DIGITAL HEALTH

Health Professional Student Learning Outcomes

Topic	Novice	Entry to Practice
Digital health basics	– Define digital health – Differentiate between the terms digital health, health informatics, e-health, bioinformatics, artificial intelligence, and machine learning – Describe the key hallmarks of digital health – List the key forces and influences driving technology trends in digital health	– Describe the high-level changes and challenges that the health industry can expect with a digital health future – Describe actual and perceived barriers to the safe and effective use of digital health platforms locally and internationally – Describe the constructs of usability and user experience and how they are related – Explain the practical implications of poor usability and poor user experience on healthcare professionals
Patient empowerment	– Define patient engagement and empowerment in the context of digital health – Outline reasons for the growing emphasis on patient engagement and empowerment in healthcare – Explain the relationship between patient empowerment and digital health – Provide practical digital health examples of patient empowerment (Open Notes / My Health Record)	– Explain the potential future impacts of My Health Record on patient care and healthcare practice – Describe the common expectations internationally, and locally, regarding what digital health could offer citizens and communities
Information governance and security	– Differentiate between the terms clinical governance, IT governance and data governance – Differentiate between appropriate and inappropriate use of digital communication in healthcare – Explain how privacy is enacted in digital health and its importance to healthcare professionals – Describe how security is enacted in digital health and its importance to healthcare professionals – Propose the potential positive or negative consequences for digital health disruption for both healthcare professionals and patients	– Describe how clinical governance, IT governance and data governance intersect and their relevance to healthcare – Analyse the current status of clinical governance, IT governance and data governance in healthcare in Australia and internationally – Predict the impacts of greater patient control of 'their' data with respect to privacy and security
Electronic Medical Records (EMRs) and their relationship to digital health	– Explain the function and purpose of an EMR – Explain the function and purpose of clinical information systems – Explain the relationship between an EMR and clinical information systems – Compare the key differences of documentation in paper, hybrid or fully electronic environment – Define clinical decision support and describe the different formats in which it is currently provided	– Explain the difference between integrated and interfaced clinical information systems and why is this difference important to healthcare professionals – Describe how clinical decision tools can impact the decision-making process of healthcare professionals – Describe the advantages and disadvantages that come with using an EMR in a manner that optimizes patient care and interprofessional collaboration
Digitally enabled care models (DECM) and processes	– Explain DECMs and describe how they differ from traditional care models – Define and describe the key considerations around telehealth (as an example of a DECM)	– Provide an example of a DECM (aside from telehealth) – Debate the advantages and disadvantages of DECMs
Digital biomarkers	– Define digital biomarkers and explain their significance – Provide a contemporary example of where digital biomarkers are being integrated into digital health products	– Critically appraise the validity and utility of digital biomarkers used in contemporary practice – Propose an area of healthcare delivery that would benefit from and could be revolutionised by the use of biomarkers
Data, data science and artificial intelligence		– Explain how data science differs from biostatistics and epidemiology – Explain the difference between structured and unstructured data and why this is important to healthcare professionals – Provide examples of the types of data collection that are routinely found in clinical care and their uses – Describe the opportunities, risks and challenges that come with using artificial intelligence in clinical practice
Sensor technology		– Describe some examples of current digital health sensor types and their underpinning mechanisms (including voice) – Explain the range of ways in which sensors are being applied in healthcare – Describe what makes a 'smartphone' and explain the relevance of the features – Provide an example of where smartphones have helped accelerate the development of new health technologies – Explain the opportunities, risks and challenges around smartphone use in the future