

FIP STATEMENT OF POLICY

Digital Health¹

Background:

The alignment of the evolving health needs of global populations with digital transformation is driving the progression of healthcare systems.² Digital transformation already streamlines the whole pharmaceutical and healthcare process, from the development of new medicines or medical devices to their use by consumers. Recent digital solutions have revolutionised clinical practice through all stages of health service delivery – from prevention to diagnosis, disease management and monitoring, taking into account convenience, safety, efficiency, ethical use, cost-effectiveness and affordability together with evidence-based, effective, sustainable, inclusive, equitable and contextualised considerations – all this resulting in improved health outcomes. Greater accessibility to care and health information, more focus on prevention and early diagnosis, personalisation of care, new communication flows between health actors, and further integration of the primary healthcare system, are additional benefits led by digital transformation, which may ultimately reduce the cost of healthcare.

The pharmacy profession has an extensive history of embracing digital technologies across all levels of pharmaceutical care services. From all times, pharmacists have demonstrated their willingness and readiness to adopt digital technologies, as seen through numerous examples giving evidence to their dedication to offer patients the highest standard of healthcare: the development of automation, e-prescribing, e-dispensing, shared electronic health patient records, decision support tools, telehealth, online pharmacy, online counselling, bots, remote patient adherence monitoring, and other digital solutions.³ As custodians of the medication management system,

¹ 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>

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

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



33 pharmacists have always been cautious in ensuring these technologies are best
34 practice use supported by pharmacists' regulatory and ethical frameworks and
35 should remain vigilant with any new technology deployed.

36 Pharmacists feel also concerned by the societal changes the digital revolution
37 brings. Public interest and engagement in self-management entail a paradigm
38 shift to a "person-centric" care model. Digital support solutions for self-care
39 empower citizens to manage their health and that of their families, while
40 improving their health literacy and finally health safety. The expansion of smart
41 wearables and other digital opportunities allows an entry point to provide feed-
42 back on daily health behaviours while creating new relationships between
43 personal data practices and big data politics. But it also gives rise to new ethical
44 concerns on issues such as ownership, privacy, human rights, increasing
45 commercialisation and data monetisation. Here pharmacists have a place to
46 help patients think beyond the technology involved to ensure their rights are
47 maintained while guiding them for informed choices on relevant eHealth
48 solutions to support them in their digital journey.⁴

49 These tech-enabled developments with tremendous potential, which underpin
50 the digital revolution, cannot be achieved without the fulfilment of
51 interoperability. Interoperability is a prerequisite to any digital technology
52 development: this must be emphasised. The need on a global level of
53 internationally recognised interoperability standards as well as recognised
54 terminology taxonomies should be strongly advocated for a swift and fluid flow
55 of information access, exchange, integration, cooperative use, and seamless
56 portability within health information systems all over the world.

57 The impact of digital transformation in healthcare has been profound, and,
58 given accelerated digital advances and innovations, it is expected to gain even
59 greater significance in the future. Technological breakthroughs such as digital
60 therapeutics, 3D printing, artificial intelligence, Internet of Things,
61 nanotechnology, biotechnology, pharmacogenetics, pharmacogenomics and
62 predictive and personalised medicine, image recognition, natural language
63 processing, virtual and augmented reality are to lead to great strides in the
64 healthcare arena in the foreseeable future. Pharmacists must keep abreast of
65 all these emerging advances to which immense capabilities will reshape
66 healthcare worldwide. Together with their teams and with the other healthcare
67 professionals, they must be given the possibility for upskilling or reskilling their
68 digital capabilities and maintaining the currency of their digital competencies to
69 leverage these tools within their recognised role of being responsible and
70 accountable for medication efficacy and safety.

