Coping with COVID-19: scaling up virtual care to standard practice

To the Editor — In times of disease outbreak, social distancing can be facilitated by video consultation, but many practices are not ready to implement this. Here, we share a roadmap for emergency scaling up of virtual care in the outpatient setting.

Since the outbreak of SARS CoV-2 and the associated disease, COVID-19, in December of 2019, the effects of the virus have manifested globally. Transmission of the virus is significantly decreased by appropriate social distancing. Fast-tracking the implementation of video consultation to replace physical appointments with virtual care is a strategy that should not be overlooked[1]. The use of real-time video connections maintains important aspects of communication, including visual aspects, without risking physical interaction. Provision of healthcare can be preserved for infected individuals and non-infected individuals scheduled for appointments not related to COVID-19 (ref. [2]). Additionally, a feeling of safety for both healthcare providers and patients can be provided to reduce the psychosocial effects of fear and anxiety.

In November of 2019, video consultation was implemented successfully on a small scale at the surgical outpatient clinic in our tertiary referral center in Amsterdam, the Netherlands[3]. To avoid full lockdown of our outpatient clinics because of COVID-19, the board of directors launched an emergency protocol to scale up video consultation to every department at the hospital within 3 days, in an attempt to cope with the crisis. Here, to aid healthcare professionals worldwide, we share our roadmap for the emergency scaling up of video consultation in an outpatient setting.

