

Cardiac teleconsulting in the time of COVID-19 global pandemic: The “Antonio Cardarelli” Hospital project

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Dear Editor,

Teleconsulting - defined as real-time consultation between doctors by exploiting video conferencing technology over the Internet network - is exponentially being implemented through the western world lastly triggered by COVID-19 pandemic [1-3]. The Cardiology Unit of Cardarelli Hospital, Naples, Italy, serves as cardiac consultations to 43 Units including perioperative cardiovascular risk assessment for noncardiac surgery, cardio-oncology and COVID-19 patients. During the last 2 years (2019-2020) it has been registered a substantial number of cardiac consultations (n= 10,064; Figure 1). Thus, the Cardarelli Hospital has designed the Teleconsulting Cardiology (TL-CARD) Project in order to improve

the performance of cardiac consultations and to reduce, at the same time, the risk SARS-CoV-2 transmission among healthcare workers and patients (Figure 2). A dedicated case manager nurse supervises the system organization and functioning. All the cardiac consultations are requested by the patient's caring physician through a web-based system. Subsequently, the cardiologist, based on available electronic charts information (including diagnosing testing results, invasive and non-invasive procedures images, etc..) identifies three distinct clinical scenarios potentially requiring cardiac advices:

Patient hemodynamically stable: the cardiologist after consulta-

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Cardiac Consultations

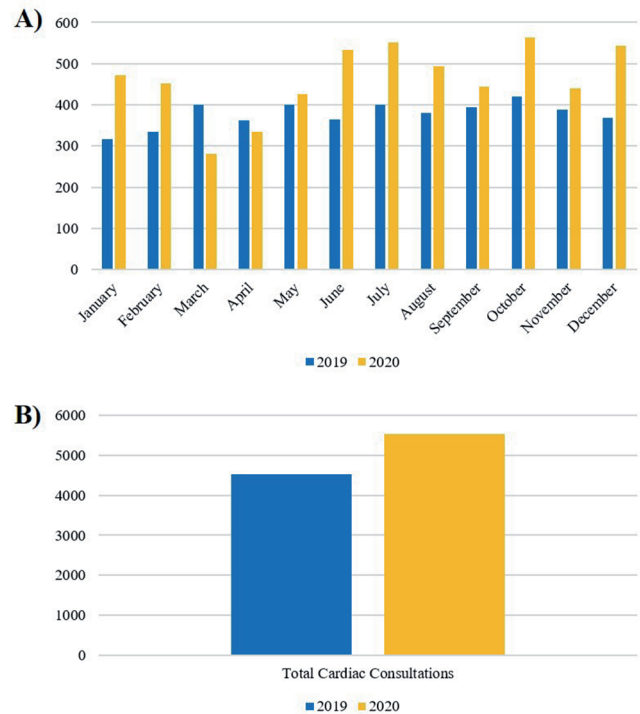


Figure 1. Number of cardiac consultations over the last two years (2019-2020), stratified by months (A) and years (B). In 2020, there is an increase in cardiac consultations compared to 2019 in all months except for March and April related to the first COVID-19 outbreak in the Naples area.

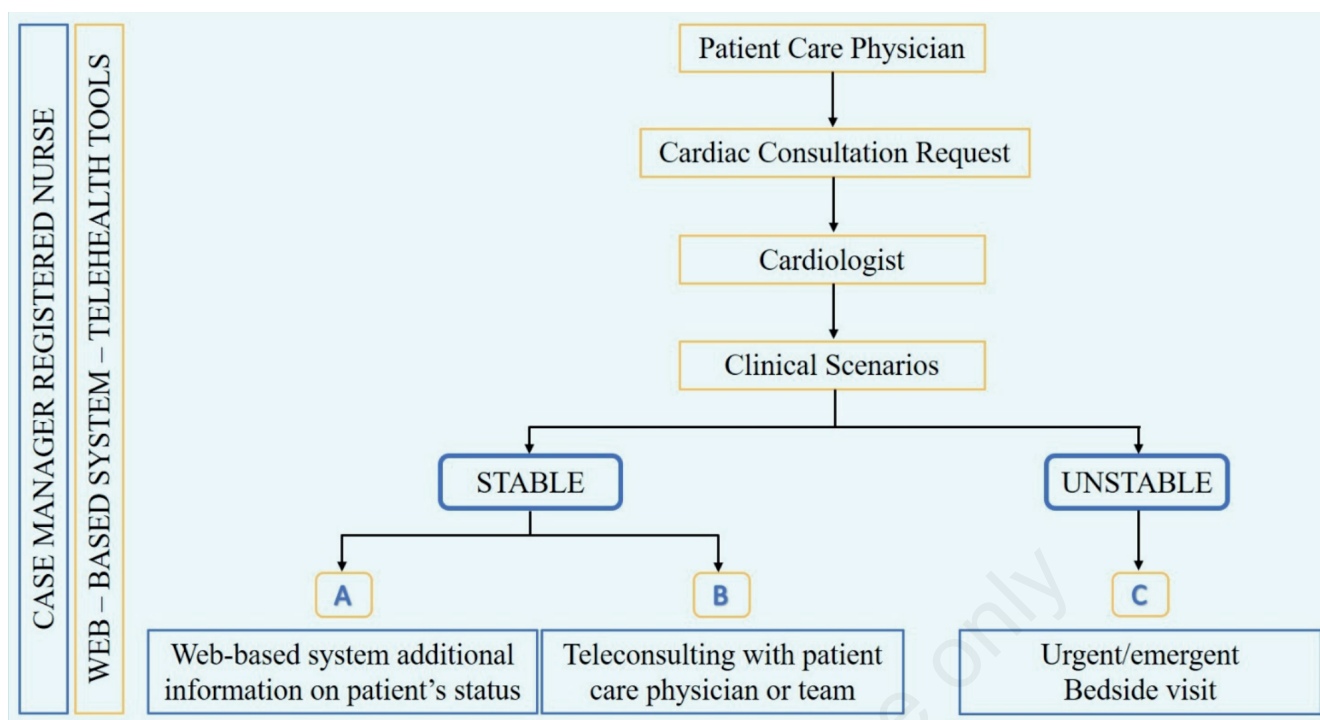


Figure 2. The Teleconsulting Cardiology (TL-CARD) algorithm designed by the Cardarelli Hospital (Naples, Italy) in order to improve the performance of cardiac consultations and to reduce the risk of SARS-CoV-2 transmission among healthcare workers and patients.

tion of electronic chart (within 24 h) may request additional anamnestic/clinical information (*i.e.*, functional status, presence of major co-morbidities) and/or blood biomarkers (namely natriuretic peptides, troponins and D-dimer) before any further step is made.

Patient hemodynamically stable where a “*second cardiology opinion*” (within 24 h) may be delivered through conferencing technology with the physician team in charge of the patient in order to define diagnostic/therapeutic clinical decision process.

Patient hemodynamically unstable [as in the case of acute or recent (≤ 30 days) coronary syndromes, myocardial infarction in non-obstructive coronary artery disease, acute pulmonary embolism, transient ischemic attack or stroke; acute heart failure, symptomatic cardiac valve disease, tachyarrhythmias or bradyarrhythmias associated with hypotension] requiring urgent/emergent cardiac specialist bedside attention (Figure 2).

The cardiac teleconsulting implementation 24 out of 24 throughout the year 2021 it is expected to guarantee through telehealth tools timely specialists’ advices (integrated multidisciplinary concept-approach) in order to provide best practice patients’ care respecting physical distancing.

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