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ORIGINAL RESEARCH

Survey of US Academic Hospitalist Leaders About Mentorship and Academic Activities in Hospitalist Groups

Rebecca Harrison, MD, FACP[1]
Alan J. Hunter, MD, FACP[1]
Bradley Sharpe, MD, FACP[2]
Andrew D. Auerbach, MD, MPH[2]

[1] Division of Hospital Medicine, Department of Medicine, Oregon Health & Science University, Portland, Oregon.
[2] UCSF Department of Medicine, University of California at San Francisco, San Francisco, California.

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BACKGROUND: Few data describe the structure, activities, and goals of academic hospital medicine groups.
METHODS: We carried out a cross sectional email survey of academic hospitalist leaders. Our survey asked about group resources, services, recruitment and growth, as well as mentoring of faculty, future priorities, and general impressions of group stability.
RESULTS: A total of 57 of 142 (40%) potential hospitalist leaders responded to our email survey. Hospitalist groups were generally young (<5 years old). Hospitalist group leaders worried about adequate mentorship and burnout while placing a high priority on avoiding physician turnover. However, most groups also placed a high priority on expanding nonclinical activities (teaching, research, etc.). Leaders felt financially and philosophically unsupported, a sentiment which seemed to stem from being viewed primarily as a clinical rather than an academic service.
CONCLUSION: Academic hospital medicine groups have an acute need for mentoring and career development programs. These programs should target both individual hospitalists and their leaders while also helping to enhance scholarly work.
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KEYWORDS: **academic hospitalists, business practices, career development, leadership, research skills.**

Hospitalists are hospital-based physicians whose primary professional focus is patient care, education, research, and administrative activities related to hospital medicine.[1] Initially, community-based hospitals were far more likely to employ hospitalists than academic centers. However, today most academic centers employ hospitalist models and it is now a fully recognized entity in academic settings.[2]

While much has been written about the structure, business operations, and potential benefits of nonteaching (clinical) hospitalist programs,[3,4] there is little known about the current state of academic hospitalist programs or their challenges. For example, who are the leaders of academic hospitalist medicine groups? Given the youth of the field, are academic hospitalists receiving adequate mentorship and are they advancing academically? What are future directions and goals for academic hospitalist groups?

To better understand academic hospitalist programs, we surveyed division chiefs and academic hospitalist leaders to explore existing business models and operations, the status of mentorship, and key issues in growth and retention.

Methods

Sites and Subjects

We targeted potential hospital medicine group leaders by identifying academic medical centers using Association of American Medical Colleges (AAMC), the Accreditation Council for Graduate Medical Education (ACGME), the Association of Chiefs of General Internal Medicine (ACGIM), and the Society of Hospital Medicine (SHM) lists of sites with teaching missions. We then used publicly available data (eg, from websites maintained by the sites) to identify physician leaders who: 1) self identified as a leader of a hospitalist group at an academic medical center (or a Chief of Division of General Internal Medicine which managed a hospitalist group) in the SHM database, 2) were listed as such on the website, or 3) were members of ACGIM and listed as a hospitalist group leader at a university based medical center.

Survey Development

Our survey was based on questions used in previous research by the authors,[5] with additional questions regarding operations of academic hospitalist programs, growth and retention of hospitalists, and mentorship developed by the study authors. Questions were pretested among a selected group of members of the Society of General Internal Medicine (SGIM) Academic Hospitalist Task Force and the SHM Academic Hospitalist Interest Group, after which the survey was refined and converted into its electronic form.

