



Measuring openness towards telecare among people experiencing homelessness in shelters offering mid- and long-term accommodation

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Who are we?

- **Health Center** of the Hungarian Charity Service of the Order of Malta
- **Primary care unit** open 24/7 in the heart of Budapest
- **Medical outreach team** visiting partner shelters and rough sleepers
- **Internal medicine** and **psychiatry** specialist care unit
- **2 in-patient chronic care units** (58 beds) offering mid- and long-term accommodation for male clients
- Managing approx. 15.000 **ambulatory appointments** a year
- Providing acute and chronic medication for **free of charge** to clients

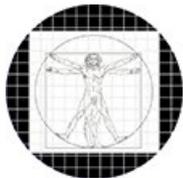


Problems we are facing with in the health care of people experiencing homelessness

- Limited availability of medical personnel
- Health care activities in shelters concentrate more on acute complaints and illnesses due to time limitation
- Continuous management of chronic conditions is poorly addressed
- Patient compliance in non-urgent issues is usually poor
- Limited availability of evidence-based knowledge and Hungarian basic health statistics focusing on this population
- **COVID-19 restrictions highly affecting in-person care in the shelters**



We have decided to move into digital health and try a pilot research project in cooperation with the Digital Health workgroup of the Institute of Behavioural Sciences (Semmelweis University).



STEP 1: Measuring client openness towards telecare

Telemedicine Questionnaire by the Hungarian Charity Service of the Order of Malta

Name (initials): _____ Date of Birth: _____ Gender: Female/Male

1. Do you consider yourself to be a homeless person? No Yes (If yes, since when?)
Year:

2. What is your highest level of education?

Less than 8 years of elementary school Elementary school Vocational school
Secondary school degree College/university degree I'd rather not answer

3. How often do you see a doctor/use health care services?

A few times each month Every 1-2 months Every 6 months Every year Less than every year

4. Please mark your answer with an x in the appropriate box.

Questions	Answer				
	not true	just slightly true	somewhat true	mostly true	completely true
4.1. In the last year, I could take my prescribed medication regularly.					
4.2. I feel my chronic conditions are managed adequately.					
4.3. In the last year, I only saw a doctor when I had acute complaints.					
4.4. I feel I have to wait a long time to receive health care in Hungary.					
4.5. In the last year, I had problems with getting adequate health care.					
4.6. In the last year, I sometimes felt I am not dealt with well in the health care setting.					
Questions	not true	just slightly true	somewhat true	mostly true	completely true
4.7. I would gladly try discussing my chronic condition with a doctor through a live video consultation.					
4.8. It would help if I could have a live video consultation with a doctor at a pre-arranged appointment.					
4.9. I would have trust in a doctor in a live video consultation.					
4.10. It is important to have a live video consultation with such a doctor whom I met previously in person.					
4.11. Having a live video consultation with a doctor might improve my health status.					
4.12. I definitely prefer in-person doctor-patient consultations.					
4.13. I don't feel that talking to a doctor through a live video consultation is safe.					
4.14. I would feel uncomfortable talking to a doctor through a live video consultation.					

- Our main aim was to investigate the openness of shelter clients towards and feasibility of a telecare project focusing on chronic disease care
- **3 main blocks:** (1) demography and background information, (2) access to health care, (3) telecare attitude regarding a live, online video call with a doctor
- **Reference group** was recruited from 2 average primary care units (Budapest)
- **Data collection:** 14 April - 31 May, 2020.
- **Ethical approval** issued under TUKEB:133/2020 and IV/10927/2020/EKU by the Scientific Research Ethics Committee of the Medical Research Council of Hungary



Participants and their demography

Institution ID	Type of institution	Gender of accommodated persons	Maximum capacity of the institution	Number of participants of the study	ETHOS classification
HCSOM 1	Shelter for homeless persons	Men	18 people	13 people	7.2
HCSOM 2	Shelter for homeless persons	Men	40 people	23 people	7.2
HCSOM 3	Senior care home for homeless persons	Men	46 people	30 people	7.1
SHF	Shelter for homeless persons	Women and Men	68 people	32 people	7.2

HCSOM: Hungarian Charity Service of the Order of Malta, SHF: Shelter House Foundation



Participants and their demography 2.

