

Editorial

Innovation ecosystems in care processes, health value and sustainable actions: present and future of Brazilian hospital pharmacists

Ecosistemas de inovação nos processos de cuidado, valor em saúde e ações sustentáveis: presente e futuro dos farmacêuticos hospitalares brasileiros

Eugenie Néri VIANA and Leonardo KISTER
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Innovation ecosystems in care processes, health value and sustainable actions comprise the evolutionary triad that guides practices in hospital pharmacies and health services in Brazil. Innovation is thinking about the next steps to take, how to improve what we do and the results we achieve for patients, institutions and society^{1,3}.

In 2023, in its fourteenth edition of the Brazilian Congress on Hospital Pharmacy held in Gramado, Rio Grande do Sul, SBRAFH discussed different nuances of these themes, instigating broad reflections on the impact of using new technologies in patient care, the paths for innovations in care processes, which practices add value to health, and how to practice sustainability. The actors involved and the ethical boundaries were noted, in addition to the risks and benefits of the innovations.

With the understanding that pharmacists are part of the group of essential actors for the creation of an innovation ecosystem in patient care processes, this broad space for discussion created at the event addressed the present and future of care practices. The application of hard, light-hard and light technologies fosters pharmacists' remarkable and disruptive performance in hospitals and health services in Brazil.

The professional practice boundaries were expanded to the development of technologies through presentations of several health and healthtech startups, developed by pharmacists based on the identification of the patients' "pains". On this rich day, we were able to follow the experience report of the application of Artificial Intelligence in the planning of inputs and in pharmaceutical care, as well as to discuss the acquisition, storage and protection of the data produced from the care provided, in search of ways to generate the greatest positive impact in the lives of patients and family members. With the presentation of the different practices, it was possible to see SBRAFH's motto: Pharmacists taking care of people's health and well-being.

Innovation ecosystems, important environments that foster changes in the practice of hospital care and health services, were expanded through collaboration between different entities that were present at the XIV Brazilian Congress on Hospital Pharmacy. Throughout the history of SBRAFH, these partners have been joining efforts to promote an important collective construction and make patient care safer, more valuable and sustainable every day, through comprehensive, multiprofessional care and with high technical added value^{4,5,6}.

The agenda presented also involved managers from municipalities, hospitals, universities and the pharmaceutical industry, allowing to share knowledge and resources, to promote the acceleration of discoveries and the development of innovative treatments, which enhance safety and quality of the medications supplied by hospital pharmacies. In this same aspect, possibilities for developing advanced needs planning systems were also discussed, with trend analysis¹, traceability, intelligent packaging, drug administration

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Rua Vergueiro, 1855 - 12º andar, Vila Mariana - São Paulo -
SP, Brazil. CEP 04101-000 - Tel./Fax: (11) 5083-4297
atendimento@sbrafh.org.br/www.sbrafh.org.br



devices and systems for checking errors in prescription and dispensing. In turn, in the clinical management field, the discussions focused on the development of integrated information systems to ease electronic prescription and analysis of drug-drug/drug-food interactions and incompatibilities. Access to information on allergies, history of medication use and adverse reactions (suspected or real) were also considered, as well as suggesting evidence-based recommendations, automated dispensing, treatment adaptations, new medications, monitoring of the therapy results, and assessment of patients' and family members' satisfaction.

It is important to innovate in health care processes safeguarding patients' individuality and safety. Consequently, the importance of evolving practices is highlighted, grounding decisions on aspects of individual rights and professional ethics, promoting safe and responsible use of new technologies, keeping patients at the center of the care process and understanding their needs, preferences and culture, especially in shared decision-making about their care.

By highlighting the pharmacists' experiences in startups and healthtech, SBRAFH broadens perspectives, pointing the way to entrepreneurship for pharmacists, by means of the rich and inspiring experiences that solve patients' problems through the creation of mobile apps, Artificial Intelligence systems for health data analysis or development of new medications and devices. These discussions were also extended to issues related to ethics, to data security and to the strategic role of communication and the importance of a special view at the care of those who provide care.

