

recruitment, with 90 candidates who aspired to enter 1 of the 6 ZL residency programs.

Each session consisted of 4 themed stations with different objectives and a break station. The duration of each station was 10 minutes. The OSCE was scored by faculty, the training and research department director, and representatives from the school of medicine.

Outcomes to Date

The OSCE was a new evaluation tool for medical educators in Haiti, and implementation faced challenges. We needed to train faculty and the standardized patients (SPs). Because of a lack of funds, we used medical students and residents as SPs. The use of medical students as SPs was helpful in multiple ways, allowing the students to learn clinical portrayal and trainee performance. Candidates and student SPs were nervous at first, but by the end of the day, all said they had benefited from the experience.

We are currently testing the OSCE as an evaluation tool in 2 residency programs (anesthesiology and pediatrics), and we intend to implement it in all ZL residency programs.

Ornella Sainterant, MD

Coordinator of Continuing Education, Zanmi Lasante, Croix-des-Bouquets, Haiti

Mary Clisbee, EdD

Director of Research, Zanmi Lasante, Croix-des-Bouquets, Haiti

Emmanuel Fabrice Julceus, MD

Coordinator of Research, Zanmi Lasante, Croix-des-Bouquets, Haiti

Corresponding author: Mary Clisbee, EdD, Zanmi Lasante, 18A Route de Santo, Croix-des-Bouquet, Haiti, mclisbee@pih.org

References

1. Central Intelligence Agency. The World Factbook. Central America: Haiti. <https://www.cia.gov/library/publications/the-world-factbook/geos/ha.html>. Accessed June 18, 2019.
2. The World Bank. The World Bank in Haiti: Overview. 2019. <http://www.worldbank.org/en/country/haiti/overview>. Accessed June 18, 2019.
3. Cavagnero ED, Cros MJ, Dunworth AJ, Sjoblom MC. Better spending, better care: a look at Haiti's health financing: summary report. 2017. <http://documents.worldbank.org/curated/en/393291498246075986/summary-report>. Accessed June 18, 2019.
4. Harden R, Lilley P, Patricio M. *The Definitive Guide to the OSCE*. 1st ed. London, UK: Elsevier/Churchill Livingstone; 2015.



Administrative and Managerial Skills for Tomorrow's Medical Professionals: A Needs Assessment

Setting and Problem

A complex and dynamic health care environment requires medical professionals of the future to be trained to deliver high-quality clinical care, as well as help address organizational problems that may be outside the clinical arena. Evidence shows that effective clinician leadership in health care organizations is linked to superior patient care outcomes.¹ However, most physicians are ill prepared to undertake responsibilities requiring organizational and management skills because medical school and residency training offer limited opportunities to learn them.² We present a framework, derived from thematic analysis of qualitative data from semistructured interviews, which identifies key capabilities to enable physicians to innovate solutions to complex organizational problems.

Intervention

We conducted a 2-phase qualitative study. First, we distributed a peer nomination survey to all senior physicians at Tan Tock Seng Hospital in Singapore, asking them to nominate peers who consistently excelled in nonclinical roles, such as leadership or administration in addition to their clinical roles. The second phase consisted of semistructured interviews with individuals who had received multiple nominations from peers. During the interviews, we asked participants to reflect on their experiences when they undertook nonclinical responsibilities in their institution, the capabilities that were necessary for them to excel in the projects they were tasked to handle as their

DOI: <http://dx.doi.org/10.4300/JGME-D-18-01007>

TABLE

Summary of Capabilities Needed to Develop T-Shaped Clinicians

Theme	Subtheme and Illustrative Quote
Knowledge and skills	<i>Self-awareness and management</i> “I think you have to understand the role that you’ve been assigned to play and . . . in order to play that role effectively, what kind of capabilities you need to develop.”
	<i>Strategic thinking</i> “I pick and choose things that I think are fundamentally solvable at my level. I think you have to recognize that some things are too big to be solvable at your level.”
	<i>Systems thinking and knowledge</i> “You need to realize the importance of the system to your individual ability to deliver the care that you want to deliver.”
	<i>Interpersonal skills</i> “I think this is something I learned over the years: you can’t just simply get things done, there’s a way of approaching people—how to solve your problems, or get things done.”
	<i>Future orientation</i> “You have to try and foresee problems, solve problems, and do certain things that may help you get around problems before you even meet with them.”
Attitudes	<i>Value multiple perspectives</i> “You have to deal with people that come from different family groups, and appreciate that their whole world map and mind-set are very different from our own.”
	<i>Empathy</i> “The ability to understand the challenges that your other colleagues are facing, or your subordinates are facing. And the ability to listen.”
	<i>Unafraid to challenge norms</i> “So . . . a question mark is not necessarily a bad thing, but may make one ponder why are certain things done in a certain way, and is there any other way.”
	<i>Perseverance</i> “Because if you don’t persevere, you would’ve dropped off long ago. Yeah. You’ll be enjoying yourself going to the movies, the theatre, whatever, you don’t have to spend your time thinking about how you’re going to get the next dollar to keep the research assistant.”

careers progressed, and how they developed these added nonclinical capabilities. We interviewed 18 participants; all interviews were audio-recorded and the data transcribed, coded, and thematically analyzed.

