

Fellowship Accreditation: Experiences From Health Care Simulation Experts

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ABSTRACT

Background The field of health care simulation continues to grow, accompanied by a proliferation of fellowship programs, leading to fellowship accreditation efforts. There is controversy around the best approach to accreditation.

Objective The authors sought to understand perspectives of simulation leaders on fellowship accreditation to best inform the growth and maturation of fellowship accreditation.

Methods In 2020, simulation leaders identified through snowball sampling were invited to participate in a qualitative study. During one-on-one semistructured interviews, participants were asked about experiences as simulation leaders and their perspective on the purpose and impact of accreditation. The interviews were audio recorded and transcribed. Thematic analysis informed by a phenomenology framework was performed using a masked open coding technique with iterative refinement. The resulting codes were organized into themes and subthemes.

Results A total of 45 simulation experts participated in interviews ranging from 25 to 67 minutes. Participants described discord and lack of consensus regarding simulation fellowship accreditation, which included a spectrum of opinions ranging from readiness for accreditation pathways to concern and avoidance. Participants also highlighted how context drove the perception of accreditation value for programs and individuals, including access to resources and capital. Finally, potential impacts from accreditation included standardization of training programs, workforce concerns, and implications for professional societies.

Conclusions Simulation leaders underscored how the value of accreditation is dependent on context. Additional subthemes included reputation and resource variability, balancing standardization with flexibility and innovation, and implications for professional societies.

Introduction

Several interacting forces have driven the growth of health care simulation. These include a heightened stakeholder expectation for high-quality patient care training that provides value,^{1,2} a shifting paradigm in health professions education to outcomes-based measures of curricular efficacy,³ and a rapid expansion in the knowledge and competencies required to enter and remain in clinical practice.^{4,5}

Fellowship training programs have emerged as a preferred gateway to developing the necessary skills and experience for those interested in pursuing a career in health care simulation.⁶⁻⁸ Simulation fellowship programs typically range from 1 to 2 years. Fellows are most frequently residency trained physicians in emergency medicine, anesthesiology, or surgery with nurses, prehospital clinicians, and non-clinical educators also represented in smaller numbers.⁹ The specialty of health care simulation has

actively developed fellowship accreditation programs in recent years.¹⁰⁻¹²

Health care simulation professionals have debated potential benefits and pitfalls regarding the development of these accreditation programs, citing mixed reactions and varying levels of endorsement among members of the simulation expert community. Problems around standard setting, validation, equity, and cost have been identified.¹³ This study aims to inform the future growth and maturation of fellowship accreditation programs by understanding the perspective of health care simulation leaders. The insights from this group may resonate with other fields experiencing a surge in fellowships and accreditation. Therefore, we explored the lived experiences and opinions of simulation and health professions experts on simulation fellowship accreditation in this interview-based qualitative study.

Methods

Participants and Data Collection

To identify leaders in simulation, we recruited initial participants from a review of simulation fellowship

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Editor's Note: The online supplementary data contains the structured interview guide used in the study.

directories, searches of professional society databases, a reputable simulation textbook authorship index, and our professional networks.¹⁴⁻¹⁷ We asked interviewees to recommend other simulation leaders in a snowball sampling method. We evaluated our list of participants' professional backgrounds, level of experience, geopolitical setting, and academic affiliations to include a holistic and representative sample for purposes of transferability.¹⁸ In addition to expertise in the field, English language proficiency was required for participation.

We developed interview questions through a synthesis of previous literature on health care simulation fellowship training and triangulation with perceived perspectives on fellowship accreditation.^{13,19,20} Fellowship accreditation questions were embedded in a broad reaching interview about professional identity and the maturation of health care simulation. The interview guide explored experiences with formal training in health care simulation, reflections on fellowship accreditation, and its potential impact on the field (provided as online supplementary data). We piloted the interview guide with a volunteer participant and made refinements based on feedback prior to formal data collection.

