannot take any of her many fears we could take otherwise because we cannot talk to her right by the bed. (05)

Establishing and re-negotiating cultural perceptions and practices

In addition to language barriers, the participants reported a number of intercultural problems that related to fundamentally different understanding of health, illness or birth. Health professionals could to a much lesser extent draw on common cultural understanding. Even in situations of basic communication, health professionals found it difficult to put themselves in the position of their clients:

We say: "We have a depression." They say: "The whole person is bad." (03)

We take for granted what they should understand [..] but maybe there is something key is missing since we don't see the world through their eyes. (02)

Divergent cultural perceptions were reported to cause a number of organizational/practical and also therapeutic challenges. Health care perceptions practices could not be taken for granted, but needed to be re-negotiated and re-defined, sometimes in a lengthy and cumbersome process. It was described that, for example, in some cultures extended families and not only the nuclear family were expected to visit a patient; a practice that led to problems in limited hospital spaces in the context of European cultures where parents and the nuclear family tend to be mainly involved in patient care:

So this is sometime it is a really hard problem because the nurses say: "Okay only mum and

dad, nobody else." And the whole family wants to visit. They have, they are obliged to visit because their culture someone is ill everyone has to visit. (03)

Problematic were also different care practices and expectations of clients towards medical treatment. This included inadequate parental care (from a Western medical perspective), for example in the case of diarrhea or fewer; or, parental expectations towards certain treatment procedures. In such situations, parents naturally exercised certain powers and health professionals needed to sensitively re-negotiate perceptions to build common understanding or to change changing and re-defining parental practices, for example in the situation sketched below:*... what does it mean not to give an antibiotic, and say: "Okay please come back tomorrow, we will wait we will see." If you do this with a German mother, it is great. You do it with a Russian family, they will never come again half an hour later they will be in the next hospital and take their antibiotic there. (03)*

Tackling gender issues - engaging with mothers

Health professionals described great struggles with gender issues in intercultural patient communication with immigrants; an aspect that is inseparably interwoven with cultural and religious perceptions and practices. For male clients from patriarch cultures it was reported to be very difficult to receive instructions from female health professionals, doctors or nurses: *they [female doctors] are not accepted as the same way as male doctors (03).* Vice versa, participants stressed that male health professionals were limited in establishing physical contact or even conversation with female clients for religious and cultural reasons:

She is normally not allowed to talk to a male person and I am not allowed to touch her. And some of them, when you offer your hand, they are not allowed to take a man's hand. (01)

In pediatric and neonatal care participants reported that often fathers accompanied children into medical care, or that they took the leading role in the interaction with health professionals. This was reported being the case since the father often had been residing longer in the country and, accordingly, had stronger language skills or because of his dominant role in the culture. Accordingly, it was also found challenging for healthcare professionals to establish and maintain communication with mothers, who naturally assume a central care giving role: mothers give birth and breastfeed, and in many cultures they are also centrally in engaged children's care and education. Having fathers as language mediators was also problematic since it was not transparent to healthcare professionals if they objectively and comprehensively translated the information to their wives/partners:

Often the husband doesn´t translate everything, or just what he likes or what won´t scare his wife, in order to protect her. These are also situations which are very difficult. (05)

Taking time, building relationships and trust

In general, health professionals found it difficult to address culture specific challenges and to more deeply engage with foreign cultures in the very time sensitive environments of today's health systems: health care and clinical professionals have to deal with intensive workload, overcrowding and stress, particularly in emergency settings (Derlet, Richards et al., 2001; Weiss, Derlet et al., 2004). A concern that was seen as a hindrance to a deeper engagement with intercultural issues:

Germans medical system gets more and more industrialized. That means you have to see more and more patients at the same time. It makes it even worse to find out about the culture and the social background. (02)

While building trust over time was considered key in intercultural, patient-healthcare professional communication, time restrictions, language and cultural barriers often limited this engagement. The situation was further complicated by shifts and changing health care personnel in hospital settings:

I think, in that case it is ideal to be with the patient as frequently as possible so that he or she doesn´t see so many different health care professionals at one time. But, that's also not always feasible. That´s how you can win their trust and you know the (your) standing with this person, too. (01)

Current solution approaches

In addressing the above stated challenges, health professionals made use of limited formal and a wide range of informal support. The solution approaches identified ranged from professional, co-worker, and family translations, gestural practices, media artifacts, and intercultural training.

