

Why you need to be a systems thinker in health care

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Practicing medicine today is so much more than the interaction between you and the patient sitting before you. Physicians must understand all parts of the health care system—from the emergency department to the primary care clinic, from the patient’s family to community organizations—and critically think about how all these moving parts can work together to improve patients’ health, meet their health care needs and anticipate and mitigate safety threats or other problems.

It is a practice called systems thinking and an education module offered via the AMA Ed Hub™ helps medical students—and residents and practicing physicians who may not have received training during their medical school years—understand the importance of systems thinking in clinical care and learn how to adopt the habits of a systems-thinking health professional who can help improve care.

The AMA Ed Hub is an online platform that brings together high-quality CME, maintenance of certification, and educational content—in one place—with relevant learning activities, automated credit tracking and reporting for some states and specialty boards.

The free online module, “Systems Thinking,” is one of six modules released as part of the Health Systems Science Learning Series. Another seven modules will be released as part of the series in early 2020.

Which systems are interacting?

To become a health systems thinker, future physicians must first understand they will be part of complex, adaptive system made up of independent parts and agents, such as these outlined below.

Providers system. A clinic or hospital where physicians and other health professionals provide care and support for patients, including administrative functions and other processes of care.

Health care system. A collection of clinical programs and centers that are part of a larger organization, such as clinical programs and centers, hospitals, multispecialty groups and integrated health care systems.

Patient's system. The people patients interact with, including their family and friends, community organizations, their providers, the larger health care system and health care administration professionals and processes.

How to become a systems thinker?

Systems thinking helps provide better patient-centered care, fosters problem-solving and encourages questioning. For example, a physician who is discharging a female patient with diabetes from a hospital stay related to blood-sugar control helps the patient by making sure she has support in place to follow the care plan, consulting with the patient's nurse care manager and contacting the patient's primary care physician to provide a copy of the discharge plan.

It takes time and practice to become a systems thinker. According to the AMA module, systems thinkers have 14 habits.

Systems thinkers:

- Seek to understand the big picture.
- Observe how elements within a system change over time, generating patterns and trends.
- Recognize that a system's structure generates behavior.
- Identify the circular nature of complex cause-and-effect relationships.
- Make meaningful connections within and between systems.
- Change perspectives to increase understanding.
- Surface and test assumptions.
- Consider the issue fully and resist coming to a quick conclusion.
- Consider how mental models affect current reality and the future.
- Use understanding of system structure to identify possible leverage actions.
- Consider short-term, long-term and unintended consequences of actions.
- Pay attention to accumulations and their rates of change.
- Recognize the impact of time delays when exploring cause-and-effect relationships.
- Check results and change actions if needed, a process known as "successive approximation."

More help to study health systems science

The AMA also recently released the *Health Systems Science Review* book, published by Elsevier. The AMA is working with the National Board of Medical Examiners to develop a standardized exam, which is expected to be available later in 2020.

The review book complement's the AMA's 2016 *Health Systems Science* textbook, which outlines a formal method to teach students how to deliver care that meets patients' needs in modern health systems. More than 4,000 copies have been sold worldwide, and it is being used in over 30 medical and health professions schools. Both books are available for purchase at the AMA Store.