Professional Identity Formation During the COVID-19 Pandemic

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In 1957, Merton wrote that the primary aim of medical education should be "to provide [learners] with a professional identity so that [they] come to think, act, and feel like a physician."[1] More than a half-century later, the Carnegie Foundation for the Advancement of Teaching echoed his sentiments in its landmark examination of the United States medical education system, which produced four key recommendations for curricular reform, including explicitly addressing professional identity formation (PIF).[2] PIF is a process by which a learner transforms into a physician with the values, dispositions, and aspirations of the physician community.[3] It is now recognized as crucial to developing physicians who can deliver high-quality care.[2]

Major changes to the learning environment can impact PIF. For example, when the Accreditation Committee for Graduate Medical Education duty-hour restrictions were implemented in 2003, several educators were concerned that the changes may negatively affect resident PIF,[4] whereas others saw an opportunity to refocus curricular efforts on PIF.[5] Medical education is now in the midst of another radical change with the novel coronavirus disease 2019 (COVID-19) pandemic. Over the past several months, we have begun to understand the pandemic's effects on medical education in terms of learner welfare, educational experiences/value, innovation, and assessment.[6-8] However, little has been published on the pandemic's effect on PIF.[9] We explore the impact of COVID-19 on physicians' PIF and identify strategies to support PIF in physicians and other healthcare professionals during times of crisis.

SOCIALIZATION AND COMMUNITIES OF PRACTICE

PIF is dynamic and nonlinear, occurring at every level of the medical education hierarchy (medical student, resident, fellow, attending).[10] Emphasis on PIF has grown in recent years as a response to the limitations of behavior-based educational frameworks such as competency-based medical education (CBME),[3] which focuses on what the learner can "do." PIF moves beyond "doing" to consider who the learner "is."[11] PIF occurs at the individual level as learners progress through multiple distinct identity stages during their longitudinal formation[10,12-14] but also at the level of the collective. Socialization plays a crucial role; thus, PIF is heavily influenced by the environment, context, and other individuals.[10]

Medicine can be conceptualized as a community of practice, which is a sustaining network of individuals who share knowledge, beliefs, values, and experiences related to a common practice or purpose.[15,16] In a community of practice, learning is social, includes knowledge that is tacit to the community, and is situated within the context in which it will be applied. PIF involves learners moving from "legitimate peripheral participation," whereby they are accepted as novice community members, to "full participation," which involves gaining competence in relevant tasks and internalizing community principles to become full partners in the community.[13] Critical to this process is exposure to socializing agents (eg, attendings, nurses, peers), observation of community interactions, experiential learning in the clinical environment, and access to role models.[10,16] Immersion in the clinical environment with other community members is thus crucial to PIF. This is especially important, as "medicine" is not truly a single community, but rather a "landscape of communities," each with its own identity.[17] Learners must therefore be immersed in many different clinical environments to experience the various communities within our field.

COVID-19 CHANGING THE LEARNING ENVIRONMENT

The pandemic is drastically altering the learning environment in medical education.[8] Several institutions temporarily removed medical students from clinical rotations to reduce learner exposure and conserve personal protective equipment. Some residents were removed from nonessential clinical activities for similar reasons. Many attendings have been asked to work from home when not required to be present for clinical care duties. Common medical community activities, such as group meals and conferences, have been altered for physical distancing or simply canceled. Usual clinical care has rapidly evolved, with changes in rounding practices, a boon of telehealth, and cancellations of nonessential procedures. These necessary changes present constantly shifting grounds for anyone trying to integrate into a community and develop a professional identity.

Changes outside of the clinical learning environment are also affecting PIF. Social interactions, such as dinners and

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TABLE. **Principles for Supporting Professional Identity Formation***

