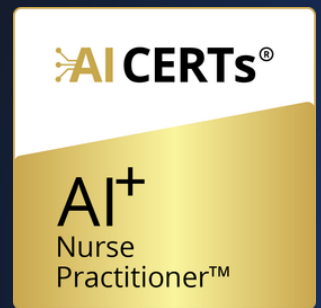


AI+ Nurse Practitioner (1 Day)

Program Detailed Curriculum



Executive Summary

The AI + Nurse Practitioner certification program equips healthcare professionals with the essential skills to integrate artificial intelligence into nursing practice. By focusing on AI technologies and their application in clinical settings, the certification prepares nurses to enhance patient care, optimize workflows, and improve decision-making. The program covers AI fundamentals, data analytics, machine learning, and ethical considerations, enabling nurses to confidently leverage AI tools to advance patient outcomes. With the growing role of technology in healthcare, the AI + Nurse certification provides a critical edge for nurses seeking to stay at the forefront of the evolving healthcare landscape.

Prerequisites for the AI+ Nurse Practitioner Course:

- **Basic Nursing Knowledge:** Understanding of clinical practices and patient care.
- **Familiarity with Healthcare Technology:** Experience with electronic health records and medical devices.
- **Introduction to Data Science:** Understanding data analysis and interpretation in healthcare.
- **Basic AI and Machine Learning Concepts:** Knowledge of algorithms and predictive modeling.
- **Critical Thinking and Problem Solving:** Ability to make data-driven healthcare decisions.

Module 1

What is AI for Nurses?

1.1 Understanding AI Basics in a Nursing Context

- **Overview – Why AI Matters in Healthcare:** AI enhances healthcare by improving diagnostic accuracy, predicting patient risks, and automating administrative tasks, leading to better patient care, resource optimization, and more efficient nursing workflows.
- **AI, Machine Learning, and Deep Learning:** Understand the differences between AI, Machine Learning (ML), and Deep Learning (DL), exploring how these technologies revolutionize nursing by providing predictive insights, automating tasks, and optimizing patient outcomes.
- **Real-Life Examples – Smart Monitors, Predictive EHR Alerts, Chatbots, and Virtual Assistants:** Explore practical AI tools such as smart monitors, predictive EHR alerts, chatbots, and virtual assistants, illustrating how they assist nurses in improving patient monitoring, communication, and care efficiency.
- **Common Myths and Concerns:** Address common misconceptions, like AI replacing healthcare workers, and concerns over data privacy and algorithmic biases, offering real-world examples to highlight AI's supportive role in nursing practice.
- **Historical Development of AI in Healthcare:** Explore AI's evolution in healthcare from early concepts to modern applications, focusing on its transformative impact, including machine learning, deep learning, and AI-powered clinical decision support systems.

Where AI Shows Up in Nursing

1.2 Understanding AI Basics in a Nursing Context

- **Patient Monitoring, Staffing, and Clinical Alerts:** AI optimizes patient monitoring, staffing allocation, and clinical alert systems, enabling nurses to anticipate patient needs, optimize workflows, and respond proactively to emerging risks, ensuring quality care.
- **Administrative Support and Operational Efficiency:** AI streamlines administrative tasks like documentation and scheduling, reducing nurse workload and burnout, thus enhancing operational efficiency and allowing more time for direct patient care.
- **Role of AI in Nursing Leadership and Policy:** AI empowers nursing leaders by providing data-driven insights to improve staffing, policy decisions, and resource management, ensuring quality care and promoting a sustainable healthcare environment.
- **Practical Applications of AI in Nursing:** AI in nursing enhances patient monitoring, streamlines workflows, and aids decision-making, offering real-life examples where AI applications such as smart monitors, EHR alerts, and automated documentation improve care.

1.3 Case Study: Improving Patient Safety and Nursing Efficiency with AI at Riverside Medical Center

This case study illustrates how Riverside Medical Center successfully implemented AI technologies for early detection, predictive alerts, streamlined documentation, and optimized staffing, leading to improved patient outcomes and nurse satisfaction.

