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**Pp. 99-105 in: Latifi, Rifat (ed.):  
Establishing Telemedicine in Developing Countries: From Inception to  
Implementation. Studies in Health Technology and Informatics. IOS Press,  
Amsterdam 2004.**

## **EXPERIENCES AND PERSPECTIVES IN USING TELEMATIC PREVENTION ON SENSITIVE HEALTH ISSUES**

### *The nature of ICT*

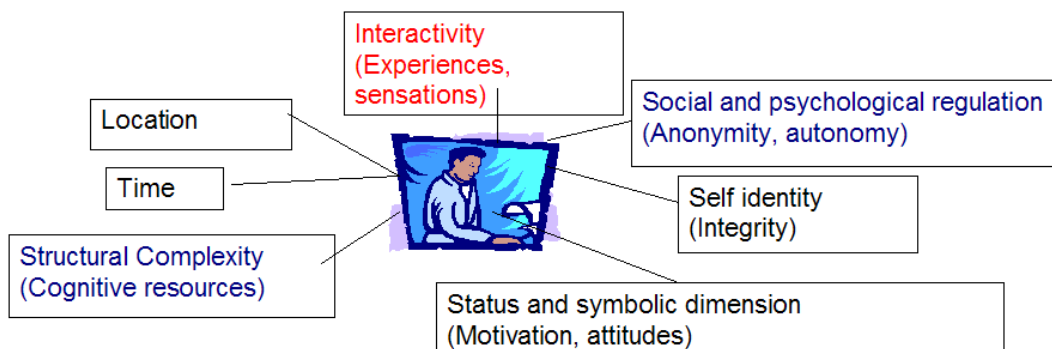
The new information and communication technologies, *telematics* – such as the Internet, telephone services and videoconferencing – are simultaneously both an *instrument* and a *symbol* – a sign of progress – but also a potential *addiction problem*. Sensitive topics – like substances or mental health – bring out all these characteristics of telematics. Therefore the computer world, substances and addictions are closely connected.

It can, in fact, be said that the most important aspect of the new information technologies – note that many consider the information society to be an entirely new form of society and speak of it in Utopian terms – is their ability to give people *more freedom and flexibility* in areas where we until now have been bound by the physical realities of the world. The most obvious change is that we are no longer bound by time and place: the telephone and the fax started this change that was finally completed by the emergence of e-mail. Another important aspect of telematics is that they create tools for outlining and analysing the ever-complicating society. At the same time, telematics has also increased the productivity of labour.

Some fields of work, and especially human-centred work, have special characteristics due to which some do not consider the use of telematics to be suitable. The most important of these characteristics is that the work is fundamentally about *two people meeting*. However, it is important to remember that the pros and cons of telematics are often two sides of the same coin. The benefit and the disadvantage of telematic media is that they allow one to operate anonymously and to regulate *social and psychological distance*. The *threshold* of seeking treatment is fairly high and it can be lowered through the use of telematics. As an example one could say that the quick success of

ATMs shows that people want cash, not a new human relation every time they need money. Face-to-face relation is, likewise, not an indispensable element in human related work, but an appearance of limits of the existing world. In reality people wish to regulate the psycho-social distance themselves. This is, in my opinion, the most important novel feature of information networks and telematics (*Picture 1*).

### Picture 1. Differences between the real and virtual world: more freedom for individual choices



**The virtual world allows more freedom of action e.g. in terms of following aspects:**

Time, Anonymity, Identity, Integrity, Location, Motivation, Attitudinal range, Cognitive resources, Autonomy, Social capacity, Interactivity, Experience range

The Internet and other information technologies provide enormous possibilities for substance abuse prevention and treatment – even when it comes to helping the marginal groups of society. With the help of the new technologies people themselves can be active and take part in prevention work. In brief, it can be said that via telematics following are possible:

- Simplification of the continuously more complex society
- Interactivity, feedback and democracy
- Anonymity, and closeness at will
- Low threshold to evaluate, motivate and seek help
- Empowerment to use one's own resources

