

Domain 8: Informatics and Healthcare Technologies

Sub-competency	Progression Indicators (Observable Behaviors)	
	Developing	Developed (Competent)
8.1 Describe the various information and communication technology tools used in the care of patients, communities, and populations.		
8.1a Identify the variety of information and communication technologies used in care settings.	Recognize commonly used information and communication technologies in clinical settings. Explain the fundamental purpose of each identified technology.	Describe the primary information and communication tools used in patient care. Compare the features and benefits of different information and communication technology (ICT) options for specific care tasks.
8.1b Identify the basic concepts of electronic health, mobile health, and telehealth systems for enabling patient care.	Describe the fundamental features of electronic health, mobile health, and telehealth systems. Explain how electronic health, mobile health, and telehealth systems support patient care.	Demonstrate appropriate use of electronic health, mobile health, or telehealth systems in patient care. Compare and contrast the benefits and limitations of various electronic health, mobile health, and telehealth solutions in clinical contexts.
8.1c Effectively use electronic communication tools.	Identify electronic communication tools utilized in clinical interactions. Demonstrate fundamental use of electronic communication tools during patient care.	Demonstrate fluent use of electronic communication methods. Apply appropriate electronic communication tools in diverse healthcare settings when interacting with patients and interdisciplinary team members.
8.1d Describe the appropriate use of multimedia applications in health care.	Identify commonly used multimedia applications in patient education. Articulate how multimedia applications enhance patient engagement and learning.	Assess the effectiveness of different multimedia tools for specific patient populations.
8.1e Demonstrate best practice use of social networking applications.	Articulate professional guidelines governing the use of social media in healthcare.	Analyze the ethical implications of social media use in patient-centered care. Demonstrate appropriate and professional use of social media in diverse healthcare settings.

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8.1f Explain the importance of nursing engagement in the planning and selection of healthcare technologies.	Identify processes involved in the selection of healthcare technologies. Explain the necessity of nurse input in selecting patient care technologies.	Analyze the impact of nursing engagement on the successful selection and implementation of healthcare technologies. Recommend specific criteria and characteristics for healthcare technology based on different care settings and patient populations.
8.1g Identify best evidence and practices for the application of information and communication technologies to support care.	Appraise best-practice guidelines for the use of ICT in healthcare settings.	Select and apply evidence to improve ICT best practices in diverse clinical environments.
8.1h Evaluate the unintended consequences of information and communication technologies on care processes, communications, and information flow across care settings.	Identify and summarize potential unintended consequences of ICT on patient care outcomes. Describe the potential impact of information and communication technologies on clinical decision-making and workflow efficiency.	Assess ICT-related challenges and propose evidence-based solutions. Address ICT challenges when planning and evaluating patient care strategies.
8.1i Propose a plan to influence the selection and implementation of new information and communication technologies.	Summarize key organizational considerations for selecting new ICT solutions. Demonstrate initial planning steps for introducing a new ICT solution into a clinical environment.	Collaboratively develop a comprehensive implementation strategy for an ICT innovation.
8.1j Explore the fiscal impact of information and communication technologies on health care.	Identify essential cost factors associated with ICT implementation.	Analyze the cost-effectiveness of various ICT solutions in different clinical settings.
8.1k Identify the impact of information and communication technologies on workflow processes and healthcare outcomes.	Describe how ICT influences clinical workflow efficiency. Recognize ICT-driven patient care outcomes and their influence on clinical decision-making.	Analyze the relationship between ICT integration and changes in healthcare delivery processes. Modify patient care plans based on the evaluation of ICT impact and healthcare outcomes.
8.2 Use information and communication technology to gather data, create information, and generate knowledge.		
8.2a Enter accurate data when chronicling care.	Identify essential documentation guidelines for accurate data entry.	Enter and verify comprehensive patient information for accuracy.

