

A call for telehealth application for heart failure patients during the Coronavirus 2019 pandemic

The usefulness of telehealth is well known in working with heart failure patients.^{1–3} It is important to appreciate it in various situations, like Coronavirus Disease 2019 (COVID-19) pandemic when many fragile heart failure patients having limited access to the healthcare system are either afraid to visit hospitals or uncertain which symptoms qualify for a visit.⁴

Forty-eight patients with a history of at least one hospital admission in the less densely populated town of Boshruyeh during the past year were called. The patients, few of whom contacted hospital, were provided with phone lines to reach the healthcare system if they had any symptoms during the early days of COVID-19 outbreak. Thus, we planned phone calls to heart failure patients by the attending cardiologist. Of the 48 patients, five had died, and seven did not answer or were unavailable. From the remaining 36 calls, there was a dose increase for diuretic therapy for four patients because of increasing orthopnoea and oedema symptoms. Lifestyle modification plans for 10 patients having increased salt intake by different processed food due to the Nowruz (New Year holidays) and three patients were advised to visit the hospital for dyspnoea, severe oedema, and decreased urinary output. From the remaining 19 patients, there was no change in plan for 16, three of whom were asked not to visit hospital for the non-significant symptoms. We listed two examples from interviews with heart failure patients by a cardiologist.

Patient 1 suffered biventricular failure with a prosthetic valve who experienced headaches and high international normalized ratio for the past 2 months and avoided the

hospital. She was persuaded to have her international normalized ratio checked. Patient 6 was ischaemic cardiomyopathic with radicular leg pain intending to visit hospital. He was suggested bed rest and taking some acetaminophen rather than visiting hospital. Both patients were educated about important signs and symptoms and were grateful for calls and the relief.

While many healthcare workers are busy with COVID-19-related admissions,⁵ telehealth is urgently needed by doctors during the outbreak in less affected smaller towns for high-risk patients. For patients in rural areas without heart failure clinic, service could be provided through phone by cardiologists or nurses with heart failure expertise. Implementing this in larger cities in the near future and continuous self-care education to heart failure patients can also help in unbidden situations.⁶

Mohammad Mostafa Ansari Ramandi

Cardiovascular Diseases Research Center, Birjand University of Medical Sciences, Birjand, Iran

Hossein Yarmohammari

Medical Students Research Committee, Shahed University, Tehran, Iran

Nasim Naderi

Rajaie Cardiovascular Medical and Research Center, Iran University of Medical Sciences, Tehran, Iran
E-mail: naderi.nasim@gmail.com

References

1. Di Lenarda A, Casolo G, Gulizia MM, Aspromonte N, Scalvini S, Mortara A, Alunni G, Ricci RP, Mantovan R, Russo G, Gensini GF, Romeo F. The future of telemedicine for the management of heart failure patients: a Consensus Document of the Italian Association of Hospital Cardiologists (ANMCO), the Italian Society of Cardiology (SIC) and the Italian Society for Telemedicine and eHealth (Digital SIT). *Eur Heart J Suppl* 2017; **19**: D113–D129.
2. Antonicelli R, Testarmata P, Spazzafumo L, Gagliardi C, Bilo G, Valentini M, Olivieri F, Parati G. Impact of telemonitoring at home on the management of elderly patients with congestive heart failure. *J Telemed Telecare* 2008; **14**: 300–305.
3. Scalvini S, Zanelli E, Volterrani M, Martinelli G, Baratti D, Buscaya O, Baiardi P, Glisenti F, Giordano A. A pilot study of nurse-led, home-based telecardiology for patients with chronic

- heart failure. *J Telemed Telecare* 2004; **10**: 113–117.
4. Ardati AK, Mena Lora AJ. Be prepared. Circulation: cardiovascular quality and outcomes. Published online ahead of print 17 March 2020.
 5. World Health Organization. World Health Organization coronavirus disease 2019 (COVID-19) situation report. <https://apps.who.int/iris/bitstream/handle/10665/331597/nCoVsitrep19Mar2020-eng.pdf> (19 March 2020).
 6. Sahebi A, Mohammad-Aliha J, Ansari-Ramandi M, Naderi N. Investigation the relationship between self-care and readmission in patients with chronic heart failure. *Res Cardiovasc Med* 2015; **4**: e25472.