Domain of Competence: Systems-Based Practice

Susan Guralnick, MD; Stephen Ludwig, MD; Robert Englander, MD, MPH

From the Office of Graduate Medical Education and Student Affairs, and Department of Pediatrics, Winthrop University Hospital, Mineola, NY (Dr Guralnick); Perelman School of Medicine, University of Pennsylvania, and Children's Hospital of Philadelphia, Philadelphia, Pa (Dr Ludwig); and Association of American Medical Colleges, Washington, DC (Dr Englander)

The views expressed in this report are those of the authors and do not necessarily represent those of the Accreditation Council for Graduate Medical Education, the American Board of Pediatrics, the Association of Pediatric Program Directors, or the Academic Pediatric Association.
The authors declare that they have no conflict of interest.
Publication of this article was supported by the American Board of Pediatrics Foundation and the Association of Pediatric Program Directors.
Address correspondence to Susan Guralnick, MD, 222 Station Plaza N Suite 510, Mineola, NY 11501 (e-mail: sguralnick@winthrop.org).

KEYWORDS: pediatrics; residency; graduate medical education; undergraduate medical education; competency based education; systems-based practice

ACADEMIC PEDIATRICS 2014;14:S70–S79

SYSTEMS-BASED PRACTICE (SBP) is the competency domain that is perceived to be the most abstract. Perhaps this is because it is so foundational to the practice of medicine that it goes unnoticed. The system underlies everything we do as a medical professional. It encompasses the vast array of people, places, resources, and environments in which we care for patients. At the core of SBP is the need to understand complex systems, navigate them for the benefit of patients, and lead or participate in continually improving them. Physicians' knowledge and understanding of the patient, community, and micro- and macrosystems within which they work are integral to optimal care delivery.

SBP cannot be defined exclusive of the other competency domains. Strong interpersonal and communication skills and professionalism are essential for: 1) interacting with the spectrum of patients, families, interprofessional team members, and other staff that form the foundation of our systems, and 2) breaching the barriers that exist interprofessionally, recognizing and embracing the diversity of professional culture. In fact, communication is broadly defined to include principles of patient-centered care, emphasizing shared-decision-making, with consideration of the social, educational, and cultural contexts of care.

The competencies within this domain call upon the physician to broaden her view of care and advocacy beyond the individual patient to the community level and ultimately to a population level. She must accept and embrace responsibility for personal and systems error recognition and prevention, promoting patient safety through systems change. In defining the milestones within this domain, we were challenged by the interplay between the development of an individual and the limits of each system within which one functions, recognizing the interdependence between the two. Ultimately, competent patient care can only be delivered within competent systems of care.[1]

REFERENCE

1. Asch DA, Nicholson S, Srinivas S, et al. Evaluating obstetrical residency programs using patient outcomes. *JAMA*. 2009;302:1277–1283.

Competency 1: Work effectively in various health care delivery settings and systems relevant to their clinical specialty

Robert Englander, MD, MPH

BACKGROUND: The physician who is willing to learn about the nature of systems, how to control them, and how to improve them can significantly influence medical systems. Being a good citizen in a medical system requires the appreciation of its systemic nature and the will to use that knowledge to change it, the better to accomplish its purpose.[1]

DEFINITIONS:

SYSTEM

A system is defined as "a collection of interdependent elements that interact to achieve a common purpose."[1]

SYSTEMS THINKING

The process of understanding how things influence one another within a whole. Systems thinking is an approach to problem solving, by viewing "problems" as parts of an overall system rather than reacting to specific parts, outcomes, or events and potentially contributing to the further development of unintended consequences.[2]

WORK-AROUND

A plan or method to circumvent a problem without eliminating it.

Copyright © 2014 by American Board of Pediatrics and Accreditation Council for Graduate Medical Association

Perhaps the keys to competence in SBP are the ability to understand complex systems, navigate them for the benefit of one's patients, and ultimately lead or participate in their change where change is required for improvement. Using this construct, "work effectively" within the framework of this competency can be defined as understanding complex systems (knowledge), navigating them (skills), and internalizing the responsibility to lead or participate in changing them as core to one's professional identity (attitudes).

