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Education Scholarship Fellowships: An Emerging Model for Creating Educational Leaders

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Consider the following scenario: *You are a midcareer residency director in an academic center. Your program leadership comprises several recent residency graduates without experience in residency administration, training in education theory, competency-based assessment, or education research methods. You are committed to mentoring them, but finding the time and funding to provide focused faculty development is challenging with your limited time and education budget, and their busy clinical schedules. How can you best provide them with the professional development necessary to promote their careers and prepare them to make positive contributions to the residency program and education literature?*

Today's academic graduate medical educator faces unique challenges that require a sophisticated skill set. As graduate medical education embarks on an aspirational transformation toward competency-based education, educators must apply learning theory and methods to their teaching practice during a time when learners may spend more time in a virtual classroom than face to face, where crucial learning occurs in simulated patient encounters, and where educators juggle administrative, clinical, teaching, and scholarship roles with ever-increasing financial and clinical productivity pressures. Furthermore, as medical education research matures as a field, adherence to rigorous methods and reporting standards make it even more difficult for an inexperienced educator to achieve scholarship.¹⁻⁶ Educators state that the lack of training and access to expertise limit their ability to apply these methods and standards effectively, hindering their success as educational researchers.⁶⁻¹⁰

Although multiple formats for faculty development in education scholarship exist, a new model has been described in emergency medicine (EM): a dedicated, postgraduate fellowship structured similarly to accredited clinical training fellowships.¹¹⁻¹³ This postgraduate training model provides fellows time to

develop skills as teachers and scholars under the mentorship of a fellowship director who can facilitate opportunities for leadership, research, and teaching.¹⁴ In 2012, the Academic Emergency Medicine Consensus Conference—Education Research in Emergency Medicine: Opportunities, Challenges, and Strategies for Success—specifically addressed postgraduate fellowship training programs for future education scholars. The resulting articles in the consensus proceedings papers supported the model of a structured Education Scholarship Fellowship (ESF), a dedicated 2-year postgraduate training opportunity, to prepare future educational leaders for successful careers as education scholars.¹⁵⁻¹⁸

Since the 2012 Consensus Conference, the number of EM education fellowships has grown, with 31 fellowships now listed on the Emergency Medicine Residents' Association fellowship page.¹⁹ Although these fellowships are heterogeneous in their duration, training opportunities, and clinical requirements, a recently implemented, rigorous approval process by the Society for Academic Emergency Medicine aims to ensure fellowships meet pre-established standards for curricula, mentorship, and protected time. As more fellowships pursue approval status, the heterogeneity of experiences may decrease in endorsed fellowships. Currently, there are 7 EM ESFs approved by the Society for Academic Emergency Medicine, and applications for new fellowships continue to grow.²⁰

Graduates of ESFs cite several benefits of fellowship training: (1) mentorship and collaboration; (2) protected time for scholarly work; (3) dedicated training in education research skills; (4) foundation in theoretical and applied teaching; and (5) leadership training and preparation for an academic career.²¹ They identified potential drawbacks, including delayed faculty appointment, salary, lack of resources (poor grant funding environment, lack of protected time), and concern about the "credibility" of such a fellowship.

Although graduates perceive career benefits, possible outcomes that may indicate overall program

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TABLE 1
Development of an Education Scholarship Fellowship (ESF) Curriculum^a