Survey Methods

The email survey process began in April 2007 with an initial survey sent to those physicians identified using preexisting data, as described. Our survey asked first if recipients were directly responsible for the oversight of a hospitalist group (eg, the division chief or director of the hospital medicine group) and if they practiced at an academic medical center. Only

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TABLE 1. Characteristics of Hospitalist Programs

Characteristic	n (%)
Group leader characteristics	
Academic rank	
Assistant professor/other	26 (45)
Associate professor	18 (32)
Full professor	13 (23)
Years in position (mean, range)	3.8 (2.0–7.0)
Group characteristics	
Hospital medicine place in school of medicine	
Within the department of medicine	55 (98)
Separate division	9 (16)
Within division of general medicine	38 (67)
Other	9 (16)
Not in the department of medicine	1 (2)
Program size (mean, range)	
Number of hospitalists in program	10 (7–18)
Number of FTE	11 (3.5–12)
FTE's hired in past 2 years (July 2005 to survey date)	4.0 (2.2–7.0)
Hospitalist activities	
Medicine consultation	52 (91)
Quality improvement projects	52 (91)
Nonteaching attending	44 (77)
Comanagement of surgical patients	44 (77)
24-hour coverage	24 (61)
Manage patient transfer requests	32 (56)
Peer review/morbidity and mortality	31 (54)
Education program leadership	29 (51)
Medical student program leadership	29 (51)
Palliative care program	23 (40)
Preoperative clinic	23 (40)
Emergency department triage	14 (25)
Post discharge follow-up clinic	13 (23)
Skill nursing facility coverage	4 (7)
Other	15 (26)

Abbreviation: FTE, full time equivalents.

TABLE 2. Mentorship Practices in Academic Hospital Medicine Groups

Mentorship Activity	n (%)
Programs performing annual reviews with faculty	50 (88)
Who performs the annual review?	
General Medicine Division Chief	9 (18)
Hospitalist leader	18 (36)
Both	13 (26)
Other (eg, Department Chair, Chief Medical Officer)	10 (20)
Who is the primary source of mentorship for clinician-educators?	
Senior faculty within the group	43 (77)
Generalist faculty outside the group, but within the institution	6 (11)
Subspecialty Internal Medicine faculty outside the group, but within the institution	3 (5)
Non-Internal Medicine (eg, surgeon, epidemiologist) outside the group, but within the institution	0 (0)
Faculty from another institution	0 (0)
Don't know	4 (7)
Who is the primary source of mentorship for clinician-investigators?	
Senior faculty within the group	6 (12)
Generalist faculty outside the group, but within the institution	13 (25)
Subspecialty internal medicine faculty outside the group, but within the institution	6 (12)
Non-Internal Medicine (eg, surgeon, epidemiologist) outside the group, but within the institution	2 (4)
Faculty from another institution	3 (6)
Don't know	2 (4)
Not applicable; no clinician investigators	20 (38)

respondents who answered yes to both of these criteria were invited to respond to our survey. Those who felt the survey did not apply to them were invited to forward the email survey on to the appropriate person at their site or respond that their hospital had no hospital medicine service. Subsequent reminder emails were sent to nonrespondents at 10-day intervals up to a total of four times. This survey was granted exempt status from the UCSF Institutional Review Board.

Statistical Methods

Response rates and frequencies and distribution of survey responses were analyzed using univariable statistics.

Results

Characteristics of Responding Sites

We received responses from 57 (40%) of the academic sites identified as having an academic hospital medicine group. Hospitalist group leaders at responding sites had been in their current position 3.8 years, graduated medical school approximately 15 years prior, and were either Assistant (40%), Associate (32%), or Full Professors (23%). Group leaders reported that the vast majority (91%) of group full-time members were in junior faculty positions (Instructor or Assistant Professor), who were working full-time. On average, responding programs were 6 years old (formed in 2001) and currently had 10.0 total full time equivalents (FTEs). A total of 38 of the groups (67%) were part of the larger Division of General Internal Medicine, whereas 9 groups (16 %) were their own division within the Department of Medicine. The remaining 17% were part of another division.

Mentorship Practices In Academic Hospital Medicine Groups

As one mechanism of mentorship, annual performance reviews were offered in most programs (88%). These were usually performed by the general medicine division chief or hospitalist leader. Mentoring relationships for clinician investigators (CI) were most often from personnel outside the hospitalist group, whereas clinician-educators (CE) most often were mentored by faculty inside the group.

