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AAIM Perspectives

AAIM is the largest academically focused specialty organization representing departments of internal medicine at medical schools and teaching hospitals in the United States and Canada. As a consortium of five organizations, AAIM represents department chairs and chiefs; clerkship, residency, and fellowship program directors; division chiefs; and academic and business administrators as well as other faculty and staff in departments of internal medicine and their divisions.

E^{2}DUCATE: A blueprint for institutions and societies to elevate faculty development for clinician educators

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Background

Faculty development plays a vital role in the professional growth of clinician educators, equipping them with essential skills as delineated in the 2022 Accreditation Council for Graduate Medical Education (ACGME) clinician educator milestones.[1] The Coalition for Physician Accountability highlighted faculty development in its August 2021 report, with nine of 34 recommendations emphasizing the importance of faculty development in medical education.[2] Despite its importance, there are significant challenges in developing and implementing effective faculty development programs in academic medicine.[3]

Clinician educators engage in faculty development in a variety of forms and venues. Multiple specialty organizations and societies offer faculty development resources and opportunities[4–6] Longitudinal options such as master's in health professions education, certificate programs and academies promote skill acquisition, collaboration, and peer support.[7–9]

Over the last 20 years, literature describing and evaluating faculty development programs has expanded[10,11] and highlights its benefits including improved faculty retention and academic success.[12–14] A 2006 review of faculty development initiatives by Steinert et al[13] found high satisfaction, positive changes in attitudes toward faculty development and teaching, increased knowledge of educational principles, and changes in teaching skills among participants. A follow-up review published a decade later emphasized the growth of faculty development and underscored the need to move beyond individual teaching effectiveness and increase institutional support.[14]

Non-traditional resources (NTR) such as webinars, virtual platforms, and artificial intelligence are rapidly growing in faculty development,[15] offering valuable asynchronous training options. Social media is

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increasingly used for academic and professional development.[16–18] However, limited data exists on their use in faculty development. It is important to note that published faculty development efforts are just the tip of the iceberg, with many formal curricula and efforts that remain unpublished or uncirculated.

Despite the rise in faculty development resources, numerous needs assessments have identified common barriers at the individual clinician educator level, such as awareness or access to faculty development or time to participate as well as a lack of access to resources to guide curriculum developers.[3,19] Importantly, there are also significant barriers to faculty development implementation at the institutional and society level. More involved forms of faculty development, such as certificate programs or national conferences, come with substantial financial costs.[20] Additional barriers include administrative support and identifying faculty to effectively deliver the material.

PERSPECTIVE VIEWPOINTS

- Faculty Development (FD) is essential for clinician educators (CE), yet barriers like time, cost, and access persist at both individual and institutional levels.
- A competency-based framework, like the AAIM Faculty Development initiative Task Force model, paired with robust needs assessment and evaluation can lead to sustainable FD implementation.
- Expanding access through non-traditional resources, institutional and societal collaboration and train-the-trainer models can amplify FD impact.

A review published in 2021 offered detailed solutions to help individuals and institutions approach many barriers.[3] Understanding local clinician educators junior faculty needs is crucial, though mid-career and senior faculty need support also.[21] To review and examine the landscape of faculty development in medicine, in 2021, the authors of this paper conducted a literature review as well as qualitative interviews with experts in the field of faculty development and provided their recommendations to enhance faculty development.[15] Our primary aim is to provide evidence-based recommendations for institutions and societies on the planning and implementation of faculty development curriculum (Table 2).

Recommendations

Engage relevant parties

Identifying and approaching key involved parties for any faculty development implementation is the crucial initial step. At an institutional level, it can include graduate and undergraduate medical education leadership as well as departmental leadership. Engaging these leaders is a vital step towards implementation of faculty development to identify and allocate resources for faculty development implementation. Utilizing published data to show advantages of faculty development for clinician educators is recommended to help garner support.[13,14] To ensure faculty engagement and buy-in, this data is a valuable tool. Critically, departmental leadership must be engaged to pinpoint strategies for allocating time to faculty development for clinician educators at all levels. For the longitudinal engagement of clinician educators, the recognition and reward of faculty development through promotion criteria is essential. Concurrently, at the society level, it is recommended to solicit the engagement of society leadership by leveraging the data-driven advantages of faculty development.