		Homeless persons		Reference population		Reference population (weighted)	
number of respondents:		98		110		112	
		n	%	n	%	n	%
Gender	male	89	90,8%	61	55,5%	103	92,0%
	female	9	9,2%	49	44,5%	9	8,0%
	total	98	100,0%	110	100,0%	112	100,0%
Do you consider yourself to be a homeless person?	no	33	34,7%	N / A		N / A	
	yes	62	65,3%				
	total	95	100,0%				
How many years have you been homeless?	0-5	25	41,0%	N / A		N / A	
	6-10	10	16,4%				
	11-15	10	16,4%				
	16 or more	16	26,2%				
	total	61	100,0%				
What is your highest level of education?	less than 8 years of elementary school	3	3,1%	3	2,7%	4	3,6%
	elementary school	25	25,8%	6	5,5%	19	17,0%
	vocational school	48	49,5%	25	22,7%	69	61,6%
	high school	15	15,5%	29	26,4%	14	12,5%
	higher education (college or university)	6	6,2%	47	42,7%	6	5,4%
	total	91	100,0%	100	100,0%	112	100,0%
How often do you see a doctor/use health care services? *	semi-annually or more frequently	64	67,40%	98	91,60%	96	88,9%
	annually or less frequently	31	32,60%	9	8,40%	12	11,1%
	total	95	100,0%	107	100,0%	112	100,0%
Age		mean	n	mean	n	mean	n
	mean (p < 0,05)	64,0	98	63,1	110	62,9	112,0%

All participants were of Hungarian nationality.



Results

- A significant fraction of respondents recruited from shelters do not oppose the use of telecare via live online video consultation.
- No difference in openness of the index group compared to a national reference group (averages of 3.09 vs. 3.15, respectively, on a 5-grade Likert scale).
- Results of the index group indicate that those more satisfied with health care services, in general, manifest more openness to telecare.
- Demonstrated by multivariate analysis that those participants of the homeless group who had problems getting health care in the last year, definitely prefer in-person doctor-patient consultations.
- In planning telecare activities, building trust is a key issue.

(Study under publication)



STEP 2: 12-week long telecare pilot



Clinical setup

- A course of 6 online visits was offered to 75 clients suffering from at least 1 chronic condition, recruited from 4 shelters providing mid- and long-term accommodation
- Visits were planned every 2 weeks
- The care team consisted of an on-site assistant on the originating (patient) site and a doctor (1 GP and 2 internal med. specialists) on the remote site
- Focus group interviews with care teams at the start and closure of the pilot were completed to get their insights
- Client satisfaction questionnaire on the originating site and medical survey on the remote side were administered after every online visit session
- Pilot was completed in 2021 Q2
- Ethical approval issued under TUKEB:133/2020 and IV/10927/2020/EKU by the Scientific Research Ethics Committee of the Medical Research Council of Hungary



Early results: drop-out rate and missed visits

Institution ID	Type of institution	Number of recruited clients	Number of completed visits	Number of missed visits / planned	ETHOS classification
HCSOM 1	Shelter for homeless persons	12	64	8/72 (11,1%)	7.2
SHF		21	105	15/126 (11,9 %)	
BIC 1		12	59	13/72 (18,1%)	
BIC 2		30	178	2/180 (1,1%)	



HCSOM: Hungarian Charity Service of the Order of Malta, SHF: Shelter House Foundation, BIC: Baptist Integration Center

Early results: client satisfaction (5-grade Likert scale)

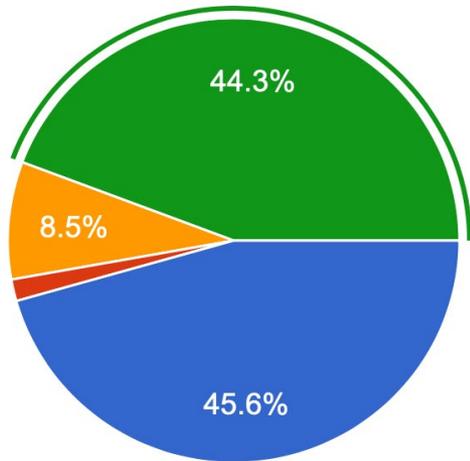
Institution ID	Type of institution	Number of recruited clients	Number of completed visits	Avg. rating of completed visits	ETHOS classification
HCSOM 1	Shelter for homeless persons	12	64	4.39	7.2
SHF		21	105	4.95	
BIC 1		12	59	4.88	
BIC 2		30	178	4.51	



