# Better Together: Integrating AI Into Interprofessional Healthcare Provider Education To Improve Patient Care

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**Executive Summary:** Current competencies in interprofessional healthcare education lack standardized guidance on the use of Artificial Intelligence (AI). As AI becomes increasingly integrated into healthcare systems, health educators must come together to establish AI-related priorities for training current and future professionals. These priorities should include informing practitioners about AI's risks and benefits, addressing emerging ethical challenges and responsibilities, and leveraging AI to enhance interprofessional collaboration. Individual certification programs on AI in healthcare have emerged to fill the gap left by the lack of standardized curricula, but their objectives are inconsistent. Without cohesive guidelines around AI education in healthcare, the benefits it provides will be unequally distributed and risks such as data biases may be exacerbated. Convening bodies, such as the Interprofessional Education Collaborative (IPEC), bring together health professions educators from a wide variety of health disciplines to establish standards which equitably improve patient care in the United States. As such, IPEC is uniquely well-situated to standardize national guidance on the use of AI in healthcare. We recommend that IPEC address these concerns by (1) updating its interprofessional Core Competencies to include guidance on the use of AI and (2) working with other organizations to develop open-access educational resources (e.g. toolkits & online modules) to make these standards equally achievable across health professions and institutions. By taking these steps, IPEC can play a pivotal role in preparing the next generation of healthcare professionals to navigate AI's evolving role in patient care and interprofessional practice.

## I. Background

In the past few decades, health professionals have had access to a wealth of information and data beyond their own personal processing power (Stead et al. 2011). Artificial Intelligence (AI) has long contributed to efforts to leverage this data to provide the best possible healthcare through diagnostic aids including the cardiovascular risk calculator or stroke risk in atrial fibrillation tool (Bayati et al. 2014). More recent advances – brought about by deep neural networks and advancements in natural language processing in generative AI – have the potential to fundamentally transform medical practice. Many healthcare settings use these new AI technologies for a diverse range of applications including processing digital images, aiding robotic surgery, and supporting diagnostic and medical administrative workflows (e.g. chart summarization, report writing, and scribing from voice input) (Ali et al. 2023; Deo and Anjankar 2023; Matheny et al. 2025).

AI has the potential to improve efficiency and democratize patient access to quality healthcare.

Like early AI-powered tools, there is great promise for these new technologies to boost accuracy and timeliness of diagnosis and therapy, reduce errors, and minimize costs. This promise has led to early adoption and implementation of emerging AI tools, despite risks including bias, reliability concerns, and patient privacy. Unaddressed, the lack of formalized guidelines on health AI could create barriers to equitable adoption across the healthcare workforce. Health professional education (HPE) should address this lack of standardization, thereby enabling the healthcare sector to self-regulate AI use. A recent publication by the National Academy of Medicine (NAM) put out a call for action: health educators must incorporate guidelines and training in AI use across health professionals now, lest we "risk creating a health workforce unprepared to leverage the promise of AI or navigate its potential perils" (Lomis et al. 2021). This memo addresses NAM's call to action by urging the Interprofessional Education Collaborative (IPEC) to update provider norms for interaction with AI and improve the accessibility of any training necessary to do so.

Whereas the scope of work of other healthcare institutions either extend beyond HPE or are limited to an individual discipline of health practice, IPEC is uniquely positioned to take on this task through its mission to promote proficiency in interprofessional health practice while drawing from expertise across the HPE field. IPEC comprises 22 professional associations, representing the interests of a majority of health professional schools in the United States. IPEC establishes foundational skills, values, and knowledge areas (i.e., Core Competencies) which have become the gold standard for administering interprofessional health education (Zorek et al. 2021). As artificial intelligence rapidly transforms clinical practice, the window for shaping its integration into healthcare education is quickly narrowing. Establishing standards now will ensure that future healthcare professionals are not only competent in using these technologies but also equipped to address the ethical, legal, and patient-safety implications before adoption becomes widespread and entrenched.