Outcomes to Date

The diverse capabilities that emerged from the data were organized into subthemes, and subsequently into broad themes using the framework of knowledge, skills, and attitudes. These are summarized in the TABLE with a representative quote illustrating each subtheme.

It is noteworthy that some of these subthemes (future orientation, being unafraid to challenge norms, and perseverance) are important to self-regulated learning and are closely related to the personal characteristics (curiosity, motivation, and resilience) and processes mentioned in the development of the “master adaptive learner.”³ In addition to cognitive skills, capabilities that enabled individuals to function in teams (interpersonal skills, empathy, appreciating multiple stakeholder perspectives) were also frequently mentioned. Working in teams is common in health care, and participants emphasized that team skills were particularly important in the

context of interacting with colleagues from nonclinical professions, who may have a different mind-set and worldview than those of clinicians.

Participants felt that medical school and specialty training had prepared them well in terms of clinical knowledge, but had not equipped them adequately for the mounting administrative and leadership roles as their careers progressed. They also acknowledged that developing medical professionals equipped for a complex health care system must encompass both deep clinical expertise and a crosscutting range of skills and attitudes to enable clinicians to understand and communicate with others in the system, and to continuously learn and innovate. In addition to clinical acumen, this requires understanding and mastery of a range of skills from other disciplines and the ability to integrate them for knowledge creation, problem-solving, and innovation.⁴ The importance of combining both deep professional expertise with broad cross-disciplinary skills to produce a “T-shaped” professional has been acknowledged in other fields as well.⁵

Beginning to incorporate development of these capabilities in our medical students and residents is the next step. A number of participants emphasized

that they had developed these skills and attitudes not through formal curricula, but through immersion in organizational cultures that fostered positive learning experiences and interaction with role models. Future interventions could involve trainees in system-level, cross-professional problem solving, combined with thoughtful pairing of appropriate mentors or coaches, such as the experts identified in this study, and allowing participants to reflect on their experience.

Winnie Teo, PhD

Assistant Director (Education), National Healthcare Group, Singapore

Hwee Sing Khoo, PhD

Senior Research Analyst, Health Outcomes and Medical Education Research, National Healthcare Group, Singapore

Yee Lin Tang, MBBS, FRCPA

Consultant, Department of Pathology, Tan Tock Seng Hospital, Singapore

Yvonne Ng, MSc

Senior Director (Education), National Healthcare Group, Singapore

Nicholas Chew, MBBS, MMed (Psy), MHPEd, FAMS
Group Chief Education Officer, National Healthcare Group, Singapore

Michelle Jong, MBBCh, FRCP, FAMS

Assistant Chairman Medical Board, Education, Tan Tock Seng Hospital, Singapore

Corresponding author: Winnie Teo, PhD, Tan Tock Seng Hospital, 7 Jalan Tan Tock Seng, Annex 2 (Level 3), Singapore 308440, winnie_ll_teo@nhg.com.sg

References

1. Tsai TC, Jha AK, Gawande AA, Huckman RS, Bloom N, Sadun R. Hospital board and management practices are strongly related to hospital performance on clinical quality metrics. *Health Aff (Millwood)*. 2015;34(8):1304–1311. doi:10.1377/hlthaff. 2014.1282.
2. Khoo HS, Teo WL. A transformative learning approach to teaching management skills in medical education. *Acad Med*. 2018;93(4):516–517. doi:10.1097/ACM. 0000000000002115.
3. Cutrer WB, Atkinson HG, Friedman E, Deiorio N, Gruppen LD, Dekhtyar M, et al. Exploring the characteristics and context that allow master adaptive learners to thrive. *Med Teach*. 2018;40(8):791–796. doi:10.1080/0142159X.2018.1484560.
4. Fast Company. Brown T. Strategy by Design. <https://www.fastcompany.com/52795/strategy-design>. Accessed June 11, 2019.
5. Hansen MT, von Oetinger B. Introducing T-shaped managers: knowledge management's next generation. *Harv Bus Rev*. 2001;79(3):107–116.

NEW IDEAS

Teaching How to Teach in a Train-the-Trainer Program

Setting and Problem

Train-the-trainer programs in international settings focus on teaching medical content to local faculty.¹ Local faculty are then tasked with becoming the teachers of medical content to other hospitals and regional health care providers as part of the development of a sustainable educational program. However, faculty are rarely taught effective teaching techniques during their medical training or as a part of a train-the-trainer course.²

Advanced Pediatric Life Support (APLS) courses³ are designed by the American Academy of Pediatrics (AAP) to be adaptable to different practice environments. The course materials include a student manual and an instructor “toolkit” with 21 modules of medical content in PowerPoint slides and small group session scripts, skill stations, and administrative materials, including recommended course schedules and pre- and posttests. All materials can be modified according to setting. After taking the course, students can become course instructors. Additionally, the AAP outlines parameters for instructors to become course directors, who can submit a course schedule to the AAP and obtain official certification for students. We have used the APLS program and a train-the-trainer approach to increase pediatric capacity in global health.

Intervention

We proposed to include modules on teaching pedagogy within our APLS train-the-trainer programs. In April 2018, we implemented an APLS course at the University Teaching Hospital of Kigali in Rwanda with 2 iterations of the course over 1 week. The first

DOI: <http://dx.doi.org/10.4300/JGME-D-18-01014>