

Digital Health Technology - Patient Care

These resources may be helpful to utilize as reading material for learners and in developing didactic and experiential learning. Each cited article provides background information on patient care technologies, including digital therapeutics, augmented and virtual reality, robotics, data analytics, automation, and wearable technologies.

C3. Pharmacy practice leaders should be engaged in assessing emerging patient care technologies (e.g., mobile applications, monitoring devices, digital wearables or ingestibles, blockchain technology) to support optimal medication use outcomes.

C4. The pharmacy workforce should be competent in health information technology (including but not limited to analytics, automation, and clinical applications of technology) with ongoing education and training embedded at all stages of career development.

Learner Resources

[ASHP Commission on Goals - Data-Driven Healthcare](#)

- On March 7, 2023, ASHP convened an interdisciplinary commission to focus on providing guidance regarding the use of digital health technologies. While the report of this commission has not yet been published, the proceedings will be included in an upcoming edition of AJHP.

[ASHP Resource Center - Digital Health](#)

- This resource center, created by ASHP's Section of Pharmacy Informatics and Technology, highlights various digital health resources from the FDA, AMA, AHRQ, and other organizations.

[Digital Health Interventions by Clinical Pharmacists: A Systematic Review](#)

- This article published in the International Journal of Environmental Research and Public Health analyzes literature on the use of digital technology by clinical pharmacists. Herein, the results of 19 studies are summarized based on the type of digital intervention and patient outcomes. This resource would be helpful for leaders looking to justify the cost-effectiveness of digital health interventions by pharmacists.

[Webinar - How digital health is changing care delivery for pharmacists and improving public health](#)

- This webinar is produced by the FIP Technology Forum. According to FIP, participants of this webinar... "will learn more about the activities led by FIP Technology Forum as well as be exposed to an array of topics related to digital services in pharmacy, the challenges and benefits of digitisation in pharmacy and the impact on pharmacy education and training." The strengths of this webinar are that it provides a

comprehensive review of definitions, recommendations for implementation into patient care, incorporation of digital pharmacy education in pharmacy curricula, and challenges with chatGPT and similar technologies.

[Health IT implementation best practices](#)

- This series of articles provides an in-depth analysis of best practices related to health IT implementation, covering digital health from both a macro and micro level. It also includes specific resources related to various technologies, tools, and advice for implementation. Examples of resources include implementing telehealth, revenue cycle management, and patient engagement.

[NIH Division of Health Informatics Technologies \(Informatics\)](#)

- This resource is curated by the division of Health Informatics Technologies within the NIH. The application of this research is applicable to clinical decision support, in-home treatment monitoring, medical image improvement and data analysis, and mobile health. Topics of research include AI, machine learning, mobile health and telehealth, biomedical informatics, point-of-care diagnostics, image processing, and biomedical sensors. Within each of these areas, there is a list of links and resources for an in-depth analysis of these topics.

Inclusion in Pharmacy Experiential & Didactic Curriculum

[How to Get Digital Health into the Health Care Curriculum: a Framework Model for Pharmacy Schools as a Case Example](#)

- This article uses pharmacy education as a case study for integrating digital health content into the academic curriculum. It provides practice advice for integrating digital health into other disciplines rather than teaching this content in isolation by proposing three curricular models. This article is most helpful for academics engaged in curricular development and assessment.

[FIP digital health in pharmacy education: Developing a digitally enabled pharmaceutical workforce](#)

- This comprehensive report, published in 2021 by the International Pharmaceutical Federation (FIP), provides a wealth of information regarding how the digitally-enabled pharmacy workforce must be developed. The report contains an overview of digital health and a timeline of its advancement, robust information on digital health in pharmacy education (including experiential learning), results of the FIP digital health in pharmacy education survey, and case studies of digital health initiatives in pharmacy schools around the world. It also details how the future of pharmacy practice may be impacted by digital health.

[Webinar - Global Launch of the FIP digital health in pharmacy education report](#)

- This webinar summarizes the FIP Digital Health in Pharmacy Education report. Three key aspects of digital health education are emphasized: educating every student and

practitioner on the use of the various facets of digital health; educating students and practitioners to be the developers of digital health modalities; and blending remote (online) education and the digital tools available to improve education.

[Diving Into Digital Health](#)

- This article published by Academic Pharmacy Now highlights ways in which pharmacy schools and preceptors can prepare students to utilize digital health solutions in various practice settings. It highlights examples of how some programs have incorporated digital health education into the curriculum.
- Maps to C3 and C4

[Digital Health in Pharmacy Education: Preparedness and Responsiveness of Pharmacy Programmes.](#)

- The International Pharmaceutical Federation (FIP) published this report, which provides a global picture of the areas of focus for digital health education and skills development of the pharmaceutical workforce. Findings indicate that there is a deficit in digital health education and training and that more guidance on how to implement digital health tools is needed.

[Digital pharmacists: the new wave in pharmacy practice and education](#)

- This article published in the International Journal of Clinical Pharmacy describes the increase in digital technology utilization in pharmacy since the COVID-19 pandemic and the Fourth Industrial Revolution. Additionally, the paper gives practical recommendations for how digital technologies can be implemented more rapidly in pharmacy practice and education.