1.4 Hands-on: Using Nurse AI for Clinical Data Visualization in Postoperative Nursing Care

This hands-on exercise demonstrates how nurses can use AI tools to visualize patient data trends, aiding in decision-making, documentation, and patient education for improved clinical outcomes and efficient care planning.

Module 2

AI for Documentation, Workflow, and Data Literacy

2.1 Introduction to AI in Nursing

- **Understanding NLP:** NLP enables AI to process and understand human language, transforming complex clinical language into structured data. This reduces documentation time, improves accuracy, and enhances communication across nursing teams.
- **Practical AI Applications in Nursing:** AI applications, such as voice-to-text technology and smart documentation assistants, help nurses reduce administrative workload, improve patient outcomes, and streamline their daily documentation and clinical tasks with real-time assistance.
- **Benefits of AI-Assisted Documentation for Nurses:** AI-assisted documentation tools enhance accuracy, efficiency, nurse satisfaction, and patient safety. By automating time-consuming tasks, these tools allow nurses to spend more time on patient-centered care and clinical decision-making.
- **Potential Risks and Mitigation Strategies:** AI tools pose risks like inaccuracies, over-reliance, and privacy concerns. Nurses must mitigate these risks through human oversight, continuous training, strict privacy protocols, and regular system audits to ensure safe use.

2.2 Workflow Automation: Transforming Nursing Practice

- **Overview of Workflow Technologies in Nursing:** This section covers various automation technologies used in nursing practice, including smart IV pumps, barcode scanning, and real-time monitoring systems. These tools automate and validate essential clinical tasks, ensuring better patient safety.
- **Real-World Scenarios Demonstrating Workflow Improvements:** Explore how automation tools like smart pumps and task management systems are used in healthcare settings. Real-life scenarios demonstrate the impact of these tools in improving nurse efficiency and clinical outcomes.
- **Strategies for Selecting and Implementing Workflow Automation Tools:** Effective implementation of workflow automation begins with understanding nursing needs, selecting compatible tools, and engaging nurses in pilot testing. Proper training, communication, and ongoing support ensure smooth adoption.
- **Benefits of Workflow Automation for Nurses:** Workflow automation significantly reduces clinical errors, enhances patient safety, improves nurse satisfaction, and frees up time for patient care. These tools also reduce cognitive load and decision fatigue, enhancing overall efficiency.
- **Potential Challenges and Mitigation Strategies:** Automation tools present challenges such as resistance to change, over-reliance, and integration issues. Strategies like nurse involvement, regular training, and secure technology integration can mitigate these challenges, ensuring successful adoption.

2.3 Beginner's Guide to Data Literacy in Nursing

- **Understanding Electronic Health Records (EHRs):** EHRs are digital platforms that store, manage, and share patient data. Nurses must understand EHR systems to use patient information effectively, supporting informed clinical decisions and improving care coordination.
- **Structured vs. Unstructured Data: Importance for Nursing:** Structured data, like lab results and vital signs, is organized for easy analysis. Unstructured data, such as nursing notes, captures detailed patient experiences. Both types are essential for comprehensive patient care.
- **Importance of Data Quality and Accuracy in Nursing:** Accurate and timely documentation ensures effective clinical decision-making and patient safety. Nurses are responsible for maintaining data quality through accuracy, completeness, consistency, and timeliness in their daily records.
- **Introduction to Clinical Dashboards and Data Visualization:** Clinical dashboards provide a visual summary of key patient data, enhancing nurses' ability to monitor vital signs, lab results, and medication adherence. Dashboards improve clinical decision-making by simplifying complex data.
- **Developing Basic Data Interpretation Skills:** Basic data interpretation skills allow nurses to recognize trends in patient data, identify abnormalities, and make timely interventions. These skills are crucial for effective patient care and improving health outcomes.