## II. The current state of AI in healthcare education

Although some AI courses have emerged in HPE, the current decentralized approach has created inconsistencies in curriculum availability and outcomes. A 2022-2023 curriculum survey of Doctor of Medicine (MD) and Doctor of Osteopathy (DO)-granting medical institutions in the U.S. reported that less than half included AI in their required or elective curricula (Loudin 2025). The lack of standardized curricula creates knowledge and skill gaps in current and future healthcare professionals that can limit the positive impacts of AI. One facet of these concerns is reflected in algorithmic bias. In one recent example, a widely used AI model underestimated the care needs of African-American patients because it was trained on healthcare spending data. Since African-American patients historically access fewer healthcare resources, the algorithm was biased to require these patients to be significantly more ill in order to access resources (Obermeyer et al. 2019). Similarly, dermatology AI systems trained primarily on lighter skin tones have shown reduced accuracy in detecting conditions on darker skin, raising concerns about diagnostic reliability and fairness (Adamson and Smith, 2018). Without HPE training to recognize such limitations, clinicians may over-rely on flawed tools or dismiss AI altogether, both of which can erode patient trust. Patients, in turn, may resist AI-informed care if providers cannot explain how recommendations are generated or if outcomes appear biased. Establishing standardized education ensures that healthcare professionals can critically assess algorithms, communicate transparently with patients, and harness AI in ways that promote equity, improve accuracy, and increase trust in care delivery.

Additionally, recent regulations on AI in healthcare, including Section 1557 of the Patient Protection and Affordable Care Act of 2024, determines that health systems are now the liable party for any unjustified bias in an AI model (Matheny et al. 2025). Under this new regulatory landscape, healthcare providers will need to be equipped to think critically about when and how to use AI. Without an interprofessional framework to address AI-related ethical issues, risks can emerge to the detriment of both patients and providers.

## III. Statement of issue

HPE has not kept pace with the rate at which AI tools are being adopted in healthcare. Interprofessional standards for HPE on the use of AI should prioritize ethics; clear roles and responsibilities; transparent communication among healthcare providers and

with patients, including clarity about how AI tools inform decisions; and guidelines for interprofessional teams. While federal regulations are beginning to address the roles and responsibilities of healthcare providers in using AI, major gaps remain in preparing the healthcare workforce's understanding of how interprofessional teams will work with and interpret AI outputs.

To address this gap, IPEC must update its Core Competencies to establish standards for responsible use of AI. Additionally, these updates should be supported by open-access educational tools that promote equity across training programs. This multi-pronged approach would ensure that AI literacy and ethics are embedded in the foundation of interprofessional health education.

## IV. Policy options

### *i. Policy option 1: Update IPEC core competencies to include sub-competency statements addressing the interaction of AI in HPE*

IPEC's Core Competencies are intended to be broad statements on the priorities to prepare learners for collaborative practice that improves population health and patient care outcomes. These statements are interpreted and adapted by each member organization, for the specific health professionals and programs taught at their institutions. We recommend that IPEC develop a minimum of seven new sub-statements to update standards under each sub-domain (Values/Ethics, Roles/Responsibilities, Communication, Teams/Teamwork) within the Core Competencies framework. This initiative should be carried out in collaboration with IPEC's 22 member organizations to ensure that the updated standards reflect input from, and apply across each HPE discipline. The goal is to ensure that all health professions students are equipped with shared principles, role clarity, and team-based strategies for the responsible integration of AI into patient care. We specifically suggest the following considerations for new sub-statements in each domain:

The revised Core Competencies should include updates in the **Values/Ethics domain** to:

- Evaluate the utility and risk of AI tools in clinical practice (Matheny et al. 2019).
- Support individual and community autonomy and informed consent regarding data sharing and acceptance of AI-informed medical decisions (Matheny et al. 2019; Gillon 1994).