Establish a framework

Faculty development planning, whether at a society or an institutional level, starts with a competency-based framework.[1,22,23] There are several framework options. We highlight a particular framework for its comprehensiveness that allows for curriculum development based on current expectations of clinician educators.[15] This framework organizes faculty development into six domains: teaching and learning; evaluation, assessment and feedback; personal and professional development; instructional design and curriculum development; scholarly activity; and leadership, administration, and organizational development (Table 1). Each domain encompasses multiple identified subdomains. Using this framework to structure faculty development content offers a comprehensive approach that aligns with the identified domains and subdomains across institutions and societies, while also being adaptable to various specialties. Societies can use this framework to create and consolidate faculty development for their digital content as well as to guide society meetings. Both institutions and societies can also use this framework for needs assessment, planning, and tracking delivered faculty development content. The clinician educator milestones can be mapped to the framework domains to facilitate faculty development curriculum design.[1]

Develop needs assessment

Initial and periodically targeted needs assessments carried out by institutions should focus on gaps in faculty development domains, participation barriers, and delivery methods. The assessments should attempt to capture all levels and roles of educators. While formal tools like the ACGME annual faculty survey can be used to identify major focus areas,[24] it only captures a

Table 1 Faculty development domains.

Faculty Development Domains

Teaching and Learning

- Theories of learning and motivation
- Clinical teaching
  - *Teaching on rounds/Bedside teaching*
  - *Precepting in ambulatory setting*
  - *Small group facilitation (other venues)*
  - *Large group didactic teaching (other venues)*
  - *Teaching Reasoning and Decision Making*
  - *Procedural teaching*
  - *Medical Knowledge*
- Simulation based teaching
- Teaching a struggling learner
- Counseling for each transition
- Teaching in a virtual setting
- Interactive methods of teaching
  - *Team based learning*
  - *Flipped classroom*
  - *Problem based learning*
  - *Case based learning*

Evaluation, Assessment, and Feedback

- Assessment methods
  - *Direct observation*
  - *Other*
- Validity and Reliability of assessment tools
- Feedback
  - Verbal
  - Written
  - Formative and summative
- Competence assessment based on assessments (Standard setting)
- Milestones/EPAs
- Evaluating learners for Implicit Bias
- Standardization of assessment tools — what does it look like? How do you teach your faculty? How would you create one?
- Clinical Competency Committees
- Remediation of struggling learner
- Letter of Recommendation/SLOE

Personal and Professional Development

- Well-being
  - Financial
  - Work-life balance
- Career advancement
- Mentoring, advising and coaching
  - Selecting a mentor
- Implicit bias and diversity
- Equity and Advocacy
- Digital media in professional life
- Financial component (personal)
- Counseling for each transition
- SMART goals
- MoC
- Collaboration/networking
- Documentation/coding/billing
- CV
- Organization, prioritization skills, time management
- Interviewing skills

Instructional Design and Curriculum Development

- Course goals and objectives
- Curricular approaches
  - n Small/large group lectures and other modalities
  - n Curricular design — how to develop and implement effective curriculum
- Blueprinting
- Needs assessments
- Curriculum evaluation
- Simulation
  - n Case-based
  - n Procedural
  - n Communication (breaking bad news, etc.)
  - n Slide deck creation
  - n Audience interaction/engagement
  - n Creating simulations

Scholarly Activity

- Types of scholarship and various methods of dissemination
- Research methodology
  - Quantitative
  - Qualitative
- Writing (manuscript, grant, narrative)
- Designing workshops
- Abstract preparation and presentation Skills
- QIPS
- IRB/CITI program
- Literature review
- Local/regional/national committee membership

Leadership, Administration, and Organizational Development

- Leadership models
- Organizational structures and culture *(including DEI)*
- Power and authority *(including DEI)*
- Creative and strategic management
- Conflict resolution
- Recruitment
- Financial management of an organization
- Committee membership
- Role modeling
- Negotiations
- Formation into an academic leader

subset of faculty. Institutional surveys, focus groups, and interviews with a broad and diverse group of clinician educators can explore needs within all domains and preferred educational methods. Review of institutional goals and strategic plans as well as analysis of trainee evaluation and data can provide additional data points to help with needs assessment. An innovative strategy at the institutional level is to grow a community of practice, such as establishing a faculty development council composed of representatives from each specialty with a particular interest in faculty development.[25] The council could identify specific areas of need for their faculty across the institution. This council can also plan the logistics for a streamlined approach to faculty development implementation as well as communicate effectively with faculty to

Table 2 E^2DUCATE to Elevate faculty development for clinician educators.