2.4 Legal & Compliance Basics in Nursing AI Documentation

- **Key Healthcare Regulations Nurses Should Know:** Understanding regulations like HIPAA and GDPR ensures that nurses comply with data privacy and security laws. These regulations govern how patient information is collected, stored, shared, and protected in healthcare settings.
- **Nurse Responsibilities in Data Handling and Compliance:** Nurses are responsible for safeguarding patient data by securing access, minimizing exposure, obtaining patient consent, and ensuring accurate and ethical documentation. These practices ensure patient confidentiality and legal compliance.
- **Practical Guidelines for Nurses Using AI Tools:** To ensure the ethical use of AI tools, nurses must verify AI-generated documentation, maintain audit trails, report errors promptly, and participate in ongoing compliance training. These guidelines protect patient safety and data integrity.

- **Compliance and Ethical Considerations in Patient Communication:** Nurses must inform patients about the use of AI in their care, emphasizing transparency and ensuring that patients understand their rights to privacy and data access, fostering trust and compliance with ethical standards.
- **Common Compliance Pitfalls and Strategies to Avoid Them:** Common compliance pitfalls, like unsecured data sharing or over-reliance on AI, can compromise patient care. Strategies like robust security training and "human-in-the-loop" processes help avoid these issues and maintain regulatory compliance.

2.5 Case Study: Integrating AI and Workflow Automation at Massachusetts General Hospital (MGH)

The case study explores the integration of AI and workflow automation tools at Massachusetts General Hospital (MGH). It demonstrates how these tools improved nurse efficiency, reduced medication errors, and enhanced patient outcomes through collaborative implementation and continuous feedback.

2.6 Hands-On Exercise: Using the ChatGPT Registered Nurse Tool in Clinical Documentation and Patient Education

This hands-on exercise provides nurses with practical experience using AI tools like the ChatGPT Registered Nurse tool for generating shift reports and patient education materials. The activity encourages critical evaluation of AI-generated content to ensure clinical accuracy and patient-centeredness.

Module 3

Predictive AI and Patient Safety

3.1 Understanding Predictive Models

- **Introduction to Predictive AI in Healthcare:** Predictive AI leverages patient data to forecast clinical risks. Understanding AI systems helps nurses validate alerts and intervene early, improving patient outcomes while navigating potential model limitations in daily practice.
- **Common Clinical Use Cases:** AI models apply all risk, pressure injury prevention, and sepsis detection, using patient data to trigger proactive measures. These applications enable nurses to prevent adverse events and improve patient safety.
- **Evaluating Model Accuracy:** Nurses assess predictive model accuracy using metrics like sensitivity and specificity. Understanding these allows for better decision-making and trust in AI-generated alerts while ensuring patient safety through correct interpretation.

3.2 Alert Fatigue and Trust

- **What is Alert Fatigue?:** Alert fatigue occurs when constant notifications desensitize clinicians, leading to ignored or dismissed alerts. Understanding its impact helps nurses maintain vigilance, ensuring critical alerts receive timely and appropriate responses.
- **Balancing Human and Machine Intelligence:** AI is a tool, not a replacement for clinical expertise. Nurses must learn to interpret AI alerts in the context of patient assessments, combining human intuition with data-driven insights for optimal care.
- **Recognizing False Positives and Overreliance:** False positives occur when AI alerts trigger for non-existent issues, leading to unnecessary interventions. Overreliance on AI can delay clinical action, so nurses must balance AI predictions with real-time patient assessments.
- **Best Practices for Safe Alert Management:** Effective alert management includes tiered alerts, customization, and feedback loops. Educating nurses on alert thresholds and involving them in system design enhances alert relevance, reducing fatigue and improving decision-making.

