

Roles, Responsibilities, and Needs of Institutional GME Leaders: A Multinational Characterization of Designated Institutional Officials

Sawsan Abdel-Razig, MD, MEHP

Halal Ibrahim, MD, MEHP

ABSTRACT

Background Since 2012, several academic centers in the Middle East have attained accreditation by the Accreditation Council for Graduate Medical Education International (ACGME-I). An emerging group of GME leaders have assumed the role of designated institutional official (DIO), leading their institutions to accreditation. Despite these DIOs' key positions in driving GME reform, there is a lack of published studies on the roles, responsibilities, and needs of DIOs in international settings.

Objective We examined the characteristics, roles, responsibilities, and needs of DIOs in the Middle East.

Methods A questionnaire was electronically distributed from December 2018 to February 2019 to all current and former DIOs in ACGME-I accredited institutions in the Middle East.

Results Of 16 surveys sent, 11 (69%) were returned. All DIOs were physicians; the majority were women less than 55 years of age, and assumed the role of DIO in the past decade. Most DIOs felt prepared for the position and well supported by their institution and their program directors. All reported having additional roles beyond the DIO position. Most identified the most challenging aspect of their role related to GME budgets, training for their responsibilities, sharing best practices and documents such as DIO job descriptions and other key documents, and DIO training.

Conclusions ACGME-I accreditation is a critical driver of efforts to define the DIO role. DIOs in the Middle East share common perceptions, experiences, and needs. Further research should identify professional development needs in an increasingly diverse international worldwide DIO community.

Introduction

Health systems across the globe are undergoing historic transformations driven by physician shortages, aging populations, and health disparities within and among nations.¹ To better meet citizens' health care needs, government regulators are calling for greater transparency and accountability from their medical education systems. Some nations have restructured their graduate medical education (GME) systems to outcomes-based education.² Since 2012, academic medical centers (AMCs) in the United Arab Emirates (UAE), Lebanon, Oman, Qatar, and Saudi Arabia have transitioned to the competency-based framework of the Accreditation Council for Graduate Medical Education-International (ACGME-I).³ There are currently 11 institutions with 81 programs in the Middle East with ACGME-I accreditation.⁴

ACGME-I mandates that each accredited institution appoint a designated institutional official (DIO).⁵ The DIO is an essential position in the GME system as the individual ultimately responsible to lead and ensure appropriate oversight of all GME programs at

the sponsoring institution. A study from the United States identified wide variability in DIO responsibilities and roles across the United States.⁶ The DIO role may be equally complex in international settings, where there is a diversity of cultural contexts, practice models, and health system governing structures. With the adoption of international accreditation standards, individuals appointed as DIOs often are expected to actively participate in the transformation of an institution's educational culture. DIOs tasked with this role may have variable preparation and guidance.

To our knowledge, there are no published studies on international DIOs' perception of their role. To address this gap, we examined the characteristics, roles, and responsibilities of institutional GME leadership in ACGME-I accredited AMCs in the Middle East, assessed DIOs' preparedness for these roles, and identified professional development needs for this group.

Methods

Survey Development and Dissemination

We modeled our questionnaire after the instrument used by Riesenbergh and colleagues,⁶ and obtained their permission for the use of the survey. The authors (a current and a former international DIO) iteratively

DOI: <http://dx.doi.org/10.4300/JGME-D-19-00192>

reviewed the questions and revised them for clarity and context. The instrument was then pilot-tested by 3 institutional GME leaders (1 international and 2 United States-based), and their comments were used to modify the instrument. The final version consisted of 45 items in 4 domains: (1) characteristics, experience, and qualifications; (2) definition of role, preparation, and support; (3) roles and responsibilities; and (4) needs and essential requirements. An open-ended item asked DIOs to describe major challenges and accomplishments during their tenure.

A list of international accredited institutions and their current DIOs in the Middle East was obtained from the ACGME-I website.⁴ Current and former DIO contact information was obtained through personal contacts, institutions' public websites, and by contacting GME offices. In December 2018, each participant received an e-mail invitation and link to an online confidential survey. E-mail reminders were sent every 2 weeks, with a total of 3 reminders. No incentives were offered for completing the survey.