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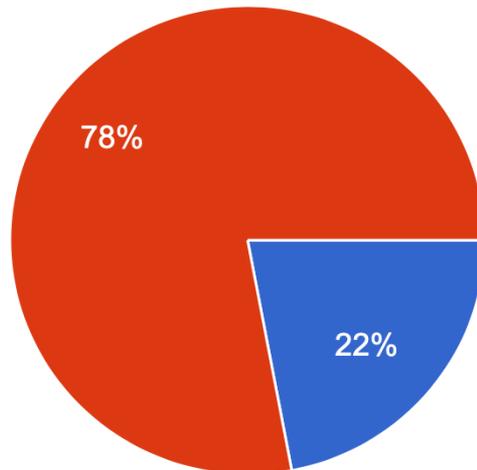
Early results: medical relevance

Were chronic parameters tracked since the last visit?



- No, but it wasn't necessary.
- No, but it would have been useful to have more parameters tracked.
- Yes, but the number of measurements has to be increased.
- Yes, and the number of measurements is satisfactory.

Have you applied any changes in therapy?

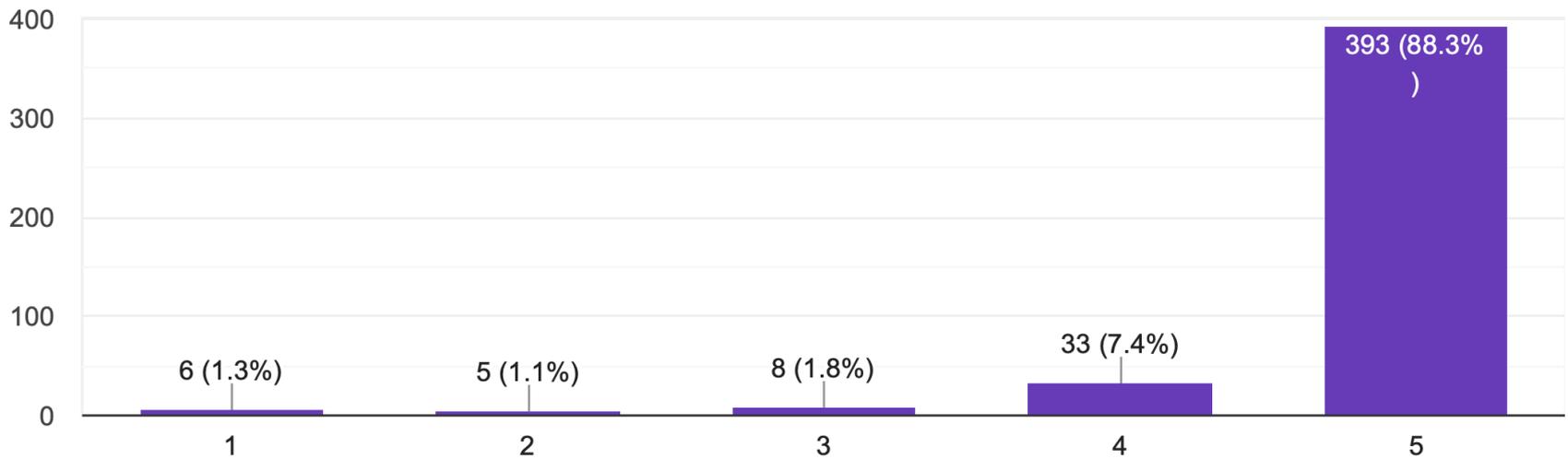


- Yes
- No



Early results: medical relevance 2

How would you rate the online visit from a medical perspective?