The Amsterdam University Medical Centres (Amsterdam UMC) were recently

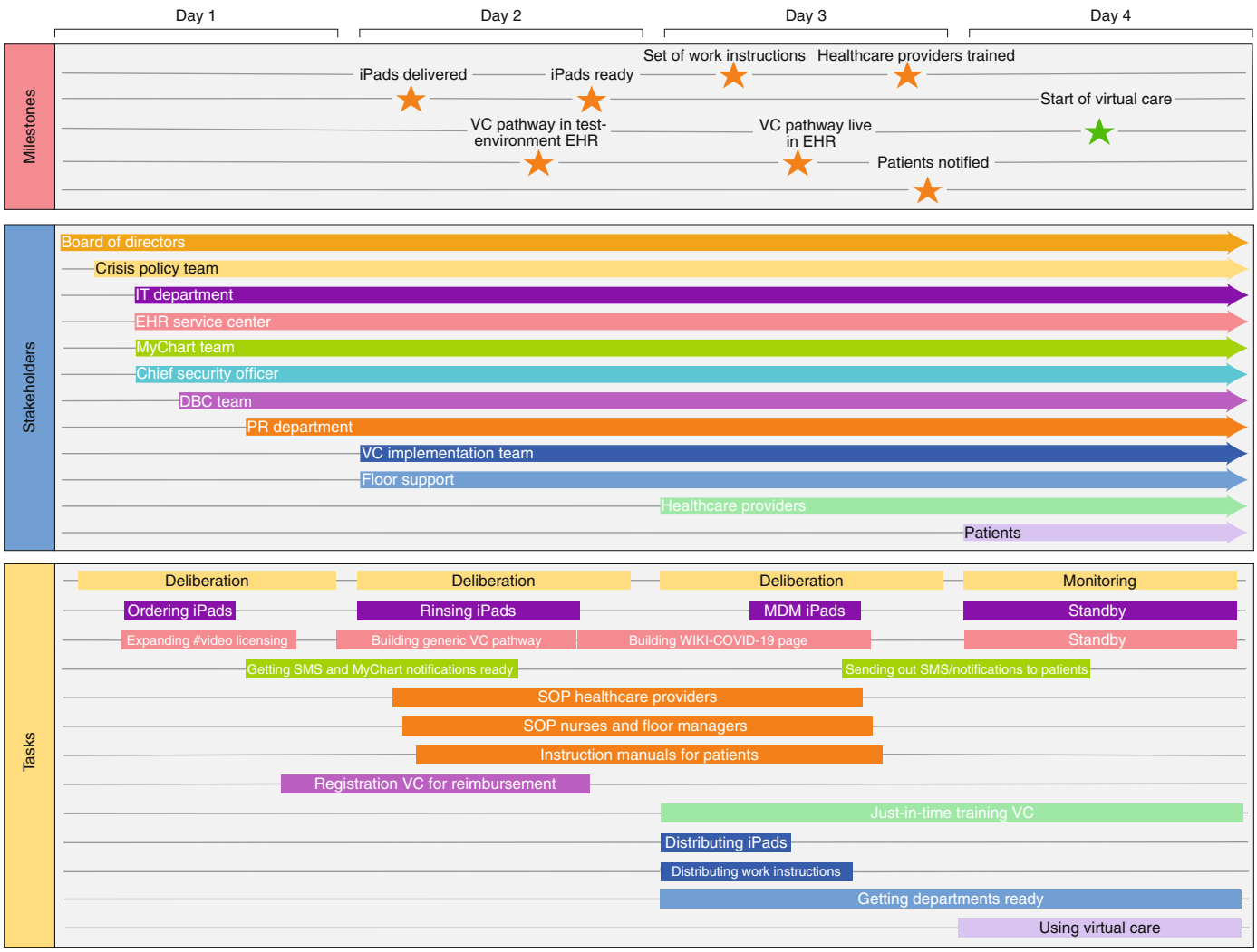

Fig. 1 | Roadmap to scaling up video consultation. VC, video consultation; PR, public relations; DBC, decibels relative to the carrier; SOP, standard operating procedure; MDM, mobile device management; MyChart, patient portal of the EHR in use.

formed in a merger between two large university hospitals at two physical locations. Together, both hospitals have more than 15,000 employees and approximately 1,700 beds. At the AMC location alone, 350,000 patients are scheduled for appointments at the outpatient clinic annually. The electronic health record (EHR) used is EPIC Hyperspace 2017. Patients can use EPIC's electronic patient portal, MyChart, to access their own medical files (for example, to view available blood-test or diagnostic imaging results, or to schedule or reschedule appointments). During the past 3 years, software enabling a secure video connection (Vidyo) has been integrated into the EHR and MyChart to allow for the safe use of video consultation. Because the video software was integrated within the EHR, confidentiality was ensured through the hospital's standardized regulations according to the General Data Protection Regulation guidelines (portal with protected personal two-factor-verification login). Healthcare providers can either start a video connection by accessing the EHR through EPIC at a clinical workstation or use EpicCare's mobile applications, Haiku or Canto. The latter option allows clinicians to access patient charts securely from their own devices. For patients, the video connection is accessible via MyChart.

Within 3 days, a protocol was generated for facilitating the full implementation of video consultation (Fig. 1). The board of directors prioritized overcoming the limitations hindering the scaling up of video consultation. The success of this process required the immediate cooperation and dedication of all stakeholders together, which are otherwise known to be important barriers to the scaling up of any innovation within a hospital[4].

On day 1, a crisis policy team was appointed, consisting of members of the department heads of the intensive care units, clinical wards, outpatient clinics, representatives of the internet technology department, the EHR service center and chief security officers. All essential personnel were approached early in the process, extra workforce capacity was added, and time-appropriate milestones were formulated. Hence, the full scale of the emergency scale up became apparent.

During the second half of day 1, existing technical services were expanded by ordering 50 extra iPads and ensuring that enough video-connection licenses were available. Furthermore, at that time, all involved stakeholders were preparing for day 2, the day of the development of all technical aspects of scaling up the integration of video consultation within the EHR.

Day 2 began with a stand-up meeting with the crisis policy team and technical staff to provide a status update, identify possible issues and set deadlines regarding the formulated milestones. Next, all teams worked to meet the proposed deadlines, and the crisis policy team was updated regularly during the day. The video-consultation pathway was tested with earlier-appointed super users in the surgical department who already knew how to operate the video-consultation software and hardware. Because the first test failed, another test was scheduled for the next morning.

Day 3, the day on which everything needed to come together, started with a stand-up meeting and a short brainstorming session regarding the failed test of the day before. By the end of the morning, the new test was successful, and the video-consultation pathway was merged with the live environment of the EHR. All work instructions were finalized and approved by the crisis policy team. The video-consultation implementation team distributed the iPads together with the work instructions to all departments. Floor support offered just-in-time training to healthcare providers who needed extra support. Because all important milestones were achieved, patients could then be notified about scaling up virtual care to standard practice. All patients already scheduled for an appointment at the outpatient clinic received a text message with the details and directions for receiving virtual care. A news link was placed on the hospital website to inform patients without a scheduled appointment at the hospital.

On day 4, the first video consultations took place after the prerequisite stand-up meeting. The virtual outpatient clinic care successfully began, thus facilitating social distancing while preserving the provision of healthcare.

Because we believe that video consultation holds promise in optimizing outpatient care in the current crisis, we feel that others may benefit from our approach and efforts. By sharing this roadmap, we aim to inspire other centers to scale up virtual care to cope with COVID-19. ❐

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Author contributions

All authors contributed extensively to the work presented in this paper. All authors reviewed and approved the final version of the manuscript.

Competing interests

The authors declare no competing interests.