*Special features of telematics for drug and alcohol work*

The Internet changes networks from hierarchical to horizontal and thereby increases both *democracy* and *anarchy*. For example, without the help of the new technology the Finnish Cannabis Association might have not been able to voice its views about their suggestion to legalize cannabis. In a society where all use of drugs is prohibited the most eager opponents have wanted to remove

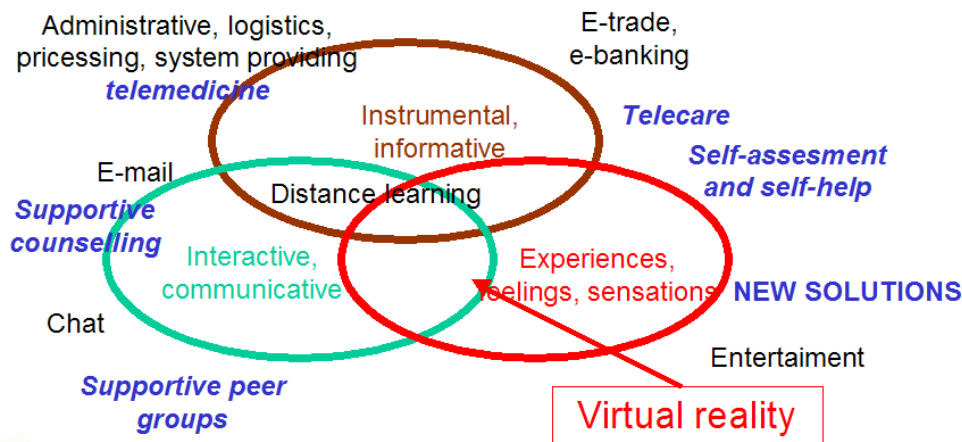
this site from the net and censor the contents of the Internet. There is plenty of pro-drug material in the net, and this is, of course, permitted in a society that believes in free speech. New technologies often make society consider and reconsider its values. The question is how matters are dealt with and what kind of society the technology is used in. In practice like in drug prevention this liberty forms a great challenge for drug educators to balance the incorrect drug information that Internet feeds in mass. The same problem concerns naturally many other fields of health care.

What makes telematic prevention work challenging is the fact that computer programs and information networks can also be very addictive. Computer games are addictive just like all other games. Chat groups are very popular both in the Internet and via telephones. This seems to be one of the features of networks that is related to net addiction: net addicts use networks as *virtual social environments*, whereas for most users the Internet is a flexible and instrumental database.

Virtual reality is the most interesting prospect of telematics. On the one hand, it will undoubtedly be an excellent *instrument of prevention, training and treatment work*, on the other hand it may create yet another addiction. At the moment people can experience *virtual worlds* through books and movies or through the use of chemicals like alcohol and drugs. These only stimulate some of the senses and the human imagination takes care of the rest.

People can enter the virtual reality also through computer games, multimedia and other telematic means. The actual technological devices for virtual reality are still in their infancy. The first example of a virtual technological mass product was the *tamagotchi*, a threshold invention that combined machine and human behaviour to a sufficient degree. And again, the human imagination took care of the rest.

**Picture 2.** Types of relations between telematics and the user: the future of telematic care and treatment



When virtual technology is developed far further *the virtual and the real world may perfectly overlap*. Virtual reality becomes a state where people can sense pleasure and experience things with all their senses. It is not difficult to imagine that it would not be appealing to return from a state of total pleasure to the imperfect real world. *Virtual addiction* may develop into a worse addiction problem than substance, gambling or net addictions are today. (Picture 2)

*Examples of addiction telematic products in Finland*

The A-Clinic Foundation has developed prevention methods based on Internet, videoconferencing and telephone technologies. Projects have been carried out on international level as Prevnet Network activities ([www.prevnet.net](http://www.prevnet.net)). The main service, *Päihdelinkki* (AddictionLink in English), was started in 1996 and is now in its third design. The site consists of a databank, discussion forums, self-assessment tests and instructions, counselling services, areas for families, parents and foreigners, fun area etc.

A SMS service for assessing BAC “*Promille*” was introduced in 2000 and been used between 400 and 12 000 times a month depending on the marketing efforts. The intended use of Promille GSM SMS service is to provide a handy way to measure the blood alcohol level as well as the ability and the legal status to drive a car. There seem to be a number of people using it to control their drinking also. The test should be used mainly at restaurants where the concept of unit of drink is easy to put into the practise.