	Recommendations to Strategize Faculty Development
E	Engage Relevant Parties
E	Establish a framework
D	Develop needs assessment
U	Utilize evaluation process
C	Curate accessible resources
A	Advance interdisciplinary collaboration
T	Train the trainer programs
E	Expand offerings

highlight the value and relevance of faculty development. At the society level, periodic needs assessment should be conducted among the audience and membership to identify priority topics requiring greater emphasis.

Utilize evaluation process

A robust institutional evaluation process should follow any faculty development curriculum offering to capture the impact.[26] This can be achieved using Kirkpatrick's model of training evaluation utilizing levels of reaction, learning, behavior change, and results.[27] Possible methods for assessment are:

- Level 1 (Reaction): assess curriculum relevance, faculty engagement, and sense of community.
- Level 2 (Learning): self-assessment of faculty knowledge, skills, and attitude.
- Level 3 (Behavior change): assessed by getting patient, learner, and peer evaluations.
- Level 4 (Results): assessed by clinician educator recruitment, retention, and promotion.

Utilizing this evaluation process routinely and at well placed intervals can make sure a continuous improvement process exists for faculty development curricula.

Curate accessible resources

Local and national educational societies should establish learning management systems (LMS), commonly used in higher education.[28,29] An LMS can include repositories and communication tools such as listservers, online communities, and social media platforms dedicated to faculty development.[30] Repositories can include published traditional, in-development local, and NTR curricula that can be delivered via formal or asynchronous formats. Examples include MedEdPORTAL with easily accessible faculty development content, and the dedicated faculty development pages on American Academy of Family Physicians and American Pediatric Association websites.[6,31–33] The curation and communication of existing NTR would be an effective means for societies to advertise faculty development opportunities. Assigned member "champions" or committees can foster engagement and mentorship locally. At an institutional level, a local intranet page or faculty development toolkit can be utilized to consolidate and house faculty development resources, including recordings of prior faculty development offerings for asynchronous learning. Our recommended framework can be utilized to organize this content based on domains and sub-domains. Given the size and speed of the change in NTR, curation of these resources by a single entity is not feasible. Rather, all faculty should get some digital media education to be able to locate, access, and utilize these resources.

Advance institutional and societal collaboration

Partnerships between institutions and societies to curate faculty development publications relevant to the clinician educators are recommended. Additional collaboration with organizations and faculty development leaders can enhance content development, delivery, and needs assessments. Specialty societies should create faculty development certificate programs or academies for educators with the development of faculty development curricula including goals, content, and requirements and focusing on the use of clinician educator milestones. For example, both the Society of General Internal Medicine and the Society for Hospital Medicine have programs for junior clinician educators. The goals would focus on skill acquisition, promotion, networking, and educator well-being. Though resource intensive, this approach would provide dividends through educator reinvestment in providing faculty development for colleagues.

Train the trainer programs

Given the varying sizes of institutions and departments, institutions should focus on expanding the number of faculty development educators. Developing a team of faculty development-focused educators will support sustainability. Developing train-the-trainer sessions should be explored, as many medical schools and hospital systems are becoming more geographically separated. Institutions should also consider inviting external faculty expertise. If cost is a barrier, virtual sessions and geographically local institutional partnerships provide alternative solutions. These approaches relieve the local institution, support academic career advancement for external faculty, while bolstering camaraderie, and networking. By utilizing trainer programs, institutions can sponsor a manageable group of faculty for national meetings or certificate programs to learn focused skills which this focused group can then bring back and disseminate across the institution.[34] This approach creates a core community of practice medical education leaders and develops a sustainable

method of faculty development implementation without exhausting financial resources. It also helps the personal and professional development of all clinician educators involved.