The study protocol was approved by the institutional review board of the Cleveland Clinic Abu Dhabi.

Data Analysis

Quantitative data were analyzed using SPSS Statistics 25.0 (IBM Corp, Armonk, NY) and reported as descriptive statistics. Qualitative data were analyzed using interpretative thematic analysis. Both investigators reviewed responses to qualitative questions independently and extracted the themes. Common themes identified were used in the analysis.

Results

Of 16 DIOs of ACGME-I accredited institutions in the region, 11 responded (69% response rate). All responding DIOs were physicians, 64% (7 of 11) were women, 91% (10 of 11) held leadership roles prior to becoming DIO. Most DIOs were responsible for less than 10 GME programs. The vast majority (91%, 10 of 11) spent up to 30 hours per week on DIO-related duties. Additional DIO characteristics are shown in TABLE 1.

Definition of Role, Preparation, and Support

Approximately half (46%, 5 of 11) of survey participants were the founding (original) DIOs (TABLE 1). Most DIOs assumed their role as a progression from previous educational roles, and 64% (7 of 11) reported they felt prepared for the position, although less than half had received DIO-

What was known and gap

ACGME International accreditation emphasizes the role of the designated institutional official (DIO), yet there is scarce information on DIO roles, responsibilities, and professional experience in international settings.

What is new

A survey of DIOs in the Middle East explored their roles, responsibilities, background, accomplishments, and challenges.

Limitations

Survey bias and the potential for social desirability responding.

Bottom line

DIOs in the Middle East share common perceptions, experiences and needs, and feel well-supported by institutional and accredited program leaders.

specific training. The majority felt well supported by their program directors and institutional leadership.

DIO Roles and Responsibilities

The various roles and responsibilities of DIO respondents are shown in TABLE 2A. All DIOs indicated having additional responsibilities beyond those specified in ACGME-I standards (TABLE 2B). All DIOs maintained patient care activities and participated in clinical teaching, and 91% (10 of 11) had a role in continuing medical education (CME) and faculty development in their institutions.

DIO Minimum Requirements, Challenges, and Accomplishments

Respondents reported the most useful experiences and qualifications were leadership and management training (TABLE 3A), and the most useful committees were the medical executive and program director committees (55% [6 of 11] and 45% [5 of 11], respectively). Of note, the ACGME annual conferences were rated as useful by 64% (7 of 11) of DIOs, while none of the participants rated compliance, board of directors/trustees, finance, and house staff committees as useful. Specific resources DIOs reported they were likely to use included templates for GME policies, contracts, and affiliation agreements.

DIOs in the Middle East feel well supported and prepared to carry out their duties effectively. When asked about essential requirements for the DIO role, the most common responses included having an MD or equivalent degree, experience in a GME setting, and ACGME conference attendance. Core competencies for successful job performance were professionalism, verbal communication skills, and interpersonal skills (all rated as essential by 91% [10 of 11] of DIOs; TABLE 3B).

Review of the qualitative responses revealed that a common area for professional development, reported

TABLE 1

Characteristics of Designated Institutional Officials (DIOs) in the Middle East

Characteristic		N (%)
Gender	Female	7 (64)
	Male	4 (36)
Age	36–45	2 (18)
	46–55	7 (64)
	56–65	1 (9)
	66–75	1 (9)
Title	Consultant/doctor	5 (46)
	DIO	1 (9)
	Chief/chair of academics	3 (27)
	Professor/dean	2 (18)
Degree	MD/MBBS/MBBCh	11 (100)
	PhD	1 (9)
Education role prior to being DIO	No	2 (18)
	Yes	9 (82)
Leadership role prior to being DIO	No	1 (9)
	Yes	10 (91)
Years as DIO	0–5	7 (64)
	6–10	2 (18)
	11–15	2 (18)
Years in GME	6–10	4 (36)
	11–15	4 (36)
	15–20	2 (18)
	> 20	1 (9)
Role reports to	CMO/DCMO	8 (73)
	Chief/Chair of academics	1 (9)
	Dean/associate/assistant dean	1 (9)
	Other	1 (9)
Written job description	Yes	6 (55)
	No	5 (46)
Number of programs	0–5	5 (46)
	6–10	3 (27)
	11–15	1 (9)
	16–20	1 (9)
	> 20	1 (9)
Founding DIO	Yes	5 (46)
	No	6 (55)
Assumption of role	Progression from faculty/PD role	7 (64)
	Assumed role upon start	4 (36)

