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Faculty Development in Academic Hospital Medicine: a Scoping Review



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ABSTRACT

This scoping review sought to identify and describe the state of academic faculty development programs in hospital medicine and other specialties. We reviewed faculty development content, structure, metrics of success including facilitators, barriers, and sustainability to create a framework and inform hospital medicine leadership and faculty development initiatives. We completed a systematic search of peer-reviewed literature and searched Ovid MEDLINE ALL (1946 to June 17, 2021) and Embase (via Elsevier, 1947 to June 17, 2021). Twenty-two studies were included in the final review, with wide heterogeneity in program design, program description, outcomes, and study design. Program design included a combination of didactics, workshops, and community or networking events; half of the studies included mentorship or coaching for faculty. Thirteen studies included program description and institutional experience without reported outcomes while eight studies included quantitative analysis and mixed methods results. Barriers to program success included limited time and support for faculty attendance, conflicting clinical commitments, and lack of mentor availability. Facilitators included allotted funding and time for faculty participation, formal mentoring and coaching opportunities, and a structured curriculum with focused skill development supporting faculty priorities. We identified heterogeneous historical studies addressing faculty development across highly variable program design, intervention, faculty targeted, and outcomes assessed. Common themes emerged, including the need for program structure and support, aligning areas of skill development with faculty values, and longitudinal mentoring/coaching. Programs require dedicated program leadership, support for faculty time and participation, curricula focused on skills development, and mentoring and sponsorship.

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Faculty development, also called professional development, can be defined as “any planned activity designed to improve an individual’s knowledge and skills in areas considered essential to the performance of a faculty member.”

¹ Academic medicine faculty have careers encompassing broad scopes in areas that support the clinical, educational, research, and administrative/leadership missions of academic medical institutions. Facilitating growth of faculty in these areas is essential to the professional advancement of individual clinicians, as well as collective divisional, departmental, and institutional success. Within any academic division or department, well-developed and nimble faculty development programs (FDPs) are necessary to lead and support faculty, and to increase academic productivity. Conversely, a lack of support for individuals’ professional development and absence of formal FDPs may result in decreased engagement and faculty attrition.^{2,3}

Hospital medicine (HM) is a relatively new subspecialty with unique faculty development needs.⁴ Most divisions are relatively nascent with recent rapid growth, with a majority of faculty at the instructor or assistant professor rank and most without fellowship training.⁵ Academic HM faculty lag behind other medical specialties in scholarship productivity and promotions.⁶

HM faculty have heterogeneous interests, including administration, quality improvement, medical education, health policy, clinical research, operations, and leadership (among others). Many of these interests do not align with existing faculty development offerings at their institutions.⁵ Furthermore, clinical schedules, often with periods of seven or more days of direct patient care in a row, may exclude hospitalists from many existing institutional opportunities and can make scheduling hospitalist-focused faculty

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development activities difficult.⁷ With heavy patient care duties, there is often limited time and appetite for on-campus activities when not on service, reducing exposure to in-person educational and faculty development opportunities and collaborations with other faculty.⁵ Finally, burnout, exacerbated by the pandemic, has taken an emotional toll and may thwart engagement in FDP offerings.⁸

An accepted and standardized framework to meet long-term individual and collective HM academic faculty professional development goals and needs is lacking.⁹ Before determining best practices for HM FDPs, we sought to understand what has been published to date by performing a scoping literature review of FDPs, including HM-related literature, teaching hospitals, and academic medical centers. In addition to describing faculty development programming and content, and summarizing definitions and metrics of program success, we sought to understand barriers faced with implementation, uptake, and sustainability. We also sought to characterize the results of described programs, based on internal evaluations, perceived programmatic benefits, and, when available, metrics of success.

METHODS

We conducted a scoping review to identify, synthesize, and collate existing evidence. This methodology was selected due to the heterogeneous nature of the known evidence, which limits the feasibility of a more targeted systematic review.

Information Sources

A literature search was designed and performed by a medical librarian (CP) in June 2021 targeting the following concepts: faculty professional development, program development, and hospital medicine. Relevant publications were identified by searching the following databases with a combination of standardized index terms and keywords: Ovid MEDLINE ALL (1946 to June 17, 2021) and Embase (via Elsevier, 1947 to June 17, 2021). The search was developed in Ovid MEDLINE and translated for Embase. Searches were limited to English language. All results were exported to and deduplicated in EndNote 20. Covidence systematic review software (Veritas Health Innovation) was used for screening and full-text review (see the Appendix for complete search strategies).

