InnovaTive care services, enhanced with technology, to deliver QUick rEsponses for individuals with advanced heart failure and complex care needs through integrated care



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Rendicontazione



Periodic Reporting for period 1 - TIQUE (InnovaTive care services, enhanced with technology, to deliver QUick rEsponses for individuals with advanced heart failure and complex care needs through integrated care)

Periodo di rendicontazione: 2021-03-01 al 2022-06-30

Sintesi del contesto e degli obiettivi generali del progetto

In Europe, 15 million people live with heart failure (HF). It is the leading cause of hospitalisation in people over the age of 65 and has a mortality of 75% within 5 years of the first admission. It carries a high cost to healthcare systems and a substantial loss in quality of life for patients and also their families.

The TIQUE Buyers Group of healthcare providers has identified a common unmet need for the transformation of health and care services for AHF patients, specifically for solutions to enable personalised, predictive, integrated care (IC) for patients with AHF, who are likely to have co-existing chronic conditions (multi-morbidity), and who may be frail or at risk of becoming frail. Three public procurers from Spain, Sweden, and Italy will jointly procure the design, research, and development of TIQUE solutions and services.

The procurement aims to trigger new solutions to be developed and tested to address the following challenge: improve treatment for patients with advanced heart failure and complex care needs through technology-enabled integrated care solutions.

TIQUE aims to bring to the market a new generation of integrated care solutions making extensive use of edge technologies to provide novel healthcare service models which reduce hospitalisation and still preserve the health status of the patients, as well as improve their quality of life. The objective is to deploy a long-term sustainable solution that is able to scale up. For this reason, it is supported by a value-based model demonstrating the added value of the solutions.

Lavoro eseguito dall'inizio del progetto fino alla fine del periodo coperto dalla relazione e principali risultati finora ottenuti

TIQUE has been capable to identify a common unmet need for the transformation of health and care services for AHF patients and define a path for designing innovative solutions to enable personalised, predictive, integrated care (IC) for patients with AHF, who are likely to have co-existing chronic conditions (multi-morbidity), and who may be frail or at risk of becoming frail.

The TIQUE project started in March 2021 and during the 16 first Months we have been developing the Preparation Phase (See Figure 1 attached).

WP1 has covered aspects related to project management.

WP2 is assumed to be core for the project as it includes the design and definition of the TIQUE model. The analysis started with the state-of-the-art design in which was performed a review of the literature and technologies commercially available. Another step forward in building the TIQUE model was to identify the common needs based on research on user experiences and expectations, conducted through workshops and interviews.

WP3 included the launching of the Open Market Consultation, the development of the Tender Documents and obtaining an agreement among Buyers on the official documents such as the Joint Procurement Agreement (JPA) and Financial Commitment (FC).

WP4 covered the OJEU Prior Information Notice Publication.

WP6 specifies the strategy followed for communicating, disseminating and engaging the stakeholders, including also, the communication and outreach activities planned across the target group.

WP7 has covered aspects related to the ethics requirements of the project.

During the first period of project execution, a great impact on obtaining engagement of the market has been achieved thanks to all the communication activities in the OMC process. Moreover, after the tenderer's publication, two Explanatory Workshops have taken place in June and July 2022. The aim was to explain to the potential bidders how is the tenderer process and go through the tender documents that they have to work on until September 2022.

In the last months of this first project period, the full validation of the challenge has been reached and verified after the elaboration of the TD2. In addition, through this tender document, the challenge has been launched to the market, and therefore it is expected to obtain solutions that meet TIQUE's goals.

Progressi oltre lo stato dell'arte e potenziale impatto previsto (incluso l'impatto socioeconomico e le implicazioni sociali più ampie del progetto fino ad ora)

The focus of TIQUE is on the transformation of AHF healthcare through a shift towards a truly integrated patient-centred value-based model of care, made possible by the development and adoption of new and cutting-edge technologies.

The implementation of the TIQUE Model of AHF Healthcare is envisioned as supported by a 'Virtual Care Centre' (VCC) that facilitates the delivery of health services to meet the needs of each patient. The TIQUE model itself requires technology-enabled services that facilitate integrated planning of care, communication between stakeholders, monitoring of patients' status in real-time, advancing the ability to predict and prevent health crises and hospital admissions, and empowering patients and/or carers to become active participants in their own treatment and care.

From the analysis of best practices, it would appear that the market for digitally integrated care is in the relatively early stages of development. The field of cardiology has been a leader in the area of eHealth, both in terms of policy and practice and has promoted telemedicine and telecare including disease management services, remote patient monitoring, teleconsultations, and homecare.

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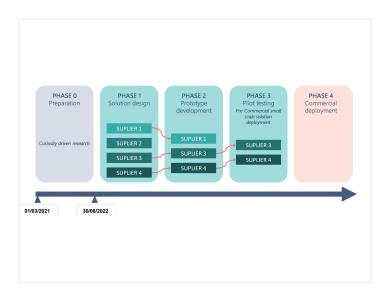
A review of the current state of the art as well as emerging trends in caring for patients with Advanced Heart Failure reveals the lack of and need for solutions in the following areas:

- 1. Solutions for interfacing with other patient data systems, integrating and managing patient data from disparate data systems
- 2. User-friendly solutions for easy access to integrated patient data from the regular digital working environment
- 3. Solutions providing rule-based and Al-based decision support systems
- 4. Solutions providing already validated AI algorithms, to predict and early detect potential problems that can then be prevented or optimally managed.
- 5. Solutions for collaboration, cooperation and communication among all of the stakeholders
- 6. Solutions for remote patient monitoring from devices, wearables, mobile apps, environmental sensors and patient input that are integrated with existing patient information
- 7. Solutions for patient empowerment providing patients access to their own medical information
- 8. Coaching solutions for patients using virtual assistants that combine machine learning, artificial intelligence strong decision support systems, leverage big data, natural language processing and voice recognition.
- 9. Solutions for facilitating organizational change as well as changes in care processes and professional attitudes

Collaboration, coordination and communication among health and care professionals and with the patient and carers; and partnership with patients facilitating empowerment, and co-management of the care are at the heart of the TIQUE Solution.

In the TIQUE model tender documents and specifically the challenge brief, the concept of the 'Virtual Care Centre' (VCC) and functional and non-functional requirements were planned and characterized in light of the nine above-mentioned areas requiring solutions beyond the current state of the art.

The evaluation of the bids submitted in response to the tender will rely heavily on the extent to which the proposed solutions take into account emerging trends and advance digitally-enabled integrated care for Advanced Heart Failure patients and their families beyond the state of the art.



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