TABLE 1

Characteristics of Designated Institutional Officials (DIOs) in the Middle East (continued)

Characteristic		N (%)
Definition of role	Defined out of necessity	2 (18)
	The role was driven by ACGME-I requirements/citations	8 (73)
	No response	1 (9)
Did you feel prepared for the role?	Yes	7 (64)
	No	4 (36)
DIO specific education prior to assuming role?	Yes	5 (46)
	No	6 (55)
Support from hospital leadership	Low support	2 (18)
	Mixed support	1 (9)
	Moderate support	2 (18)
	Strong support	5 (46)
	No response	1 (9)
Support from PDs	No response	1 (9)
	Low support	0 (0)
	Mixed support	2 (18)
	Moderate support	2 (18)
	Strong support	6 (55)
How well informed is the institutional leadership about your role?	No response	1 (9)
	Not informed	1 (9)
	Somewhat informed	2 (18)
	Very well informed	7 (64)
How well informed are the supportive services about your role?	No response	1 (9)
	Not informed	1 (9)
	Somewhat informed	6 (55)
	Very well informed	3 (27)
Confusion between DIO and PD role?	No response	1 (9)
	A lot of confusion	1 (9)
	Some confusion	2 (18)
	No confusion	7 (64)
Resources provided to you	No response	2 (18)
	On the job training	7 (64)
	Coach/mentor	2 (18)
Hours per week fulfilling DIO duties	11–20	5 (46)
	21–30	5 (46)
	> 40	1 (9)

Abbreviations: GME, graduate medical education; ACGME, Accreditation Council for Graduate Medical Education; PD, program director.

by 46% [5 of 11] of respondents, entailed budgeting and the financial aspects of GME. The most frequently described accomplishment was the establishment of accredited training programs, described by 55% [6 of 11] of the respondents.

Discussion

To our knowledge, our study is the first to explore the characteristics, roles, and needs of international institutional GME leaders in institutions that have

TABLE 2A

Designated Institutional Official (DIO) Roles and Responsibilities

Role	Description	Degree of Responsibility, n (%) N = 11		
		Complete	Some	None
DIORS (DIO Responsibility Scale)	Provide oversight of GME	10 (91)	1 (9)	0 (0)
	Serve as first contact with ACGME-I or other GME organizations	9 (82)	2 (18)	0 (0)
	Play an active role on the GMEC	11 (100)	0	0 (0)
	Ensure compliance with ACGME-I requirements	9 (82)	2 (18)	0 (0)
	Provide Leadership for GME	9 (82)	2 (18)	0 (0)
	Develop GME policies	8 (73)	3 (27)	0 (0)
	Provide management of GME	8 (73)	3 (27)	0 (0)
	Facilitate discussion of GME issues	9 (82)	2 (18)	0 (0)
	Provide education about GME to individuals in your institution outside of GME	7 (64)	4 (36)	0 (0)
	Provide education about GME to GME staff	10 (91)	1 (9)	0 (0)
	Serve on other institutional committees	9 (82)	2 (18)	0 (0)
Program Evaluations	Initiate program evaluations	6 (55)	4 (36)	1 (9)
	Report program evaluation results to others	8 (73)	2 (18)	1 (9)
	Interpret program evaluations	7 (64)	4 (36)	0 (0)
	Conduct program evaluations	6 (55)	4 (36)	1 (9)
	Create program evaluations	4 (36)	6 (55)	1 (9)
GME Budgets	Provide GME budget oversight	6 (55)	5 (46)	0 (0)
	Provide GME budget defense	6 (55)	5 (46)	0 (0)
	Create GME budgets	5 (46)	6 (55)	0 (0)
Discipline	Provide GME staff discipline	9 (82)	2 (18)	0 (0)
	Provide discipline of residents	6 (55)	5 (6)	0 (0)
	Provide discipline of program directors	7 (64)	4 (36)	0 (0)
	Provide discipline of faculty members	1 (9)	10 (91)	0 (0)
	Provide discipline of medical students	1 (9)	4 (36)	6 (55)
Performance Evaluations	Complete GME staff performance evaluations	7 (64)	4 (36)	0 (0)
	Complete program director performance evaluations	6 (55)	3 (27)	2 (18)

