prior to implantation, and hemodynamic instability prior to or during induction of anesthesia and the concomitant angioplasty of the main coronary artery, to prevent severe complications that could compromise the success of the procedure and patient survival. The feasibility of this strategy has been demonstrated in selected cases. (3-5)

Conflicts of interest
None declared.

Ethical approval
Not applicable.

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Virtual Cardiology Outpatient Clinic in a Public Hospital During the COVID-19 Pandemic

The COVID-19 pandemic has generated health measures such as interruption of in-person work activities, social confinement, and suspension of scheduled medical services. (1, 2) “Hospital El Cruce - Néstor Kirchner” is a high-complexity tertiary care center that is part of a public health network in the south of the Greater Buenos Aires Area.

A system of referral and counter-referral of patients operates through the network, so that most patients return to their referring institutions after hospitalization or diagnostic-therapeutic interventions. A lower proportion of patients are followed-up by hospital physicians, due to complex diseases that may require additional procedures or rehospitalizations.

Thus, outpatient clinics receive a reduced number of patients depending on the hospital services provided, with scheduled appointments and full schedules for several months. As of March 20, with the provision of the pandemic lockdown by national authorities, the hospital’s outpatient clinic was interrupted. (2)

In the first week of April, we started a telephone follow-up program for patients with scheduled appointments, which was then followed by a system designed for patients who had smartphones or computers suitable for that practice. (3-5) The Department of Telemedicine created a virtual consultation procedure within the current regulatory framework (Resolution 2018-189-APN-SGS#MSYDS / DI-2019-1-APN-DNSIS#MSYDS), adapted to the mandatory,
preventive lockdown (Decree 260/2020; 297/2020) due to COVID-19. (3, 4)

The teleconsultation process consists of a list of patients being followed up by the Service, to be interviewed virtually. This requires: 1) ability to understand the procedure, 2) availability of appropriate technology, 3) agreement with the new form of consultation. First-time consultation and preoperative risk patients were excluded.

Telemedicine advises patients on how to download and operate the application to be used (Cisco Webex). At this point, the informed consent is read, clarifying basic points such as: 1) differences with in-person consultation, 2) environment and conditions to be achieved prior to the consultation, 3) need for an accompanying person (excluding condition), and 4) clarification that emergencies are attended in the traditional way (not by teleconsultation). Before reading the informed consent, patients must show their National Identity Card in camera to certify their identity, and the presence of a witness is also required. This is recorded and included in the patient’s medical history, as authorization to participate in the virtual doctor’s clinic. (5)

Connection tests through telemedicine are made, and patients are finally informed about the scheduled date and time for the virtual appointment.

Physicians affected to their clinics took over teleconsultations with access to the electronic medical record from the hospital or from their home when, based upon their health history, they were considered at potential risk of complications by COVID-19. Consultations were prospectively recorded with a series of parameters to evaluate the impact of the process and the situation of patients.

Between April 7 and June 2, 2020, we achieved consultations with 230 of the 264 patients scheduled (86.8%). Ninety-two percent were scheduled consultations, 10% were patients followed up by the Department’s heart failure program, 4.5% were recent discharges, and 2.3% were patients with angioplasty and drug-eluting stenting in the last six months.

Call responses were tabulated as grateful 226 (98.3%), indifferent 4 (1.4%), and upset 1 (0.4%). Clinical problems in progress were detected in 33 patients (14.3%): 7 with progression of heart failure, 10 with angina pectoris, and 16 with inadequate control of blood pressure. Two of them required hospitalization and interventions. Medication adherence was asked, and 42 patients (18.3%) reported having discontinued one or more prescribed drugs. The reasons were: forgetfulness (n = 2), lack of prescription (n = 26), financial reasons (n = 16), lack of drug delivery from health insurance plan (n = 5), and lack of drug delivery in the primary health care center (n = 6). The sum is over 42 because 13 patients referred more than one reason.

In conclusion, the rapid transformation from in-person to virtual consultation made it possible to complete 86.8% of scheduled visits. The technical possibility of accessible electronic medical records and the institutional support for medical services through telemedicine facilitated the health care program implementation, which was highly valued by almost all of the patients. Despite the lack of face-to-face contact, this system was able to detect decompensation in 14.3% of cases and medication discontinuation in 18.3%, due to different reasons that reveal a complex reality that may have been hidden under interruption of in-person consultations. Teleconsultation was satisfactory for both patients and health care professionals. (6)

This experience targeted a low-income population with barriers to virtual contact, but in most cases everyday technology was enough to find solutions that adapted to the requirements of the teleconsultations.

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**Conflicts of interest**

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**Ethical approval**

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