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⁴ 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>



71 Only a confident, capable, agile, and digitally enabled pharmaceutical workforce
72 will be able to leverage the potential of digital health into a sustainable pharmacy
73 ecosystem and tackle the challenges to usher pharmacy into its digital future.⁵

74 This goal will reduce inequities and improve health and well-being.

75 It complies with FIP Development Goals 20 and 21⁶ and the UN Sustainable
76 Development Goals⁷.

77

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

79 **Governments and policy makers:**

- 80 1. Promote the adoption of common international interoperable digital
81 standards and recognised international terminology taxonomies to
82 ensure swift and fluid exchanges and avoid costly interfaces between
83 health information digital systems.
- 84 2. Engage with pharmacists as healthcare professionals to develop health-
85 related digital transformation policies and services at national, regional,
86 or local levels as appropriate.
- 87 3. Promote and support the deployment of digital technologies within
88 pharmacy that are evidence-based, allow for the continued pharmacist-
89 based professional stewardship of medicines,⁸ and match the current
90 demands of digitalised healthcare within the healthcare infrastructure
91 in respect of data protection, patient universality, security, and privacy.
- 92 4. Put in place appropriate governance arrangements ensuring
93 appropriate data and information management practices are
94 implemented within systems and organisations.
- 95 5. Make sure disruptive technologies and business models are to be
96 governed in a manner that maintains the inherent protections that are
97 in place for the care of the population while recognising that disruptive
98 technologies may deliver change that is beneficial to healthcare
99 consumers.

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⁵ 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>

⁶ International Pharmaceutical Federation (FIP). FIP Development Goals. 2020. Available from: <https://www.fip.org/fip-development-goals>

⁷ United Nations (UN). Sustainable Development Goals (SDGs). 2015. Available from: <https://sdgs.un.org/goals>

⁸ International Pharmaceutical Federation (FIP). FIP Position Statement on Emerging technologies and pharmacy practice. 2020. Available from: <https://www.fip.org/file/4874>



- 100 6. Enforce appropriate regulation in the use of digital technology for the
101 marketing and promotion of the purchase of medical products to
102 protect the public.
- 103 7. Focus on the creation of governance and policies that:
104 A - give public confidence in the use of digital technologies in the
105 provision of healthcare
106 B - facilitate public health literacy for the adoption of new and
107 emerging digital technologies for improved access to healthcare
108 C - empower the public to access their health data and take
109 control over who will have access to their data for improved self-
110 care.
- 111
- 112 8. Encourage and financially support interprofessional education on the
113 use of digital technologies, both at undergraduate and professional
114 levels, to increase health professionals' digital literacy, adjust upskilling
115 or reskilling of health workforces to the healthcare demand, and
116 prepare them to usher the profound reshaping emerging technologies
117 will bring to healthcare delivery.
- 118 9. Ensure healthcare professionals' readiness to adopt and incorporate
119 new digital technologies and collaborate on healthcare interventions
120 where appropriate.
- 121 10. Allow development of solidly architected value-based disease registries,
122 with strong quality data management procedures for research purposes
123 in respect of data privacy and security and explore the usage of data
124 repositories for research on unmet medical needs, while recognising
125 where digital technologies can meet those needs for better therapeutic
126 outcomes and well-being.
- 127 11. Make sure data protection legislation and patient consent policies are
128 enforced to protect patient privacy and confidentiality. Ensure effective
129 data-sharing agreements between health care facilities' professionals,
130 pharmacies and government/research bodies, and patients so that
131 sharing of individualised patients' information cannot be done without
132 their express authorisation.
- 133 12. Make the development and refinement of pharmacist-led digital
134 technologies for pharmaceutical care a research priority for funding to
135 improve patient outcomes.
- 136 13. Promote and evaluate innovative remuneration models⁹ for digital
137 health services to enable pharmacist-led use of digital technologies for
138 pharmaceutical care to benefit the patient.
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⁹International 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>



