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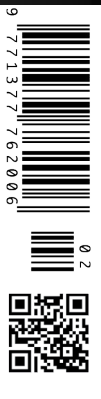
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RESET 2021 – What Worked, What Failed, What Comes Now



A report of the [digital conference](#) on Reset 2021, organised by HealthManagement.org with Alexandre Lourenço as the moderator and Prof Davide Caramella, Dr Rafael Grossmann, Christian Hay, John Nosta, Prof Robert Vander Stichele and Dr Rafael Vidal-Perez as panellists.



Key Points

- In 2020, there were many lessons to learn from the pandemic experience, including inefficient planning and communication strategies, and inadequate use of available resources and infrastructures, e.g. in telehealth or vaccine management.
- Digital health technologies have huge potential, but their applications are still far from the optimal level, their focus is often skewed, and the overall ecosystem is fragmented.
- There is a high probability that the unprecedented vaccination programmes around the world may be undermined by the lack of proper monitoring. Technology is available but underutilised.
- In terms of management, there is much room for improvement. Healthcare systems need to be more dynamic, pay more attention to the staff and patients' needs, and better appropriate existing technologies.

The best thing about 2020 is that it is over. Undoubtedly, it was a seismic shock to most healthcare systems around the world to deal with the fall-out of COVID-19. Inevitably, the way we deliver care has fundamentally changed. During the Reset 2021 DigiConf webinar, our panellists looked at the challenges and issues facing healthcare providers in Europe and the rest of the world in the aftermath of the pandemic, and explored the lessons that we learned and how the healthcare model could potentially be improved to better deal with a similar (or worse) crisis in future. With so many questions to answer – the vaccination rollout, the use of technology, telemedicine, vaccination passports, personalised care, patient safety, the safety of healthcare workers, staffing shortages, etc., there was a lot that was shared and explored by the participants. Here is a quick overview of the proceedings.

2020: Year of Challenges

[Davide Caramella](#), Professor, Diagnostic and Interventional Radiology Department of Diagnostic and Interventional Imaging, University of Pisa (Italy), opened the discussion as he shared his hospital's response to the COVID-19 challenge. He pointed out that since the first outbreak of the pandemic in Italy was in the Northern region, Pisa had some time to prepare. In terms of what failed, Prof Caramella acknowledged that they

probably overdid it a little bit, particularly as far as radiology was concerned. A big chunk of radiology resources was devoted to the COVID-19 hospital, and the resulting issue was that some patients with problems other than COVID-19 had to suffer a waiting time that was much longer than usual. However, this was an important lesson to learn for the future. He pointed out that vaccinations were going very well in their region, and this should hopefully bring a positive change for everyone.

[Rafael Grossmann](#), Healthcare Futurist, Technology Innovator, Surgeon and Educator (USA), highlighted that communication was certainly one of the first things that did not work initially. There was a lack of connectivity between all the different players around the world. Speaking from his experience of dealing with the pandemic in the U.S., Dr Grossmann said that they were late to alert themselves or prepare for the pandemic. After that, several weeks were wasted, and the process of mobilising resources, getting ventilators ready, and providing hospital staff with personal protective equipment (PPE) was significantly affected by this lack of preparedness. This was especially true for the major metropolitan areas where most of the population lived and where most of the hospitals were overwhelmed very quickly. All this could have been done better. However, Dr Grossmann also explained that eventually, things picked up, and COVID-19 offered a great

Reset 2021:

What worked | What failed | What comes now

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Moderator

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Speakers



Prof Davide Caramella



Dr Rafael Grossmann



Christian Hay



John Nosta



Dr Rafael Vidal-Perez



Prof Dr Robert Vander Stichele

opportunity to communicate and connect better in a world-wide way to crowdsource information, to organise from the big players to the smaller players, and certainly the degree of innovation that was seen and that is still being practiced. The pandemic has been phenomenal, from vaccine development to the development of PPE and contact tracing applications to ventilators and ways to sterilise environments and much more. The use of telecommunications, telemedicine and telehealth has been a very positive response, and that is one of the good things that is going to stay to some degree, in an adapted way, after the pandemic, said Dr Grossmann.