3.3 Simulation Activity: Responding to Real-Time Deterioration Alerts

- **Scenario Overview:** A realistic simulation introduces nurses to deteriorating patient scenarios where AI alerts trigger, testing their ability to assess, intervene, and communicate effectively with the healthcare team in real-time.
- **Objectives of the Simulation:** Learners will interpret AI alerts, conduct rapid assessments, implement interventions, communicate with the healthcare team, and document actions. The goal is to enhance decision-making and teamwork during critical patient events.
- **Simulation Execution:** Nurses engage in hands-on care, interpreting alerts, assessing patients, initiating interventions, and documenting actions in real-time. The focus is on making quick, informed decisions while collaborating with the healthcare team.
- **Debrief and Reflection:** The debriefing session helps nurses reflect on their simulation actions, discuss improvements, and understand the challenges faced. This critical reflection boosts learning and prepares nurses for real-life clinical decision-making.

3.4 Collaborating Across Teams

- **Interprofessional Communication:** Clear communication is key to translating AI alerts into patient-centered decisions. Nurses must use structured methods like SBAR to ensure team members understand the situation, enabling effective, timely interventions.
- **Case Study: AI Alert Triggers Medication Adjustment:** A case study illustrates how AI alerts lead to coordinated team action, including medication adjustments and fall risk prevention. It highlights the nurse's role in initiating communication and leading interventions.
- **Leveraging IT Support:** Collaboration with IT teams ensures that predictive AI models are accurate, relevant, and continuously improved. Nurses' frontline feedback helps refine alert systems, making them more clinically useful and aligned with patient care.

3.5 Bias in Predictions

- **Recognizing Algorithmic Bias:** Nurses must identify when predictive models show bias, such as underrepresenting certain patient demographics. Understanding these biases helps ensure that AI tools are used fairly and ethically in patient care.
- **Case Example: Racial Bias in Sepsis Prediction:** This case highlights how AI tools can be biased against minority patients. Nurses must advocate for more inclusive training data to ensure equitable predictions and prevent delayed care for disadvantaged groups.
- **Ethical Considerations and Advocacy:** Nurses have a responsibility to advocate for fair AI systems. This includes questioning alerts that seem biased and pushing for improvements in data representation, ultimately ensuring all patients receive equitable care.

3.6 Case Study

This case study demonstrates the impact of AI in reducing patient falls through early detection and prevention. It emphasizes the importance of interdisciplinary collaboration and continuous feedback for AI tool improvement.

3.7 Hands-On Activity: Integrating Predictive AI into Nursing Practice

In this activity, nurses use ChatGPT to assess predictive alerts, interpret data, and evaluate the clinical relevance of alerts. They will also practice interdisciplinary communication and manage alert fatigue through evidence-based strategies.

Generative AI and Nursing Education

4.1 Introduction to Generative AI in Nursing

- **Overview of LLMs in Healthcare:** Introduces LLMs, showing how they process and generate human language to improve clinical tasks like documentation, information retrieval, and patient interaction. Includes use cases for nurses and patient care.
- **Popular LLM Tools:** Details popular LLMs like ChatGPT, Med-PaLM, Bard, and Claude, showcasing their unique applications in nursing, from patient communication to evidence-based care support. Includes examples of clinical scenarios.
- **Clinical Scenarios for LLM Use:** Provides real-world examples of how LLMs can enhance clinical tasks like patient summary drafting, medical explanations, medication guidance, and educational material creation. Includes case studies.

4.3 Creating Patient Education Materials with AI

- **Drafting Patient Handouts and Flyers:** Outlines how AI can create clear, patient-friendly educational materials, like flyers for chronic disease management. Discusses integrating AI-generated text with design tools for better engagement.
- **Writing FAQs and Educational Posters:** Shows how AI can generate targeted FAQs and posters to improve patient education. Discusses creating engaging content and ensuring readability and cultural relevance for diverse patient groups.
- **Multilingual Support:** Highlights AI's role in translating and adapting patient education materials for multilingual populations, ensuring accurate, culturally sensitive content. Discusses tools for efficient translation and refinement.