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8.2b Explain how data entered on one patient impacts public and population health data.	Describe how individual patient records contribute to public and population health statistics.	Analyze the impact of individual patient documentation on population-level trends. Compare individual patient data for specific diagnoses with local and regional population data.
8.2c Use appropriate data when planning care.	Identify relevant clinical data required for effective care planning.	Incorporate relevant data and trends in plans of care.
8.2d Demonstrate the appropriate use of health information literacy assessments and improvement strategies.	Explain key strategies for enhancing a patient's health information literacy.	Recommend strategies to improve health information literacy among diverse populations.
8.2e Describe the importance of standardized nursing data to reflect the unique contribution of nursing practice.	Explain how standardized nursing data ensures that patient care assessments, interventions, and outcomes are measurable.	Examine the role of standardized documentation in enhancing the visibility and quantifiability of nursing contributions.
8.2f Generate information and knowledge from health information technology databases.	Retrieve and organize relevant clinical data from health information technology (HIT) databases.	Analyze multifaceted data across HIT databases to identify patterns or correlations that inform clinical decision-making.
8.2g Evaluate the use of communication technology to improve consumer health information literacy.	Assess whether health information provided through technology aligns with health literacy best practices. Identify potential barriers to technology adoption.	Synthesize information and communication technology to enhance data flow, interoperability, and scalability for population-level interventions. Propose information and communication technology interventions based on the synthesis of literacy improvement, engagement rates, and health outcomes.
8.2h Use standardized data to evaluate decision-making and outcomes across all systems levels.	Analyze data to identify trends in patient outcomes. Analyze data to identify areas for operational improvements. Examine epidemiological data to recommend evidence-based public health interventions.	Use standardized datasets to justify clinical reasoning. Utilize standardized data to recognize patterns and opportunities for quality improvement.

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8.2i Clarify how the collection of standardized data advances the practice, understanding, and value of nursing and supports care.	Provide examples of how standardized data enhances patient safety, efficacy, and satisfaction. Articulate pathways from data collection to improved health outcomes.	Justify the use of standardized data collection to support evidence-based care planning. Communicate the impact of standardized data analysis to interprofessional team members during decision-making processes.
8.2j Interpret primary and secondary data and other information to support care.	Differentiate between primary and secondary data sources. Analyze primary and secondary datasets to identify care requirements and inform decision-making.	Synthesize primary and secondary data to understand patient and population health needs comprehensively. Recognize the limitations of available data and its implications for care planning.
8.3 Use information and communication technologies and informatics processes to deliver safe nursing care to diverse populations in a variety of settings.		
8.3a Demonstrate appropriate use of information and communication technologies.	Identify examples of adherence to HIPAA and other privacy standards when utilizing information and communication technologies. Recognize how cultural, linguistic, and health literacy differences influence the selection and use of communication technologies.	Apply appropriate technologies for delivering nursing care in various settings. Integrate clinical decision support tools to enhance care quality and safety.
8.3b Evaluate how decision support tools impact clinical judgment and safe patient care.	Explain the ethical implications of over-reliance on decision-support tools and their effect on critical thinking and clinical judgment. Identify the strengths and limitations of decision-support tools in clinical practice.	Analyze the correlation between decision-support tools and observable patient outcomes. Integrate decision-support tools with clinical observations and patient preferences to facilitate holistic care decisions.
8.3c Use information and communication technology in a manner that supports the nurse-patient relationship.	Provide examples of adherence to HIPAA and other privacy standards when engaging in electronic communication. Consider cultural, linguistic, and health literacy differences when selecting and using communication technologies.	Employ digital tools to communicate with patients regarding their health conditions, treatment plans, and self-care strategies.