Involving professional translation services

To a very limited extent health professionals reported to be able to speak a few words in the original language of their clients - a practice that was, however, perceived as valuable in breaking down emotional barriers and in establishing trust:

It is always good to speak a few words of the language the person who is opposite to you speaks. Say "Hello", "How are you?", "Sit down".(03)

In many cases health professionals required the help of translators to overcome communication barriers. In all three countries, participants reported to be able to involve professional, phone-based and on-site translation services. Professional translation was considered key in overcoming many of the above stated challenges:

In the ideal world, a good translator or something similar would work perfect, and then you could use this [service] whenever you want. (02)

However, a number of difficulties were tied to these services: most basically, in some cases, migrants (in particular those who had no permit or where facing other problems) considered translators as part of the authorities, and therefore, refused their involvement:

Quite often they do not want to have any outsiders involved even though interpreters are obliged to confidentiality. Families, especially from war areas, often refuse them. (05)

It also became apparent that access to translators needed to be pre-arranged and was situated and temporarily restricted. This was particularly true in case of emergencies and unexpected changes in patient conditions:

But the most difficult [situation] is if immigrants' child is coming to the emergency room preferably late in the night [ironic] and they speak a language that's not so common in Sweden. Then we have a problem because we can't get hold of a translator and we can't

communicate at all. (01)

We have interpreters who are here only for a certain time. That´s when we can talk, however, if this situation changes later on we cannot communicate directly with the mother. (05)

Professional translation services were also associated with high costs; or in the words of a health professional: "*The budget is not unlimited*." This is important since costs and expenditures tend to be an increasing issue in the current debate on health systems in Europe. Another constraint perceived by the interviewed health professionals was that training would likely cover the main cultures, but would not be able to address minority cultures. Moreover, translators were not only required to be able to translate local languages and dialects, but they also needed to be familiar with the medical terms. Since very few of them were reported to have special, health-related skills/education - health professionals occasionally needed to inform and basically educate them ad-hoc; a practice they perceived as cumbersome and time consuming: *this is slowing down the process, if you have to explain to the translator what insulin is. (02)*

While translation services helped with the discussion of factual verbal information, they were perceived as having limitations regarding the exchange of emotional and other non-verbal messages. In particular phone translation was reported to be very limited in this respect. They were, as indicated in the second extract, also perceived to be complicated and cumbersome procedures; some participants gave this as the reason for not using them.

We still have a problem with translating fears as part of the non-verbal communication which you can't transfer if you talk via a computer or a translator. (01)

There is also a phone-based translation service. I have never used it. You have to make an appointment. You talk to an interpreter and the interpreter talks to the mother or to the father, and then we get back on the phone, back and forth. I find it quite complicated. (05)

In view of these limitations, health professionals reported using a number of further resources that supported them in overcoming language and cultural barriers:

Using co-workers as cultural, language and "gender" translators

The study participants described that in hospitals they made use of the usually wide and culturally heterogenic pool of health workers, in particular in larger clinics: health professionals with immigrant background helped to overcome language and cultural barriers, for example by informing their colleagues about cultural perceptions of their home countries:

We had a practitioner [...], I guess he came from Iraq, and he told us a little bit about the, differences, about how illnesses are experienced. (01)

Also in immediate communication situations, health professionals applied a number of "tricks" by involving adequate health personal: one doctor reported that in case of intercultural encounters he deliberately chose to be accompanied by an assistant with a immigrant background in order to facilitate communication - a method that was well received by many patients:

In my clinics, when we have Muslim patients, female patients, I always have a female

assistant with me. And she is from Indonesia. So she looks different, she looks exotic as the patient as well and it is much easier.[..] And they prefer to talk to her and not to me. (xx)

Not only health professionals but also personnel from cleaning services were reported being involved in spontaneous translation. While personnel with immigrant background were deemed valuable for ad-hoc support, this was also tied to several shortcomings: first, participants stressed that staff had own responsibilities and tasks- and translation had to be done on top of their normal workload:

...there are many foreign nurses and there is always somebody to understand you, although the clinic does not want them to go to always to the [other] clinic. (01)