Problem identification and general needs assessment	<i>Stakeholders:</i> Potential fellows, educational leaders (program directors, clerkship directors, etc), chairs, departments and institutions, and learners. <i>Needs:</i> Fellow needs for professional development and the stakeholder needs for future faculty members who have expertise in education scholarship.
Targeted needs assessment	Core content should include professional development, education theory and teaching methods, educational program administration, and education research training. ¹⁵
Goals and objectives	Upon completion of an ESF, the fellow will be prepared to: <ul style="list-style-type: none"> ▪ contribute to specialty department as an education scholar with a defined niche; ▪ collaborate with colleagues to produce education scholarship and promote excellence in education; and ▪ meet departmental and institutional expectations for educational service, leadership, and productivity.
Educational strategies	<i>Clinical requirements:</i> Clinical hours will vary by specialty but must allow protected time for fellowship curricula. <i>Didactic education:</i> Structured training to meet predetermined education scholarship curriculum core content. <i>Administrative roles:</i> Fellows will benefit from experiential learning in mentored educational leadership roles, such as assistant residency director, assistant clerkship director, or assistant simulation director.
Implementation	Prior to implementation, fellowships should: <ul style="list-style-type: none"> ▪ develop core content and curriculum; ▪ secure funding; and ▪ define a plan and timeline for advertising the position and fellow selection.
Program evaluation	Learners should be assessed frequently on progress in clinical performance, service contributions, teaching effectiveness, and scholarly productivity. Program outcomes should be measured, including: <ul style="list-style-type: none"> ▪ fellow evaluations of program; ▪ fellow graduation rate; ▪ leadership roles attained by graduates; ▪ graduate scholarship (national presentations, grants, publications); and ▪ graduate honors and awards.

^a Based on the Kern et al²² 6-step model for curriculum development.

success include that graduates secure an academic faculty position after the fellowship; report career satisfaction; assume a leadership role in educational program administration or external organizations; and report favorable scholarship metrics, such as publications per year, number of mentees per year, and time to promotion.

Let's return to our scenario: *You approach your chair about implementing an ESF. She is intrigued and agrees with the implementation—not only does this align with the educational mission of the department, but also fellows will generate clinical revenue to support their training, and their experiential training will also include assuming educational leadership roles that benefit the department. Over the next 10 years, you graduate 14 fellows. Two join your faculty as assistant residency director and director of medical student education. Others assume educational leadership roles in other academic institutions; some even becoming ESF directors themselves. You find reward in mentoring and training future educational leaders,*

but also find that having fellows increases the scholarly activity of the faculty, breathes new life into your education section, and expands the available workforce to engage in your department's educational mission.

Postgraduate ESFs are novel in their timing, structure, and aim, and share common themes with previously described longitudinal faculty development opportunities in medical education.^{23–35} Although ESFs may partner with existing longitudinal or formal degree programs to deliver some of the core content, the defining features of ESFs are the dedicated postgraduate structure, the mentorship, and the emphasis on the fellow's primary role as a learner. The model has been developed, piloted, revised, and is now widely implemented in EM and may be applicable to other specialties. TABLE 1 provides a proposed framework for ESF development and implementation, framed in the context of the Kern model for curriculum development.²² Previous literature identified challenges and solutions to ESF

TABLE 2

Potential Challenges to Education Scholarship Fellowship (ESF) Development and Implementation

Challenges in timing	It may be difficult to recruit physicians with current faculty appointments for ESFs due to increased time constraints and relative decreased compensation associated with fellowship training.
Potential solution	Postgraduate ESFs should target residents for enrollment.
Challenges to ESF program directors	Potential ESF program directors may lack protected time and expertise to create and maintain a rigorous program.
Potential solutions	Potential ESF program directors should seek out mentorship and expertise from those who have been successful in creating and maintaining high-quality ESFs both within their specialty and outside of it to understand best practices. Potential ESF program directors should garner leadership support from their department and institution prior to embarking on the establishment of an ESF.
Challenges to the institution	Institutions may lack funds and local faculty expertise to support an ESF.
Potential solutions	ESFs could potentially be tied to value-added strategic initiatives within the institution. Existing institutional resources must be evaluated prior to embarking on the establishment of an ESF. Supportive resources may be found in affiliated medical school departments or a graduate school of education.

development and implementation,²¹ which may be helpful to potential ESF program directors (TABLE 2). Educators aiming to develop and implement an ESF should pay particular attention to fellowship *timing*, *curriculum*, and *implementation*.

Timing

Postgraduate ESFs are fundamentally different than longitudinal training opportunities because they usually occur prior to a faculty appointment, which takes advantage of residency graduates' familiarity with the learner role, and provides a gentle transformation from resident to independent scholar under direct mentorship. A gradual increase in leadership and teaching responsibilities during the 2-year period gives fellows sufficient time to develop and execute scholarly projects and facilitates transitioning to faculty with the experience and a collaboration network to be productive immediately.