### Picture 3. Anonymous distant BAC calculating: "Promille-GSM" SMS text message service

**INFORMATION TO SEND:**

- \* PROMILLE
- \* M (male) or N (female)
- \* Weight in kilograms
- \* Number of alcohol units
- \* Time when started drinking (e.g. 9 p.m. as 2100)
- (\* Separate values by spaces)



Example --- PROMILLE N 60 5 1930 Example ---

**BASIC ANSWER MESSAGE**

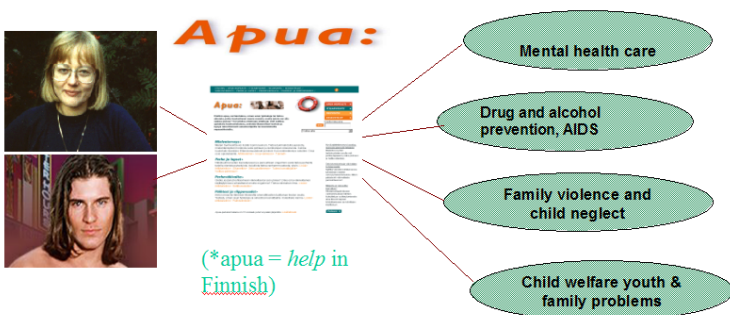
ESTIMATE: BAC x.x. Metabolization will take at least xx hours. Extensive individual and situational differences. Responsibility only YOURS. If unsure, don't drive!

The early-stage counselling and crisis *portal* [www.apua.info](http://www.apua.info) (help.info in English translation) is maintained by 15 mental health, addiction work, children's welfare, domestic violence and public health organisations.

One of the basic ideas is that people should not be obligated to self-diagnoses before they can seek help. Therefore [apua.info](http://www.apua.info) combines many psychosocial topics that are related to each other, so that clients can seek help even when they just have a vague unspecified feeling of being unwell and the system directs them to appropriate services.

The advantage of the [www.apua.info](http://www.apua.info) is that it offers versatile forms of help via one channel. For its members, the portal offers the opportunity to co-ordinate, co-operate and share tasks, speed up the development of their own web services, become more known and find new clients. Also the cost-benefit ratio is good. The whole is greater than the sum of its parts. Together the organisations reach sufficient critical mass.

### Picture 4. Operational themes and services of the [www.apua.info](http://www.apua.info) portal



In principle, [www.apua.info](http://www.apua.info) has the potential to become a citizen serving hyper-portal for social and health care in Finland, if it can offer to the public a sufficiently easy way to access a sufficiently wide range of services. In addition to the issue of who should finance the services, the key question is whether the state and municipal health and social services, especially hospital districts, will also join the project, because for the citizens the ownership of services providers is of lesser importance.

AddictionLink service received the Finnish award for being the best health promotion material of 1999 and was chosen one of the Finnish nominees for the European health education award in 2000. The main reason for considering it a success is, however, the number of users. The net services of the A-Clinic Foundation have nearly 20 000 different visitors a month which is quite a remarkable use for a this much specialized site in a country with only five million people.

It can be said that the AddictionLink has seemingly succeeded in reaching its goal and has *lowered the threshold* of seeking help with substance abuse problems: the number of “out-patient” contacts to the A-Clinic Foundation has increased tremendously. The AddictionLink service seems to have reached people who would otherwise not have sought information and treatment with substance related issues. Experiences show that telematic services can complement, improve and in some cases replace the existing support and treatment services.

The most problematic aspect of the services has been *financing*: as services are used anonymously, the municipalities do not cover the expenses, as they should be according to the basic principles of substance treatment responsibilities in Finland.