The revised Core Competencies should include updates in the **Roles/Responsibilities domain** to:

- Use AI as an additional team tool with complementary capabilities. This will allow teams to innovate, adopt, and continuously improve service delivery where AI systems can relieve scarce access to resources or discover associations undetected by other team members (Matheny et al. 2019; Adams et al. 2024).
- Determine appropriate responsibility and accountability across teams for monitoring and updating data systems and bringing in consultations on AI when needed (Matheny et al. 2019).

The revised Core Competencies should include updates in the **Communication domain** to:

- Advocate for clear communication, transparency, explainability, and interpretability in Health AI applications to ensure tools are understandable by all stakeholders and that providers adopt shared protocols for surfacing and conveying uncertainty and decision logic (Matheny et al. 2019; Coalition for Health AI 2023).
- Collaborate with diverse stakeholders – including clinicians and patients – in transparent evaluation and education processes for AI incorporated into health systems (Kim et al. 2024).

The revised Core Competencies should include updates in the **Teams/Teamwork domain** to:

- Define roles in monitoring responsibilities to clarify who is responsible for verifying, validating, and acting upon AI-generated insights, and ensuring that tools do not worsen inequities (Adams et al. 2024; Wilson, Daugherty, and Bianzino 2017).

*Advantages*

- Encourages Educational Consistency Across Health Professions: Creates a unified foundation and common language and training requirements across allied HPE programs.
- Clarifies Roles and Responsibilities Across Teams: Defines responsibility for interpreting

AI outputs, when and how AI should be consulted, and what shared accountability looks like in team-based care. Reduces confusion and miscommunication in clinical settings.
- Enhances Interprofessional Trust and Collaboration: Reinforces mutual accountability by ensuring all team members are trained in the same ethical and procedural standards for AI use. Aligns with IPEC's mission to build collaborative, trusting interprofessional teams that prioritize quality and equity in care.
- Builds Public and Patient Trust: A coordinated, visible commitment to ethical AI use signals to patients and the public that healthcare professionals are trained to use new technologies safely, equitably, and transparently. Patient autonomy in this area will allow AI systems to help reduce existing disparities, rather than exacerbate them.
- Prepares the Workforce for Future Regulations: Proactively equips future clinicians to navigate emerging requirements by instilling best practices before mandates are enforced.

*Barriers*
- Voluntary Nature of IPEC Guidance: IPEC's Core Competencies are widely respected but not enforceable. Adoption depends on voluntary uptake by HPE programs.
- Keeping Pace with Rapid Technological Change: AI technologies evolve more quickly than the traditional process for updating Core Competencies. For example, IPEC's most recent update took two years to complete. For continued relevance, IPEC should establish a streamlined mechanism for continual review, revision, and updating that minimizes potential administrative burdens.

*ii. Policy option 2: Collaborate to provide open-access resources for AI in HPE*

Open-access educational resources can improve inclusion in education and scale rapidly (Bulathwela et al. 2024). While open-access courses regarding AI in healthcare currently exist - including courses from Stanford University, Google Cloud, and Northeastern University - these courses are not coordinated and do not have an interprofessional focus.

Interprofessional organizations should work together to assemble a task force, similar to the Healthy People Curriculum Task Force, to develop open-access learning materials (e.g., toolkits and online learning modules) addressing the guidelines suggested in policy option 1. Contributing organizations could include the National Center for Interprofessional Practice and Education, IPEC, and the NASEM Global Forum on Innovation in HPE. Together, these three entities could provide a cohesive interprofessional framework. The National Center and the NASEM Global Forum both have experience developing resources for learners and educators, and IPEC's website features a collection of teaching and learning resources. Additionally, representatives involved in the development of pre-existing open-access courses could be invited to contribute in order to streamline efforts. As these learning resources become available, the IPEC Institutional Assessment Instrument should be used to assess progress towards fulfilling the updated IPEC Core Competencies (Zorek et al. 2021; Zorek et al. 2022)

*Advantages*
- Capitalizing on the Moment: Most fields are early in their adoption of AI, so providing open-access learning resources could standardize best practices and ethical guidelines.
- Managing Big Data: Widespread availability of AI tools and resources can help facilitate a transition from knowledge acquisition to assessing and applying information. This transition is necessary to advance the field of precision health, which relies on large amounts of data (Lomis et al. 2021).
- Combatting Data Biases: Open-access resources can help combat data biases by making AI more equitably accessible to all future healthcare providers and patient populations. Equitable data provides a more accurate representation of patient populations for AI systems to train on. This will reduce systemic barriers in healthcare and support the training of the future workforce to best help patients from all backgrounds.