Curricular Basics

A broad, portable skill set that addresses the needs of academic departments and their learners enhances progress through the academic ranks. The ESFs should focus on 3 fundamental domains: (1) *Teaching*, including core education theory and teaching experience; (2) *Scholarship*, emphasizing mastery of education research methodology; and (3) *Administration*, highlighting leadership and management strategies, including the Accreditation Council for Graduate Medical Education (ACGME) guidelines.¹⁵

Looking Ahead to Implementation

Many educational leaders with experience in program administration already possess the required skills to implement an ESF. Obtaining the support of institutional and departmental leadership is key, and emphasizing the value-added benefits of the ESF with respect to workforce needs and the creation of a scholarly milieu are critical talking points. Funding, protected time for both fellows and ESF directors, and administrative support should be negotiated during the planning stages. Funding options may vary depending on institution or department. In the existing EM fellowships, a portion of the funding for salary and benefits is often generated by the fellow's clinical contributions, as EM fellows in non-ACGME accredited fellowships typically have a joint faculty appointment, allowing them to work clinically and bill in the emergency department. Many departments and affiliated medical schools may also provide salary support, continuing medical education funds, stipends for tuition, and merit awards for travel. Salary and benefits may be administered through the institution's department, graduate medical education office, or occasionally, extramurally.^{12,16,36}

New fellowship directors may benefit from published ESF curricula, implementation resources, and mentorship from existing directors to become familiar with best practices.^{11,12,15,16,37} Implementing a new fellowship in an environment where there are few faculty with formal training may seem daunting, but directors can solicit support from faculty who have completed ESFs in other institutions and from local faculty who have engaged in longitudinal professional

Box Funding Considerations

- If fellows are board eligible in their clinical specialties and have joint faculty appointments, clinical revenue may contribute to offsetting training costs.
- Potential funding sources include institutional graduate medical education departments, departments of medical education, individual clinical departments, and extramural funding.
- Salary and benefits may be provided through any of these venues.
- Salary structures may vary, with options for fixed salaries, incentive salaries and clinical bonuses, continuing medical education funds and tuition stipends, and benefits packages customized to meet departmental or institutional standards.
- In some specialties, fellows may be permitted to moonlight outside of their fellowship contracts in order to supplement their salaries and clinical experience.

development in education; directors can also partner with or access existing longitudinal fellowship offers or other interdisciplinary resources within the dean's office or graduate schools of education (BOX).³⁸

Once funding and curricula are in place, fellowship directors may recruit and select potential applicants similar to selection processes for other non-ACGME accredited fellowships or faculty positions. In EM, fellowships begin to advertise open positions as early as a year in advance, by advertising at national meetings, publishing ads in specialty journals, and distributing fliers on residency director listservs. Applicants typically interview in person, and admission may be rolling or offers may be rendered at a set date in the fall or early winter.

In conclusion, Education Scholarship Fellowships are thriving in the field of EM. This postgraduate model addresses a pressing need to develop educational leaders who are prepared to tackle the challenging and rapidly evolving landscapes of medical education and scholarship, and may be applicable to other medical specialties or institutional graduate medical education departments. Certain specialties may wish to adopt a similar non-ACGME accredited fellowship model if they have shorter training durations (such as pediatrics, medicine, and family medicine) that graduate specialty-specific, board-eligible clinicians—who then may engage in independent clinical care as faculty and would also benefit from education scholarship training prior to a faculty appointment. Specialties that have funded postgraduate chief resident years or administrative fellowships may wish to incorporate education scholarship curricula into that existing structure. Subspecialty fellowships (such as adult and pediatric medical and surgical clinical subspecialties) could

consider offering the option of 1 or 2 years of ESF training within the ACGME-accredited fellowship instead of traditional research year(s). Alternatively, central school of medicine or institutional departments of medical education departments who have funding to support 1 or more fellows might consider implementing a centralized fellowship (with or without a required clinical component) to prepare future leaders in education scholarship prior to faculty appointments. These potential structures may benefit both the fellow's professional development and the supporting department or institution; in this regard, the fellow contributes to the local medical education community of practice as an engaged, informed member who participates in teaching, scholarship, and service during their fellowship. Further work is needed to describe the impact of ESFs on faculty career satisfaction, advancement, and scholarly productivity.

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