Abbreviations: GME, graduate medical education; ACGME-I, Accreditation Council for Graduate Medical Education International; GMEC, Graduate Medical Education Committee.

transitioned to competency-based medical education and attained ACGME-I accreditation. The majority of DIOs are women less than 55 years of age who actively participate in patient care activities and clinical teaching. In addition, most assumed their DIO role within the last 10 years and oversaw less than 10 GME programs. This is consistent with the relative newness of ACGME-I accreditation internationally, and the limited number of GME opportunities in the Middle East region. The predominance of female DIOs in this study seems contrary to the large body of existing literature documenting gender inequity in academic medicine.⁷ Although most studies focus on Western contexts, international studies confirm gender disparities in the recruitment, retention, and advancement of women, with

significant underrepresentation in academic leadership positions.^{7,8} The promotion of women faculty to this educational leadership role is a step toward gender diversity, equity, and inclusivity in academic medicine in the Middle East.

The majority of DIOs in this study held leadership and education roles prior to assuming the DIO position and felt well prepared for their GME leadership responsibilities. This may be an important factor, as research has shown that program directors who previously held other educational leadership roles felt better prepared and reported greater job satisfaction.⁹ It is reassuring that the DIOs surveyed feel supported by their program directors and hospital leadership, as studies have linked low satisfaction with colleague relationships with high turnover in

TABLE 2B

Other Designated Institutional Official (DIO) Roles and Responsibilities (Not Required by ACGME-I)

Role and Responsibility (N = 11)	No, n (%)	Yes, n (%)
Undergraduate medical education (Bachelor's level programs)	9 (82)	2 (18)
Continuing medical education	1 (9)	10 (91)
Patient care	0 (0)	11 (100)
Research and/or institutional review board	5 (46)	6 (55)
Other academic programs (eg, nursing, pharmacy, etc)	6 (55)	5 (46)
Member of executive management team	3 (27)	8 (73)
Quality assurance/improvement or performance improvement	2 (18)	9 (82)
Department chair	6 (55)	5 (46)
Library	5 (46)	6 (55)
Medical staff administration	8 (73)	3 (27)
Program director, assistant/associate program director	6 (55)	5 (46)
Other GME (osteopathic programs)	11 (100)	0 (0)
Teaching	0 (0)	11 (100)
Community service	7 (64)	4 (36)
Patient safety	3 (27)	8 (73)
Faculty development	1 (9)	10 (91)
Compliance officer	11 (100)	0 (0)
Information services or electronic health record	10 (91)	1 (9)
Media services	10 (91)	1 (9)
Curriculum development	3 (27)	8 (73)
Finance (other than GME finance)	9 (82)	2 (18)
Human resources	10 (91)	1 (9)
Standardized patients	8 (73)	3 (27)
Real estate (other than resident housing)	11(100)	0 (0)

educational leaders.¹⁰ In addition, the majority of DIOs reported their institutions were well informed about their role, although nearly half of respondents did not have a job description. This may represent the significance of accreditation activities that have increased institutional awareness of the DIO role and GME governance structures, supported by the fact that 73% of DIOs reported that their role was driven by ACGME-I requirements, a remarkable testament to the role of accreditation.

Despite differences in geographic location, program composition, and national health care infrastructure and regulations among the countries represented in the study, the results show consistencies in perception and shared experiences among responding DIOs. All items in the DIO responsibility scale reflected the

responsibilities of the majority of respondents, suggesting uniformity in ACGME-I role definitions.

