Como a COVID-19 Impulsionou a Adoção de Tecnologia Complexa na Prestação de Cuidados de Saúde How COVID-19 Boosted Complex Technology Adoption in Healthcare Delivery

Sofia Couto da Rocha¹*, Eduarda Reis¹, Wal Chevrand¹, Susana Fonseca¹, Hugo Dias¹, Gonçalo Bandeira¹, Luís Vaz Henriques¹

*Autor Correspondente/Corresponding Author: Sofia Couto da Rocha [sofiacdr@gmail.com] Rua Ferreira Lapa 27, c/v esquerda, 1150-155 Lisboa, Portugal

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COVID-19 pandemic is changing the world, and its effects will last. Two thousand and twenty was the year of massive transition for healthcare delivery. The implementation of teleconsultation was only one of the first steps for the virtualization of care in our units, as the client pathway and the information systems had to change even more without being obvious to our eyes.

Digital medicine has an unlimited number of uses although it fully depends on the process of implementation, namely on the people you engage.^{1,2,4} All stakeholders had to change according to this new vision of healthcare delivery: legislators, payers, physicians and most of all, patients.⁵ All the processes and steps are valuable for other projects regarding digital transformation. This process is way beyond technology, actually in our point of view, it is based on four main pillars: relationship with users and other stakeholders, professionals and teams capacitation, operational efficiency & costs optimization and, as an overall, heal-thcare process transformation generated by intelligence.

To follow the pace that markets and patients are imposing, technology plays a great role, being a solution facilitator or an easy trap to fall with the promise to solve it all.³ This last year was probably the biggest challenge of our lives, accelerating the transfer of different technologies to the daily basis care. Our target was to solve and expand a fast answer to the new needs, imposed by the pandemic, and to reorganize the long run digital transformation plan. Our goal was to accelerate the digital transformation along the organization focusing on 5 main projects that are transversal the 4 referred pillars: + Lusíadas, Lusíadas service catalog (LSC), Telemedicine project, Lusíadas Clinical Call Center, artificial intelligence (AI) applied to access.

Looking to each project:

1. + Lusíadas: an omnichannel concept for all user interactive platforms. The number of users (above 150 000) has been increasing continuously since the launch by September 2020. The number of bookings by this solution has also been growing with a variation of +197% in 2021, when compared to the previous solution in 2019, only with 6 months in the market. Regarding users experience, we have the best rating when compared to the direct competitors. The available functionalities, after our first experience with methodology agile, changed a lot along the way. With the pandemic solutions like fully automated check in, digital payment, or the inclusion of teleconsultations to access by the app appeared to be crucial for the launch. That methodology allowed us to listen to the users and iterate continuously. Preparing by now the step two of the digital solution.

^{1.} Lusíadas Saúde, Lisboa, Portugal.

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- 2. Lusíadas service catalog (LSC): to have a robust frontend vision of the clinical offer it would be easier to access, predict and control if all information is on the same place. With that in mind LSC was built. The challenge now is to improve the data quality so that in a near future we could improve data based decision making, a transversal nomenclature of the offer, apply automation to promote efficiency and to reduce error.
- 3. Telemedicine project: to rollout the digital offer regarding a variety of services besides teleconsultation, which is mostly a service that changed from an "in person" channel to a digital one. We went from a few teleconsultations to over 64 000 in less than a year and a NPS of 78, we would like to expand the opportunities and the offer to the patients and families. We went further in the concept in order to better understand which services could be used in distance, and from those, which ones would represent the highest savings in costs not related to healthcare directly. For example, regarding tele rehabilitation, for many cases there is no need for the patient to move to a hospital for the session, it can be available from the comfort of their home, reducing time and distance costs. This same rational applied to SOS pediatrics and adults consultations. They are a daily offer that functions as an evaluation before going to the Emergency Room (ER), which frequently solves the problem. This is especially important in moments of pandemic. It is a service that is already a hybrid between "in person" and "digital" as the patients can benefit from the ER of the hospital as a continuity of service.
- 4. Lusíadas Clinical Call Center: tactically a clinical call center is crucial due to benchmarking, strategically it is a great way to interact with patients, who frequently need orientations from a healthcare professional without having a clear idea on which specialty to choose, which service or sometimes just for post-operatory questions. A team of registered nurses, who follow validated algorithms for primary clinical evaluation, are answering directly the calls. It started last month with a continuous increase in the team number and on the received calls.
- 5. Al applied to access: due to the pandemic, and the generated backlog, we needed to unlock all the accesses to booking channels. With artificial intelligence, voice recognition and web robots, Lusiadas will launch an amplified way to allow interaction with our patients and customers. It has been tested and optimized during a few months to be launched mid-2021.

Those are just 5 of the main impacted areas, where technology is definitely changing the pace, the methodology or the volume. In healthcare we are always searching for new disruptive innovation and what we found is that more than new technologies we need enabling ones. To be connected and with an easy and safe access. By the faster implementation that the pandemic imposed, it became clearer that it is way slower and inefficient to plan without a multidisciplinary team working together and with the field. Digital transformation is linked to the ability to have a strong plan and to be able to react to new non-predicted needs in the fasted and easiest way possible. Being near to the final user is crucial as, besides all stakeholders, he is the determinant "piece of the puzzle".

For the future, we expect more and more technologies to appear. In order to succeed the primary focus should be in learning with the past and connecting dots with enablers. Those could be people, technology or moments, all of them are essential to turn decisions and experience more accurate and fluid. For an innovative field, like healthcare, the next milestone achieved means a new one in the horizon, to search continuously for a better day to come.

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ORCID iD: Sofia Couto da Rocha https://orcid.org/0000-0001-6423-9457

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