Eligibility Criteria

We included studies that focused on faculty development programs for faculty or hospitalists in a hospital medicine specialty, academic medical center, or teaching hospital. Faculty development programs were defined to be programs that addressed the overall development of faculty. Studies prior to 1996 were excluded, as hospital medicine as a specialized branch of medicine was not formally established

until 1996. We included studies that focused either specifically on hospitalists or similar generalist faculty who primarily work in a teaching or academic hospital. Included studies were required to discuss faculty development programs comprehensively, so articles that narrowly examined one subset or skill within faculty development, such as mentorship or Point-of-Care Ultrasound (POCUS), were excluded. The target population for inclusion was limited to faculty (excluding development programs related strictly to trainees). Only studies based in Canada and the United States (U.S.) were included. We excluded conference abstracts, editorials, opinion, and perspective pieces.

Study Selection

Citations and abstracts were uploaded in Covidence for study selection. Multiple researchers (GM, AG, VS, AN, MF, SL, CW, SR) independently screened all titles and abstracts. The lead researcher (GM) reviewed all citations and additional researchers (AG, VS, AN, MF) provided the second vote for each citation for inclusion into the full-text review. Title and abstract conflicts were resolved by a third review by additional authors (SL, CW, SR). For the full-text screening, one researcher (MF) voted on all citations for inclusion into the final review. Multiple researchers (VS, AG, AN) provided the second vote. Conflicts were resolved by one researcher (SL). Questions about inclusion criteria by reviewers were discussed with all team members and decided via consensus throughout the review process.

Data Extraction

Data extraction was done blindly and independently using Covidence systematic review software (Veritas Health Innovation). Data extraction was done by two researchers (MF, BS). Consensus for data extraction was achieved by a third researcher (GM). Quality assessment for the included articles was attempted utilizing Medical Education Research Study Quality Instrument (MERSQI) and Mixed Methods Appraisal Tool (MMAT), but it was not possible due to the heterogeneous nature of study designs.

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RESULTS

Our initial database search yielded 1365 eligible articles, of which 131 full-text articles underwent advanced screening based upon our inclusion criteria. Twenty-two unique articles were ultimately included in qualitative synthesis describing faculty development programs (see Fig. 1).

Of included studies, there was wide heterogeneity in *study design*. Despite our attempt to exclude perspective and

