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## FIP STATEMENT OF POLICY

### Digital health<sup>1</sup>

#### Background:

Progress and development of healthcare systems are being driven by the evolving health needs of global populations alongside the opportunities that digital transformation brings.<sup>2</sup> Digital transformation already streamlines pharmaceutical and healthcare processes. Recent digital solutions have revolutionised clinical practice through all stages of health service delivery, from the development of new medicines and medical devices; to their use by patients and consumers. In the areas of prevention, diagnosis, disease management and monitoring, digital tools already provide timeliness and convenience, together with safety, effectiveness and efficiency. For example, they allow for electronic prescribing and exchange of health data within and between healthcare systems. They enable new communication flows between health actors, between primary care and secondary care, and even across borders and boundaries. They can be evidence-based, include contextualised considerations and provide helpful support to pharmacists for better pharmaceutical care, e.g., embedding bedside scanning functionality in hospitals to deliver personalised treatment for patients.

Moreover, digital tools can provide greater accessibility to health information and potentially improve access to care. All of this can ultimately result in improved health outcomes and reduced costs of healthcare.

Finally, digital transformation may allow for more inclusive, equitable and ethical use of healthcare resources and is often more environmentally friendly.

The pharmacy profession has an extensive history of embracing digital technologies across all levels of pharmaceutical care services. At all times, pharmacists have demonstrated their willingness and readiness to adopt digital technologies. Numerous examples show pharmacists' dedication to offer

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<sup>1</sup> Definition of digital health adopted from WHO Global strategy for Digital Health 2020-2025: "digital health is understood to mean "the field of knowledge and practice associated with the development and use of digital technologies to improve health". This definition encompasses eHealth [...] and expands the concept of eHealth to include digital consumers, with a wider range of smart and connected devices. It also encompasses other uses of digital technologies for health such as the Internet of Things, advanced computing, big data analytics, artificial intelligence including machine learning, and robotics. Available from:

<https://www.who.int/docs/default-source/documents/g4dhd2a9f352b0445bafbc79ca799dce4d.pdf>

<sup>2</sup> World Health Organization (WHO). Website. 2021. Available from: <https://www.who.int/ehealth/about/en/>



patients the highest standard of health care: for example, the development of automation, e-prescribing, e-dispensing, shared electronic health patient records, decision support tools, telehealth, online presence of community pharmacies, online counselling, chatbots and remote patient adherence monitoring.<sup>3</sup> As custodians of medication management systems, pharmacists have a responsibility to ensure that the use of such technologies is supported by strong regulatory and ethical frameworks.

Pharmacists acknowledge the positive changes in health care that the digital revolution brings and the support it provides them in their daily practice. They welcome the public's interest and engagement in self-management together with the paradigm shift to a "person-centric" care model that this entails. They foster digital solutions for self-management which empower citizens to manage their own health and that of their families and are ready to assist them in improving their health and digital literacy and optimising health outcomes.

Indeed, the expansion of smart wearables and other digital opportunities provides an entry point for feedback on daily health behaviours while creating new relationships between personal data practices and big data politics. However, this may also give rise to ethical and legal concerns in relation to issues such as ownership, privacy, human rights, commercialisation and monetisation of health data. Here, pharmacists have a role to play in helping to guide citizens and support them in making informed healthcare choices involving e-health solutions in their digital journey, while also helping ensure their patients' rights are maintained.<sup>4,5</sup>

The full potential of digital and technology-enabled solutions cannot be achieved without the implementation of interoperability. Interoperability should be a prerequisite to any digital technology development. The need for internationally recognised interoperability standards in addition to recognised terminology and taxonomy should be strongly advocated. It is the *sine qua non* for a swift and fluid flow of information access, exchange, integration, cooperative use and seamless portability within health information systems all over the world.

The impact of digital transformation in health care is already profound. But given accelerated digital advances and innovations, this impact is expected to gain even greater significance in the future. Digital therapeutics, 3D printing, artificial intelligence, the internet of things, nanotechnology, biotechnology, pharmacogenetics, pharmacogenomics, and predictive and personalised medicine are innovative breakthroughs that can influence pharmacy in the

<sup>3</sup> Examples will be available at the FIP website under the online digital tools resource centre (under development) and under WHO Digital Health Atlas. 2021. Available from: <https://digitalhealthatlas.org/en/-/>

<sup>4</sup> International Pharmaceutical Federation (FIP). FIP digital health in pharmacy education: Developing a digitally enabled pharmaceutical workforce. 2021. Available from: <https://www.fip.org/file/4958>

<sup>5</sup> The Pharmaceutical Group of the European Union (PGEU). Position Paper on Digital Health. 2021. Available from: <https://www.pgeu.eu/digital-health/>



foreseeable future. Image recognition, natural language processing, and virtual and augmented reality can lead to great strides in the healthcare arena. Pharmacists must keep abreast of all these emerging advances, whose immense capabilities have the potential to reshape health care worldwide. Together with their teams and with other healthcare professionals, pharmacists must also take responsibility for maintaining the currency of their digital competencies and skills to harness the benefits of digital innovations. This is most relevant in the context of the pharmacist's recognised role of being responsible and accountable for medication efficacy and safety.

