
CONFERENCE ABSTRACT

Co-creating and advancing integrated care in telecardiology. The case of the TreC Cardiology platform in the Province of Trento, Italy

22nd International Conference on Integrated Care, Odense, Denmark, 23-25 May 2022

Lorenzo Gios¹, Massimiliano Maines², Michele Moretti², Giancarlo Tomasi², Maurizio Del Greco², Massimiliano Marini², Silvia Quintarelli², Roberto Bonmassari², Luigi Patil², Andrea Pravato², Ettore Turra², Francesca Perini¹, Giulia Malfatti¹, Andrea Nicolini¹, Claudio Eccher³, Oscar Mayora-Ibarra³, Stefano Forti³, Olivia Balagna⁴, Diego Conforti⁴

1: Trentinosalute4.0, Italy

2: Azienda Provinciale Servizi Sanitari, Trento, Italy

3: Fondazione Bruno Kessler, Trento, Italy

4: Provincia Autonoma di Trento, Trento, Italy

The COVID-19 pandemic has significantly impacted on the organisation of healthcare systems, accelerating the development and use of telemedicine as a way to mitigate the issue of accessing healthcare services and to avoid interruptions in service provision. Telemedicine solutions are particularly effective in case of remote monitoring (RM) of patients with Heart Failure (HF), especially those with Cardiac Implantable Electronic Devices (CIEDs).

TreC Cardiology is a multilayer platform embracing a novel organizational asset to advance telecardiology in the Province of Trento. The initiative has been jointly promoted by the local Healthcare Trust, the Autonomous Province, the Bruno Kessler Foundation and the local competence centre on digital health (TrentinoSalute4.0).

TreC Cardiology is conceived with a flexible architecture, allowing the collection and management of heterogeneous data, ranging from Patient-Generated Health Data (PGHD) to CIEDs data.

Both the platform and the organizational model have been co-designed with the support of medical staff and patients, in line with a Stepped Care and the eHealth Enhanced Chronic Care Model. The system includes i) an App for patients and ii) a dedicated dashboard for healthcare staff. The App is designed to incorporate medical and lifestyle recommendations, and to record disease and health-related information (PGHD). The medical dashboard is conceived as an easy-to-use console, supporting healthcare staff in managing clinical and non/clinical information collected through different sources, as well as setting up (personalizing) specific triggering patterns to collect specific data through the App. The dashboard also includes a unique console gathering data from CIEDs, allowing combination of PGHD and CIEDs for each patient.

The platform has been further developed during COVID-19 pandemic, by adding a tele-visit feature, enabling remote appointments, chat and video calls. At December 2021, 271 patients have been enrolled and monitored adopting the TreC Cardiology model in Trento and Rovereto, the two main Departments of Cardiology in the Province, as part of their standard procedure.

This platform has led to significant optimization of in-person outpatient activities, whilst advancing the continuity and quality of the service with remote assessments and remote visits. Additionally, the collection and combination of PGHD and CIEDs is potentially providing the basis for big data modelling (patients' health trajectories), further improving quality and personalization of the service for the patient, as well as shaping organizational asset in line with the expected workload.

At national level, different regional healthcare providers have decided to adopt TreC Cardiology as effective tool to promote telemedicine, whilst contributing to the validation of the model across different settings.