4.4 Ensuring Safe and Ethical Use of AI

- **Understanding AI Limitations:** Details the limitations of generative AI, such as inaccuracies, over-reliance, and lack of contextual understanding. Offers strategies to mitigate risks through cross-verification and maintaining clinical judgment.
- **Prompt Engineering for Nurses:** Teaches effective prompt engineering for nurses, helping them craft precise, clear instructions for AI tools. Highlights best practices to ensure AI-generated content is accurate, safe, and patient-centered.
- **Data Privacy and Confidentiality:** Discusses the importance of protecting patient data and maintaining confidentiality when using AI. Offers guidelines for anonymization, HIPAA compliance, and best practices for safe AI use in healthcare.

4.5 Case Study

Explores Riverside Medical Center's implementation of generative AI to reduce nurse burnout, enhance patient education, and improve multilingual accessibility, demonstrating AI's impact on nursing efficiency and patient outcomes.

4.6 Hands-On Activity:

Exploring AI-Powered Differential Diagnosis with Symptoma

Engages participants in practical exercises using AI tools like Symptoma for differential diagnosis and ChatGPT for clinical decision support, reinforcing AI's role in clinical reasoning, patient education, and care planning.

Ethics, Safety, and Advocacy in AI Integration

5.1 Bias, Fairness, and Inclusion

- **Sources and Examples of Bias:** Discusses historical, data imbalance, measurement, and labeling biases in AI, providing real-world examples of biased algorithms in healthcare and their implications.
- **Consequences of Biased AI:** Explores the effects of biased AI on patient care, including misdiagnosis, delayed treatments, unequal resource allocation, and the erosion of patient trust.
- **Bias Mitigation Strategies:** Outlines strategies to reduce bias in AI systems, such as using inclusive datasets, conducting algorithm audits, and providing fairness-aware design to ensure equity in healthcare.

5.2 Informed Consent and Transparency

- **Expanded Informed Consent:** Explains how to effectively communicate data collection practices, secondary data use, and the ethical implications of genetic data within the context of AI healthcare systems.
- **Communicating AI Use to Patients:** Emphasizes the importance of clear and accessible communication with patients about AI's role in healthcare, using plain language and respecting patient autonomy.
- **Transparency and Trust-building:** Describes methods for building trust through transparency, including sharing AI outputs, addressing conflicts of interest, and providing educational resources for patients.

5.3 Nurse Advocacy and Professional Responsibilities

- **Advocating for Ethical AI:** Encourages nurses to participate in AI tool selection and development, ensuring technologies support human judgment and prioritize equity and fairness in patient care.
- **Continuous Education and Training:** Highlights the need for ongoing professional development in AI ethics, fairness, and technology, ensuring nurses are well-equipped to navigate AI integration effectively.
- **Advocacy for Patients and Staff:** Focuses on advocating for staff training, patient privacy, and fostering cultural competence to ensure AI adoption benefits both patients and healthcare teams.

5.4 Creating an Ethics Checklist

Provides a comprehensive checklist for evaluating AI tools in clinical settings, ensuring alignment with ethical principles, patient safety, and regulatory standards.

5.5 Stakeholder Feedback Techniques

- **Educational Initiatives and Open Dialogue:** Discusses the importance of educational sessions, Q&A forums, and accessible materials to promote understanding and trust in AI applications among all stakeholders.
- **Surveys and Polls:** Describes how structured surveys and real-time polling can capture stakeholder perceptions, satisfaction, and concerns, ensuring AI systems meet ethical standards.
- **Focus Groups and Digital Town Halls:** Outlines the benefits of focus groups and digital town halls to engage diverse stakeholders in meaningful discussions, gathering detailed feedback for AI improvements.