All DIOs reported having additional non-ACGME-I mandated roles in clinical and administrative domains. When asked about essential competencies for success in the DIO role, the majority of respondents identified competencies related to professionalism and interpersonal communication skills as most essential, highlighting the importance of personal attributes over technical skills. There also was a consistency among DIOs in identifying essential qualifications or experiences required for the DIO role—being a physician and having experience in GME. It is interesting that almost all respondents felt that attendance of the ACGME Annual Educational Conference was essential to the role, and this conference also was the most popular professional development need identified by respondents.

The majority of DIOs surveyed agreed that templates for policies, contracts, and affiliation agreements would be beneficial to their roles and that DIO job descriptions and training would be helpful. Additionally, a majority of respondents identified the most challenging aspect of their role to be related to budgeting and/or GME financing, while listing the attainment of accreditation of their programs or institutions as their biggest accomplishment. This represents an opportunity for the international GME community to facilitate opportunities for networking on GME-related issues, discuss and disseminate successful innovations in GME, develop collaborative professional development resources, and share best practices.

Our results should be viewed in light of limitations. First, our data include only institutions in the Middle East that have achieved ACGME-I accreditation, although we believe some of our findings may be relevant to educational leaders working in other competency-based education systems in the region. Second, the small sample size limits the ability to detect statistically significant differences in responses and may limit generalizability. Third, the cross-sectional design of this study does not provide the ability to make causal assumptions or assess longitudinal change. Finally, there may be added factors that may not have been fully addressed in our survey, including institutional culture and DIOs' individual personality.

Conclusion

DIOs in the Middle East reported they feel well supported and prepared to carry out their duties effectively and are involved in ACGME-I mandated responsibilities, as well as additional activities, such as patient care, teaching, and administrative roles.

TABLE 3A

Designated Institutional Official (DIO) Needs

Utility Toward the DIO Role	Description	DIOs Rated as Useful, n (%) N = 11
Experiences/qualifications	Leadership	5 (45)
	Management	5 (45)
	Communication training	3 (27)
	Mentor/coach	3 (27)
	Degrees	2 (18)
	Finance	1 (9)
	Negotiation skills	0 (0)
	None of the above	3 (27)
Professional development experiences	ACGME conference	7 (64)
	Specialty-specific (eg, APDIM)	3 (27)
	Not applicable	1 (9)
Committees	Medical executive	6 (55)
	Program directors	5 (45)
	Continuing medical education	4 (36)
	Guidelines/clinical pathways	3 (27)
	Ethics	3 (27)
	Institutional management	2 (18)
	QA/QI	2 (18)
	Risk management	2 (18)
	Institutional review board	2 (18)
	Medical staff	2 (18)
	Clinical management	2 (18)
	Credentialing	2 (18)
	Bylaws	2 (18)
	IT	1 (9)
	Length of stay/utilization	1 (9)
	Patient safety	1 (9)
	Library	1 (9)
	Compliance	0 (0)
	BOD/trustees	0 (0)
	Finance	0 (0)
	House staff	0 (0)
Resource ^a	Templates for GME policies, contract, affiliation agreements	9 (82)
	DIO-specific training	9 (82)
	Publication of DIO demographic data (eg, salaries, degrees, titles, and responsibilities)	7 (64)
	DIO job description templates	9 (82)
	Clear description of DIO versus program director responsibilities	8 (73)
	DIO certification program	6 (54)

^a Useful calculated as sum of percentages of answer choices: "somewhat likely" and "very likely to use."

Note: 2 participants did not respond to these questions.

Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; APDIM, Association of Program Directors in Internal Medicine; QA, quality assurance; QI, quality improvement; IT, information technology; BOD, board of directors; GME, graduate medical education.

