



Innovative solution for the health of homeless people

Homecoming of People Living in the Streets via Rehabilitation and
Mediation Project (HOPE)



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Institutions and professionals involved in HOPE project place a great emphasis also on the fact that they do not only present the current situation in the field of homeless care. They will also put innovative solutions into the focus. The aim of this knowledge transferring document is **to bring us the future** in the field of health care of homeless people. For the first time in Europe, an interesting research was born and pilot testing of the **application of telemedicine in the health care of homeless people** was carried out in Hungary. We recommend it into the attention of policy makers in each of the partner countries, as a progressive solution. We believe that modern technology makes it easier to fulfil tasks and solve problems in all areas of life. Even in the case of a such marginalized group as the homeless.

Digital health care in homeless care - a remarkable, stopgap initiative, even at international level

The coronavirus epidemic has posed a huge challenge to health systems worldwide. As a substitute for face-to-face medical services, a significant proportion of doctors and patients have turned to **telemedicine** solutions.

However, while this is a novel opportunity to reduce inequalities in care, for those with limited means, internet access and digital skills, it could easily mean exclusion from care. The Hungarian Charity Service of the Order of Malta is committed to reduce accessing difficulties of homeless people to health care.

What is telemedicine?

Telemedicine is a healthcare service where the patient and the health care staff (doctor, nurse, therapist, pharmacist) are separated in space and/or time, they do not meet directly, their connection is established through some remote data transmission system.

But telemedicine also includes when a doctor requests an opinion or contribution from a colleague using a telecommunication device.

In Western European countries such as Scandinavia or for example in Estonia, telemedicine already plays an important role in healthcare. The current pandemic situation also favours the development of telemedicine systems around the world.



In 2021, The Hungarian Charity Service of the Order of Malta launched a telemedicine pilot concerning four institutions in order to treat the chronic diseases of the beneficiaries more efficiently.

In order to establish an appropriate form of telemedical care for them, the organisation has started a stopgap research activity in this field in cooperation with the Digital Health research group of the Institute of Behavioural Sciences Institute of Semmelweis University in Hungary - summarised the things to know about the programme Dr. Sándor Békási, Chief Medical Officer of the Health Centre of The Hungarian Charity Service of the Order of Malta. *To the best of our knowledge, the present study is novel in European research analysing the attitude of homeless persons towards telecare.*



Digitalisation has been a growing trend in the Hungarian healthcare system for years, and people, including patients, are looking for new ways of communication and new technologies. The coronavirus epidemic has further accelerated this process, as it has posed a huge challenge to health care worldwide. In general, there is an unprecedented demand for telemedicine and telemedicinal services in Hungary. Still, one cannot talk about Hungarian society in general, as the rise of digitalisation in healthcare might easily mean exclusion from care for those who have limited or no access to tools, internet access or digital skills.



This is also true for homeless people as well. The Health Care Centre of The Hungarian Charity Service of the Order of Malta provides medical treatment for the most helpless people, it is committed to decreasing difficulties of homeless people's access to health care, so the fact whether telemedicine is a viable option in this social segment proved to be an inevitable question.

The biggest advantage of telemedicine is its independence and flexibility in terms of time and space.

Telemedicine is particularly useful for elderly, mobility-impaired, bedridden patients or in cases those with long waiting times for a specialist appointment, but it can also be beneficial for people who live in a place, from where it is difficult to get to a specialist clinic.

The Charity Service has started a stopgap research activity in this field in cooperation with the Digital Health research group of the Institute of Behavioural Sciences of Semmelweis University. **This study of digital healthcare opportunities related to homeless people is a noteworthy, stopgap initiative even at international level.**

As its first step, a questionnaire survey was carried out in 2020 to assess the openness of people in social institutions providing long-term accommodation for homeless people to telemedicine health services in the form of online medical visits. Since no national data on this was available for the non-homeless population, the results were compared to a reference group in Budapest, consisting of patients from two average general practitioners' practices.

The results show that the openness and attitudes of homeless people do not differ from those of non-homeless people and that basically, they have a positive attitude towards such a service. It is also clear from the data that those who have a positive experience with the healthcare system are more open to telemedicinal care as well. Thus, increasing trust in general healthcare can also have a positive impact on the uptake of digital health solutions for homeless people.



The findings of the study **were published in the medical journal PLOS ONE**, under the title *Exploratory attitude survey of homeless persons regarding telecare services in shelters providing mid- and long-term accommodation: the importance of trust*.

PLOS ONE is an inclusive journal community working together to advance science for the benefit of society, now and in the future. Founded with the aim of accelerating the pace of scientific advancement and demonstrating its value, they believe all rigorous science needs to be published and discoverable, widely disseminated and freely accessible to all.

The first shared authors of the publication are Dr. Zsuzsa Gyórfy, leader of the Digital health research group of Behaviour Science Institute of Semmelweis University and dr. Sándor Békási, the senior chief of Health Care Centre of Hungarian Maltese Charity Service.