Two authors (H.K., R.T.M.) conducted one-on-one, semi-structured interviews using Zoom (Zoom Video Communications) and WebEx (Cisco Systems) online conferencing platforms. All interviewees gave informed verbal consent prior to the interview. Discussions were audio recorded, transcribed verbatim, de-identified, and entered into qualitative data management software (Dedoose version 8.2.27; Socio-Cultural Research Consultants, LLC). Demographic data obtained from the interviewees and review of their public facing professional profiles were recorded in a separate table.

Data Analysis

A phenomenology framework informed our thematic analysis as part of our process for study credibility.²¹ Specifically, we followed the transcendental phenomenological approach to investigate both *what* participants experienced (textural descriptions) and *how* they experienced the process of fellowship accreditation based on their situational context (structural descriptions) through the fresh lens of the research team to develop rich meaning of their lived experiences.²² We adopted an interpretive analytic approach to uncover a range of unique lived experiences and varied interpretation of how accreditation may impact participants and the field of health care simulation.²³ We also took into consideration our own backgrounds and lived experiences as simulation experts and academic

KEY POINTS

What Is Known

As fellowships proliferate, accreditation efforts invariably follow, but it is not always clear what value accreditation provides or what the best approach is to the accreditation process.

What Is New

This qualitative study of leaders in the field of simulation adds narrative information and clarity about the lack of consensus around fellowship accreditation.

Bottom Line

This work provides insights from the simulation fellowship world that can be taken into account by any other new fellowship fields or those also struggling with accreditation conversations.

medical educators throughout the research process. A 6-member coding team (M.C., H.K., A.N.M., R.T.M., A.P., A.H.W.) used Dedoose for thematic analysis and organization of the qualitative data. The coding team created and refined the code book through masked open coding of initial transcripts, identifying additional codes through iterative rounds of group discussion and integrating existing codes. After coding each transcript, the team tested reliability by comparing the codes of each researcher, refined the codes to eliminate redundancy, and came to consensus.^{24,25} Thereafter, all transcripts were independently coded by at least 2 team members (double-coding) following a similar process as above.²⁶ We performed data collection and analysis iteratively where we coded as we interviewed, noting when no new themes or codes emerged in the data set. We maintained an audit log of the analytic process, which was reviewed and discussed in peer-debriefing session among the team for confirmability. After all transcripts were analyzed, the team summarized codes into major themes and subthemes.

Reflexivity

Our multi-institutional research team was deliberately mindful of the value of reflexivity throughout the research process, adopting several reflexive practices to capture emerging thoughts, feelings, and reactions to the research process and data produced by it. Team members relied on these practices to acknowledge our individual subjectivity. Chief among these practices were regularly scheduled meetings, memo taking, commenting, agenda setting, and minute taking. Team members engaged in these practices both synchronously (during video teleconferencing sessions or in-person meetings) and asynchronously (during independent analysis). The team regularly reminded one another of their individual demographics and career trajectories with one another

and often compared and contrasted them with those described by the research subjects. Five authors (R.A.A., M.C., R.T.M., A.N.M., and A.H.W.) are US-centered physicians with clinical training in emergency medicine and subspecialty expertise in health care simulation; all identify as male. M.C. has an academic appointment at a school of nursing. H.K. is a US-centered physician who identifies as female with subspecialty expertise in health care simulation. She held an administrative role at a large university school of nursing during the research process. A.P. is a Finnish cultural anthropologist/social scientist who identifies as male. His expertise is in qualitative research methods, and he completed his PhD during the research process.

Our study protocol was approved by the Yale University Institutional Review Board. We followed the 21-item Standards for Reporting Qualitative Research.²⁷