Second, it was argued that clinical staff not only translated facts in a neutral way but tended to tie their morals and values to their translations and, accordingly, could bring in additional communication "bias:

But nurses who are not trained for example they translate their own morals. So if the patient is a man, and the nurse thinks his behavior is not okay she will translate her own morals. (01)

Third, if the translator had little (specific) medical background knowledge, translations can be difficult and also error prone:

It´s extremely difficult to explain a complication, for example of a premature baby. We try to do this in easy to understand German. Then she has to translate, and that´s where you have to pay attention to choosing the right person. (01)

Co-workers also served to mediate intercultural gender issues. In this sense, one participant reported that - in a larger hospital - a "gender-appropriate" medical actor was chosen according to situated needs:

And sometimes if it is a male-female interaction problem we just change the sex. So if the father has to be told something really strict, a male doctor will go there and tell him what to do. (03)

Harnessing immigrants' children, family and colleagues as mediators

In some cases, friends and relatives of immigrants acted as translators. The translation from "third-parties" in conversations about birth, health and illnesses was, however, not seen as appropriate by the participants since they knew little about the family's relationship with the translating person; second, it was not known to what degree the translator was providing and forwarding reliable and complete information. Accordingly, the involvement of friends and colleagues of migrants as translators was mainly accepted in emergency situations:

Yes, but we don´t really like that - Only in an emergency. It´s a quite sensitive situation as we don´t know what this colleague is to know or how trustful the relationship is, what we can really talk about. This situation is never a safe one. (05)

Translation was reported being done on-site, for example by a colleague, who accompanied the family to the clinic, as well as virtually, in the form of mobile phone conversations:

Some of the immigrants have mobile technology. This is really valuable for us because they can sometimes call someone who can then translate (01)

Also the children of immigrants play a role both as active and passive mediators of intercultural communication. In pediatric care, older children sometimes translated for their parents. This was reported to be limited to non-critical information since health professionals did not know to what extent the translation was correctly conducted. Interestingly, participants also described how they "used" children as mediators to break down cultural barriers and to establish trust:

One advantage in a situation of mistrust is - also with non-migrants - to establish the contact through the child. I don´t need to initiate contact with an adult in the first place if I can do this through the child, since the child opens many doors. When the mother notices that her child feels good […] and I hold it in my arms, then there is at least one point of reference through which I can get in contact with the parents. I think this makes it easier. This is an easier way than trying to get in contact with an adult directly. (05)

Making use of gestural practices

In intercultural communication where the use of common verbal language tends to be limited, non-verbal gestural communication and physical/haptic contact was said to take a much greater role, in particular in terms of establishing trust. This included mimics, eye contact/gazes and demonstrations/gestures - a way of communication that was, from a multimodal point of view, much richer, but also difficult to establish and time consuming:

When new people come to you, you always have to look for new ways of communication. I believe it takes a lot of empathy, a lot of demonstration as well as mimic, a lot of gestures, and also a lot of attention and care. [...] And also trying to lead people, to take them by their hands. (05)

Nonverbal communication was reported to be also used in situations with interpreters; and it served as an additional means to establish contact directly with the mother in situations where she had otherwise not been included in the communication; for example when other family members acted as dominant communication partners:

I think one possibility is to find out how to work with an interpreter. So you can talk about different aspects and at the same time try to get directly in contact with the mother on a nonverbal level. Even in the presence of other people, I try to keep eye contact with the mother and not with the grandfather. (05)

Using media artifacts as cultural and language mediators

The participants indicated using different information sources to enhance intercultural communication and patient education. For example, German doctors reported to be able to provide clients with "some folders" (01) - brochures translated into different languages about new born babies. A source that was distributed by the hospitals and that was much appreciated by health professionals:

We had an information sheet last year for new born babies. In German, in Russian, in Turkish,

and I think also in English. But due to financial reasons this year it is only available in German. [...] (01)

Also image based sources or combinations of text and images in the form of pictograms were used for immediate patient communication: cards that illustrated pain, illness patterns or allowed the patients to communicate their needs by selecting and pointing on images in a nonverbal way, for example "*cramps in the stomach, headache, something to drink or something to eat or to vomit".* (03) These media served as a means of patient education, for example by helping clients, i.e. parents) to achieve a better understanding of illnesses and of health care practices:

> *How to touch the child, or how the child is fed through the tube or how s/he is getting its diapers changed. Ordinary things that happen every day.[…] so she [the mother] will understand what´s happening next. (05)*

Communication based on cards resp. images was found to be relatively easily understood by parents and children. These media were reported to be particularly helpful in difficult intercultural communication: in situations that were troubled by greatly divergent cultural and religious perceptions, for example in moments when even physical contact/examination of the patient was not adequate, as one doctor reports:

Figure 1 Anaesthesia Website (source http://www.narkoswebben.se)

> *Yesterday I had a woman from Sudan [..]. She was a refugee and she delivered her baby during the night on the road. She suffered from severe stress, but she was so afraid to talk to a Christian man, because she was Muslim. [...] So what we find very helpful is showing pictures. "What is the part of the body?" "Show something [you want] to drink or something to eat. So it changes the way of communication from verbal to nonverbal. (03)*

To some extent also electronic media were involved in patient communication and education: *Swedish participants referred for example to Anesthesia web shown in Figure 1. A site that is available in more than 20 languages, "where children and adults can learn more about being in hospital and what happens before, during and after anesthesia and the operation". (Anaesthesia Website)*

Media sources were not only distributed and/or produced by central authorities and hospitals. For example, in neonatal care setting a mother created a book about the premature birth and the difficult trajectory of her baby. She allowed the clinical staff to show the book to other parents, who were in the same, difficult situation. The book, and in particular pictures, were deemed as valuable sources also in intercultural communication situations, for example "*besides the talk with the interpreter*" where images helped parents in understanding such situations.

Media also served as icebreakers: for example, one doctor reported that photographs in her clinic from different cultural regions made clients feel more comfortable and contributed to engage them in discussions. Another participant revealed using a digital map on his computer to establish an emotional basis for further medical discussions:

> *I have picture, a photograph from Egypt. Pupils, female pupils all with white veils. And I think many of the Arabic people […] like this picture. I also have pictures from Nicaragua and other countries. They look at this picture [and say]: "Oh, where was it? You were there?" (03)*

> *What I do: I open my laptop and ask: "Show me where you come from." On Google Earth. So I establish an emotional contact with him. (04)*

Participants also pointed to their occasional use of internet translation services, for example www.leo.org, in order to help them in short, immediate translations. Interestingly, also Google translation services were used at bedside (see Figure 2). Expressions and phrases of a range of languages were typed in, translated and could be even acoustically pronounced by the program:

> *… when they didn´t have an interpreter and the mother didn´t understand any German. That was when they had the idea of looking it up on the internet. Since we have the earphones in our ward we typed it in […] It went well, and it was very good for the mother in this situation. (06)*

However, the interviewed health professionals were concerned about the reliability of automatic, internet-based translation; such tools were deemed suitable mainly for day-to-day care and not for critical, diagnostic or therapeutic conversations.

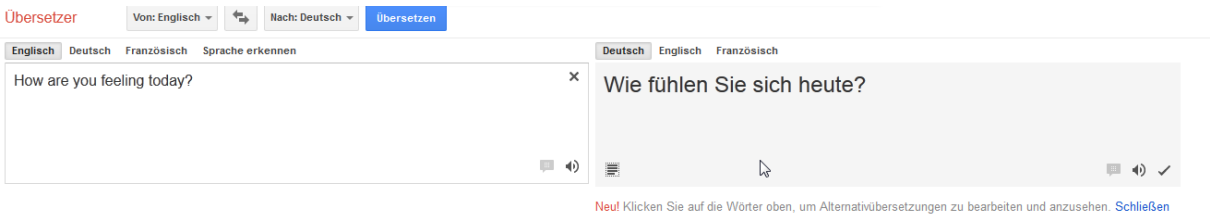

Figure 2 Google translate

Attending intercultural training

Beyond different support systems in communication situations, participants showed interest in intercultural communication courses. However, only very few of them were aware of concrete offers; and only one person from all of the participants already had attended intercultural training. Accordingly, they described availability of and personal interest in training opportunities as follows:

Not that I know. .. I would be interested in because I think its quite interesting to learn about the different cultures. (01)

Intercultural training was expected to be useful in achieving a better understanding of the clients' cultural backgrounds. However, it was perceived as having several limitations. First, participants stressed that training could not address the wealth of the many different cultures, and, accordingly such measures would neglect cultures where fewer people come from.