*Barriers*
- Lack of Enforcement: Though IPEC can develop

resources and make them available, this approach is voluntary and cannot be enforced. There are pre-existing challenges to implementing and evaluating interprofessional learning curricula, such as inconsistent application (Zorek et al. 2021), insufficient funding (Zorek et al. 2022), and logistical challenges (Patel et al. 2025).

- Incomplete Removal of Barriers: Though open-access resources help equalize the information available, they do not necessarily address other barriers, like having adequate staffing of educators and funding for any paid AI tools.
- The Digital Divide at Healthcare Institutions: Healthcare institutions' capacity to handle emerging technology varies widely. HPE should prepare trainees for resourced and under-resourced environments. Educational materials must address challenges faced in under-resourced settings and incorporate open-source AI tools, such as those compiled on this GitHub, as much as possible. Resources should be continually updated as new open-source AI tools become available.

*iii. Policy option 3: Maintain status quo*

AI has already been recognized for its potential to solve problems in our modern healthcare environment. These potential applications include filling in gaps caused by labor shortages (Meskó et al., 2018), improving diagnostics (Kalra et al. 2024), and streamlining Electronic Health Records systems (Mullankandy et al. 2024). The tool will continue to be integrated into healthcare regardless of whether practitioners adopt a cohesive curriculum for ethics and best practices.

*Advantages*

- Tailored Guidelines: Without a cohesive interprofessional framework, each educational institution and medical field can develop their own guidelines. These individualized guidelines can be tailored to the priorities and available resources of the institution or field.
- Efficiency: AI applications may become adopted more quickly if not subject to a standardized set of ethical best practices.