Principle	Challenges worsened by the COVID-19 pandemic	Potential solution
Develop and transmit the cognitive base	There is a baseline lack of understanding of and attention paid to PIF, which is likely worsened by competing priorities during the pandemic	Integrate the topic of PIF into current learning activities, such as didactic conferences, group learning activities, and mentorship meetings
Establish PIF as an educational objective	Current assessment frameworks (eg, medical school end-of-training EPAs and ACGME subcompetencies) do not explicitly address PIF	Include PIF in the mission/vision/values statement of education and faculty development programs, including learning objectives that are mapped to curricular frameworks
Explicitly address the known factors affecting PIF	There are fewer face-to-face mentoring opportunities and reduced experiential learning as a result of necessary safety measures; the hidden curriculum may be more challenging to decipher for learners	Leverage technology to continue mentoring relationships virtually or with physical distancing. Integrate learners into the clinical environment in novel ways, such as helping with quality and safety initiatives, systems redesign efforts, or patient outreach
Embrace communities of practice as an educational theory underpinning PIF	Socialization is difficult because of physical distancing and altered social practices, making it challenging to learn the values of the community	Make the values and social expectations of the community explicit, including inequitable hierarchies and power structures, and work to eliminate them. Dedicate efforts to maintain social ties within the community
Provide institutional support	Financial and personnel resources are stretched thin to meet the needs of a rapidly shifting educational landscape	Provide protected time and training for mentors to help with guided reflection and for program leaders to develop curricula that meaningfully integrate PIF
Allocate responsibility	There is a lack of clear leadership roles for addressing factors important in PIF, with other pandemic-related issues taking priority	Designate a program and resident leader to monitor PIF activities and report to the larger leadership group
Engage learners in PIF	Little time is allocated to learners for dedicated reflection on professional identity, with reduced access to mentors for guided reflection exercises	Provide protected time for learners to reflect on professional identity and their community of practice. Train facilitators to guide reflection sessions for learners
Establish a program to assess progress in PIF	There is a dearth of instruments with robust validity evidence for assessing and tracking PIF and fewer opportunities to collect data during the pandemic	Forgo psychometric approaches with little validity evidence and embrace narrative assessment, including observational and self-assessments
Create and maintain a welcoming community	The pandemic has worsened long-standing inequitable treatment toward underrepresented minority groups and women, causing negative effects on physicians and patients	Engage our learners in efforts to make our community's inequities visible and transparent so systematic change can take place

*Adapted from Cruess et al[17] for the COVID-19 pandemic

Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; COVID-19, coronavirus disease 2019; EPA, Entrustable Professional Activity; PIF, professional identity formation.

peer gatherings, occur via video conference or not at all. Most in-person contact happens with masks in place, physically distanced, and in smaller groups. Resident and student lounges are being modified to physically distance or reduce the number of occupants. There is often variable adherence, both intentional and unintentional, to physical distance and mask mandates, creating potential for confusion as learners try to internalize the values and norms of the medical community. Common professional rituals, such as white coat ceremonies, orientation events, and graduations, have been curtailed or canceled. Even experiences that are not commonly seen as social events but are important in the physician's journey, such as the residency and fellowship application processes and standardized tests, are being transformed. These changes alter typical social patterns that are important in PIF and may adversely affect high-value social group interactions that serve as buffers against stressors during training.[18]

Finally, the pandemic has altered the timeline for many learners. Medical students at several institutions graduated early to join the workforce and help care for escalating numbers of patients during the pandemic.[7] Some see the pandemic as a catalyst to move toward competency-based time-variable training, in which learners progress through training at variable rates depending on their individual performance and learning needs.[19] These changes could shorten the amount of time some learners spend in a given role (eg, medical student, intern). In such situations, it is unclear whether a minimal maturational time is necessary for most learners to fully develop a professional identity.

SUPPORTING PIF DURING THE PANDEMIC

In 2019, Cruess et al published general principles for supporting PIF,[17] which have been used to support PIF during the COVID-19 pandemic.[20] In the Table, we describe these principles and provide examples of how to implement them in the context of the pandemic. We believe these principles are applicable for PIF in undergraduate medical education, graduate medical education, and faculty development programs. A common thread throughout the principles is that PIF is not a process that should be left to chance, but rather explicitly nurtured through systematic support and curricular initiatives.[5] This may be challenging while the COVID-19 pandemic is sapping financial resources and requiring rapid changes to clinical systems, but given the central role PIF plays in physician development, it should be prioritized by educational leaders.

CREATING AND MAINTAINING A WELCOMING COMMUNITY: AN OPPORTUNITY

One of the final principles from Cruess et al is to create and maintain a welcoming community.[17] This prompts questions such as: Is our community welcoming to everyone, where "everyone" really does mean *everyone*? Like other social structures, communities of practice tend to perpetuate existing power structures and inequities.[17] It is no secret that medicine,

like other professions, is riddled with inequities and bias based on factors such as race, gender, and socioeconomic status.[21-23] The COVID-19 pandemic is likely exacerbating these inequities, such as the adverse impacts that are specifically affecting women physicians, who take on a disproportionate share of the child care at home.[23] These biases impact not only the members of our professional community but also our patients, contributing to disparities in care and outcomes.

Physicians who have received inequitable treatment have laid bare the ways in which our communities of practice are failing them, and also outlined a better path on which to move forward.[21,23] In addition to recruitment practices that promote diversity, meaningful programs should be developed to support inclusion, equity (in recognition, support, compensation), retention, and advancement. The disruption caused by COVID-19 can be a catalyst for this change. By taking this moment of crisis to examine the values and norms of medicine and how we systematically perpetuate harmful inequities and biases, we have an opportunity to deliberately rebuild our community of practice in a manner that helps shape the next generation's professional identities to be better than we have been. This should always be the aim of education.

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