In the communication field, innovative technologies bring patients and health teams closer together, allowing to share diverse information and clinical decisions, generating more assertive and fruitful care. In addition, as a strategic point of view, we need to be able to improve our communication, to explain the reasons why we suggest one type of care or another, as well as its importance and advantages. We need to learn to communicate in different scenarios and with different audiences and to use different technological tools. In this field, SBRAFH discussed for the first time the use of mass communication tools (social media) by pharmacists, how to take care of image, and how to ethically and professionally work on digital positioning.

Care for pharmacists' mental and physical health was also highlighted, launching a broader perspective on the importance of the topic in the institutions' routines, discussing strategies to identify the issue, working conditions, facing problems and overcoming them, as essential bases for pharmacists to be able to offer safe and good quality care to patients.

Ratifying its commitment to the excellence of practices in hospital pharmacy and health services and recognizing that the costs of medications and materials involved in the patient care process have become increasingly high, SBRAFH has been promoting spaces for discussions and exchanges of experiences among professionals from various Institutions, as a way of multiplying good ideas and viable projects developed by Brazilian pharmacists, in order to exert positive impacts on the institutions' economic and financial aspects and contribute to the creation of health systems with high value for the users. These opportunities for exchanging experiences also contribute to expanding the value of pharmaceutical work in institutions, to generate a positive impact on the importance of multidisciplinary and centrality of the patients and their needs in health planning. In addition to economic-financial sustainability, another pulsing area is sustainability from the ecological perspective⁷. This topic was discussed and good practices were shared with a special eye on the impacts on future generations.

Pharmaceutical practices in hospitals and health services should focus on reducing the consumption of natural resources such as water and energy and on waste generation, including disposable materials and chemical substances. The savings generated by the adoption of sustainable practices can make it possible to invest resources in different actions, such as in workers' quality of life or in patient care quality, generating an upward spiral of improvements. Sustainable hospitals can play an important role in promoting social responsibility and community engagement. This can include implementing environmental education programs for employees, patients and the community, and participating in social responsibility initiatives such as supporting local organizations and getting involved in environmental improvement projects in the region. These actions not only contribute to sustainability but also strengthen ties between the hospital and the community, generating greater social responsibility and community engagement. By demonstrating their commitment to sustainability, hospitals can inspire positive changes across the entire health care chain, from providers to patients.

Pharmacists are responsible for managing the second largest volume of resources in health institutions and constantly need to seek the best cost-benefit ratio between management and care practices. In this sense, continuous reflection on these themes of innovation, health value and sustainability; exchange of experiences; and the permanent and continuing education actions promoted by SBRAFH, decisively contribute to generating value in health.

At the boundary of the innovation trends in health, we can see an increase in Digitization⁷ and Telepharmacy⁸ (which is here to stay¹) as timely strategies with great value for patients, institutions and society. In addition to that, greater use of Artificial Intelligence and machine learning and the increase in the daily application of smart wearable devices such as wristbands and sensors, to continuously monitor health parameters and customize treatments based on each patient's individual characteristics. Finally, the use of Virtual Reality and Augmented Reality in practice training and simulations is highlighted, contributing to pharmacists' preparedness to better face critical situations, such as behavioral challenges with patients and teams. This future, which is already starting today, is what guides SBRAFH in offering guidelines, guides and continuous improvement for hospital pharmacists and health services in Brazil.

Crowning the last years and another edition of the Brazilian Congress on Hospital Pharmacy, SBRAFH is proud to experience the evolutionary triad: innovation ecosystems in care processes, health value and sustainable actions, built day after day with increasingly solid partnerships with various institutions in Brazil, such as ISMP, SOBASP, SBA, SOBRAFO, AMIB, CFF, CONASEMS, Universities and other strong and reliable partners who, through discussions, joint elaboration of documents and exchange of experiences, provided Brazilian hospital pharmacists with support in times of uncertainty, a Horizon to solve concrete problems, and the opportunity to explore new possibilities for building a bright future that generates health care value in Brazil.



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Leonardo Kirster de Toledo is a pharmacist at the Hospital Complex belonging to the Federal University of Bahia, MSc in Pharmaceutical Assistance by UFRGS, and President of SBRAFH.

Eugenie Néri Viana is a pharmacist at the Hospital Complex belonging to the Federal University of Ceará, PhD in Pharmaceutical Sciences by UFC, and Scientific Director of SBRAFH.