Results

Participant Characteristics

We reached data sufficiency with 45 participants. Two authors (H.K., R.T.M.) conducted all semi-structured interviews between January and June 2020. The median length of interviews was 47 minutes, with a range of 25 to 67 minutes. Most participants were physicians, with additional representation from nurses, scientists, and other nonphysician simulation experts. The most prevalent specialty was emergency medicine. Other specialties included anesthesiology, pediatrics, and critical care. Nonclinical participants were mostly educators and nurses, many working with multiple specialties including surgery. Participant characteristics are summarized in TABLE 1. While 34 participants were from the United States, 11 participants represented the larger international simulation community of practice, including experts from Australia, Canada, Denmark, Hong Kong, Mexico, Singapore, and the United Kingdom. Nearly half of those interviewed reported 20 or more years of experience in health care simulation, academic practice, or both. Nineteen (42.2%) pursued additional education, demonstrated by completion of health care simulation fellowships or graduate degrees in education, business administration, and other fields. Twenty-four (53.3%) of the participants were in a leadership role at their institution, such as simulation center director or fellowship director.

Main Results

We identified 3 overarching themes: discord and lack of consensus; value perception depends on context; and potential personal, financial, and professional impacts. TABLE 2 provides a summary of each of these themes as

TABLE 1
Participant Demographics

Demographic	n (%)
Gender	
Female	12 (26.7)
Male	33 (73.3)
Geographic distribution	
International	11 (24.4)
USA Northeast	5 (11.1)
USA Eastern	5 (11.1)
USA Southeast	4 (8.9)
USA South	5 (11.1)
USA West	7 (15.6)
USA Midwest	8 (17.8)
Profession	
Physician	37 (82.2)
Nurse	2 (4.4)
Scientist	6 (13.3)
Clinical specialty	
Anesthesiology	5 (11.1)
Emergency medicine	25 (55.6)
Pediatrics (includes emergency medicine and critical care)	7 (15.6)
Nonclinical	8 (17.8)
Years in academics	
<10	1 (2.2)
10 to 20	19 (42.2)
21 to 30	14 (31.1)
>30	8 (17.8)
Unknown	3 (6.7)
Additional descriptors of expertise ^a	
Additional degree (MEd, MS, MHPE, MBA)	19 (42.2)
Simulation fellowship	11 (24.4)
Director ^b	24 (53.3)
Chair	5 (11.1)
Dean/associate dean	5 (11.1)

^a Participants may exist within 2 or more categories; totals of all percentages may exceed 100%.

^b Indicates simulation center director, fellowship director, or similar leadership position.

well as their subthemes, concepts, and definitions. Participant quotes illustrating subthemes are presented in TABLE 3. These tables are designed to present a comprehensive review of our results, while the following sections highlight key findings from each theme.

Theme 1: Discord and Lack of Consensus

Many participants expressed emotional and often conflicting opinions regarding fellowship accreditation.

TABLE 2

Simulation Fellowship Accreditation Themes and Definitions from 45 Simulation Leaders Interviewed in 2020

Theme	Subthemes	Concepts	Definitions
Discord and lack of consensus	Emotional reactions	Readiness	Maturity of the specialty deserves/requires this evolution.
		Annoyance, avoidance	New processes and requirements are overwhelming. Change is difficult.
		Conflicted	Recognizes pros and cons, but reserves judgement or opinion.
	Confusion around terminology	Accreditation vs certification	Accreditation for programs, certification for individuals. Yet this vocabulary is used differently even by leaders in the field.
		Definition of fellowship	Term fellowship is used broadly, describes heterogeneous experiences.
	Evaluation of fellowship program quality	Content based metrics	Suggests accreditation will standardize fellowship curricula.
		Process based metrics	Suggests curricula should remain flexible, as long as process safeguards are in place. For example, demonstrating sustainable funding, learner evaluation processes, and other policies.
Value perception depends on context	Program size and resource dependent	Reputation trumps need for accreditation	Large well-established programs can leverage their reputation, decreasing their desire for accreditation.
		Smaller and/or newer programs are overwhelmed by the process	Smaller programs may lack the administrative and financial resources to undergo the accreditation process.
	Return on investment is stakeholder dependent	Value for the program	Acts as a motivator to improve program quality. Adds to credibility/legitimacy.
		Value for fellows	Assurance of program quality during application process, provides protections during fellowship, and improves marketability after fellowship.
		Value for the future employer	Additional marker of quality when comparing fellowship graduates for hiring or promotions.
Potential personal, financial, and professional impacts	Workforce concerns	Protection of the vulnerable	Accreditation provides a layer of security to fellows in regard to protected time and evaluation processes.
		Growth of fellowship training programs	Proliferation of fellowships may lead to oversaturation of the field. Accreditation may help regulate this.
	Standardization of training programs	Guardrails	Accreditation can provide criterion-based guidelines and benchmarking to improve programs.
		Limiting flexibility	Concerns that accreditation may become prescriptive and limit the flexibility for programs to customize training experiences to meet the goals and needs of trainees.
		Restriction of diversity and innovation	Over-regulation of training programs may result in homogenous training programs. Concern that this will stifle creativity and prevent evolution of a specialty known for its innovation.
	Professional society implications	Reputation and influence	Several professional societies offer options for accreditation, which may grow their membership and sphere of influence.
		Financial opportunities	Accreditation can serve as a revenue stream for professional societies.