Only a confident, capable, agile and digitally enabled pharmaceutical workforce will be able to leverage the potential of digital health into a sustainable pharmacy ecosystem and tackle the challenges to usher pharmacy into its digitally supported future.<sup>6</sup> The ultimate goal is to reduce inequities in health care and improve health and well-being. This aligns with both FIP Development Goals 20 (Digital health) and 21 (Sustainability in pharmacy)<sup>7</sup> and the United Nations Sustainable Development Goals.<sup>8</sup>

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## **AGAINST THIS BACKGROUND, FIP RECOMMENDS THAT:**

### **Governments and policymakers:**

1. Promote the adoption of common international, interoperable digital standards and recognised international terminology and taxonomy to ensure swift and fluid exchange of healthcare data and information and avoid costly interfaces between health information digital systems.
2. Engage with pharmacists as healthcare professionals:
  - a. in the digital transformation across all aspects of health care delivery. This includes the design, the specification of parameters and the evaluation of digital health solutions to ensure that they enable the seamless transfer of data and information between pharmacies, primary care and secondary care in the safest way, and that digital health solutions meet the needs of patients and healthcare professionals and providers; and

<sup>6</sup> International Pharmaceutical Federation (FIP). FIP Global Competency Framework: Supporting the development of foundation and early career Pharmacists. Version 2. 2020. Available from: <https://www.fip.org/file/4805>

<sup>7</sup> International Pharmaceutical Federation (FIP). FIP Development Goals. 2020. Available from: <https://www.fip.org/fip-development-goals>

<sup>8</sup> United Nations (UN). Sustainable Development Goals (SDGs). 2015. Available from: <https://sdgs.un.org/goals>



- b. in the development of health-related digital transformation policies and services at national, regional or local levels as appropriate.
3. Promote and support the deployment of digital technologies within pharmacy that are evidence-based, allow for the continued pharmacist-based professional stewardship of medicines and medical devices,<sup>9</sup> and match the current demands of digitalised health care in respect of data protection, patient data universality, security and privacy.
4. Put in place appropriate governance arrangements to ensure that appropriate data and information management practices are implemented within systems and organisations.
5. Make sure disruptive technologies and business models are governed to maintain the inherent protections that are in place for the care of populations, alongside delivery of innovation and change that are beneficial to healthcare consumers.
6. Enforce appropriate regulation in the use of digital technology for the marketing, promotion and purchase of medicines and medical products. Particular attention should be paid to the digitalisation of the supply chain process for its potential value in terms of improvement of quality and patient safety, counterfeit prevention, more efficient and resilient supply, and further automation of pharmacists' activities.
7. Focus on the creation of governance and policies that:
  - a. give public confidence in the use of digital technologies in the provision of healthcare;
  - b. facilitate public health literacy for the adoption of new and emerging digital technologies for improved access to healthcare; and
  - c. empower the public to access their health data and take control over who will have access to their data for improved self-management.
8. Encourage and financially support interprofessional education on the use of digital technologies, both at undergraduate and professional levels, to increase health professionals' digital literacy.
9. Adjust upskilling and/or reskilling of health workforces through continuing professional development to prepare healthcare professionals to embrace and champion the profound reshaping that emerging technologies will bring to healthcare delivery.
10. Ensure healthcare professionals' readiness to adopt and incorporate new digital technologies and collaborate on healthcare interventions where appropriate.

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<sup>9</sup> International Pharmaceutical Federation (FIP). FIP Position Statement on Emerging technologies and pharmacy practice. 2020. Available from: <https://www.fip.org/file/4874>



11. Allow development of robustly designed, value-based disease registries, with strong emphasis on data quality management, robust procedures to allow access to data and information for research purposes while respecting data privacy and security. Explore the usage of data repositories for research on unmet medical needs, while recognising where digital technologies can meet those needs for better therapeutic outcomes and well-being.
12. Introduce and/or amend data protection legislation to allow for robust oversight mechanisms, so that patient consent policies are enforced, and so that patient privacy and confidentiality is appropriately protected at all times. Ensure effective data-sharing agreements and procedures between healthcare facilities' professionals, pharmacies, government or research bodies, and patients so that individualised patients' information cannot be shared without their express authorisation.
13. Make the development and refinement of pharmacist-led digital technologies for pharmaceutical care a research priority for funding in order to improve patient outcomes.
14. Promote and evaluate innovative remuneration models<sup>10</sup> for digital health services to enable sustainable pharmacist-led use of digital technologies for pharmaceutical care to benefit patients.

