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Editorial

Facing the shortage of health technologies generated by the global health crisis: joint actions of Brazilian scientific societies

Enfrentamento da escassez de tecnologias em saúde gerada pela crise sanitária global: ações conjuntas de entidades científicas brasileiras

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Access to medicines is fundamental to ensure the right to health[1]. It is a *sine qua non* condition for the continuity of clinical care, allied to the search for the promotion of their rational use, quality, safety, and efficacy[2]. In health services, medicines and other supplies equip the multidisciplinary team to prevent, diagnose, and modify the course or treatment of a disease. Occasional or permanent access problems compromise care quality, harming patients, health professionals, and funding of the system[3,4].

Thus, the scientific community has widely discussed and acknowledged shortage as a global public health problem[5,6]. However, the global scarcity of resources was aggravated by the COVID-19 pandemic[7], given that the processes for accessing health technologies were extremely influenced by multiple factors[8].

In Brazil, countless actions were developed and coordinated in several spheres in an attempt to minimize the shortage problem. Institutions (?) such as the National Health Surveillance Agency (*Agência Nacional de Vigilância Sanitária*, ANVISA), the Ministry of Health (*Ministério da Saúde*, MS), the National Council of Health Secretaries (*Conselho Nacional de Secretários de Saúde*, CONASS), the National Council of Municipal Health Secretariats (*Conselho Nacional de Secretarias Municipais de Saúde*, CONASEMS) and diverse scientific entities worked together on several occasions to overcome this adversity[9].

Likewise, in a collective and voluntary effort, seven entities – the Brazilian Society of Hospital Pharmacy and Health Services (*Sociedade Brasileira de Farmácia Hospitalar e Serviços de Saúde*, SBRAFH), the Brazilian Society of Anesthesiology (*Sociedade Brasileira de Anestesiologia*, SBA), the Institute for Safe Practices in Medication Use (*Instituto para Práticas Seguras no Uso de Medicamentos*, ISMP), the Brazilian Association of Intensive Medicine (*Associação Brasileira de Medicina Intensiva*, AMIB), the Brazilian Society for Care Quality and Patient Safety (*Sociedade Brasileira para Qualidade do Cuidado e Segurança do Paciente*, SOBRASP), the Brazilian Nursing and Patient Safety Network (*Rede Brasileira de Enfermagem e Segurança do Paciente*, REBRAENSP), and the Brazilian Association of Emergency Medicine (*Associação Brasileira de Medicina de Emergência*, ABRAMEDE) – developed several technical-scientific guidelines aimed at facing the severe health crisis generated by shortage in essential supplies during the COVID-19 pandemic[10–13].

Such actions were motivated by a great concern and a sense of urgency, considering that the shortage or total lack of essential resources for critically-ill hospitalized patients might influence l mortality . A global analysis pointed out that the increase in the number of beds was not sufficient to reduce mortality and other factors, such as unavailability of supplies and equipment, which may have contributed to the poor outcomes observed[3].

The records of shortages in Brazilian health institutions were countless, frequent, and widely publicized and discussed by the scientific community[14]. In mid-2020, in an attempt to scale the national shortage problem, SBRAFH identified more than 700 (seven hundred)

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notifications sent by pharmacists from all over the country, which reported product shortages and a lack of predictability regarding regularization of the stocks by the months that followed. At the time, the Ministry of Health was notified about these findings[12]. In the same year, SBRAFH initiated a research study with the objective of identifying the main causes involved in this context. Once again, the shortage was reported by at least 84.6% of the institutions in all the Brazilian states. The main difficulties related to the purchase processes corresponding to the price increase in relation to previous periods (89.9%), non-compliance with delivery deadlines (82.0%), and requests for cancellation of commitments, purchases or contracts (42.6%)[14].

The purchase price proved to be decisive for access to the technologies in many health institutions. The SBRAFH, SBA, ISMP, AMIB, SOBRASP, REBRAENSP and ABRAMEDE scientific entities formalized a document with the Executive Secretariat of the Medications Chamber, responsible for regulating drug prices in the national market, about possible overpricing, especially involving products of priority use in coping with the pandemic[10–13,15,16].