- **Patient Advisory Boards:** Encourages the establishment of advisory boards with patient representatives to co-design, test, and evaluate AI tools, ensuring their needs and perspectives are integrated.
- **Suggestion Boxes and Anonymous Portals:** Recommends using confidential feedback channels to collect honest and actionable insights from stakeholders about AI tools in healthcare.
- **Shared Decision-making Consultations:** Promotes shared decision-making, where clinicians and patients engage in collaborative conversations about AI recommendations, ensuring informed consent and patient autonomy.
- **Real-time Feedback Loops:** Focuses on establishing real-time reporting mechanisms to quickly address inaccuracies or concerns with AI tools, ensuring continuous improvement.
- **Outcome Metrics and Reporting:** Discusses how to track and transparently report AI performance and patient outcomes, ensuring that AI tools align with quality care and ethical practices.

5.6 Legal and Regulatory Considerations

- **ELiability and Accountability:** Examines the complexities of liability when AI systems contribute to clinical errors, emphasizing the need for clear accountability frameworks in healthcare.
- **Regulatory Compliance:** Explains how nurses can ensure AI tools comply with regulations like HIPAA and GDPR, ensuring patient privacy and adherence to healthcare standards.
- **AI-Related Malpractice and Risk Mitigation Strategies:** Provides strategies for nurses to mitigate malpractice risks, including robust clinical oversight, proper documentation, and ongoing staff education regarding AI tools.
- **Emerging AI Regulation Trends:** Explores the evolving regulatory landscape for AI in healthcare, focusing on transparency, algorithmic accountability, privacy protections, and the classification of AI as medical devices.
- **Practical Steps for Nurses and Healthcare Providers:** Offers practical advice for nurses on staying updated on AI regulations, ensuring proper oversight, and advocating for patient-centered, compliant AI practices.

5.7 Psychological and Social Implications

- **Patient Anxiety and Trust:** Discusses how AI may affect patient trust and anxiety, with strategies for nurses to engage patients empathetically and provide clear, transparent information about AI use.
- **Clinician-AI Interaction Dynamics:** Examines the relationship between clinicians and AI tools, highlighting the importance of maintaining professional autonomy and critical thinking while using AI recommendations.
- **Preventing Overreliance and Automation Bias:** Focuses on the risks of automation bias and strategies to encourage critical appraisal of AI tools to maintain patient safety and clinical judgment.
- **Ethical Social Dynamics:** Addresses the social and ethical challenges posed by AI, emphasizing the need for inclusivity, cultural competence, and equity in AI healthcare applications.

5.8 Case Study: Addressing Racial Bias in Healthcare Algorithms

This case study highlights how AI algorithms can unintentionally exacerbate racial disparities in healthcare, emphasizing the role of nurses in identifying biases and advocating for algorithmic fairness and equity.

5.9 Hands-on: Uncovering Bias in Diabetes Risk Prediction: A Fairness Audit Using Aequitas

Participants will conduct a fairness audit using Aequitas to identify potential bias in AI-driven diabetes risk prediction models, learning to assess representation and parity across diverse patient demographics.

Evaluating and Selecting AI Tools

6.1 Understanding Performance Metrics

- **Defining and Interpreting Core Performance Metrics:** Nurses gain insights into core metrics used to evaluate AI performance, including accuracy, sensitivity, specificity, and AUC, enabling informed decisions about adopting AI technologies.
- **Real-World Clinical Examples:** Analyzing clinical examples, such as sepsis detection and cardiac arrest prediction, helps nurses understand the practical application and trade-offs of AI performance metrics.

6.2 Vendor Red Flags

- **Identifying Key Warning Signs of Problematic AI Tools:** Nurses learn to recognize red flags such as overfitting, black-box models, and biased training data, enabling them to protect patient safety and advocate for better tools.
- **Critical Assessment of Vendor Claims:** This section helps nurses assess the validity of vendor claims, ensuring that AI tools deliver real benefits through transparency, evidence-based validation, and practical usability.