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#### **FIP member organisations:**

1. Together with other healthcare professionals' organisations and supportive patient's associations, advocate interoperability via a digital standard in health and for globally accepted terminology related to health.
2. Partner with standard development organisations to ensure that the views and needs of the profession and best interests of patients are addressed in the development of digital health standards.
3. Encourage pharmacists to work collaboratively and cooperatively with other healthcare professionals to use digital technologies in the provision of pharmacy services to citizens.
4. Encourage the adoption of digital technologies that are interoperable and that enable the safe, effective, economical and appropriate use of medicines.
5. Help pharmacists develop frameworks to assess and review the implementation of digital technologies in their practice.
6. Support pharmacists to stay up to date with emerging technologies and recent developments in digital health, demonstrating their use in

<sup>10</sup> International Pharmaceutical Federation (FIP). Statement of Policy on the sustainability of pharmacist-delivered professional services through viable remuneration models. 2020. Available from: <https://www.fip.org/file/4934>



- practice with real-life examples on improving care and solving existing medicine-related problems.
7. Promote the profile of pharmacists in leadership positions in digital health. Share their experiences and insights to help inform strategies on how to better support pharmacists in the application of digital technologies in pharmacy practice; consider the introduction of the position of chief pharmacy information officer to augment the position of chief medical information officer in hospitals as a means of promoting increased digitalisation.
  8. For the benefit of continued medicine development, contribute to the development of evidence generation and capture through digital means throughout a medicine's lifecycle.
  9. Contribute to the development of criteria for the evaluation and certification of digital technologies in pharmacy practice.
  10. Encourage and facilitate collaboration between pharmacists, technology and innovation experts, patients and other digital health stakeholders at national and international levels.
  11. Support regulators and policymakers to develop a national strategy for the uptake of digital technologies in pharmacy services that benefit patients, and challenge governments and policymakers to provide the right regulation and remuneration for appropriate digital services. Such digital services should facilitate the electronic transfer of data and patient information between episodes and locations of care, e.g., hospital admission and discharge.
  12. Work with other healthcare representative organisations and patient representative associations in developing public policies on digital health to promote the integration of pharmaceutical services into national and international digital health architectures.
  15. Encourage specialisation in digital health and advocate its integration as a core part of national education strategies. Partner with education institutions and providers to increase pharmacists' digital literacy. Develop and provide pre- and post-graduate courses on upskilling in digital health and prepare pharmacists to lead and champion the profound reshaping that emerging technologies will bring to healthcare delivery in the near future.
  16. Encourage pharmacists to upskill their pharmaceutical teams in digital literacy and utilise digital technologies in their pharmacy organisations to improve efficiency and meet the demands of health care.
  17. Encourage interprofessional research on digital health at a national and international level.

**Pharmacy academic institutions:**

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1. Support pharmacy organisations in developing standards for digital health education.
2. Ensure that pharmacy and pharmaceutical sciences students graduate with adequate knowledge and skills in digital health. Adapt the curriculum with regular and systematic appraisal of the needs of the pharmacy workforce.
3. Equip pharmacy and pharmaceutical sciences students with the necessary skills in reflective practice to ensure that they are ready to adapt and embrace competency development aligned to the digital transformation of healthcare delivery in an ethically competent manner.
4. Collaborate with stakeholders in the digital health space to provide practice, experiential learning and career opportunities for the current and future workforce.
5. Increase digital literacy competencies and the digital health knowledge of pharmacy educators and academic staff to deliver effective digital health education. Institutions should work with stakeholders, such as regulatory bodies, to develop a digital health competency framework, develop a core curriculum and assessment process for pharmacy students, graduates and qualified pharmacists, and maintain a repository of educational examples.
6. Lead the adoption of digital technologies for health care by portraying change leadership and bridging practice and education.
7. Develop the research and innovation capacity of pharmacy educators and academic staff, and provide a platform for sharing research results in the field of digital health.
8. Collaborate with professional bodies to develop e-training for suitable continuing professional development in the pharmacy profession, in addition to advocating digital transformation in health care.
9. Collaborate with other academic institutions for all healthcare professionals to establish a common knowledge platform for digital competency across all healthcare disciplines.

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#### **Pharmacists:**

1. Together with other healthcare professionals' representatives, advocate globally accepted terminology standards in health care.
2. Assess the added value of novel digital technologies through critical digital benchmarking and test their digital interoperability to ensure their suitability for use in pharmacy. Where possible, assist patients to do the same. Consider the use of pharmacoeconomic appraisal methods to assess the added value of digital transformation.