But I think, we have a lot of countries and different religions and also if you go to hours to intercultural training you do not know the background of all this. (03)

Second, participants felt that, while a better understanding of the clients' culture would be certainly desirable, such training would provide little help in supporting them to find concrete solutions for the very specific and divergent day-to-day interactions. Some believed that broadening intercultural competences would be primarily achieved through practice: "*I think that adequate knowledge can be only gained through daily routine." (05)*

Digital and mobile media: current use and future scenarios

Upon characterizing current use of digital and mobile media, the following sections seek to elaborate different scenarios and recommendations of how digital and in particular mobile media can be harnessed more systematically to support intercultural health communication.

Practices and perceptions of current mobile phone use

In general, a variety of information and communication technologies were used by participants in clinical settings, for example in the form of clinical information systems ("to look up lab results" (02)), via videoconferencing or email. With respect to mobile phone use, some health professionals, in particular younger doctors, were said to have a high affinity to and to make use of these devices in their daily clinical practice. Participants appreciated smartphones since they combined many functionalities in one device - referred to as convergence (Pachler, Bachmair et al., 2010)

Because you have the mobile phone, you have all your e-mail, your appointments; and you can take photo and the video files. And this is why everyone has it in his pocket. [Another participant continues:] It's the office in your pocket. (04)

While the use of mobiles was not officially supported in the clinical contexts observed, health professionals reportedly used functions and apps that assisted them in their daily work practices, for example for the calculations of drugs. Health professionals also took mobiles for the recording of particular patient conditions in the form of images and video - for documentation purposes and also for consulting or sharing the recorded artifacts with colleagues:

We take pictures. If you have a rash of the skin or something like this or are there any other questions you take pictures. And if you have a child with seizures we take a video file. (04)

Before we outline scenarios and suggestions for future work it is important to state that mobile devices can never replace, but only enrich any form of human, communication. Considering acceptance and affordances of mobile media, the following three scenarios can be discerned:

(1) Facilitation of ice-breaking - establishing an emotional basis and building trust

The analyses supports the view that digital media, and in particular images, may be used more systematically to bridge cultural barriers and to support the building of trust - even before any language barriers come into play. Based on one of the empirical examples reported above, one might imagine mobile applications that, for example, show a world map where the clients' origin countries can be searched (See Figure 3). If such an application is available on a mobile phone or a tablet device, it could be used directly at the bedside. The map may also be interactively combined with photographs of the respective countries and regions, since these media have been reported having a positive effect as ice-breakers. Apparently, the use of multimedia materials has to be handled carefully, since photographs can also be very sensitive, for example causing negative feelings in traumatized people.

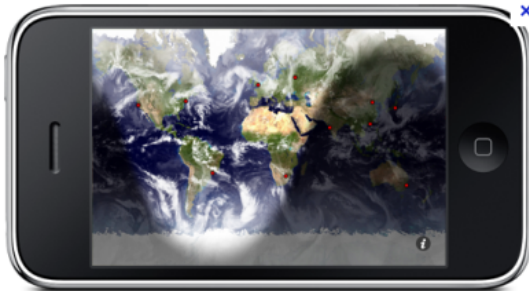

Figure 3 Mobile with world map

If a mobile application would also provide basic, verbally pronounced phrase like welcoming and greeting a client in her/his native language, health professionals may listen and learn simple phrases immediately before critical patient encounters. Since many of these functionalities are, in part, already provided in existing apps, a next valuable step may be the systematic analysis of current solutions.

(2) Support of immediate, verbal and non-verbal patient communication

After welcoming and ice-breaking practices, mobile devices can be also used to support immediate, verbal and non-verbal intercultural communication, for example in the context of diagnostic or therapeutic conversations. One responsive software application for mobiles, tabletPCs and computers (under development) that presents medical images in context with multiple languages to support verbal and visual communication between healthcare professionals and people is Comic Health. This startup company (www.comichealth.se) has been the developed out this research project and is a spinoff from bachelor thesis work conducted by an Interaction Design student from Linnaeus University, Sweden (Figure 4).