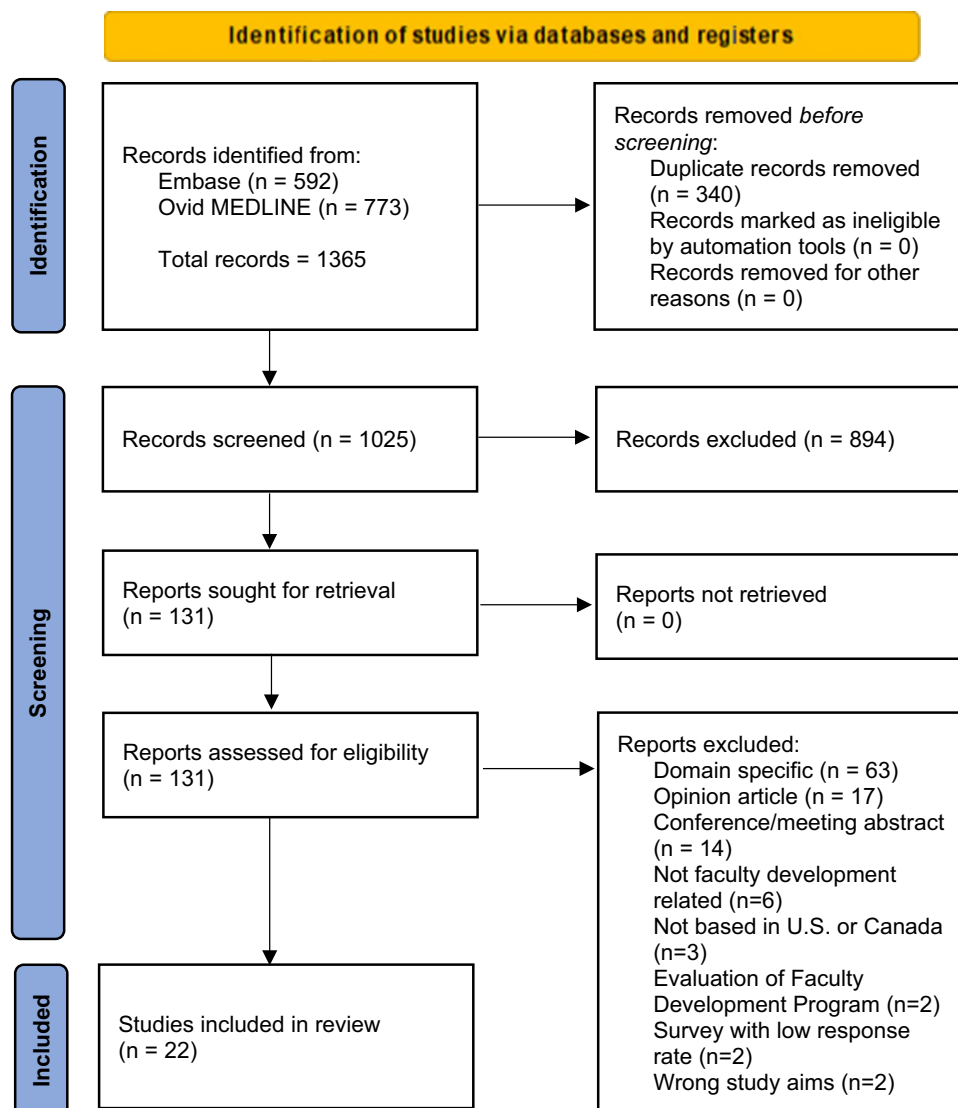


Figure 1 PRISMA diagram.

opinion articles, we found over half of the included articles ($n = 13$) did not report metrics of success, and solely described their program implementation and institutional experience related to their specific FDP. Eight of the articles encompassed quantitative analysis and mixed methods studies, in which they used these research methodologies to either design and implement, or to assess, program success. Two of the articles utilized surveys to gauge participant's perception of program.

FDP's targeted disparate academic faculty in their design; most programs only included faculty participants; however, one program also included residents among its' intervention. Faculty groups targeted in the FDP programs included Family Medicine (4 articles), Hospital Medicine (2 articles), Internal Medicine (2 articles), Pediatrics (2 articles), combined Primary Care (FM, GIM, Pediatrics, 2 articles), and broad, multi-specialty faculty groups (9 articles). Four manuscripts described programs with a Diversity, Equity, and Inclusion focus; of these, two programs focused on women

and two manuscripts described a subset of programs offered to underrepresented minorities (Table 1).

Program design included a variety of offerings ranging from single-day workshops, lectures, and networking sessions to more comprehensive and longitudinal designs, featuring a myriad of pedagogies and completion requirements. Fifty percent of programs offered mentorship and/or coaching to participants. At least half of programs described a primary focus in academic domains such as leadership skills; clinical, operations, and/or QI skills; research and scholarship skills; and teaching skills (see Table 3 in supplemental materials).

Outcomes Evaluating Faculty Development Programs

Outcomes examining the effectiveness of faculty development offerings varied widely, if reported at all. Many studies focused on participant perceptions and satisfaction, while

Table 1 Summary of Study Characteristics

Target population	Publications (n)	Type of publication (n)	Area(s) of focus
Hospital Medicine	2	Case-control Multi-method	All-encompassing
Family Medicine	2	Survey (2)	Identify current strategies and preferred competencies
Internal Medicine	1	Cohort study	Clinical, medical education, research, leadership
Pediatrics	2	Cohort study (2)	Compensation for FD, medical education
Primary Care	2	Cohort study (2)	All FD
Interdisciplinary	6	Case-control/mixed methods Narrative summary (2) Cohort study (1) Qualitative research (2)	All FD, mid-career, mentoring, clinical, QI, medical education
Multi-institutional	7	Cohort study (1) Narrative summary (5) Qualitative research (1)	DEI, all FD
URM (4 repeated from above)	5*	Cohort (1) Qualitative research (1) Narrative summary (3)	Women (3), URM (2)