As is true for many of the competencies in SBP, the ability of physicians to advance along the developmental continuum is at least partly reliant on the system in which they practice. Nolan[1] identified principles that determine the systems' ability to improve. Several of these principles, which are outlined below, will impact practitioners' abilities to develop systems thinking within the context of their specific system.

- A system needs a [common] purpose to aid people in managing their interdependencies.
- The structure of a system significantly determines the performance of the system.
- Changes in the structure of a system have the potential for generating unintended consequences.
- The need for cooperation is a logical extension of interdependencies in systems.
- Systems must be managed.

Poorly designed and managed systems that do not have a clear mission, that are unaware of or unable to evaluate unintended consequences to change, and that operate in silos will be unlikely to foster development in this competency. In contrast, optimally functioning systems that have demonstrated these qualities will likely facilitate more rapid progression of the individual practitioner through the developmental continuum. The literature suggests that interventions aimed at experiential understanding of these principles can improve the learner's knowledge about and perception of systems[3,4] as well as their ability to develop system improvements.[5]

This competency is intricately linked to several other competencies. For example, the ability to deal with uncertainty will inform success in this competency, given the inherent uncertainty of complex systems. Plsek and Greenhalgh[6] perhaps state it best: "Because the elements are changeable, the relationships non-linear, and the behavior emergent and sensitive to small changes, the detailed behaviors of any complex system is fundamentally unpredictable over time." In addition, as the understanding of systems has become paramount to providing optimal care, this understanding needs to be an intricate part of one's professional identity. Chen et al[7] write:

> *If the ethical practice of medicine depends on the system in which patient and physician interact, then physicians should see that improving systems of care is an integral part of ethical practice. Accomplishing…[this] requires that physicians change their mental models related to the ethical practice of medicine from that of a series of dyadic relationships to one that incorporates systems thinking.*

Finally, working effectively within a health care system by definition requires the abilities to: 1) be an effective team member (see communication competency); 2) optimize interprofessional collaboration (see systems-based practice competency); and 3) be a reflective practitioner (see practice-based learning and improvement competency).

DEVELOPMENTAL PROGRESSION: After considering the 2 premises discussed above (that the context in which one practices may affect the ability to progress through this competency, and that this competency is highly interconnected with other key competencies), one can still outline a developmental progression for the ability to work effectively in various settings and systems. Given the complexity of health care systems and their inherent uncertainty, the work of Plsek and Greenhalgh[6] and Fraser and Greenhalgh[8] are particularly informative for this competency. They outline a developmental progression from competence to capability, as follows.

COMPETENCE

What individuals know or are able to do in terms of knowledge, skills, and attitudes.

CAPABILITY

The extent to which individuals can adapt to change, generate new knowledge, and continue to improve their performance.

Masters of this competency will go beyond even capability to internalization of the importance of systems thinking to the ethical practice of medicine and will become champions of systems' changes toward improvement.

Moving along the developmental progression in this series of milestones requires both knowledge of systems and ability to adapt to new systems. One must simply acquire knowledge about systems and systems thinking. Since this subject has not been a traditional mainstay of medical education, either at the undergraduate or graduate level, this may be difficult to achieve. Practitioners lacking an understanding of systems will often encounter a process problem, become frustrated, and develop a work-around without consideration of how to prevent the issue for themselves or other practitioners in the future. With a knowledge of systems, competence may be reached and allow individuals to fix issues within the context of that rotation or setting; however, they remain unable to apply the abstract lessons learned in new settings or systems. Therefore, the sentinel feature to developmental progression in this competency *is the ability to adapt to new settings and systems.* This is perhaps particularly true of residents, as they are often on block rotations for short periods of time requiring their adaptation to new settings and systems as frequently as every 2 to 4 weeks. The ability to teach systems thinking will be paramount to medical educators helping learners progress from competence to capability and instilling an attitude that values systems thinking.

Download English Version:

https://daneshyari.com/en/article/4139718

Download Persian Version:

https://daneshyari.com/article/4139718

Daneshyari.com