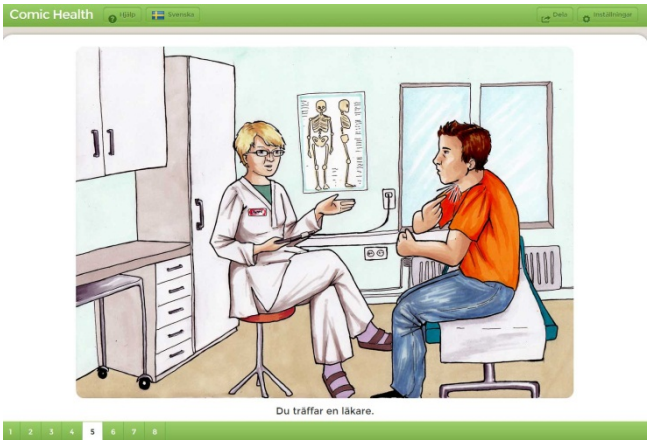

Figure 4 The Comic Health Software

While such tools may not offer fundamentally new functions to cards that were already used in some settings, the portability of the devices can support their use in situ at the bedside, as the following statements describes:

> *What we have here are these cards or the pictures. If I'm on call I don't have all these [media] with me. So what I would like to have is a mobile device where I go and browse through and then have it [available]. Not going to the office, taking a printed thing like a brochure, […] Have it at the bedside at the moment when I need it (04*)

With respect to language translation, health professionals may be pointed to the opportunity to use web-based translation services such as Google translate in direct interactions with clients at the bedside. This should naturally be limited to situations where no professional translator is available, for example in emergency situations or in day-to-day, non-medical communication; and it may be used in addition to other forms of informal and ad-hoc translations, that were outline above. Again, first solutions are already available on the market: for example, translation apps such as http://www.universaldoctor.com/ (See Figure 5). However, since such apps are likely designed for educated, literate western tourists who travel abroad, their appropriateness to be used in intercultural health communication with immigrants needs to be critically evaluated.

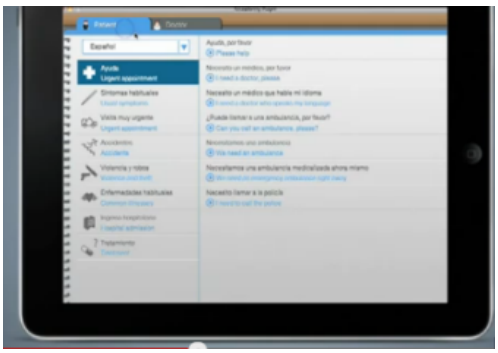

Figure 5 Universal Doctor (Screenshot from http://www.universaldoctor.com/)

- Include: Mobile video conference with translators as an additional mean of phone conversation

- Include: Standard form with standardized questions including diagnostic and therapeutic questions for patients; to be filled in a) in the waiting room prior to consultation in the language of the immigrant, for example on an iPad. Summary of results available for doctor in national language; or such a tool can be also used with a translator who then responds to questions together with client/patient. Helps in communication and is also a time-saving measure;

(3) Patient education: creating instructional materials

Beyond the needs of immediate communication, digital mobile media can be also used for patient education. Participants suggested that in particular instructional material in the form of short videos should be compiled and/or produced in order to support education of patients. As the following extract shows, such material was expected to be easily re-accessed at a later point in time, distributed and shared in further immigrant communities:

> *It would be a good idea to have a sort of teaching files on the mobile phone and make them accessible to them [patients] also via Internet […] at home. Than they can [say]: "The doctor showed me this file." And then they go home and show it to the father and say: "I show you the file again." I think it's not sufficient that I have it on my mobile phone. They should take the internet address […] and use it again and again. (04)*

Participants of this study suggested that such material could be searched and compiled - or if necessary produced. While such an effort would be certainly time consuming, health professionals stressed its broad suitability and its usefulness. It was suggested that first a few instructional videos explaining the most common diseases and treatment practices should be created and evaluated:

> *The understanding of a disease like Asthma/Bronco. What does the pill do, what does the injection do. How does it open the broncos? […] that could be used nationwide. (04)*

It was also proposed that videos should be enhanced with subtitles in the national language so that health professionals are informed about their content and are better able to integrate these materials into their patient education practices.

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