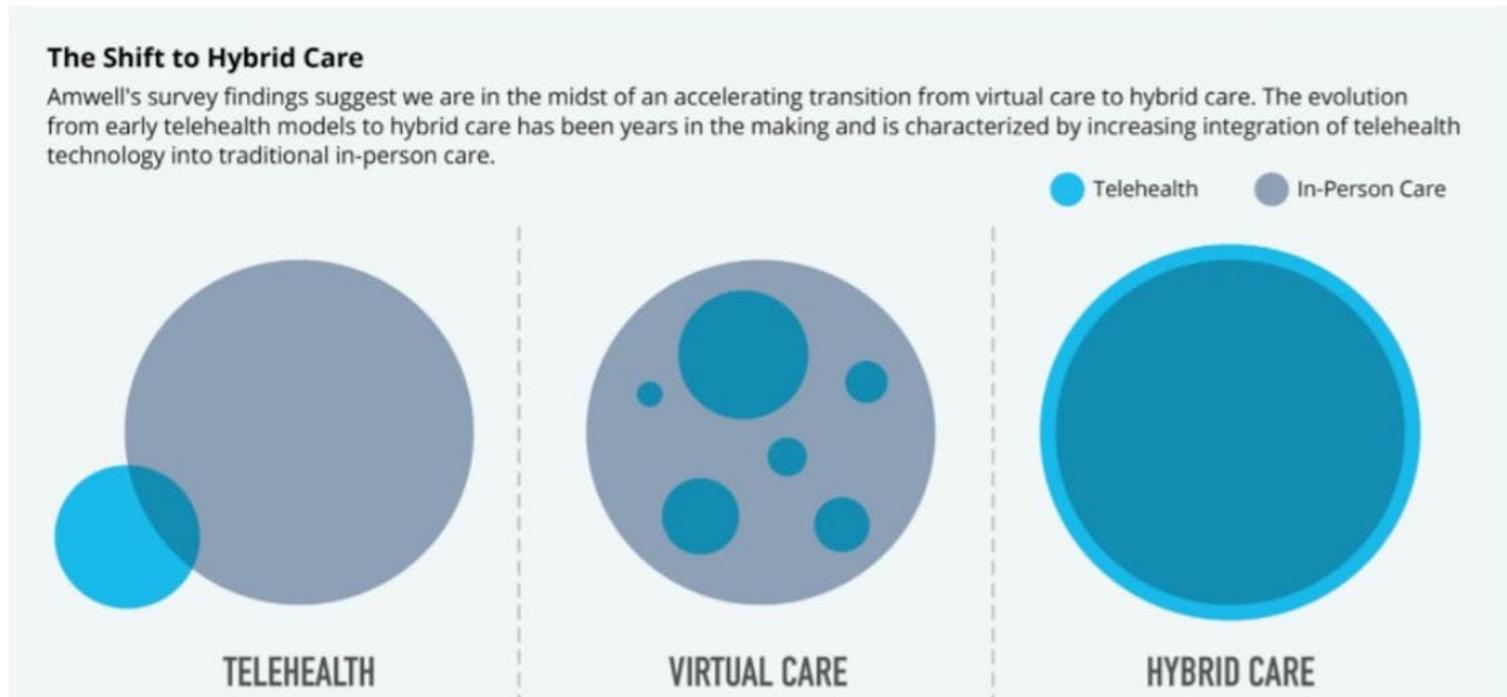
Our other research activities

- Access to digital devices and digital health literacy survey with approx. 650 respondents (survey completed, under data analysis)
- Mental health teleconsultation pilot study (pilot completed, under data analysis)
- Prevalence and early treatment options of lower extremity arterial disease (LEAD, ethical approval issued, starts in October)
- Prevalence and subtype of chronic pulmonary diseases (COPD, ethical approval issued, starts this year)
- Research related to chronic stress, anxiety and sleep disorders (ethical approval issued, starts this year)
- Research related to oral health (tooth decay, HPV infection, oral cancer, under ethical approval, starts in 2022)
- Prevalence of atrial fibrillation assessed with a mobile health device (AF, under preparation, starts in 2022)



Summary

- Significant fraction of clients in homeless shelters are open to have their chronic condition managed by digital health technologies
- Digital health tools applied by shelters that have the necessary infrastructure might have a beneficial effect on the continuity of chronic care
- After a thorough evaluation of the pilot project, telecare options might form a regular care pathway for clients experiencing homelessness in our shelters
- A training focusing on telehealth skills both on the originating and the remote site might have additional benefits in establishing such a service



Thank you for your attention!

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