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8.3d Examine how emerging technologies influence healthcare delivery and clinical decision making.	Participate in training on emerging healthcare technologies. Engage in discussions regarding the ethical and practical implications of healthcare technology.	Analyze the successes and challenges associated with integrating technology into care delivery. Articulate the perspectives of healthcare teams on incorporating technological devices and platforms into clinical practice.
8.3e Identify impact of information and communication technology on quality and safety of care.	Identify patient safety and care quality metrics influenced by technology use. Recognize systems that monitor and track patient safety and care quality metrics.	Analyze ICT data to identify trends and outcomes related to patient safety and care quality. Use findings from ICT data to inform clinical decision-making to enhance care quality.
8.3f Identify the importance of reporting system processes and functional issues (error messages, mis-directions, device malfunctions, etc.) according to organizational policies and procedures.	Explain organizational policies and procedures for reporting system issues. Explain the relationship between system reporting processes and patient safety.	Demonstrate appropriate documentation and reporting of system issues according to institutional policies.
8.3g Evaluate the use of information and communication technology to address needs, gaps, and inefficiencies in care.	Define the role of ICT in improving care access, utilization, and delivery. Identify opportunities for improving the patient-technology interface.	Assess current technology use in healthcare settings to enhance care efficiency and facilitate patient access. Propose strategies to optimize the use of ICT in healthcare service delivery.
8.3h Formulate a plan to influence decision-making processes for selecting, implementing, and evaluating support tools.	Assess the needs and goals of stakeholders when selecting healthcare technologies. Conduct a needs assessment to identify gaps in existing processes and technology. Analyze available tools and resources.	Develop a strategic plan aligning stakeholder needs, organizational goals, and available resources. Advocate for change and communicate implementation plans to decision-makers. Establish a quality improvement monitoring system to evaluate the effectiveness of implemented tools.

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8.3i Appraise the role of information and communication technologies in engaging the patient and supporting the nurse-patient relationship.	Assess patient preferences, cultural considerations, and access to technology resources. Determine the effectiveness of various technological tools in improving patient engagement, self-management, and adherence to treatment plans.	Evaluate the quality and frequency of nurse-patient communication facilitated by technology. Analyze how technology impacts the quality of the nurse-patient relationship.
8.3j Evaluate the potential uses and impact of emerging technologies in health care.	Assess the effectiveness of new technologies in improving patient engagement, self-management, and treatment adherence. Examine the ethical, legal, and social implications of adopting emerging technologies in healthcare.	Identify areas where emerging technologies can enhance healthcare delivery. Evaluate the feasibility of implementing emerging technologies.
8.3k Pose strategies to reduce inequities in digital access to data and information.	Analyze barriers to accessing digital health tools and information. Implement initiatives targeting populations most affected by digital health inequities.	Design educational programs to improve patient utilization of digital health tools. Propose strategies to enhance the availability and accessibility of necessary healthcare technology.
8.4 Use information and communication technology to support documentation of care and communication among providers, patients, and all system levels.		
8.4a Explain the role of communication technology in enhancing clinical information flows.	Describe the various communication technologies utilized in healthcare settings.	Articulate the benefits and limitations of information and communication technologies in enhancing communication among healthcare providers and between providers and patients.
8.4b Describe how information and communication technology tools support patient and team communications.	Explain the role of information and communication technologies in improving the accuracy and efficiency of information exchange within the healthcare team.	Explain how ICT tools enhance communication efficiency, reduce errors, and improve patient safety.
8.4c Identify the basic concepts of electronic health, mobile health, and telehealth systems in enabling patient care.	Describe the core functionalities of the electronic health used in clinical settings.	Differentiate between the applications of electronic health, mobile health (mHealth), and telehealth in patient care, highlighting the benefits and limitations of each.