6.3 Nurse Role in Selection

- **Critical Responsibilities in AI Tool Evaluation:** Nurses ensure AI tools align with clinical relevance, patient safety, workflow efficiency, and ethical standards, taking a leading role in evaluating and selecting technologies.
- **Ensuring Alignment with Clinical Workflows and Patient Care Priorities:** This section emphasizes how nurses ensure AI tools complement clinical workflows and support patient-centered care, advocating for practical and ethical solutions in healthcare settings.
- **Facilitating Interprofessional Collaboration:** Nurses foster interprofessional collaboration in AI evaluation, ensuring diverse perspectives inform decisions and that AI tools are integrated to optimize patient care across disciplines.
- **Participating in Pilot Programs and Testing Phases:** Active nurse participation in pilot programs ensures real-world feedback drives improvements in AI tools, helping evaluate clinical effectiveness and minimizing disruptions to care.
- **Advocating for Ethical and Patient-Centered AI Solutions:** Nurses advocate for AI solutions that prioritize ethical principles, patient autonomy, and transparency, ensuring technologies respect patient rights and improve care outcomes.

6.4 Evaluation Templates and Checklists

- **Comprehensive AI Tool Evaluation Checklists:** Using detailed checklists, nurses assess AI tools across clinical, ethical, and technical criteria, ensuring comprehensive evaluation for safe and effective integration into clinical practice.
- **Practical Application of Evaluation Templates:** Nurses use structured templates in team-based evaluations and simulations, refining their skills in assessing AI tools and making informed decisions based on real-world case scenarios.

6.5 Use Cases: AI in Clinical Decision-Making

- **Beneficial Use of AI Alerts in Patient Care:** This section highlights a successful case of an AI-driven early-warning system for sepsis detection, demonstrating how accurate alerts improve patient outcomes and streamline clinical workflows.
- **Harmful or Misleading AI Alerts in Patient Care:** Nurses explore cases of excessive AI medication interaction alert fatigue, underscoring the importance of balancing AI sensitivity and specificity in clinical settings.
- **Lessons Learned and Reflective Practice:** Reflecting on AI successes and challenges, nurses identify key takeaways for improving AI adoption in practice, emphasizing the importance of real-world testing, transparency, and continuous feedback.

6.6 Case Study:

Using AI to Enhance Real-Time Clinical Decision-Making at UAB Medicine with MIC Sickbay

This case study showcases UAB Medicine's use of AI-driven Sickbay platform to integrate real-time patient data, personalize care, enhance predictive capabilities, and improve clinician efficiency, paving the way for advanced AI applications in healthcare.

6.7 Hands-On:

Evaluating AI Diagnostic Model Performance Using Confusion Matrix Metrics

This hands-on exercise guides nurses through evaluating an AI diagnostic tool's performance using confusion matrix metrics, helping them understand key indicators like accuracy, sensitivity, specificity, and predictive values for clinical decisions.

Module 7

Implementing AI and Leading Change on the Unit

7.1 Building Buy-In: Promoting AI as an Ally, Not a Competitor

- **Clearly Articulating AI Benefits:** Focus on communicating AI's tangible benefits to healthcare teams, such as improved patient outcomes, reduced errors, and enhanced workflow efficiency, to foster confidence and engagement in AI adoption.
- **Highlighting AI's Role in Improving Patient Care:** Emphasize AI's direct impact on patient safety, diagnostic accuracy, and care personalization, ensuring healthcare teams recognize its value in enhancing patient outcomes and satisfaction.
- **Sharing Real-World Success Stories:** Present case studies showcasing AI's positive results, such as increased diagnostic precision and reduced clinician burnout, to build trust and motivate healthcare staff toward AI adoption.
- **Actively Engaging Staff in the AI Adoption Process:** Involve staff in decision-making, establish AI champions, and maintain regular communication to ensure continuous feedback and enhance staff buy-in during AI implementation.

7.2 Change Management Essentials

- **Proactively Identifying and Addressing Staff Concerns:** Anticipate and address staff fears and misconceptions, such as job displacement, through open communication, support structures, and direct involvement in the AI deployment process.

