

PERSPECTIVE



No need to worry about virtual teaching

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Today most of us use mobile phones, tablets, computer and laptops, both at work and at home. Children start using technological solutions at an early age, and are familiar with different usable software almost from their first day at school, if not prior to school entry. We use applications (apps) to get information about school and leisure activities. There are a growing number of apps to keep you in touch with family and friends. There are apps to use as financial payment solutions, for shopping and also different digital platforms where we can meet socially, exercise or get access to maps if travelling or mountain tracking. There are also an increasing number of apps that can be used to answer questionnaires, access or provide educational lectures, give or take exams, defend a PhD thesis, and participate in courses and conferences. So why are we so afraid to use digital teaching solutions in the healthcare service? Digital transformation is at the top of the political agenda as a strategy to achieve United Nations (UN) Sustainable Development Goals and to provide equal and high quality health services for all citizens. Increased use of digital technologies in healthcare services improve healthcare outcomes, increase efficiency, reduce response times, and allow for delivery of quality services, no matter the geographical location [1–4]. Electronic medical records are nearly ubiquitous in global healthcare. However, relatively few healthcare providers are formally trained to deliver rehabilitation services using digital devices or programs, and few healthcare providers have received specific education or training in communication skills using digital technologies. Traditionally, this may cause reduced use of well-suited technical solutions in the healthcare. However, amidst the current global pandemic, healthcare providers were asked to quickly turn to telehealth platforms in order to provide continuity of care to as many patients in need as possible. Healthcare educators were asked to incorporate online platforms into didactic learning programs in a matter of days. For individuals with physical challenges, offering digital healthcare services may actually provide more, and not less, access to needed services [5]. Going forward, it is important to give and to get information on how digital or telehealth healthcare service can be organized, and to whom the services should be offered. These issues are important in the facilitation of a digital healthcare service. Here, we will give an overview of some of the many digital communication possibilities and give reasons for why we should use them in healthcare and healthcare education.

Digital solutions must be set up to meet privacy and confidentiality requirements. Once done, there is no shortage of possibilities for the use of digital solutions. Voice only solutions, like telephone or mechanical voice, e.g., Apple's Siri voice [6], is a

good example of a mechanical voice solution. Siri is a virtual assistant that uses advanced machine learning technologies to function. The assistant uses voice queries and a natural-language user interface to answer questions, make recommendations, and perform actions by delegating requests to a set of Internet services. The software adapts to users' individual language usages, searches, and preferences, with continuing use. Returned results are individualized [6]. Siri is well-known solution, used by billions of people globally, and users don't seem to be afraid of the use, because it simplifies everyday life [6]. Similar solutions can be integrated into computers, robots, or stand-alone devices in the home, such as Amazon's Alexa [7]. For a person with cervical spinal cord injury (SCI), such technical solutions can promote independence in their daily living, as well as facilitate communication with healthcare providers. These devices and strategies can also be integrated into digital and technological teaching, like store and forward solutions (transmission of information to healthcare receivers or users, not active live communication) and web-based treatments (online education). There is also the growing application of artificial intelligence, which will likely have important impacts on the healthcare in the future [8]. In addition, virtual reality is being increasingly tested in SCI and other rehabilitation contexts [9]. Using digital or online platforms, teaching can also be performed as provider-to-provider (healthcare workers to healthcare workers or to other caregivers), education direct to consumer (healthcare providers to patients/care receivers), using different technical solutions like webcams, and encrypted software. Thus, as care providers, we can offer teaching to our stakeholders in many different ways, using technological and digital solutions, which increases knowledge and collaboration. However, to manage this, it is important that the providers know the solutions themselves and are comfortable with the usage. For example, the American Spinal Injury Association (ASIA) [10], in collaboration with the International Spinal Cord Society (ISCoS) [11], offers an online e-learning platform that includes instruction on and learning certification for gold-standard clinical exams like the International Standards for the Neurological Classification of Spinal Cord Injury exam, as well as others [12]. This platform offers the ability of a clinician, who cannot travel to an in-person instructional course, the opportunity to be trained in a highly complex exam that yields the gold-standard clinical determination of injury level and severity, as and such, is essential for anyone serving the SCI community. There is also the possibility to share digital content for collective, coordinated use that may help to standardize training and reduce

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costs of developing training for individual institutions. For example, the Collaborative Institutional Training Initiative (CITI) [13] is a platform used widely among academic medical institutions in the US to deliver required training on ethical conduct in research. The Norwegian Health Network (NHN) [14] is a secure digital arena to interact for all participants in the healthcare sector. Caregivers can communicate synchronously or asynchronously and exchange personal patient information in a safe and secure way. Synchronous communication via encrypted videoconference channels provides treatment, guidance, education, and training for recipients at home. In more didactic settings Zoom or other digital platforms can be used easily to facilitate journal clubs, seminars or other interactive types of classes for trainees, with whiteboard options that mimic those used in traditional in-person settings. Since the pandemic hit in March 2020, a number of medical and scientific conferences have been offered online. Some of these may have expanded their audiences, as online costs are lower and it obviates the need for travel approvals or for clinicians to find substitutes for their clinical responsibilities. An example in SCI research is the International Online SCI Research Series [15], which has been offering online seminars that are free and open, with a chat function where attendees can pose questions that are then relayed by moderators (often PhD trainees or postdoctoral fellows) to the speaker. This series is attended by a highly diverse array of international researchers, with new trainees given the same opportunity to post questions as established leaders in the field, providing truly democratic scientific exchange. Another example is the YouTube based best practices courses offered by Sustain Our Abilities [16], which offer free courses to professionals and consumers related to specific SCI topics such as bladder management, pressure injury, telerehabilitation, and sexuality. Societies, including ISCOS, also held international online meetings using different digital platforms [10, 17].

There are many benefits of online education. These include safety, saving time in travel, money, and saving the impact on the environment of excessive travel. Changes in 2020 have been abrupt and thus, have been difficult for us to incorporate into our lives. Moreover, some of us may find this difficult and have not realized that the meetings and travel of “the olden days” for professional education was a means of relaxation. Still, as digitalization is increasingly implemented in everyday healthcare, it is paramount it is also increasingly integrated into teaching across healthcare professions.

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COMPETING INTERESTS

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