141 **FIP Member Organisations:**

- 142 1. Together with the other healthcare professionals' organisations,
143 advocate for interoperability via a universal unified digital standard in
144 health and for a globally accepted terminology for health terms.
- 145 2. Partner with standard development organisations to promote that the
146 views and needs of the profession and best interests of patients are
147 addressed in the development of digital health standards.
- 148 3. Encourage pharmacists to work collaboratively and cooperatively to use
149 digital technologies in pharmacy services.
- 150 4. Encourage the adoption of digital technologies that are interoperable
151 and enable the safe, responsible, convenient, effective, and efficient
152 use of medicines.
- 153 5. Help members develop frameworks to assess and review the
154 implementation of digital technologies in their practice.
- 155 6. Support pharmacists to stay up to date with emerging technologies and
156 recent developments in digital health as well as demonstrating their use
157 in practice with real life examples on solving existing medicine related
158 problems and improve care, specially developing new digital services in
159 addition to using digital/distant channels for current service provision.
- 160 7. Promote the profile of pharmacists in leadership positions in digital
161 health. Share their experiences and insights to help inform strategies on
162 how to better support pharmacists in the application of digital
163 technologies in pharmacy practice.
- 164 8. For the benefit of continued medicine development, contribute to the
165 development of evidence generation and capture through digital means
166 throughout a medicine's lifecycle.
- 167 9. Develop criteria for evaluation and certification for digital technologies
168 in pharmacy practice.
- 169 10. Ensure that the information provided by digital technologies is correct
170 and up to date, e.g., information in apps, clinical decision support
171 systems etc.
- 172 11. Encourage and facilitate collaboration between pharmacists,
173 technology and innovation experts and other digital health stakeholders
174 on a national and international level.
- 175 12. Develop a national strategy for the uptake of digital technologies in
176 pharmacy services that benefit patients and challenge governments and
177 policymakers to provide the right regulation for appropriate digital
178 services.
- 179 13. Work with other health care representative organisations in developing
180 public policies on digital health to promote the integration of
181 pharmaceutical services into national /international digital health
182 architectures.
- 183 14. Encourage specialisation in digital health and advocate for its
184 integration within national education strategies. Partner with



- 185 institutions and education providers to increase pharmacists' digital
186 literacy and to develop and provide pre-graduate and professional
187 courses on upskilling or reskilling their competencies in digital health
188 and get them prepared to help lead the profound reshaping emerging
189 technologies will bring to healthcare delivery in the near future.
- 190 15. Provide appropriate resources and encourage pharmacists to upskill
191 their pharmaceutical teams in digital literacy and utilise digital
192 technologies in their pharmacy organisations to improve efficiency and
193 meet the demands of healthcare.
- 194 16. Encourage interprofessional research on eHealth on a national and
195 international level.

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197 **Pharmacy academic institutions:**

- 198 1. Support pharmacy organisations in developing standards for digital
199 health education.
- 200 2. Ensure that pharmacy and pharmaceutical sciences students graduate
201 with adequate knowledge and skills in digital health, adapting the
202 curriculum with regular and systematic appraisal of the needs of the
203 pharmacy workforce.
- 204 3. Equip pharmacy and pharmaceutical sciences students with the
205 necessary skills in reflective practice to ensure that they are willing to
206 adapt and embrace competency development aligned to the digital
207 transformation of health care delivery in an ethically competent manner.
- 208 4. Collaborate with stakeholders in the digital health space to provide
209 practice, experiential learning, and career opportunities for the current
210 and future workforce.
- 211 5. Increase digital literacy competencies and digital health knowledge of
212 pharmacy educators and academic staff to deliver effective digital health
213 education. Institutions should work with stakeholders such as regulatory
214 bodies to develop a digital health competency framework, develop a
215 core curriculum and assessment process for pharmacy students,
216 graduates, and qualified pharmacists, and maintain a repository of
217 educational examples.
- 218 6. Lead the adoption of digital technologies for healthcare by portraying
219 change leadership and bridging practice and education.
- 220 7. Develop research in the field of digital health.
- 221 8. Collaborate with professional bodies to develop e-training for suitable
222 continuing professional development in the pharmacy profession.
- 223 9. Collaborate with other academic institutions for other healthcare
224 professionals to establish a common knowledge platform for digital
225 competency.