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8.4d Explain the impact of health information exchange, interoperability, and integration on health care.	Define health information exchange, interoperability, and integration, and describe their influence on healthcare delivery.	Analyze the impact of health information exchange on patient safety, care coordination, and healthcare efficiency.
8.4e Assess best practices for the use of advanced information and communication technologies to support patient and team communications.	Evaluate the effectiveness of various communication technologies used within the healthcare team.	Recommend evidence-based strategies to optimize information and communication technologies for enhancing provider collaboration, patient outcomes, and care coordination.
8.4f Employ electronic health, mobile health, and telehealth systems to enable quality, ethical, and efficient patient care.	Utilize telehealth platforms to conduct patient assessments, provide education, and deliver care to remote or underserved populations.	Incorporate technologies to ensure adherence to ethical guidelines, patient safety protocols, and regulatory standards for care delivery.
8.4g Evaluate the impact of health information exchange, interoperability, and integration to support patient-centered care.	Analyze the benefits and challenges of implementing a health information exchange within a healthcare organization, considering its impact on patient data access, care coordination, and workflow efficiency.	Evaluate interoperability among EHR systems to enhance patient data sharing and facilitate care transitions across various healthcare settings.
8.5 Use information and communication technologies in accordance with ethical, legal, professional, and regulatory standards, and workplace policies in the delivery of care.		
8.5a Identify common risks associated with using information and communication technology.	Recognize potential breaches in patient confidentiality related to electronic health records.	Explain the importance of adhering to organizational policies regarding password management, data encryption, and secure messaging to protect patient information in compliance with HIPAA regulations.
8.5b Demonstrate ethical use of social networking applications.	Identify risks associated with sharing patient information or discussing work-related issues on social media platforms, emphasizing the importance of maintaining professional boundaries and patient privacy.	Apply professional guidelines and institutional policies for responsible social media use to protect patient confidentiality and uphold the integrity of the nursing profession.
8.5c Comply with legal and regulatory requirements while using communication and information technologies.	Follow institutional policies for accessing and documenting patient information in EHRs, ensuring compliance with privacy and security protocols.	Explain the legal and ethical implications of electronic patient data sharing, emphasizing HIPAA regulations and obtaining patient consent before disclosing health information.

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8.5d Educate patients on their rights to access, review, and correct personal data and medical records.	Provide educational materials explaining patients' rights to access, review, and manage their health information.	Assist patients in navigating patient portals to access their health data and answering questions about system functionalities and benefits.
8.5e Discuss how clinical judgment and critical thinking must prevail in the presence of information and communication technologies.	Recognize the limitations of information and communication technologies and seek clarification or validation from other sources when necessary.	Explain how clinical judgment and critical thinking are essential for interpreting EHR data, identifying potential errors, and making informed patient care decisions.
8.5f Deliver care using remote technology.	Assist in telehealth visits, ensuring proper equipment setup, lighting, and audio while troubleshooting technical issues.	Facilitate telehealth visits effectively by using appropriate communication techniques, utilizing platform features to share educational materials, and documenting encounters accurately in the electronic health record.
8.5g Apply risk mitigation and security strategies to reduce misuse of information and communication technology.	Educate healthcare staff on recognizing and reporting phishing attempts and cybersecurity threats that may compromise patient data or organizational systems.	Implement relevant risk mitigation strategies to minimize data breaches and ensure compliance with security regulations.
8.5h Assess potential ethical and legal issues associated with the use of information and communication technology.	Identify ethical concerns related to artificial intelligence in healthcare.	Analyze the legal and ethical implications of using patient data for research, ensuring adherence to privacy regulations, data security standards, and institutional review board protocols.
8.5i Recommend strategies to protect health information when using communication and information technology.	Suggest improvements to existing security protocols within a clinical setting.	Develop and present best practices for healthcare professionals to uphold patient privacy and confidentiality when utilizing communication and information technology, aligning with legal and ethical standards.
8.5j Promote patient engagement with their personal health data.	Facilitate patient engagement with digital health tools.	Incorporate educational resources and workshops to empower patients to navigate and utilize their health data to make informed healthcare decisions.
8.5k Advocate for policies and regulations that support the appropriate use of technologies impacting health care.	Research state and federal regulations related to telehealth practices, identifying barriers to equitable access and opportunities for advocacy to enhance healthcare delivery.	Advocate for policies supporting artificial intelligence's ethical and effective integration in healthcare.

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8.5I Analyze the impact of federal and state policies and regulation on health data and technology in care settings.	Examine the implications of recent state regulations regarding telehealth prescribing practices and their effect on patient access to care, medication safety, and interprofessional collaboration.	Evaluate the impact of current policies on health information exchange and interoperability, considering their potential to improve patient care coordination, reduce costs, and promote innovation in health information technology.
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