Episode 5: From Lab to Clinic - Integrating Context, Communication, and Critical Thinking in Health Professions Education (Part 2)

Featuring Nikki Woods, PhD

In Part 2 of their conversation, host Leslie Fall, MD, continues with Nikki Woods, PhD, Richard and Elizabeth Currie Chair for Research in Health Professions Education and Senior Scientist at The Wilson Centre, University of Toronto, and the Director of The Institute for Education Research (TIER) at the University Health Network.

Dr. Woods begins with the idea of preparation for future learning, which she distinguishes from a general orientation toward lifelong learning. No program can expose learners to every problem they will face, so the goal is to give them the conceptual knowledge to keep learning from every patient interaction, not just through formal education. She also explains why context matters, and how conceptual knowledge helps clinicians recognize when a change in context should change a diagnosis or management plan.

That leads into a discussion of case-based learning and adaptive expertise, the ability to solve both routine problems and novel, ambiguous ones. Dr. Woods describes how cases let educators manipulate context and ask "what if" questions as well as "why" questions, building a richer cognitive architecture than a single patient encounter might. Asked to design a medical school from scratch, she would start with the end goal of producing adaptive experts, introducing complexity and productive struggle early rather than leading with heavy procedural instruction. She also offers reassurance that teaching for conceptual knowledge brings procedural knowledge along for the ride, including the content licensing exams tend to emphasize.

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The conversation then turns to AI. Dr. Woods explains why she brought the message "knowledge matters in every age" to Wellspring, Aquifer's annual meeting. Having access to information is not the same as having knowledge, and AI can make learners feel like they know something when they don't. She shares what happened when students quickly found ways to sidestep collaborative case activities, and how AI raises the stakes. Her proposed framework for case-based learning in the age of AI - struggle, support, connect, and vary - keeps the thinking in the learner's hands, with AI as one tool in the toolkit and possibly even a coach that pushes productive struggle rather than handing over answers. Dr. Fall and Dr. Woods also discuss why struggle may need to happen more visibly, and why seeing AI as a teammate in clinical reasoning may be necessary.

The episode closes with two bigger topics. Dr. Woods shares how her recent work with nursing, dentistry, personal support workers, and community health workers suggests interprofessional collaboration is easier when teams share a common knowledge base and every member as an adaptive expert. She also challenges the field to think beyond the four-year box, asking how much formal education people really need before entering practice and how learning could be structured more flexibly and inclusively.

In case you missed it, make sure to check out Part 1 of their conversation, where Drs. Woods and Fall discuss how basic science shapes clinical reasoning, the power of cognitive integration, and the difference between procedural and conceptual knowledge.

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