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227 **Pharmacists:**

- 228 1. Together with the other healthcare professionals' representatives,
229 advocate for interoperability via a universal unified digital standard in
230 health and a globally accepted terminology for health terms.
- 231 2. Actively participate in incorporating in their daily practice evidenced
232 based digital technologies, which are interoperable with the existing
233 environment, compliant with existing regulations, with ethical principles
234 and respectful of patient privacy, consent, and permission when utilising
235 their digital health data.
- 236 3. Assess the added value of novel digital technologies through critical
237 digital benchmarking as well as their digital interoperability to ensure
238 their suitability for use in pharmacy. When relevant, assist their patients
239 in doing the same.
- 240 4. Identify, manage, organise, store, and share digital information in
241 respect of the principles of information management, data security,
242 privacy and confidentiality. Ensure that data and information are
243 maintained and stored securely to mitigate against loss or damage.
- 244 5. Ensure they have appropriate digital knowledge to better inform
245 decisions when implementing digital technologies and to maintain
246 critical appraisal of new developments. Keep abreast of digital
247 breakthroughs to be prepared to usher the profound reshaping emerging
248 technologies will bring to healthcare delivery in the near future.
- 249 6. Adopt reflective practice to ensure a willingness to adapt and embrace
250 competency development aligned to digital transformation as well as a
251 readiness to continually improve health service delivery in an ethical
252 manner in the context of digital health.
- 253 7. Facilitate patients' digital literacy, with attention to principles of equity.
254 Explain and discuss the benefits and implications of digital health
255 technology being used in their care so that they feel empowered to make
256 informed choices. Address misinformation.
- 257 8. Where applicable, participate in digital health services that promote
258 health outcomes and engage with digital technologies (e.g., social
259 media platforms & mobile applications) to facilitate discussions with
260 the patient and others.
- 261 9. Advocate for the benefit of all incorporated digital technologies within
262 the pharmaceutical team so that they are adopted and, when relevant,
263 used by all.
- 264 10. Educate and encourage healthcare teams to embrace digital
265 technologies and systems that maximise efficiency and support intra and
266 interprofessional clinical collaboration.



- 267 11. Help all healthcare professionals and stakeholders to bridge the use,
268 assessment and certification of any digital technology that optimises
269 healthcare.
270 12. Challenge policymakers and pharmacy organisations to support the
271 implementation of digital technologies as appropriate.
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273 **AGAINST THIS BACKGROUND, FIP COMMITS TO:**

- 274 1. Advocate to WHO, UN, WHPA, international healthcare professional
275 associations, international digital health solution consortia and other
276 relevant international bodies and stakeholders on the adoption of
277 common interoperability digital standards and common terminologies to
278 enhance interoperable eHealth solutions within health information
279 systems to facilitate health information exchange among countries on
280 global level.
281 2. Develop international strategies to promote among MOs the
282 importance of interoperable digital technology in providing high quality
283 patient-centred digital pharmaceutical care to ensure accessibility and
284 safe and rational use of effective medicines.
285 3. Support FIP member organisations to develop educational resources and
286 standards covering appropriate digital health literacy, outlining good
287 practices, affordable solutions, and resources to support digital health
288 education.
289 4. Advocate, collectively with the other healthcare professionals and on an
290 international level, for the advancement of the profession, especially
291 regarding digital breakthroughs and other emerging technologies
292 applications, so as to get prepared to lead the profound reshaping they
293 will bring to healthcare delivery in the near future.
294 5. Advocate for pharmacists globally demonstrating the pharmacy
295 profession's ability to embrace digital technologies in contribution to the
296 individual patient health and society.
297 6. Promote a positive attitude towards digital health and promote the
298 possibilities digital transformation can bring to enable safer, efficient,
299 accessible and cost-effective healthcare.
300 7. Advocate for pharmacists as agents of change in proposing, developing,
301 and implementing digital technologies to optimise health care.
302 8. Support FIP Member Organisations to challenge the pharmacy
303 profession, policymakers, and regulators, in their countries, to resource
304 and harness the potential of pharmacy via the full scope of
305 pharmaceutical care. While welcoming and embracing digital
306 technologies, remain a strong advocate and supporter for patient data
307 privacy, personalised care, and patient safety.



- 308 9. Support the exchange of experiences and success stories among member
309 countries with emphasis on developing countries.
310 10. Identify and celebrate FIP Member Organisations/countries who have
311 successfully developed and implemented value-adding digital
312 technologies, where there have been demonstrable benefits to patient
313 and health system outcomes.
314 11. Encourage international collaboration for further research in digital
315 health to increase the level of understanding of digital health
316 technologies.
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International Pharmaceutical Federation. mHealth: Use of mobile health technologies in pharmacy practice. The Hague: FIP, 2019. Available at: <https://www.fip.org/file/4874>

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