TABLE 3

Simulation Fellowship Accreditation Themes and Quotations From 45 Simulation Leaders Interviewed in 2020

Theme	Subthemes	Quotes
Discord and lack of consensus	Emotional reactions	I think we're mature enough. We've defined the field enough that we can set some basic standards and require fellowship programs to meet those standards. #35
		For some reason, in simulation, people are very myopic about their view and the way it needs to be done, and I think that's hampering the whole community moving forward. #7
		Carving out simulation as its own accredited fellowship, I think that there's a danger in people not having good grounding, and further kind of siloing off simulation for the rest of medical education, which I think is a pity and a huge threat. #8
	Confusion around terminology	I am for accreditation, but against standardization. #25
		Right now, you can have a bad fellowship and say you're a fellowship. There should be certain criteria that are agreed upon, at least a minimal level of competency expectation and a minimal level of academic productivity expectation...right now anybody can say they have a fellowship program. #4
	Evaluation of program quality	I think accreditation is a great way to guarantee a minimum viable product across the board. It can't guarantee excellence, but it can guarantee that the structures are inherent and transferable across contexts. #8
		So there needs to be some sort of litmus tests to say, what is good enough? And what does that mean? #1
Value perception depends on context	Program size and resource dependent	If you're rich, you can afford it great but if you can't afford it, then you will be sort of blackballed. And I don't want that to be a reflection on the kind of scholarship and research that can come out of some of the smaller centers. #2
		There is the potential for smaller programs to be disadvantaged because they don't necessarily have the capacity to go through the accreditation process. #21
	Return on investment is stakeholder dependent	If you're a smaller size center and trying to establish yourself and demonstrate your importance and legitimacy, accreditation is helpful. It can be helpful internally to administration to say, hey, we're accredited, and it means something to them. #3
		You have to do your own ROI. #11
		We have no shortage of people applying at this point and so, you know, is the juice worth the squeeze? And the short answer is, I don't know. #1
Potential personal, financial, and professional impacts	Workforce concerns	I grew up in a time where fellowship programs were basically created to get additional labor. A lot of time was spent clinical and it was more on the job training for the fellowship. Accreditation would limit those types of programs where you're working at a reduced salary, and not getting much out of it from a training standpoint and then graduating with a limited skill set or knowledge base. It would push those kinds of programs to a minimal standard. #35
	Standardization of training programs	Simulation fellowship would benefit strongly from there being clear, national, and international curricular expectations and demonstrated value to both the trainee themselves and the things that they're expected to produce or deliver. #22
		The sweet spot is to create a system that I call "Goldilocks Bureaucracy." Not too bureaucratic and restrictive and constraining, but one that, if you will, no regulation is dangerous, too much regulation is oppressive. #39
	Professional society implications	It just becomes a sort of weirdly political and financially motivated. #11
		If you really want to make it legitimate, about the quality of the fellowship, then you drop the price tag associated with it because right now it feels very much that it's a money minting machine. #2

Abbreviation: ROI, return on investment.