The scientific entities also published a document describing therapeutic alternatives, changes in pharmaceutical presentations and adaptations of dosage regimens, such as a contingency plan (exceptional and temporary) for shortages. The objective was to optimize the use of health technologies, considering the crisis scenario that compromised access to medications, measures that were also observed in many countries[17,18].

The dissemination of methodologies to guide the definition of estimates regarding consumption of priority use medications, such as those for analgesia, sedation and neuromuscular blocking in patients with ventilatory prosthesis, was also necessary given the drug shortages. On that occasion, at the request of CONASS and CONASEMS, SBRAFH developed an instrument with the daily therapeutic doses of these medications, recommended by the scientific bases and specifically considering the protocols published by SBA and AMIB in order to better improve management of the stocks and, thus, having a better forecast and reduction of the possibility of ruptures and interruption of treatments. The document was widely distributed at the national level and recommended as a reference for all municipalities of the country by CONASS, CONASEMS and the Ministry of Health[17,19]. This collaboration was recognized at the 3rd Ordinary Meeting of the Tripartite Intermanager Commission, and the Ministry of Health formally acknowledged the scientific entities involved in the coping actions[9].

In this context of implemented actions, ANVISA relaxed the current legislation, including the regulations referring to the production, marketing and import of medications and health products, due to the global public health emergency related to SARS-CoV-2[20–22].

Thus, health services had to deal with the complexity and variability of access to the products available on the market, including the imported ones, whose packaging and labels were written in a foreign language, not necessarily complying with the expected Brazilian standard, in addition to differences in presentations, administration routes and pharmaceutical forms conventionally known in the national market. Although necessary, as an immediate response plan, the effect of this action would cause possible harms to safety involving use of these medications, considering the identification of the products, the divergent presentations of the nationally known ones and the lack of access to information in the Portuguese language, both in the primary and in the secondary packaging, in addition to the package inserts. Thus, the entities prepared related instructions, as a matter of urgency, with a guiding purpose, aimed at the responsible bodies, by competence, and at health institutions throughout the country[23–25].

In this understanding, SBRAFH, SBA, ISMP, AMIB, SOBRASP, REBRAENSP and ABRAMEDE, aiming at improving access to medications restricted to hospital use, clinics, and outpatient and home care services, also participated in the discussions and elaboration of RDC No. 517, of June 10th, 2021, providing for the criteria for package insert exemption and requirements for labeling information involving the medications used to fight against the pandemic. This contingency measure was necessary, considering the scarcity of resources, and engagement of the societies allowed the experts to analyze possible negative impacts on the health services[26].

It is increasingly necessary to develop a new, attentive, cooperative, dynamic and holistic view so that it is possible to overcome challenges and add value to the results, especially related to the issues involving public health, which need to be rethought urgently and with top priority. It is necessary to pay due attention to the adversities arising from the scarcity of priority use resources, as countless possibilities and opportunities for improvement can be achieved.

The pandemic period exposed deficits related to the health system, associated with the response capacity to shortage and scarcity of essential products, as well as from the perspective of dealing with future situations that may interfere with access to indispensable supplies[7,27]; and, at the same time, it changed the way of providing care, allowing for a reassessment of patient-centered professional practices[27]. In a time of crisis, coordinated work proved to be fundamental to avoiding rework and loss of quality in the expected results, adding more value each time[8]. It also revealed the imperative nature of the interdependence between health, social protection and economy.

The post COVID-19 era cannot be marked by the same routine practices. It is urgent that a deeper, structural and sustained transformation process definitely takes place, so that promising and sustainable results can be achieved[7]. The structuring of crisis committees that may actually face emergency situations should be encouraged in all health institutions, with governmental support.

Structures close to equilibrium are repetitive and universal, while a system in a chaotic state can result in a new order, and, in these cases, the greatest organizer is information[28]**.** Access to indispensable supplies is as necessary as access to information, and this becomes even more latent in this global health crisis context. May this be a solid foundation capable of facing the direct and indirect effects of different disasters and emergency situations[7,23,27]. Science and knowledge as weel as communication are fundamental for the development of a response plan at the national level[8].

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