[Christian Hay](#), Senior Consultant Healthcare, GS1 Global Office (Belgium), brought a different perspective to the discussion. He acknowledged the fabulous job done by all the healthcare professionals in so many regions throughout the world. Speaking from the standardisation side, which has been his area of speciality for the last 30 years, Hay highlighted that the positive aspect of the crisis in 2020 was that the toolboxes regarding medicinal products were ready. Nothing had to be invented at the last minute. Architecture to capture information existed and registered with regulators, the manufacturers, medicinal dictionaries, etc. This architecture was available and published. Regulation of the supply chain was also ready. The U.S. Drug Supply Chain Security Act (DSCSA) regulation already imposes a certain number of tools to be used to have a safer supply chain. In Europe, there is a relatively similar system with the Falsified Medicine Directive. That means there are tools to protect against falsification, which

is a big issue at the moment. That was the positive lesson. As for the negative, one has to wonder where the toolboxes were, according to Hay. They have not been used much, and it was a huge disappointment, considering how the immunisation process is running at the moment. Writing the vaccine batch number by hand on a piece of paper is error-prone, Hay emphasised, and if one wants to collect information from that, it will be a disaster. A barcoding system is available, and all the architecture is available, but none is being used effectively at this point.

[John Nosta](#), President, NostaLab; Founding Member, Digital Health Roster of Experts, World Health Organization; Google Health Advisory Board, (USA), provided a strategic perspective to the discussion. He explained that COVID-19 had shined a light on good things and on bad things in clinical practice and pharmaceutical drug development. He pointed out that the essential observation of the day, as one looks to clinical care and the evolution of the virus, was that all eyes were on one thing: the mutation of the virus. While one acknowledges the wonderful success of the vaccine, one continues to observe and wonder what would happen if this mutates to a more virulent strain. That is the defining element of COVID-19 introduced to our world: the need for agility. It is not only clinical agility but also functional agility and intellectual agility. That is the good news. The bad news is if one wants to be agile and know what one is changing to and planning for, what the next emergency is and – it very well may be mutations in the spike protein – but it might also be something completely

unrelated, e.g. the next natural disaster or clinical emergency; it may be about water purification, iodine supplies for a radiation emergency, etc. Nosta emphasised that we need to have intellectual and functional agility, and that was largely mediated by technology. We need to be connected, and we need to build a platform where we can think fast, act fast and solve fast. COVID-19 has been an inflection point in technology where things are changing rapidly. The question is: how can we capitalise on that to build a path forward for the next disaster, which may have nothing to do with COVID-19? Actual healthcare is not for incremental changes or innovations. In healthcare, we like to think things through and play it safe. That is understandable. Nobody wants a nuclear-powered heater for their house; they want a gas heater because they know that technology. It is the same with medicine. It is that duality of wonder and fear that is a bit of an obstacle.

[Robert Vander Stichele](#), Professor Senior Research Consultant, European Institute of Innovation through Health Data (i~HD), Ghent University (Belgium), offered his perspective from Belgium. The pandemic hit very hard in the vulnerable elderly and in the long-term care facilities. Two-thirds of the deaths in the first wave were among this population segment. They were cared for by unprotected personnel, who were not prepared for the difficult ethical decisions they had to make in this challenging situation. We realised that we knew so little about the disease, the elderly patient population, and their risk profile. We had to observe that the digitalisation of medical documentation in this sector of healthcare was extremely poor. This is one lesson learned and something we need to remediate. The second point is that post-pandemic and now with a never-seen-before vaccination programme coming up, we need to have an overview of distribution. There are 200

The COVID-19 pandemic resulted in “discovering” telemedicine, even though it has been around for many years

