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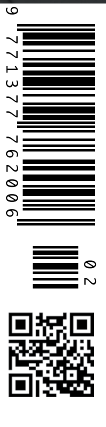
Cover Story:

COVID-19 Superheroes



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Remote Work and Virtual Consultations: Emergency Setup

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For a hospital in Spain, the national state of emergency meant two major practical challenges – to provide tools for the staff to work remotely, and to roll out a virtual consultation system. Two hospital leaders talk about the challenges they had to overcome on this way and explain the technicalities of the implemented changes.

Key Points

- Declaration of the emergency state in Spain had several major consequences, particularly with regard to the continuity of patient care and uninterrupted workflows for the staff.
- As a result, the IT team has implemented a number of projects related to the scheduling of appointments, home follow-up of patients, patient comfort and remote work.
- Time constraints and the necessity for the new work order resulted in a number of challenges, such as maintaining the operational activities and ensuring the delivery of care, but also to some great rewards, eg, realising the enormous importance of the information systems in the hospital's work.
- While any change requires a lot of effort, in general the new approaches are met positively. On this way it is essential to keep your innovations simple.

On 13 March, 2020, with the government's emergency decree and COVID-19 declared a pandemic, one of the measures taken by the health authorities was to cancel face-to-face consultations in primary care centres and hospital outpatient clinics, and the isolation of patients admitted to hospitals. This decision to impose social isolation had several consequences:

a) All planned activity was paralysed. This could be a serious problem since certain pathologies may lead to complications if a patient is not attended to within a defined time interval.

b) Additionally, suspected COVID-19 patients with mild pathology had to be isolated in their homes and followed up by health professionals to assess whether the symptoms worsened and decide on the need of treatment in a health centre.

c) Patients admitted to a hospital were largely isolated from their families. This contradicts the culture common in Spain that no patient is alone during their hospital stay. This isolation generated anxiety not only in patients but also in the family environment.

d) The hospital and the primary care centres became places of risk of contagion so teleworking had to be enabled for professionals who did not have to be in direct contact with patients.

Strategic Changes

Given the above situation, the following strategies and projects were defined.

Scheduling of appointments. According to a new process, practitioners reviewed all scheduled appointments and made the following decisions in each case.

a. The case is not a priority and can be delayed, but a face-to-face appointment is necessary. A relevant remark is made so that it can be scheduled after the no-care phase in the centres is over.

b. The case is a priority. It is scheduled as a priority with high security levels.

c. The case can be resolved. The

doctor calls the patient and carries out a virtual consultation, most of the time by phone and in some pilot cases through a videoconference.

The technical setup involved the integration of the Zoom videoconference system with the electronic medical record (EMR). This integration uses the Zoom API and an SMS message API so that, in the medical record review flow, a doctor can start a videoconference with a patient by simply clicking a button. This process, however, includes several steps:

- Clicking on the videoconference button opens a Zoom virtual room in a browser on the doctor's computer. This room is unique and different for each patient.
- A link to the room is sent by SMS to the patient's mobile phone. Clicking on this link automatically opens the room.

Prior to this process it is necessary to contact the patients through the Call Centre to confirm that they are willing to have a virtual consultation with a doctor, and have a smartphone. They also need the Zoom application installed. If it is not, they are guided through the installation and a test run is performed.

Home follow-up of patients with suspected COVID-19 infection. This required a new development on EMR as a set of forms was defined that were modified over time, since clinical information on COVID-19 evolved every week. In addition, this system included a census of patients as well as a planned daily follow-up process. Follow-up consultations were carried out by phone – integration of videoconferencing was impossible because the EMR in primary care was different from that of the hospital, with lesser room for development.

Patient comfort. A set of smartphones and tablets were made available in different areas to enable patients to hold videoconferences with their families during hospitalisation. These conferences were held using the Zoom platform, which had a very low learning curve.

Remote work. External access from home was a reality in the organisation from the beginning, but only for a limited number of users. As of 13 March, one of the priorities was to move the maximum amount of workers to their homes and make remote work possible. This whole process coincided with the change in the network infrastructure. The new firewalls were not yet ready to take on new VPN connections, so the use of existing ones was extended – a great effort since it was necessary to remotely install software on the staff's computers that had the most diverse configurations.

Due to complications in access configuration, not all systems could allow remote access, so adjustments and updates were necessary to make it possible.

Overall, the processes/projects that under normal circumstances would have taken months to realise were implemented in two-three weeks. Additionally, we have accelerated the adoption of virtual consultations and telework as a valid mechanism and not as a one-off or exceptional solution.

Biggest Challenges and Rewards

There have been a number of challenges on the way. For example, to get the professionals out of the care centres and enable telework. To implement systems in a very short period of time while keeping the rest of the projects going and the systems up and running. To not leave any patient behind neither lose control of the organisation due to the radical changes that were being implemented.

In terms of infrastructure, we needed resources such as tablets, smartphones, web cameras and headsets. On the software part, it was the licensing of Zoom and SMS-sending software, and the development of API integration. The use of Zoom as a videoconferencing solution required staff training, but the rest of the components were standard.

On the other hand, seeing that the information systems were the key to the success of our crisis management strategy has been the biggest reward- We have discovered that the systems not only are the foundation that sustains the operations but they must also be the accelerators of organisational and cultural change.

To see that patients and the epidemiological situation in general were under control at all times also was very rewarding.

The processes/projects that under normal circumstances would have taken months to realise were implemented in two-three weeks

Change Leadership

There is a reason for change. Social distancing is the best prevention strategy we can do with COVID-19, and organisational changes along with technological ones are welcome. Obviously, any change in our organisations is a complex process, but the attitude towards change has been very positive.

One characteristic experience during the pandemic has been 'leadership in solidarity,' ie, there has not been a single leader but rather natural leaders have emerged in the face of adversity.

If you are dealing with challenges similar to ours, you have to imagine the best solution, make it easy to use, and not put up barriers that have not existed before. Think of solutions from other sectors that can be applied to certain processes even if they do not fit into the established culture. ■