Abstract

Background

„With the expansion of digital health, it is imperative to consider intervention techniques in order not to be the cause of even more social health inequalities in underserved populations struggling with chronic diseases. Telemedicine solutions for homeless persons might compensate for shortcomings in access to valuable health services in different settings. The main aim of our research was to examine the attitudes and openness of homeless persons regarding telecare on a Hungarian sample.”

Methods

„Quantitative survey among homeless people (n = 98) was completed in 4 shelters providing mid- and long-term accommodation in Budapest, Hungary. Attitudes regarding healthcare service accessibility and telecare were measured by a self-developed questionnaire of the research team. Telecare attitude comparison was made with data of a Hungarian weighted reference group of non-homeless persons recruited from 2 primary care units (n = 110).”

Results

„A significant fraction of homeless people with mid- or long-term residency in homeless shelters did not oppose the use of telecare via live online video consultation and there was no difference compared to the national reference group (averages of 3.09 vs. 3.15, respectively). Results of the homeless group indicate that those more satisfied with healthcare services, in general, manifest more openness to telecare. It is clearly demonstrated by the multivariate analysis that those participants in the homeless group who had problems getting health care in the last year definitely preferred in-person doctor-patient consultations.”

Conclusion

„Digital health technologies offer a potentially important new pathway for the prevention and treatment of chronic conditions among homeless persons. Based on the attitudes towards telecare, initiating an on-site telecare program for mid- and long-term residents of homeless shelters might enable better care continuity. Our results draw attention to the key factors including building trust in the implementation of such programs among underserved and other vulnerable patient groups.”

Citation: Gyórfy Z, Békási S, Döbrössi B, Bognár VK, Radó N, Morva E, et al. (2022) Exploratory attitude survey of homeless persons regarding telecare services in shelters providing mid- and long-term accommodation: The importance of trust. PLoS ONE 17(1): e0261145.
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As a next step, the positive results of this baseline survey prompted the Charity Service to launch a telemedicine pilot in 2021, covering four institutions, in order to more efficiently treat the chronic diseases of the beneficiaries. The telemedicine pilot project used the computers and internet connection already available in the temporary shelters, with online visits supported by assistants working in the accommodations. Healthcare is a profession that is part of the Maltese mission. This sense of mission is not only realised in everyday assistance, in everyday service, but also in the fact that The Hungarian Charity Service of the Order of Malta has already been using the tools of scientific research, providing it with a space to improve the health care of homeless people.

The programme is called "DocRoom".

„Research results are very important for us because they are the foundations based on which we can introduce innovations. Our aim is to transform care system efficiently, while improving the quality of services and access to them.” – highlighted **Emília Morva**, Central Hungarian regional manager of The Hungarian Charity Service of the Order of Malta.

In addition to the individual benefits for the patient, telemedicine also has benefits for the entire healthcare system. Integrating telemedicine into healthcare improves the chance of access to health services and reduces the cost of care for both patients and the care system.

„The introduction of a hybrid form of care in the Charity's homeless care facilities is already based on the results of our research. Within this framework, we are launching a holistic primary care model, in which face-to-face clinic services, mobile medical care and online visits form a fully flexible, interoperable system,” – said **dr. Sándor Békási**, Chief Physician of the Health Care Centre of the Hungarian Charity Service of the Order of Malta. The expert stressed that the model serves both the care system and the people in care by providing safe management of chronic diseases, preventing sudden deterioration and helping homeless people to access healthcare.



dr. Békási Sándor, chief physician of The Hungarian Charity Service of the Order of Malta

„So far, we have estimated three areas in the framework of the joint research: attitudes towards telemedicine among homeless people, access to digital tools and health-aimed internet use, and we provided professional background for a live trial of telemedicine for both social institutions and doctors. Based on these findings, we believe that digital health care is also well applicable to the care of homeless people.” – added Dr. Zsuzsa Gyórfy, Associate Professor at the Institute of Behavioural Sciences at Semmelweis University and head of the Digital Health Research Group.

Among the key findings of the completed research project, she highlighted that

- homeless people are open to the services of telemedicine at the same rate as other groups of the population
- 69,6% of homeless people have a mobile phone,
- 34,6% of them have a smartphone,
- and 10,8% of them has already used a health application.

In the 3-month telemedicine pilot programme, from 4 homeless shelters, a total of 55 patients completed the chronic disease management programme, consisting of six online visits per person, with the help of three specialists and one social worker with a nursing degree working in each of the shelters.

In the framework of online screening, more common, more 'everyday' cases can be seen in a time- and cost-effective way, allowing more time to care for patients suffering from more serious or complicated illnesses.

For hospitals, the application of telemedicine can reduce costs in terms of time and human resources, for example by helping to solve possible shortages of specialists.

It also means time savings and greater flexibility for the doctor, who can connect more easily and quickly with patients and colleagues.



Dr. Zsuzsa Gyórfy associate professor at the Institute of Behavioural Sciences of Semmelweis University and Head of the Digital Health Research Group

In the framework of the **DocRoom** research programme, in addition to innovative forms of care, the Charity plans to test the effectiveness of a wide range of screening tests and preventive tools that can both improve the health prospects of homeless people and pave the way for improving the health of other disadvantaged groups in society.

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