These reactions ranged from enthusiasm to dismay and annoyance. Individuals most enthusiastic about simulation fellowship accreditation cited accreditation as an indicator of the specialty's maturity. One participant viewed accreditation as a validation of the specialty's progress and growth. *"If we say that accreditation shouldn't exist, that means we spent 20 years and we don't know what we want. We don't know what the standards are. And that's a pretty sad place to be."* (Participant 35)

On the contrary, participants who expressed disdain focused more on the burdens and limitations generated by new requirements and fees. One individual lamented, *"My initial reaction was one of extreme skepticism... it felt as if this was going to be one more hoop to jump through."* (Participant 23) This sentiment reflected the administrative burdens carried by health care education professionals who lead fellowships and training programs, sometimes without formal administrative or financial support.

A common response was more reserved and conflicted. These participants were unsure about the possible effects of implementing accreditation guidelines, acknowledging that both positive and negative outcomes could arise from their development. Many of these participants reserved judgment, citing the complexity of the issue with no one single correct answer. One participant emphasized the diversified landscape of academic medicine, recognizing that there is *"... so much process variation, so much normalization of deviance that's out there in medicine, because we have put a really high premium on intellectual freedom for a long period of time. There should be a lot more consensus on how to do things."* (Participant 38)

This diversity of opinions was partially fueled by terminology uncertainty. A participant commented, *"Simulation-based education or simulation fellowship is a very broad, ill-defined and irregular, grouping."* (Participant 19) In fact, experts used the terms fellowship, accreditation, and certification differently and sometimes interchangeably throughout their responses.

Another fellowship accreditation topic that resulted in a divergence of opinions among participants was the best measurement of fellowship program quality. While identifying quality as an important aspect of accreditation, many participants acknowledged the difficulty in identifying broadly applicable metrics within health care simulation. Some suggested standardized fellowship curricula to ensure consistency in content across programs, while others valued flexibility, favoring process-based metrics for accreditation. As one participant in favor of broad process-based evaluation described this issue: *"An appropriate accreditation standard is that candidates codesign a set of learning*

objectives with their mentor, appropriate to their profession, discipline, and level of training... rather than standards with specific metrics. People are sitting around going, oh, do you reckon it should be 6 months or 9 months [of training]? I don't know. Do you think they should have written 20 scenarios or 30? Oh, I don't know. Let's make it 30. It is a stupid conversation." (Participant 17)

Theme 2: Value Perception Depends on Context

Experts often described their own clinical and educational experiences as well as organizational and career-related circumstances as significant factors influencing their views of accreditation. As one participant stated: *"Different people have different views depending on where they come from, and where they are in the history or spectrum of simulation from a little place to a big place. So, there's no right answer, and there's no easy way to hash out these things."* (Participant 42)

Variation in opinion appeared to align with the "simulation generation" to which each expert belonged. Early simulation pioneers relied on exploration and self-teaching. One early pioneer reflected *"I think when I entered [the field], what you needed, was a whole lot of just general I'm not going to give up-ness and willingness to create and try new things and not get knocked down and just try to push forward."* (Participant 23) In contrast, newer generations of simulation leaders trained within more formal pathways, leveraged simulation specific mentors, and pursued fellowship programs. The earliest simulation fellows reported loosely structured, self-guided fellowships, while recent graduates described completing more structured programs, making them more comfortable with specific accreditation structure.

Size and resources emerged as another contextual influence, with a dichotomy between large, well-financed versus smaller programs. Equipped with more financial and administrative resources, large programs embedded in powerful academic institutions could more readily manage the accreditation process. It seemed, however, that there was less motivation to undergo accreditation since these larger programs believed in the ability to attract applicants on reputation alone. A participant from a well-known and highly respected US university stated: *"If you're well-known enough, accreditation may not matter... it's not a big deal for us because we can attract fellowship applicants and then when they finish here, they can say they did their fellowship at so-and-so with so-and-so. That's probably good enough for a lot of [hiring] places."* (Participant 42) In contrast, smaller less reputable programs could leverage accreditation to increase their credibility and competitiveness. Unfortunately, for such programs with fewer resources available, the

accreditation application process appeared burdensome and beyond reach.