3. Be a driving force in incorporating evidence-based digital technologies into daily practice. Make sure those technologies are interoperable with the existing digital environment. Check that these technologies are compliant with existing regulations and ethical principles, and that they respect patients' privacy, confidentiality, consent and permission when utilising their digital health data.
4. Identify, manage, organise, store and share digital information in respect of the principles of information management, data security, privacy and confidentiality, according to local legislation. Ensure that data and information are maintained and stored securely to mitigate against loss or damage.
5. Ensure that the pharmacy workforce has the appropriate digital knowledge and skills to better inform decisions when implementing digital technologies and to critically appraise new developments. Keep abreast of digital breakthroughs to be prepared to usher the profound reshaping that emerging technologies will bring to healthcare delivery in the near future.
6. Adopt reflective practice to ensure a willingness to adapt and embrace competency development aligned to digital transformation as well as a readiness to continually improve health service delivery in an ethical manner in the context of digital health.
7. Facilitate and encourage patients' digital literacy, with attention to principles of equity. Explain and discuss the benefits and implications of digital health technologies being used in their care so that they feel empowered to make informed choices. Address misinformation.
8. Where applicable, participate in digital health services that promote health outcomes, and engage with digital technologies (e.g., social media platforms and mobile applications) to facilitate discussions with patient and others.
9. Advocate the benefit of all incorporated digital technologies within the pharmaceutical team so that they are adopted and, where relevant, used by all.
10. Educate and encourage healthcare teams to embrace digital technologies and systems that maximise efficiency and support intra- and interprofessional clinical collaboration.
11. Collaborate with other healthcare professionals and stakeholders in the assessment, certification and implementation of digital technologies that optimise health care.
12. Challenge policymakers and pharmacy organisations to support the implementation of digital technologies as appropriate.

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**AGAINST THIS BACKGROUND, FIP COMMITS TO:**

1. Advocate — to the World Health Organization, the United Nations, the World Health Professions Alliance, other international healthcare professional associations, patients' associations, international digital health solution consortia and other relevant international stakeholders — for the adoption of common digital standards and common terminologies to enhance interoperable e-health solutions within health information systems and to facilitate health information exchange among countries at a global level.
2. Develop international strategies to promote among its member organisations the importance of interoperable digital technology in providing high-quality, patient-centred digital pharmaceutical care to ensure accessible, safe and rational use of effective medicines.
3. Support its member organisations to develop educational resources and standards covering appropriate digital health literacy. These resources should outline good practice and affordable solutions, and be a support for digital health education.
4. Advocate, collectively with the other healthcare professionals, on national and international levels, the digital advancement of the profession. Focus should be given to digital breakthroughs and other emerging technologies and applications so as to prepare the pharmacy workforce to champion and lead the profound reshaping these will bring to healthcare delivery in the near future.
5. Advocate the pharmacy profession's ability to embrace digital technologies, and pharmacists' capabilities as agents of change in leading projects of high magnitude to optimise healthcare.
6. Promote a positive attitude towards digital health and the possibilities digital transformation can bring to enable safe, efficient, accessible and cost-effective healthcare.
7. Support its member organisations to challenge the pharmacy profession, policymakers and regulators in their countries to resource and harness the potential of pharmacy via the full scope of pharmaceutical care. While welcoming and embracing digital technologies, remain a strong advocate and supporter of patient data privacy, personalised care and patient safety.
8. Support the exchange of experiences and success stories among its member organisations and countries with an emphasis on developing countries.
9. Identify and celebrate its member organisations and countries that have successfully developed and implemented value-adding digital technologies, where there have been demonstrable benefits to patient and health system outcomes.

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10. Encourage international collaboration for further research in digital health to increase the level of understanding of digital health technologies. Implement a FIP-dedicated platform for sharing the research results.
11. Provide tools and support to develop digital health curricula for pharmacists and pharmaceutical scientists. Support national implementation of the digital literacy competencies through the FIP Global Competency Framework at global level.
12. Promote evidence-based practice that can be adapted to the national level, thus supporting evidence-based policies.

Date of adoption : 17 September 2021  
Proposed by : FIP Bureau  
This Statement replaces the following previous FIP Statements : N/A  
This Statement can be quoted by stating: : FIP Statement of Policy on Digital health  
This Statement references the following FIP Statements and documents: : International Pharmaceutical Federation. FIP Statement of Policy on emerging technologies and pharmacy practice. The Hague: FIP, 2021. Available at: <https://www.fip.org/file/4874>

International Pharmaceutical Federation. mHealth: Use of mobile health technologies in pharmacy practice. The Hague: FIP, 2019. Available at: <https://www.fip.org/files/content/publications/2019/mHealth-Use-of-mobile-health-tools-in-pharmacy-practice.pdf>

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