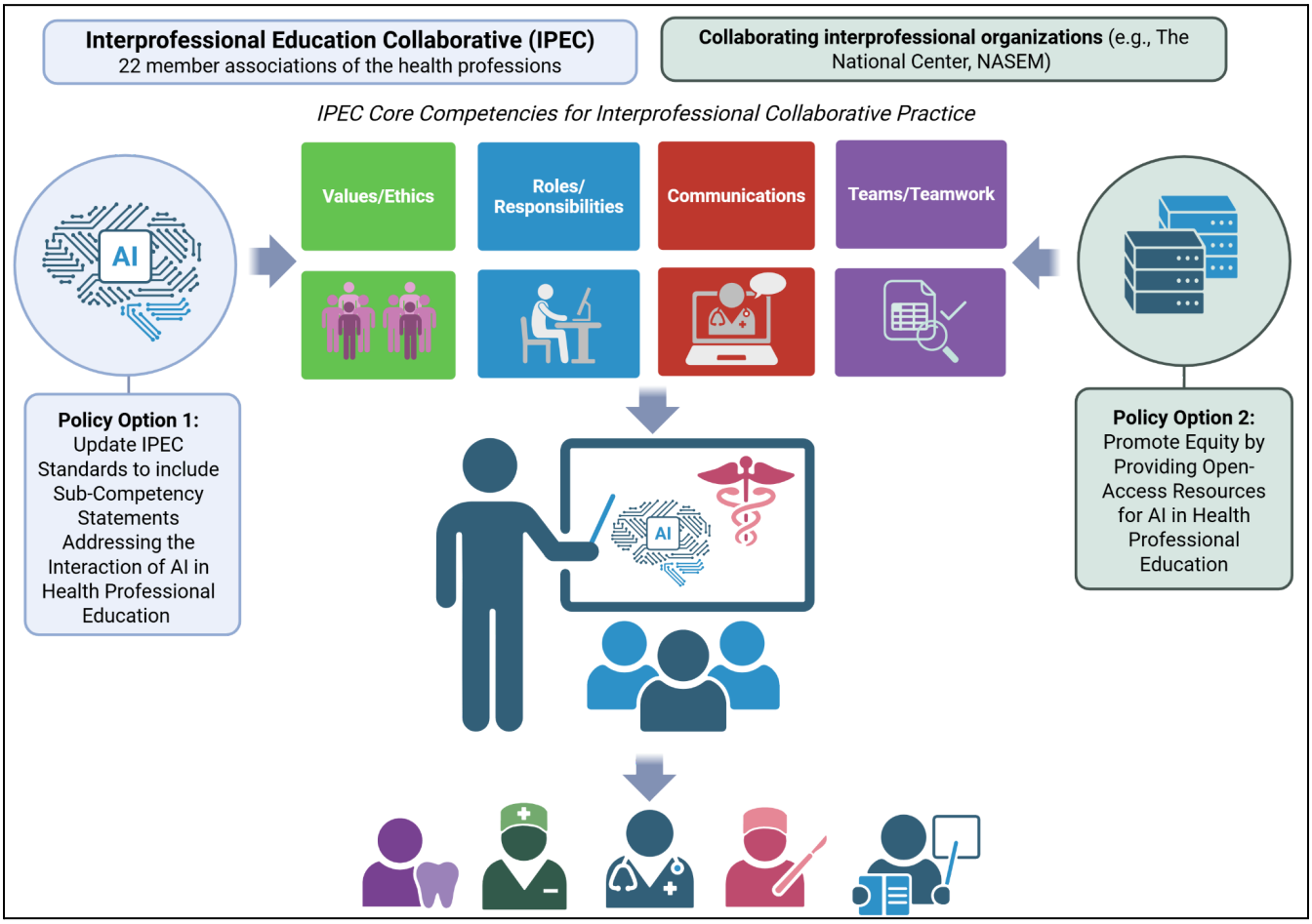
*Barriers*

- Propagation of Negative Impacts: AI applications may be adopted without a full understanding of limitations and possible adverse consequences, such as the potential to propagate biases. For example, high-income countries are currently over-represented in AI databases. This data bias could exacerbate global health inequalities (Celi et al. 2022).
- Unequal Educational Opportunities: There is already a "digital divide" within the healthcare field, where certain populations, like older generations, those from rural areas, and those with lower levels of education are less likely to benefit from technological advances in healthcare delivery (de Coca et al. 2022). Without a cohesive curriculum and best practices surrounding AI, there will be inequity in the education of future healthcare providers as some institutions will develop high-quality learning resources for AI best practices and ethics, and others will not be able.

**V. Policy recommendation**

We recommend that the first two policy options are implemented sequentially. First, IPEC should update its Core Competencies to incorporate AI into standardized learning objectives across health professions. Unclear objectives pose a challenge to implementing interprofessional education (O'Keefe and Ward 2018), so establishing clear goals through updated Core Competencies will set a strong base for improving interprofessional AI HPE. Because revisions to the Core Competencies can take a long time, we suggest that this option is initiated as soon as possible. Second, IPEC should form a taskforce to develop open-access teaching and learning resources so that all institutions have an equal opportunity to fulfill the Core Competencies and accreditation standards. Development of this taskforce and subsequent open-access resources should begin while preliminary drafts of updated IPEC Core Competencies come together, so that the tools can be informed by and promoted alongside the newly developed IPEC standards. Success metrics for implementation of these objectives would include improved student/provider preparedness to critically evaluate, ethically apply and appropriately engage with AI in healthcare practice. Together, these initiatives will encourage responsible collaborative organizations to establish priorities, best practices, and ethical guidelines for the use of AI in healthcare fields

**Appendix:** Summary Figure

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