Emerging technologies and pharmacy practice

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Pharmacy in the digital era

Throughout its history, pharmacy has successfully adapted to and adopted a range of technologies that were developed during the first three industrial revolutions and had the potential to disrupt the economic life of whole societies. Today's pharmacists continuously use innovations to improve pharmaceutical care and provide access to safe and effective medicines for patients across all communities. In the past 20 years, pharmacy has developed and implemented a range of people-centred clinical services which incorporate technological advancements that improve the care provided, and further assist our profession to fully embrace the digital revolution.

FIP continues to promote the importance of providing high quality pharmaceutical care, facilitated by technology, to ensure safe access to and the optimal use of medicines. Representing the voices of pharmaceutical practitioners, scientists and educators, FIP continues to advocate for the advancement of the profession and the use of the full scope of innovative practice of pharmacists for the benefit of all people.

Disruptive technologies

The industrial world is at the beginning of a Fourth Industrial Revolution. This era, also referred to as the digital era, will radically change our use of technology, with major implications for the way people live and work.¹ The COVID-19 pandemic has already been a disruptor for community pharmacy services, and is also serving as a catalyst for more pharmacies than ever delivering medicines and providing advice and other services remotely due to patients having to reduce contact with others. Unlike other healthcare professionals, pharmacists have continued providing face-to-face

services, which has been highly valued by the public. These have been enhanced by technology in many cases, and access to a health professional has proved invaluable to our communities.

Technological advances are disrupting the status quo. Non-pharmacy players from the technology sector are entering the healthcare industry, offering 24/7 access to pharmacists who will also check prescriptions and provide home delivery of prescription medicines.

To protect the professional autonomy and related high standards of professional conduct of pharmacists employed by pharmacy owners, as well as to highlight FIP’s long-standing support of ethical principles, FIP continues to strongly advocate for pharmacist autonomy in all sectors of the profession.²

Vast amounts of patient data can be harvested by profit-seeking entities. The collection of both health data and online purchasing history combined with considerable artificial intelligence resources is of concern as our regulators do not currently address the need for transparency in how these data are used and for ensuring that such data collection is in the best interest of patients.

Regulators also need to address the use of marketing tools and discounts to promote the purchase of unnecessary (and potentially detrimental) medical products, as the health and well-being of patients must be the highest priority.

Any new disruptive technology or business model must not dilute the inherent protections that are in place for consumers and civil society under the conventional pharmacy model. They must allow for the continued pharmacist-based professional stewardship of medicines.

Pharmacists should be involved in the development of digital health technologies. By being part of the R&D side, pharmacists can help develop better digital health tools and AI applications that are more tailored to the clinical needs of patients.

Technology brings new opportunities through combining care with supply, rather than seeing them operate in silos. FIP would like to see technological advances being utilised as an enabler of seamless care, combining diagnostic management by doctors with medicines optimisation and pharmaceutical care by pharmacists.

² [https://www.fip.org/file/1368](https://www.fip.org/file/1368)
Utilising digital technologies

FIP supports the willingness to co-create and leverage innovation and technological advancements. It is time to evaluate the services that pharmacists are providing through digital health tools that enhance pharmacy services by improving access for patients who choose to receive care digitally.

The FIP Technology Forum is one example of our constructive and forward-looking activities, discussing the innovative concepts of the blended care model which utilises digital advancements where possible and human actions when needed. Pharmacists must be able to respond to people’s needs and expectations, optimising care based on each person’s preferences and circumstances, while also leveraging their own expertise to identify all patient needs requiring to be addressed. Pharmacists must understand that these needs can only be met if there are opportunities for the establishment of meaningful interactions. New roles will include educating patients and the public on consumer health technologies and how to interpret data from such technologies in monitoring their health and health care.

FIP supports its member organisations to challenge our own profession, and policy-makers and regulators to resource and unleash the untapped potential of pharmacy through full scope universal pharmacy care. While welcoming and embracing new technologies, FIP remains a strong advocate and supporter for patient safety, patient data privacy and personalised care.

Strategies towards the future

FIP strategies such as the CPS Vision 2020-2025, the FIP Development Goals, the vaccination agenda, the primary healthcare strategy, the Global Pharmacy Observatory (GPO) and the FIP Technology Forum are important tools for our pharmacy community.

Community pharmacists are always ready to provide more value, implement collaborative services, harness new technology through access to the four cornerstones of the expert and unique care of community pharmacists: review, prescribe, dispense and administer. By being part of the technological advances, pharmacy can deliver universal, safer, more accessible, timely and better value healthcare through a more compassionate, personalised and rewarding model of care for the communities we serve, now and into the future.