EDITORIAL

Technologies in pandemic times: acceleration in the processes of production and publication.

We have witnessed the emergence of the viral agent of a new respiratory infection, the Sars-CoV-2, which surfaced in November 2019, leading to an epidemic in the province of Wuhan, China, and rapidly disseminating itself through the world, culminating in its recognition as a pandemic, declared in March 2020 by the World Health Organization.

Considering this new setting, different strategies to preserve life were sought, considering the emergency that the pandemic represents. Consequently, there was a wide dissemination of information, knowledge, and structured intelligence about the pandemic in several means of communication and to various audiences, considering the contexts of prevention and control of the new disease in the health services.

In this context, there was an intense production and publication of technologies aimed at offering support to the processes involved in the formation and activities of students, residents, and professionals of education in health. Furthermore, new forms of communication were used, to make interactions between different audiences possible and faster.

Considering how broad this theme is, the Associação Brasileira de Enfermagem Seção Pará (Brazilian Nursing Association, Department of Pará) started to promote webinars about the current pandemic context. One of the themes discussed was "Technologies in pandemic times", in which the authors were present. The intense discussion carried out about the theme during the live transmission brought forth some reflections that we share below.

What have we found in these times of pandemic? With regard to the instrumental-material components (hard technologies), the use of personal protective equipment (PPE) stood out in the entire national territory. Many types these equipment was developed by multidisciplinary teams, and some of them, specifically, by nurses. The adherence to them, which, at first, was individual, was now for the good of the collective, and the PPEs started to be required and demanded by nursing teams, aiming to guarantee the quality of safety in different care environments.

With regard to relational-informational components (soft and soft-hard technologies), there was an intense production and distribution of books, manuals, booklets, for many different audiences, including health professionals, the general population, and some specific groups, such as pregnant women, elders, natives, and others. It stands out that, up to mid-April 2020, the emphasis in the technological production-publication was given to epidemiological aspects of the pandemic, while, later, its psychological aspects were more prevalent.

In this period, many types of technology were used and produced, leading to changes in the work process of teams and in the attention to users, even before entering in hospital environments. This guidance extended to pre-hospitalization and primary care environments.

In the neonate Intensive Care Unit of a public hospital in Belém, Pará, different types of technology were produced. With regard to hard technology, an acetate facial mask with two tiaras stood out, created by the nursing team of the night shift due to the difficulties in seeing when safety glasses were worn on top of prescription glasses. Five protocols were produced, regarding: a) the standardization of the process of wearing and removing the PPEs used in the attention to newborns who were suspected/confirmed of having COVID-19; b) intubation; c) bed baths; d) orotracheal aspiration; e) oral hygiene. Concerning light technologies, workers received motivational messages, attached to the packaging of the "lunchbox" in which the meals of those on duty were delivered.

The pandemic made it urgent to reinvent teaching. Considering the new context, the discussion involving communication and information technologies (CITs) became broader, since it became necessary to temporarily suspend in-person classes. This context created a favorable environment to encourage, strengthen, and improve their use.

There are many higher education institutions that restructured and elaborated initiatives in their search for the options with the lowest possible negative impact. Among them, the Universidade do Estado de Santa Catarina (UDESC) stands out. There, measures were created for teaching, research, extension, and for the administration, starting with the offering of on-line courses about the new coronavirus, the elaboration of educational materials (infographics, videos, fliers, instructional sites, among others), the implementation of a monitoring commission for members of the academic community who tested positive for COVID-19, the preparation of the physical environment of the institution for the...
return to in-person classes — which considered classrooms, libraries, meeting rooms, laboratories, clinics, teacher lounges, management areas — among other actions.

Therefore, we have found that the production of technologies in health, in the context of the pandemic, became accelerated, with different types of technologies and different target audiences. The technologies that stemmed from this acceleration and are published in digital media, have contributed with the challenges and initiatives in hospital units of teaching institutions in Brazil and all over the world. The intense production and publishing of different types of technologies contributed with the processes involved in the formation and the activities of professors and students, residents, and health education professionals, significantly contributing for the control and prevention of the COVID-19 pandemic.

After all, the challenges on which we must focus from now on are those of post-pandemic times. May each of us do our share.

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