[Rafael Vidal-Perez](#), Cardiac Imaging Consultant, Cardiology Department, Hospital Clinico Universitario de A Coruña (Spain), spoke about telemedicine and how the COVID-19 pandemic resulted in “discovering” it, even though it has been around for many years. It was always there, but we were not using it and, therefore, had no real experience with it. Hence, when we had to use it immediately, we were not prepared. We thought that we had the right tools, but probably they were not right because we had to deal with many elderly patients who were not ready for that care model. Many office consultations were conducted by telephone, and it was quite poor. Hence, we need more improvement on telemedicine technology because in a situation similar to COVID-19, when you cannot deal with the patients directly, it can be a problem. We discovered the need for telemedicine, but the technology we have is not advanced enough to execute it properly. Another important lesson was the integration of these tools into electronic health records (EHR). We realised that this was not easy to do because it is always difficult to introduce something new in a short time when it comes to EHR. This obviously depends on the country you live in. We have apps for contact tracing, but, for example, experience in Spain was not so good because the app was not installed properly or on a mass scale, and there was no plan to involve the patients and include them in this process. Therefore, the use of contact tracing apps was not a successful strategy in Spain – in fact, it was more or less a failure. The next step for 2021 and the main challenge is how to deliver things in a faster and proper way. In Europe, we are behind if you compare with other areas of the world. Everything moves at a very slow pace here, and that might be one of the biggest challenges for us.

vaccines in development, and in most countries, already five on the market, beginning first with the very centralised cold chain distribution and then gradually spreading out to other forms of distribution and several different vaccines through hospitals through to GPs and pharmacies. How will we know who got which vaccine and when? How will that be recorded? What is the digitalisation of the immunisation act? It is so easy to do if the vaccines carry barcodes. The doctor or the vaccinator can, in a few seconds, digitally record the identity of the vaccine, the identity of the patient, their own identity, and send a full structured message to the e-health infrastructure. From there, you can warn the immunisation registry, and you can make the certificates, etc. However, we must be sure that the recording of the vaccination act is correct and done in an interoperable way. There is a risk that the distribution, but also the recording of the distribution, will run into chaos soon, and we need to remediate that. The quality of the documentation of the vaccination act needs to be much better than it is today.

Why Digital Innovations Fail

During the Question & Answer session moderated by [Alexandre Lourenço](#), several other issues were discussed. First was the question as to why healthcare had the digital tools that had been there before the crisis but was not using them. Was this a matter of literacy, strategy, or implementation? In response, the panellists provided their point-of-view. Christian Hay observed that IT in the healthcare industry is underestimated if you compared the investments for IT in the healthcare systems to the banking sector, for example. We have the tools, and we



are practicing telemedicine, but found limitations. One of the biggest issues we face is the lack of a visionary programme or an ambition to make healthcare safer. If we look at cybersecurity, we do not see major issues with banks but have issues in healthcare systems. On a positive note, this crisis has opened the eyes of the people, and maybe strategies will evolve and take more consideration for the IT investments and the standards of implementation.

John Nosta also provided his perspective on this issue. He talked about telemedicine and how COVID-19 has presented a wonderful opportunity for us to learn. We can advance telemedicine and make it telemedicine 2.0 and 3.0. We cannot just translate telemedicine that simply – we have to advance it and make it more robust and more engaging. That is the challenge now.

Rafael Grossmann highlighted the fact that that we had tremendous failures in leadership at the senior level and the local level. We also had a tremendous failure regarding innovation. We certainly have the digital tools, but at the same time, those technologies did not translate. He pointed out that we had very advanced IT systems in hospitals, at least in the U.S., but in IT our focus was on the wrong things. It is all about billing and documentation, and we do not even look at the patient – the human patient. We just look at the computer, the EMR and the EHR. That is probably one of the issues. We were caught off-guard, and despite having disaster plans, we could never imagine that something like this could happen, to a level to be prepared with all the tools that we had.

Rafael Vidal-Perez highlighted the fact that a big problem was the interoperability of electronic records. For example, in Spain, there are 17 regions, and each one has a different electronic health record solution – within one country. We have tools, but we are not able to put them together to come up with a greater solution.

