Estonian e-health solutions for the COVID-19 crisis

COVID-19 is challenging the health systems of almost all the countries around the world. The virus spreads fast and it seems to be smart in finding new victims. To win this fight against the pandemic, the humanity must be smarter. One of the main questions is how to provide medical help by reducing the face-to-face contact without losing in the high quality of the services.

E-health infrastructure

Estonian advanced e-health infrastructure has proven especially useful during crisis. As 99% prescriptions issued in Estonia are digital, the need to show up at the doctor's office is brought to minimum. Patient can use these digital prescriptions in any pharmacy in Estonia, just by providing their national ID card to the pharmacist. If a face-to-face meeting is still needed, then multiple telemedicine solutions are available.

As with COVID-19 spreading, many people need to take sick leave from work. However, going to doctor's office for this reason could spread the virus in hospitals even more and put medical workers in unnecessary risk. That is why central e-health agency launched a new service that allows people to initiate sick/care leave online themselves through the national patient portal.

These solutions are possible, because everyone's health records in Estonia are kept digitally in the national patient portal, where citizens can view the information entered by their doctors. Citizens can see their insurance status, medical history, health scans and lab reports. This information will be visible to their family doctor and if a patient needs to change the doctor this data will become accessible to the new doctor as well, without the need to carry any paperwork around. All of this information is backed by the X-road which allows secure data exchange between databases in Estonia.

Estonia is ready to help any government in building up a digitalised health system infrastructure. This will, however, require time and cooperation with which it is a good to start rather sooner than later. For quick help against the fight for corona virus we have gathered e-health solutions which can be implemented fast and from distance.

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Fast implementation e-health solutions

Guidance for nurses by Cognuse

Product:

Solution by Cognuse offers step-by-step guidance through the nursing procedures which helps nurses to provide better quality of care with mitigated risk of infection. CoNurse is giving nurses the opportunity to quickly familiarise themselves with the subject. It helps seamlessly integrate nursing-related instructions and procedural protocols into the workflow. Nurses have access to more than 300 procedural protocols, guidelines and checklists every time they undertake a procedure to help them remember their responsibilities. The solution is coupled with a Bluetooth headset for hands-free operation to mitigate the risk of infection and comply with the hospital's quality goals.

Relevance in crisis:
The current coronavirus crisis has caused great need for additional medical workers, which means that their experience and skillset might be still lacking. CoNurse suits best for the learning process and offers valuable support primarily to nurses who have less experience. At the same time, CoNurse is useful for experienced healthcare professionals who perform certain procedures rarely.

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Smart thermometer by TempID

Product:

TempID is a smart thermometer patch that can be attached to the body and which measures and monitors body temperature. The smart-patch is swipe readable. Paired with an app, users can analyse and log their temperature readings and share it with their doctor. It can be usable as treatment diary. By using TempID, body temperature data is available for 24h. Therefore with one reading procedure, doctor/nurse can get overview remotely without need of taking manual readings frequently, which reduces the risk of additional infection for medical personnel.

Relevance in crisis:

Covid-19 patients have usually high temperature which needs to be monitored throughout the infection. TempID provides continuous body temperature data, all body temperature fluctuations are visible and possible to analyze. Person who is set to quarantine, must transfer body temperature data and location to share his/her health situation with medical provider. Body temperature data can be used as forecasting figures to organize COVID-19 testing to certain area or regulate quarantine rules according to possible rise in COVID-19 infection numbers.
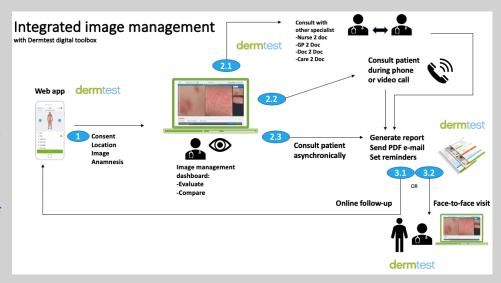
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High quality dermatological care during isolation by Dermtest

Product:

Image management tool supporting phone-based telehealth consultations during isolation. Health systems are rapidly moving towards telehealth. Most systems are opting for phone-call based teleconsultations initially, because going to video-visits needs a lot of adjustments from care providers. Also, patients and doctors are more comfortable with phones as a communication tool and there is no need for high bandwidth internet in case of phones. But phone-call communication lacks sufficient visual capacity, which is needed for dermatological care, wound care, trauma, allergies, surgery follow-ups, rheumatology, ophthalmology, oncology side-effects and many other areas. High quality images are needed to prescribe the right care, but good quality images are not easy to provide.

Dermtest telehealth support-tool was built for such cases together with the largest ambulatory hospital in Estonia. It is part of an integrated image management toolkit for health systems, insurances and care networks. Dermtest telehealth+ enables to make distance-care high quality for phone-call based telehealth, but also for video-conferencing solutions, as they don't focus on image quality that much. Furthermore, everything can be launched on-line and the solution is very easy to start - it does not need any training of doctors. Also images are available for follow-up visits. Dermtest is an Estonian digital health company, which started initially with early skin-cancer detection, but expanded to be a comprehensive digital toolkit for skin and wound care. Dermtest is operational in 6 languages in 4 countries (including a pilot in Moldova) and has covered 100% of Estonian regions and 14% of GPs in Estonia. Two of the top3 largest hospitals use Dermtest tools. More than 80,000 cases have been managed on the platform by now.

Relevance in crisis:

With the Covid-19 crisis, face-to-face visits to the doctor must be brought to minimum. Dermtest enables the patient to get high quality care by supporting phone-based telehealth consultations. This is especially relevant to dermatological care, wound care, trauma, allergies, surgery follow-ups, rheumatology, ophthalmology, oncology.

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