Expand offerings

Institutions and societies should broaden faculty development efforts beyond clinician educators in formal academic leadership roles—such as residency program directors and associate program directors as well as core faculty—to include less-studied groups such as clinical faculty who regularly engage with learners since faculty development often serves as a vital career accelerator.[35] Realizing that one size does not fit all, institutional faculty development champions should try to utilize a variety of approaches including already existing platforms and avenues to disseminate faculty development for their clinician educators. Alternative approaches, such as integrating faculty development micro-sessions into scheduled meetings can be used to overcome the time barrier.[36] Hybrid meetings to accommodate geographically distributed institutions and faculty may be utilized. Creating asynchronous learning opportunities using LMS is another way to make sure faculty development is available for clinician educators if they are unable to attend live sessions.

Conclusion

Modern medical education has formally identified a broader set of skills, knowledge, and attitudes that can be utilized to create and plan faculty development for clinician educators. Robust and accessible faculty development programs are crucial in meeting the needs of clinician educators. By establishing a framework, developing needs assessment, utilizing an evaluation process, creating accessible resources, advancing collaborations, training the trainers and expanding offerings, institutions and academic societies can elevate faculty development for clinician educators to foster professional growth and create a new generation of transformative leaders in medical education.

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References

1. The Clinician Educator Milestone Project. Accreditation Council for Graduate Medical Education; 2022. https://www.acgme.org/milestones/resources/clinician-educator-milestones/; 2022 Accessed August 2024.
2. Coalition for Physician Accountability. Coalition for Physician Accountability Accepts Report and Recommendations from UME-to-GME Review Committee; 2021. https://physicianaccountability.org/wp-content/uploads/2021/08/UGRC-Coalition-Report-FINAL.pdf; 2021 Accessed August 2024.
3. Donnelly J, Ray A, Lo MC, et al. Common cause and common purpose: strategies to increase engagement in faculty development activities. *Am J Med* 2021;134(5):691–8.
4. Society of General Internal Medicine (SGIM). *SGIM TEACH Program*. https://www.sgim.org/communities/education/sgim-teach-program#
5. Accreditation Council for Graduate Medical Education. *Developing Faculty Competencies in Assessment*. https://www.acgme.org/Meetings-and-Educational-Activities/Other-Educational-Activities/Courses-and-Workshops/Developing-Faculty-Competencies-in-Assessment/
6. https://www.mededportal.org/
7. Uijtdehaage S, Ho MJ, Harvey E, Dorris CS, Huggett KN. Academies in health professions education: a scoping review. *Acad Med* 2021;96(10):1476–83. https://doi.org/10.1097/ACM.0000000000004161.
8. Buckley H, Nimmon L. Learning in faculty development: the role of social networks. *Acad Med.* 2020;95. https://doi.org/10.1097/ACM.0000000000003627 (11S Association of American Medical Colleges Learn Serve Lead: Proceedings of the 59th Annual Research in Medical Education Presentations):S20-S27.
9. Tekian A, Artino AR. Master's degree in health professions education programs. *Acad Med* 2013;88(9):1399.
10. Steinert Y. Faculty development: from rubies to oak. *Med Teach* 2020;42(4):429–35.
11. Ludmerer KM. *Let Me Heal: The Opportunity to Preserve Excellence in American Medicine*. New York: Oxford University Press; 2015.
12. Ries A, Wingard D, Gamst A, Larsen C, Farrell E, Reznik V. Measuring faculty retention and success in academic medicine. *Acad Med* 2012;87(8):1046–51. https://doi.org/10.1097/ACM.0b013e31825d0d31.
13. Steinert Y, Mann K, Centeno A, et al. A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. *Med Teach* 2006;28(6):497–526.
14. Steinert Y, Mann K, Anderson B, et al. A systematic review of faculty development initiatives designed to enhance teaching effectiveness: a 10-year update: BEME Guide No. 40. *Med Teach* 2016;38(8):769–86.
15. Didwania A, Soares S, Hartzell J, Velamuri K, Anderson M, Anees A, Sikha A, Puri A, Langenhan T, Noronha C, Huang G, Suddarth K, Friedman K, Sutha L, Rehman A, O V. Faculty development initiative task force report and recommendation. *Alliance Acad Int Med* 2021 November[accessed July 2025]; Available online from Faculty Development Task Force Recommendations.
16. Chidharla A, Utengen A, Attai DJ, et al. Social media and professional development for oncology professionals. *JCO Oncol Pract* 2022;18(8):566–71. https://doi.org/10.1200/OP.21.00761.
17. Oliveira JE, Silva L, Maldonado G, Brigham T, Mullan AF, Utengen A, Cabrera D. Evaluating scholars' impact and influence: cross-sectional study of the correlation between a novel social media-based score and an author-level citation metric. *J Med Internet Res* 2021;23(5):e28859. https://doi.org/10.2196/28859 Published 2021 May 31.