- **Providing Comprehensive, Role-Specific Training:** Design tailored, interactive training programs for different healthcare roles, using a mix of methods like hands-on workshops, online resources, and peer mentorship to ensure effective AI adoption.
- **Fostering Open Communication and Collaboration:** Create open channels for regular feedback and collaboration between departments, allowing staff to share concerns and solutions, which helps smooth the AI integration process.
- **Celebrating Early Successes to Reinforce Change:** Publicly recognize and celebrate milestones and staff achievements during the AI implementation, reinforcing positive attitudes and motivating continuous engagement with technology.

7.3 Creating an AI Playbook: A Comprehensive Roadmap for Sustainable Success

- **Defining Clear and Measurable Goals:** Set specific, measurable goals linked to organizational priorities, such as reducing errors and improving patient safety, to guide AI implementation and track progress.
- **Developing Structured Training Schedules:** Create flexible, role-specific training schedules that integrate diverse learning formats and ensure ongoing skill development, allowing healthcare teams to remain proficient with evolving AI tools.
- **Outlining Comprehensive Support Plans:** Establish accessible support systems, including help desks and technical teams, to promptly address challenges and maintain staff confidence during AI adoption.
- **Establishing Clear Escalation Pathways:** Define clear, prioritized escalation procedures for addressing AI-related issues, ensuring swift resolution and maintaining operational continuity and staff trust.

7.4 Monitoring Quality Improvement: Leveraging AI Metrics for Continuous Enhancement

- **Utilizing AI-Driven Metrics to Monitor Patient Outcomes:** Leverage AI-driven analytics to track patient outcomes in real-time, measuring improvements like diagnostic accuracy and patient safety, while making data-informed adjustments to optimize care.
- **Measuring Workflow Enhancements:** Track and quantify improvements in workflow efficiency, such as reduced administrative burden, and share these results to promote further staff engagement with AI integration.
- **Conducting Regular Data Reviews and Adjustments:** Establish regular data reviews to identify areas for improvement in AI performance, and quickly implement adjustments based on data-driven insights to enhance system effectiveness.
- **Transparently Sharing Improvement Outcomes:** Regularly communicate the results of AI-driven improvements, using visual tools and reports to ensure staff stays informed and motivated by AI's impact on patient care and workflow.

7.5 Error Reporting and Safety Protocols: Ensuring Safe and Reliable AI Integration

- **Developing Clear Protocols for AI Error Identification:** Implement standardized procedures to identify, classify, and document AI-related errors, ensuring rapid detection and minimizing patient risks.
- **Creating Effective Reporting Channels:** Establish accessible, confidential error reporting channels that encourage staff to report AI-related concerns and contribute to improving system safety and reliability.
- **Defining Rapid Corrective Actions and Safety Responses:** Develop clear response plans for addressing AI errors, ensuring quick corrective actions are taken to prevent patient harm and maintain staff trust.
- **Continuously Refining Safety Protocols:** Regularly review error data to refine and enhance safety protocols, making sure AI systems stay aligned with the evolving best practices for patient care.

7.6 Hands-On: Calculating Clinical Risk Scores and Visualization with ChatGPT

Participants will use GPT-4 Expert to calculate clinical risk scores (MEWS, NEWS, HEART) and visualize results in Excel or Google Sheets, enhancing decision-making skills for improved patient care and workflow efficiency.

Module 8

Capstone Project: Designing a Personal AI in Nursing Impact Plan

This module guides nurses in integrating AI tools to improve patient care, enhance documentation, and streamline education. It emphasizes practical application through projects that design personalized AI solutions for nursing challenges.

Additional Module

AI Agents for AI+ Nurses

9.1 What Are AI Agents?

9.2 How Does an AI Agent Work in Healthcare?

9.3 Core Characteristics of AI Agents

9.4 Importance of AI Agents (General + Nursing)

9.5 Significance of AI Agents in Nursing

9.6 Types of AI Agents?

9.7 Applications and Trends in Nursing

9.8 Case Study - AI Agents for Nursing Workflow & Sepsis

9.9 Hands-On Lab