FD, faculty development; QI, quality improvement; DEI, diversity, equity, and inclusion; URM, underrepresented minority; *includes overlapping target populations from above (# of publications thus 27)

others focused on processes such as participation/completion rates, skill development, and publication rates. A few studies published outcomes on retention, diversity, and promotions/advancement. Overall, FDP participants reported high attendance and program completion rates,¹⁰ high levels of satisfaction with the program and their career,^{11–13} and ranked highly the quality, relevance, and impact on teaching and usefulness.^{14,15}

Some programs identified an increase in participants' self-perceived scholarly proficiency and skills, while others also reported improvements in specific skills.^{10,16} Other measured program outcomes included improved academic output and increased number of peer-reviewed publications and grants.^{12,13,17,18}

Many study participants perceived FDP as having a positive impact on their academic careers,^{19,20} preparing them to advance their academic careers,¹² and supporting task completion important to the advancement of their careers. Participants identified increased collaborations during and after their program¹⁶ and increased national leadership roles for division members.¹⁷

Participants were more likely to stay at an institution^{11,21} when there was an institutional focus on recruitment, retention, and promotion.²² Other positive results included greater faculty diversity,²³ including more female faculty and department chairs,²¹ and increased number and participation of faculty in teaching and mentoring.¹⁴

What Stands in the Way of Effective Faculty Development Programming?

While studies exploring formal faculty development did not explicitly examine specific barriers to effectiveness, the authors did identify several obstacles to effective faculty development. Need for extensive faculty support was

cited¹⁰, yet institutional fiscal constraints provide a noteworthy hindrance to creating thriving FDPs.²³ In addition, insufficient supported time and multiple demands for time were each reported (e.g., required voluntary and/or weekend participation), complicated by clinical responsibilities displacing educational pursuits and the inability to participate in mentoring and leadership activities.^{15,23} Others described that their medical education activities were under-valued¹⁹, noted a lack of mentors, and commented on gender-related influences as additional limitations in effective faculty development.²⁰

DISCUSSION

Faculty development is essential for any thriving academic medicine program. Despite the recognition that academic faculty require intensive and wide-ranging support throughout their careers, it remains unclear how to best create effective and sustainable programs for HM. There exists a paucity of published programs and interventions to effectively address diverse needs of individual academic HM faculty across the career spectrum. A gap in the literature exists in defining an effective FDP to meet long-term individual and collective HM academic faculty goals.

Yet results of our literature review still provide several insights and lessons for academic faculty and program leaders. We identified heterogeneous historical studies addressing faculty development across highly variable program design, intervention, faculty targeted, and outcomes assessed. A few common themes emerged, including (1) the need for program structure and support, (2) the value of prioritizing areas of skill development aligned with faculty needs, and (3) the importance of longitudinal mentoring/coaching. Positive outcomes included high levels of participant satisfaction

leading to increased engagement and retention. Additionally, some studies reported important positive impacts such as increased collaborations and diversity, enhanced academic output and promotion, and career advancement leading to leadership roles.

Based on the results of our review, we suggest that effective FDPs are best implemented after assessing the local needs of the faculty practice, outlining clear objectives, and defining metrics of success. Effective FDPs include new programs and curricula (e.g., addiction medicine, informatics, specialty consult or co-management services, procedure teams) and measure practice-specific faculty retention and new hire rates, engagement, and academic promotion. Effective programs teach and develop faculty skills targeted to specific disciplines with emphasis on scholarship, education/teaching, organizational leadership, and promotion.²⁴ The most effective programs included longitudinal structure, with dedicated program leadership and curriculum support and robust mentoring and sponsorship as key tenets to faculty development.^{25,26} Assisting early faculty navigate academic life requires significant institutional commitment and resources, including budgetary and administrative support.⁹

Effective FDPs also move beyond the limited scope of narrowly targeted and individual components (e.g., workshops, teaching-specific) to a multifaceted approach that support faculty longitudinally. Faculty development and early career support are best promoted by a set of accessible resources along an established timeline with supplementary guidance on using these resources optimally. Academic medicine leaders must look beyond patient care alone and support the creation of tailored careers for their faculty by balancing clinical and academic activities and leadership roles according to individual interests.²⁷ Providing opportunities and experience through collaboration and team building, while cultivating faculty resilience through reflection²⁸ appear to be valuable elements in creating a culture of support and collaboration.