18. Sathianathen NJ, Lane Iii R, Murphy DG, et al. Social media coverage of scientific articles immediately after publication predicts subsequent citations - #SoME_impact score: observational analysis. *J Med Internet Res* 2020;22(4):e12288. https://doi.org/10.2196/12288 Published 2020 Apr 17.
19. Steinert Y, Macdonald ME, Boillat M, et al. Faculty development: if you build it, they will come. *Med Educ* 2010;44(9):900–7. https://doi.org/10.1111/j.1365-2923.2010.03746.x.
20. Cook DA, Stephenson CR, Wilkinson JM, et al. Costs and economic impacts of physician continuous professional development: a systematic scoping review. *Acad Med* 2022;97(1):152–61. https://doi.org/10.1097/ACM.0000000000004370.
21. Teshima J, McKean AJS, Myint MT, et al. Developmental approaches to faculty development. *Psychiatr Clin North Am* 2019;42(3):375–87. https://doi.org/10.1016/j.psc.2019.05.008.
22. Steinet Y. *Faculty development in the health professions: a focus on research and practice*. *Innovations and Change in Professional Education*, 11. Springer; 2014.
23. Srinivasan M, Li ST, Meyers FJ, et al. Teaching as a competency: competencies for medical educators. *Acad Med* 2011;86(10):1211–20.
24. https://www.acgme-i.org/accreditation-process/survey-information/
25. de Carvalho-Filho MA, Tio RA, Steinert Y. Twelve tips for implementing a community of practice for faculty development. *Med Teach* 2020;42(2):143–9. https://doi.org/10.1080/0142159X.2018.1552782.
26. Alexandraki I, Rosasco RE, Mooradian AD. An evaluation of faculty development programs for clinician-educators: a scoping review. *Acad Med* 2021;96(4):599–606.
27. Kirkpatrick DonaldL. *Evaluating Training Programs: the Four Levels*. San Francisco: Emeryville, CA: Berrett-Koehler; Publishers Group West [distributor]; 1994.
28. Garcia, Julius & Gañgan, MarkGil & Tolentino, Marita & Ligas, Marc & Moraga, Shirley & Pasilan, Amelia. (2020). Canvas Adoption: Assessment and Acceptance of the Learning Management System on a Web-based Platform.
29. Richter Stephanie, Gowen Peter, Miller Tracy, Wills Cameron. Understanding faculty use of the learning management system. *Online Learn* 2017;21. https://doi.org/10.24059/olj.v21i3.1217.
30. Cahn PS, Benjamin EJ, Shanahan CW. Uncrunching' time: medical schools' use of social media for faculty development. *Med Educ Online* 2013;18:20995. https://doi.org/10.3402/meo.v18i0.20995 Published 2013 Jun 27.
31. https://www.aafp.org/cme/faculty/resources.html
32. https://www.im.org/resources/ume-gme-program-resources/faculty-development-resources
33. https://www.academicpeds.org/programs-awards/faculty-development-program/
34. Snydman LK, Memari M, Puri A, et al. The master adaptive clinician educator: a framework for future educational leaders in academic medicine. *J Gen Intern Med* 2025;40(4):927–32. https://doi.org/10.1007/s11606-024-09199-3.
35. Thomas LR, Roesch J, Haber L, et al. Becoming outstanding educators: what do they say contributed to success? *Adv Health Sci Educ Theory Pract* 2020;25(3):655–72.
36. Dyrbye LN, Bergene AL, Leep Hunderfund AN, Billings HA. Reimagining faculty development deployment: a multipronged, pragmatic approach to improve engagement. *Acad Med* 2022;97(9):1322–30. https://doi.org/10.1097/ACM.0000000000004688.