Indeed, participant statements shed light on an array of fellowship accreditation stakeholders. Individuals described potential benefits and drawbacks of fellowship accreditation from specific viewpoints. For example, from the fellowship program's perspective, accreditation could lend credibility and legitimacy. From the future employer's point of view, accreditation provided a sense of security when hiring a fellowship graduate. One might assume an accredited fellowship graduate underwent a quality training process. From the fellow's lens, accreditation could provide a layer of protection from potential abuse or exploitation. *"Somebody can look and say, I'm not getting hosed by going to an unaccredited program and letting them take 2 years of my life. Accreditation is a necessary safety mechanism to make sure that a simulation center can't just grab somebody for 2 years, pay the minimum wage and say that you're now a simulation fellow and release them without much more knowledge than they came in with. That's really important."* (Participant 23)

Theme 3: Potential Personal, Financial, and Professional Impacts

As more fellowships become accredited, the effects of accreditation may have broad and lasting impacts on the specialty of health care simulation. Many participants identified standardization as an intended outcome of accreditation, but responses varied on its consequences. Some described how criterion-based guidelines and benchmarking would improve program quality. As one non-US based participant explained: *"I think accreditation is a great way to guarantee a minimum viable product across the board. It can't guarantee excellence, but it can guarantee that the structures are inherent and transferable across contacts."* (Participant 8)

On the other hand, some raised concerns that limiting flexibility might prevent programs from customizing training to meet the spectrum of needs and career goals of trainees. *"I would love to see a bit of a flexible accreditation process because we don't need a bunch of cookie cutter simulation fellowships. I think they all should have some unique aspects to them."* (Participant 13) One participant summarized this conflict between frameworks that promote ascending to greatness versus restricting growth: *"It is the difference between scaffolding and a cage."* (Participant 22)

Additionally, some interviewees identified potential implications for professional societies. These societies administer accreditation programs, which may serve as

a revenue stream. *"My honest opinion is: I think they are doing it as a money grab...I'm saying that as somebody who is accredited by multiple societies. We lose a lot of money to accreditation."* (Participant 1) More than one professional society currently offers fellowship accreditation, and all have associated fees.

Discussion

We obtained diverse insights on fellowship accreditation by speaking with an interprofessional, multidisciplinary pool of experts representing the global health care simulation community of practice. Overarching themes included discord and lack of consensus, highlighting the diversity of stakeholders in health care simulation. The experts conveyed uncertainty and recognized the importance of context and perspective. Participants identified the potential impacts of fellowship accreditation on health care simulation, ranging from standardization of training programs to financial conflicts of interest for professional societies.

Fellowship training programs have proliferated in recent years throughout North America, South America, Europe, Australia, and parts of Asia.^{20,28,29} Along with the rapid growth in the number of simulation fellowship training programs, there has been a need to characterize them. Several publications describe the necessary components and curricula for simulation fellowship programs.^{19,20,29,30} Some fellowship program directors have identified opportunities for guidelines, standardization, or accreditation.⁹ More recently, several professional societies have developed accreditation or approval processes for simulation fellowship programs.¹⁰⁻¹² The simulation community needs to consider how it wants to mold this process to shape the future of the specialty.

An examination of a newer accredited Accreditation Council for Graduate Medical Education (ACGME) fellowship, Emergency Medical Services (EMS), may inform the efforts of those interested in fellowship accreditation. This subspecialty began in 2010, with ACGME accreditation occurring in 2013. Only 10 programs were accredited in 2013, growing to nearly 70 by 2020 as more programs were able to meet accreditation criteria.³¹ Despite this growth, some programs struggle with unfilled positions and diversity of fellows.^{32,33} As EMS has matured over the last decade, guidelines have been updated by a diverse board of educators to keep up with advancements in the field,³⁴ including plans to update every 5 to 7 years.³⁵ This highlights how accrediting bodies must plan for growth and innovation.