### *Future perspectives*

There is a European Prevnnet Network advancing the use of telematics in addiction fields. It has listed a number of promising ventures around the world but especially in regard to the possible telematic fields analysed in the *picture 2*, much remains to be done. Aspects which needs to be taken into consideration in the future telematic activities on sensitive topics include:

- Quality proof system and regulation
- Contents integration: public health, portals, EU goals integration: eEurope and eHealth
- The role of written word and pictures in the prevention and treatment
- The need for research on the use and effects of services
- Standardization of platforms and interfaces

- New technologies: use of broadband services, SMS text and picture message, positioning and other mobile services
- Virtual reality and use of experiences, feelings and sensations

Especially three issues are important to emphasise. The first is the *role of phones and mobile services*. People tend to forget that phone is the oldest and most common telematic system! Mobile phone is rapidly getting more common than Internet and SMS is spreading at exponential speeds. Some additional reasons to emphasise mobile telematic services are listed below.

- In many countries fixed line phones were available already long ago to nearly all population
- Mobile phones are reaching saturation point in many Western countries
- The phone interface has been standardized long ago, for mobile phones the same is taking place
- (Mobile) phones, Internet, (digital) television, computers are competing and their functions are overlapping
- In social and health care hot lines stay popular
- Call centres are spreading

*Written messages* offer many benefits. They allow time shift, accuracy of messages, possibility to return to the message and the answer, anonymity and regulation of psychosocial distance. No wonder people seem to love written telematics as e-mail, SMS, net chat, television chats indicate. That should be paid more attention also in health and social care telematics.

The third issue are the telematic services of *interactive and sensations arousing nature*. In those the future of telematic care and treatment need to learn more from the two groups of the most interactive and sensation and experiences offering web sites available today: net gambling and cybersex (*Picture 5*). These have already now been able to build much to the future because people are willing to pay individually for these services. This means later on also the utilising of the virtual reality to full extent also in health and social care telematics.

## Picture 5. Virtual reality now: TV-SMS chats, cybersex, net gambling



The Internet and other information technologies provide enormous possibilities for prevention and treatment – even when it comes to helping the marginal groups of society as well as in developing countries. To be realistic, there are also many fundamental tasks ahead, especially in building the IT-infrastructure and training people and avoiding the digital divide.

It should also be noted that until now telemedicine has progressed steadily but that the core has been to improve the treatment related medical infrastructure. Less emphasis has been put to the interaction between the patient and the therapist. That is true also with social care, perhaps to even greater extent because of the nature of social work: not many machines are needed. That has led to a hesitant attitude towards more advanced ICT solutions.

## Picture 6. Future aspects in telematic activities



- @ Contents integration: public health, portals, EU goals integration: **eEurope and eHealth**
- @ **Quality** proof system and regulation
- @ **Standardization** of platforms and interfaces 
- @ **New technologies coming:** Use of high speed and *broadband* services, Mobile services, SMS text and picture message, positioning (locating) and other *mobile services*
- @ **(Motion) pictures** coming as common as **written word** (SMS, chat) and voice in telematics now 
- @ **Cross-media** coming for technical and financial reasons
- @ **Virtual reality** and use of experiences, feelings and sensations intensifying the telematic interfaces and contents of services
- @ In practise most of the "future" telematic tools already exists. The future is already here (though it is a little delayed) and we should start using it.



It should now be time to deal also with the main human element in health and social care: relation between the patient and the therapist. Unlike many, I really believe that telematics can replace a part of our face-to-face work – and that is a development that can be simultaneously preferred by the



patient and also produce better results. These are aspects, however, which would need research in the future. But for practical reasons, one could say that most of the “future” telematic tools (as we know them now) already exists. The future is already here (though it is a little delayed) and we should take advantage of it.

*More information:*

*Tammi, Tuukka & Peltoniemi, Teuvo (eds.):* Telematic drug & alcohol prevention: guidelines and experiences from Prevnet Euro. A-Clinic Foundation Report Series nr 33. Helsinki 1999. (Also at [www.prevnet.net](http://www.prevnet.net) as a pdf-file)

[www.paihdelinkki.fi](http://www.paihdelinkki.fi) (Abbreviated English version at [www.paihdelinkki.fi/english](http://www.paihdelinkki.fi/english))

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*New references:*

*Peltoniemi, Teuvo:* Young people and the new technologies: Internet and mobile services in drug and alcohol prevention. In: Stay in Touch. Bundesamt für Gesundheit BAG. Bern 2003. Also in pdf at [www.teuvopeltoniemi.net](http://www.teuvopeltoniemi.net)