TABLE 3B

Essential Requirements for Designated Institutional Officials

Requirement		n (%)
Degree/qualification	No response	1 (9)
	MD/MBBS/MBBCH/DO	10 (91)
	Doctorate (PhD or EdD)	1 (9)
Experience	No response	1 (9)
	Experience as a PD	3 (27)
	Experience as a program director/associate or assistant program director or dean or department chair or site coordinator or GME management	7 (64)
Conference attendance	No response	1 (9)
	ACGME conferences	10 (91)
	Other conferences	1 (9)
Educational setting	No response	1 (9)
	GME	9 (82)
	Medical school	4 (36)
	Higher education	2 (18)
Other experience	No response	1 (9)
	Teaching experience	6 (55)
	Leadership training/experience	1 (9)
	Clinical experience	1 (9)
	Administrative experience	1 (9)
Competencies	No response	1 (9)
	Professionalism	10 (91)
	Verbal communication skills	10 (91)
	Interpersonal skills	10 (91)
	Written communication skills	9 (82)
	Leadership skills	9 (82)
	Management skills	9 (82)
	Policy development	9 (82)
	HR knowledge	7 (64)
	Financial management	7 (64)
	Teaching skills	6 (55)
	Medical knowledge	8 (73)
	Legal expertise	2 (18)

Abbreviations: PD, program director; GME, graduate medical education; ACGME, Accreditation Council for Graduate Medical Education; HR, human resources.

The findings suggest added areas for continued development and facilitation of the DIO role, including the dissemination and sharing of resources and professional development opportunities. As the ACGME-I continues to expand its international accreditation activities, further studies could identify specific professional development needs for an increasingly diverse DIO community.

References

1. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010;376(9756):1923–1958. doi:10.1016/S0140-6736(10)61854-5.
2. Abdel-Razig S, Alameri H. Restructuring graduate medical education to meet the health care needs of Emirati citizens. *J Grad Med Educ*. 2013;5(2):195–200. doi:10.4300/JGME-05-03-41.
3. Ibrahim H, Al Tatari H, Holmboe ES. The transition to competency-based pediatric training in the United Arab Emirates. *BMC Med Educ*. 2015;15:65. doi:10.1186/s12909-015-0340-3.
4. Accreditation Council for Graduate Medical Education International. Public. <https://apps.acgme-i.org/ads/Public/INTL/Reports/Report/2>. Accessed July 1, 2019.

5. Accreditation Council for Graduate Medical Education. Designated Institutional Officials. <https://www.acgme.org/Designated-Institutional-Officials/Overview>. Accessed July 1, 2019.
6. Riesenbergr LA, Rosenbaum P, Stick SL. Characteristics, roles and responsibilities of the Designated Institutional Official (DIO) position in graduate medical education. *Acad Med*. 2006;81(1):8–16.
7. Santamaria A, Merino A, Vinas O, Arrizabalaga P. Does medicine still show an unresolved discrimination against women? Experience in two European university hospitals. *J Med Ethics*. 2009;35(2):104–106. doi:10.1136/jme.2008.024240.
8. Stadler DJ, Archuleta S, Ibrahim H, Shah NG, Al-Mohammed AA, Cofrancesco J Jr. Gender and international clinician educators. *Postgrad Med J*. 2017;93(1106):719–724. doi:10.1136/postgradmedj-2016-134599.
9. Beeson MS, Gerson LW, Weigand JV, Jwayyed S, Kuhn GJ. Characteristics of emergency medicine program directors. *Acad Emerg Med*. 2006;13(2):166–173. doi:10.1197/j.aem.2005.08.010.
10. Beasley BW, Kern DE, Kolodner K. Job turnover and its correlates among residency program directors in internal medicine: a three-year cohort study. *Acad Med*. 2001;76(11):1127–1135.



Sawsan Abdel-Razig, MD, MEHP, is a Hospitalist, Director of Medical Education, and Founding Designated Institutional Official (DIO), Cleveland Clinic Abu Dhabi, United Arab Emirates (UAE); and **Halal Ibrahim, MD, MEHP**, is Senior Consultant, Department of Internal Medicine, Sheikh Khalifa Medical City, Abu Dhabi, UAE. She served as Founding DIO, Tawam Hospital, Al Ain, UAE.

Funding: The authors report no external funding source for this study.

Conflict of interest: The authors declare they have no competing interests.

The authors would like to thank the many designated institutional officials who, despite their responsibilities, took the time to complete the survey.

Corresponding author: Sawsan Abdel-Razig, MD, MEHP, Cleveland Clinic Abu Dhabi, Al Falah Street, Abu Dhabi, United Arab Emirates, +971506857736, sawsanrazig@gmail.com

Received March 14, 2019; revision received May 16, 2019; accepted June 4, 2019.