The participants we interviewed identified standardization of training programs through accreditation as a double-edged sword. While specific guidelines

and curricula could improve quality assurance and accountability,²⁹ overregulation could stifle the creativity of a specialty known for innovation, versatility, and diversity, resulting in a proliferation of homogeneous training programs. Finding a balance between these tensions will be critical to the successful implementation of any proposed fellowship accreditation process.

An additional challenge is making the accreditation product valuable to an array of fellowship programs. Given the number and diversity of programs, a one-size-fits-all approach may not be practical.³⁶ The Society for Simulation in Healthcare's accreditation program for simulation centers has a core set of standards with optional standards in assessment, research, and teaching/education.^{15,37} Fellowship programs could follow suit with a categorical accrediting structure. Adjustments in accreditation requirements could be represented by specific designations. For example, fellowship accreditation could designate excellence in large system administration and leadership, standardized patient programs, virtual reality education, simulation technology, or patient safety and health systems evaluation.

Many of the participants expressed emotional responses and strong opinions surrounding fellowship accreditation. Some of the interviews coincided with the Society for Simulation in Healthcare's introduction of a fellowship accreditation program.¹⁰ Change can be fraught with difficulties, highlighting the importance of agile change management and implementation science when launching accreditation processes.³⁸ For these reasons, we emphasize the importance of early involvement of diverse stakeholder groups when developing and implementing accreditation programs for multispecialty fellowship training programs such as simulation. Parallels likely exist in the growth and organization of fellowship training programs in medical education, health care administration and leadership, and risk management and patient safety.

Health care simulation is a unique area of focus in academic medicine, spanning multiple specialties. One alternate model recently created and worthy of close observation by the simulation community is the forthcoming Health Care Administration, Leadership, and Management (HALM) certification.³⁹ The HALM model may be the best approach moving forward for simulation as a potential mechanism for formal certification that formally spells out quality control and resource support, and provides needed flexibility within a standardized curricular framework developed by experts from various disciplines, while still allowing for innovation within the field. HALM training integrates expertise and best practices from several fields including medicine, law, public health, patient safety, and system science, to

name a few. The 4 specialties (emergency medicine, preventative medicine, anesthesiology, and family medicine) co-sponsor the certification, administration, scoring of examinations, etc. Each board is responsible for approving candidate applications with potential to effect change in complex health systems.³⁹ The potential parallel vision for simulation might entail sponsorship by the fields of anesthesiology, general surgery, and emergency medicine, which have historically been the most invested in the utilization of simulation for training during residency.⁸

The development of simulation fellowship accreditation is complex with potential far-reaching impacts. The perspective of training programs from various geographical areas and of various sizes and resources, current fellows, and professional societies all need to be considered. Recognizing the broad spectrum of needs and opportunities across simulation fellowships, we propose developing accreditation solutions with early input from diverse stakeholder groups across clinical specialties; incorporating tangible benefits for participants; and including processes to adapt to future growth and innovation.

Limitations

Our inclusion criteria required spoken English proficiency, as reliable translation services were not logistically feasible given resources and financial constraints. It should be noted we included participants from non-English speaking countries, including Denmark, Hong Kong, Mexico, and Singapore.

Our data collection spanned 6 months, during which time accreditation programs for health care simulation fellowships were actively being created by the Society for Simulation in Healthcare and the Society for Academic Emergency Medicine. COVID-19 became a global pandemic during this time and may have affected the lens through which participants responded to our questions.

Throughout this process, we recognized the importance of context and perspective. We understood that we coded the transcripts through our own unique lens as a research team. The team acknowledged that the overrepresentation of males, physicians, emergency medicine, and US-centered health care simulationists could influence our perceptions and understandings of data obtained from non-North American subjects. The research team intentionally sought to allow greater voice to other members and alternative interpretations of the data throughout the research process.

Conclusions

Leaders in simulation described the lack of consensus among diverse fellowship programs regarding

accreditation and quality metrics. Contextual differences for fellowship programs included size, reputation, resources, and potential return on investment. Possible implications of accreditation include benchmarking, standardization, and conflicts of interest for professional societies.

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