Our work is limited by the lack of rigorous, outcome studies that could better measure programmatic success. Measuring program success through building and assessing academic competencies might prove useful, as only 58% of programs discuss ACGME's faculty development component areas (clinical, educational, administrative, leadership, research, and behavioral).²⁹ Moreover, creating a shared vision and standard among HM faculty development

Table 2 Faculty Development Framework

Faculty development framework	Components	Key characteristics
Conceptual	Partnerships and collaborations Faculty priorities & values	Longitudinal relationships, internal and external ^{13,15,22,30} Individual priorities and values (e.g., education and scholarship opportunities, supported faculty, work life balance, effective mentorship) aligning with overall program goals and needs (e.g., providing high-quality direct patient care, proving indispensability with key stakeholders) and institutional/system needs (e.g., high-volume patient care, economic solvency) ^{21,31-33}
	Faculty engagement	Consistently appeal to faculty with well-defined and lofty expectations of new faculty, and through ongoing participation & feedback for all faculty ^{12,17,18,30}
	Skill development	Allow for pursuit of individual development plans, including targeted skills in leadership, teaching, scholarship, clinical operations, and mentorship training ^{14,15}
Infrastructure/core elements	Time & support	Invest requisite resources, including partially funded full-time equivalent (FTE) time, training opportunities, and extramural funding to enhance program structure ^{17,15,18,20-22,32}
	Mentoring & coaching	Greatest impact on academic career is access to, and involvement in, a mentoring relationship, including peer-mentoring networks ^{13,15,20,31,32} Mentoring and coaching relationships with more senior faculty members is essential in creating a successful framework in FDP ^{17,23}
	Multidisciplinary team	Includes formal education, personal positioning/planning, continuous and coordinated support ²³ and the creation and recognition of durable educational materials linked to institutional needs ²¹
	Focused practice/targeted skills	<i>Clinician educator</i> roles - clinical practice/skills, teaching-related activities ¹² <i>Career development</i> support - leadership/research/administrative training: teaching, research, awards, inter-professional education, and networking; developing scholarly activities and information technology ^{12,34,35}
	Structured curricula	<i>Curricula</i> in research, teaching/education, clinical practice, and career development ¹⁶ <i>Project completion</i> - individual (guidance from senior faculty mentor) ¹⁶ and multidisciplinary group (to address institutional needs) ¹⁵ Learning modules, a core curriculum, a teaching course, divisional Grand Rounds, lunch seminars, and venues to share scholarship and works in progress ¹⁷ Workshops on evidence-based medicine, physician leadership, advocacy, doctor-patient communication, quality, technology tools, and teaching skills ¹⁰

leaders to identify best practices and measures of success may be valuable in faculty development program-building. In addition, by restricting our search to hospital-medicine specific literature, and maintaining strict exclusion criteria, our included studies were necessarily constrained.

Ultimately, an effective and enduring FDP requires agility and vision to best identify the individual and collective needs of its faculty. It meets stated programmatic goals and improves faculty ability to meet their individual professional goals, and improves departmental rates of academic promotion, engagement, and/or retention. Effective faculty development includes conceptual frameworks of longitudinal partnerships and collaborations, aligned faculty values and program priorities, strong faculty engagement, and a focus on skill development. Core elements include (1) explicitly funded time and support along with a multidisciplinary team, (2) mentoring and coaching in various formats, but especially with senior faculty members, and (3) a structured curriculum with opportunity for focused skill development in identified prioritized areas. A summary of conceptual and infrastructure/core elements of FDPs is in Table 2.

This review identifies significant gaps in existing literature, and evidence more research is needed to define an effective FDP. We also intend to generate discussion on the fundamental components a program demands to address the needs of diverse faculty and advance the academic mission within one's institution. Next steps include developing expert consensus guidelines on how to build tailored FDPs for academic HM, and encouraging further publications detailing innovative and successful approaches toward faculty development. We recommend all academic HM programs invest in faculty development as a key component to developing sustainable, rewarding careers for hospitalists and ultimately specialty and institutional success.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s11606-023-08089-4>.

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Declarations

Conflict of Interest The authors declare that they do not have a conflict of interest.

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