

AQUIFER EDUCATOR CONNECTION PODCAST

Episode 11: Integrated Illness Scripts – Linking Basic Science Concepts to Patient Care

Guest: Leah Sheridan, PhD Professor of Physiology, Ohio Heritage College of Osteopathic Medicine and Sciences Lead, Aquifer Sciences Course Board

Host: Lynne Robins, PhD, Professor Emerita, Department of Biomedical Informatics and Medical Education, University of Washington School of Medicine, Seattle, WA.

Description: Engaging medical students in mastering essential basic science concepts can be challenging if they don't understand how or why they are relevant to caring for patients. Aquifer's Integrated Illness Scripts provide learners the "why" by explicitly connecting clinical features with the science mechanism, laying the groundwork for providing excellent patient care. In this episode, Dr. Leah Sheridan shares why she is such an enthusiastic proponent of teaching with integrated illness scripts and describes how you can incorporate them into teaching pre-clinical and clinical learners.

Key Takeaways about Integrated Illness Scripts:

1. Unlike traditional illness scripts, Integrated illness Scripts integrate the scientific causal mechanisms with the clinical aspects of medicine so that they both pop up in the clinician's mind as a cognitive framework when they are engaging with patients.
2. Essential features of integrated illness scripts include:
 - a. A specific disease overview, which includes the definition and underlying pathological trigger or insult, the epidemiology, the most common presenting clinical features, the basic science mechanisms underlying the clinical features, and the core basic science concepts underlying the mechanisms
 - b. Mechanism of disease map – a framework that takes the basic science mechanism underlying a clinical feature and, using boxes and arrows, provides a visual overview of the mechanistic steps of how and why each clinical feature arises in a disease.
3. Busy medical students appreciate knowing why a piece of science is relevant to their becoming physicians; it motivates them to want to learn it. Leading with the "why" when teaching medical students in the classroom helps you get buy-in right away.

Leah's Tips for Using Integrated Illness Scripts to Teach:

1. Whether you give students scripts, have them build their own, or do a bit of both, Integrated Illness Scripts are valuable tools for motivating pre-clinical learners to master basic science concepts by connecting the clinical relevance with the science

mechanism, and for motivating clinical learners to think deeply about their differential diagnosis and treatment plans.

2. Start small by integrating one activity into your course, Aquifer's ready-made tools make it easy to do so.
3. With pre-clinical students:
 - a. Consider using a script related to work through a challenging topic with students to help them experience the clinical presentation, or
 - b. Have students build their own scripts step by step.
4. With clinical students
 - a. Introduce developed scripts at the bedside to remind them of the science behind a patient presentation.
 - b. Take deep dives into mechanisms behind a diagnosis that is already known or presented in an Aquifer case
 - c. If diagnosis is unknown compare scripts to narrow down what is happening with the patient. Have them compare and contrast one script to another script.
 - d. Use scripts to help students think creatively and always keep an open mind: probe students about how the presentation of different features might alter their diagnoses.

Aquifer's beta set of integrated illness scripts are available free through July, 2022 to Aquifer Curricular Partners who subscribe to all five of Aquifer's Signature Courses. You can find them in your Aquifer account, on your Courses page.

Additional Resources:

- [Aquifer Integrated Illness Scripts](#)
- New: Integrated Illness Scripts Activity cards with short activities (5 - 30 min) to use with your preclinical and clinical learners are now available to Aquifer Curricular Partners. Look for them in the Educator Resources section of your Aquifer account.

Theme Music: "Little Idea" by scottholmesmusic.com