Digital Support for Vaccinations

On the issue of vaccination, another question that was raised was how to promote the digitalisation of the vaccination process. Robert Vander Stichele pointed out that pharmaceutical companies who developed the first two vaccines were faced with demands for mass production and mass distribution and asked for exemptions of the normal labelling procedures. Vials were shipped without information, without proper recognition on them, and certainly not facilitating this at the point-of-care documentation. He hoped that with the new vaccines, there would be data metrics on every vial, and that would change, from a very practical point of view, the ease with which the vaccination act could be recorded. In the beginning, this was completely overlooked, and companies were exempted from doing this. They had to produce the vaccine in very big boxes but did not care about the detail of the identification, which also goes with the problem of falsification. It may not seem to be a big problem in the beginning because everything is going through very centralised distribution channels,

heavily checked and controlled, but very soon, there will be other distribution channels, and issues of fraud and falsification will come up, both in rich countries and certainly already in developing countries where the need is higher.

Every nation is struggling to get its population vaccinated as quickly as possible. In three or four months, there is likely to be a situation that the rich countries will have four or five times the vaccines that they need. At that point, the issue of equity will come up. This pandemic will not go away if not every country has reached herd immunity. Therefore it is in our interest to make sure that equity in vaccination is at the forefront of what we do now.

Christian Hay also supported this perspective. The manufacturing process must be done right – the quality of the medicinal product, its labelling and sequencing, the process, marketing, virtualisation, etc. and the outcome for the patient. If a patient has an adverse reaction, how can we retrieve the information? This must be done in a coherent way. In the U.S., there are activities dealing with this question in conjunction with the FDA, but in Europe, it is a bit slow, and Europe is more fragmented. One initiative in this area is UNICOM, an EU-funded project with the purpose of fostering the implementation of those standards. This project aims to bring the regulators and the authorities together and use a system of identifiers. If we can agree on a common language in the supply chain, we will gain efficiencies because we will be in a much better position to aggregate this information, develop intelligence and better understand what happens, what is good, what is less good, and so on. The tools are there, and the stakeholders will start to understand the value of the standards, bridging into our property, etc.

John Nosta highlighted the role technology could play in this area. Many of these methodologies are well established, and they can be used for vaccine distribution and tracking as well as telemedicine. In many instances, we are not seeking innovation, but we are just trying to get an innovation accepted. That is an important dynamic.

Room for Improvement

Asked about areas of improvement in healthcare management, Davide Caramella stated that healthcare needed to rethink where to make the relevant investments and how to make good use of the investments. Rafael Grossmann also agreed there was much room for improvement. Certain areas responded and are still responding very well, but to be more efficient, the healthcare system needs to be more dynamic, versatile and flexible, with better allocation of resources, and with true innovation, from idea to implementation. Healthcare organisations need to think about patients and healthcare providers. We have seen a shameful and frustrating reaction of the healthcare administrations towards healthcare staff which is impossible to justify. People are working in the trenches, without proper equipment, without the tools they need in order to protect the patients. This needs to change.

Robert Vander Stichele emphasised that the system should respond to the needs of patients better, but we also have to know the needs better, their expectations and wishes. Elderly people have comorbidities, and they will be the victims of the next pandemic – the victims of pollution, accidents, of all the big catastrophes. The healthcare management systems are simply not equipped yet to face this. The ethical aspect of advanced care planning must be in focus to be ready for the next catastrophe because this has painfully failed.

Rafael Vidal-Perez reiterated the problem of the gap between regional and central systems. Central organisations were not ready to organise the local systems because the locals were working on their own, and they were working well. Therefore, recentralisation turned out to be more of an error. Local management is essential because many good solutions came from local ideas, not from the central system.

Christian Hay touched upon innovation in healthcare and explained that people who embrace innovation as a strategy

probably think that innovation was something that had not existed before. Innovation is not there because things do not evolve at that speed. Innovation sometimes is ten years old and not implemented, so the fruits of that innovation have not been really seen on the ground. We have not explored it sufficiently; hence there is room for improvement. Innovation is the way you implement an existing technology to be very efficient, secure the proper care and save lives.

Overall, the panellists concluded that what was needed were good leadership, flexibility and agility. We need true innovation which is based on scientific data. We do not need complex innovations but simple ones that healthcare systems must follow. Healthcare solutions in the future need to be scientific, largely driven by technology, but with a focus on real issues and challenges.

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