Hospitalist Leaders' Priorities and Impressions of Growth, Opportunities, Career Development and Barriers

Hospitalist leaders reported the highest priorities for hospitalist leaders were developing research and teaching programs, and minimizing turnover. Other priorities included achieving financial stability, applying for extramural funding, and reducing clinical workload (Table 2). Only 14% of

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TABLE 3. Hospitalist Leaders' 2-Year Priorities

	Highest Priority, n (%)	Intermediate Priority, n (%)	Lowest Priority, n (%)	Not a Priority, n (%)	NA, n (%)
Reducing individual faculty clinical workload	9 (16)	22 (3)	11 (2)	14 (2)	0 (0)
Achieving financial stability	13 (24)	30 (55)	6 (11)	6 (11)	0 (0)
Minimizing turnover	22 (39)	27 (48)	6 (11)	1 (2)	0 (0)
Developing teaching programs	22 (39)	29 (52)	3 (5)	2 (4)	0 (0)
Becoming a separate division	3 (5)	5 (9)	11 (20)	23 (41)	14 (25)
Developing research	25 (45)	18 (32)	5 (9)	6 (11)	2 (4)
Applying for extramural funding	10 (18)	24 (43)	10 (18)	8 (14)	4 (7)

TABLE 4. Factors Relevant to Growth and Sustainability of Hospital Medicine Group Functions

	Strongly Agree, n (%)	Agree, n (%)	Neutral, n (%)	Disagree, n (%)	Strongly Disagree, n (%)	NA, n (%)
Growth and sustainability						
Availability of funds is limiting expansion of academic functions (eg, education and research)	20 (36)	21 (38)	5 (9)	7 (12)	3 (5)	0 (0)
Availability of funds is limiting expansion of clinical functions (eg, development of new services)	11 (20)	17 (30)	14 (25)	10 (18)	4 (7)	0 (0)
My faculty are developing sustainable nonclinical activities	9 (16)	23 (41)	12 (21)	9 (16)	3 (5)	0 (0)
Career development						
Mentorship is a major issue for my clinician-educator faculty	14 (25)	28 (50)	7 (12)	4 (7)	1 (2)	2 (4)
Mentorship is a major issue for my research faculty	22 (40)	10 (18)	4 (7)	3 (5)	2 (4)	14 (25)
External support for hospital medicine group						
There is investment in the development of academic functions of our hospitalist program from my hospital	4 (7)	12 (21)	10 (18)	22 (39)	8 (14)	0 (0)
There is investment in the development of academic functions of our hospitalist program from the Department of Medicine	22 (40)	17 (31)	8 (15)	4 (7)	2 (4)	2 (4)

respondents noted that becoming a separate division was a priority.

In general, academic hospitalist leaders reported that Departments of Medicine and Divisions of General Medicine (where applicable) were invested in the development of their academic functions. Yet, more than half of program directors reported that hospitals were not supportive. Moreover, lack of funds limited the expansion of their academic or clinical functions (Table 3). Additionally, while the majority either strongly agree or agree that their faculty are developing sustainable nonclinical activities (57%), they perceive that they are at risk for burnout (69%), and that lack of mentorship is a major issue for both CE (75%) and research faculty (58%). Lastly, while program directors strongly agree or agree (71%) that their hospitalist groups are respected by other academic physicians, they additionally strongly agree or agree that their Departments of Medicine (58%) and other Divisions (78%) view their hospitalist program as a clinical service rather than an academic program.

Discussion

Our survey provides a unique snapshot of academic hospitalist groups, highlighting a perceived lack of support and respect for their programs, a need to increase education and scholarly activities, and a desire to better prepare faculty for academic promotion.

Academic hospitalist groups and leaders reflected what one would expect from a field that is just over a decade old. Program leaders were relatively new to their position, as were their division group members. As a result, it is not surprising that most of the academic hospitalist leaders identified mentorship as a major issue. We were encouraged to see that most programs were offering annual reviews. However, the majority of these annual reviews were performed by the group leaders, many of whom are relatively junior (40% Assistant Professors) and may not be experienced in mentoring and performing annual reviews. Importantly, the absence of a mentor (or a high-quality, experienced one) among physicians, and specifically hospitalists, may result in fewer peer-reviewed first author and non-peer-reviewed publications, and less experience leading a teaching session at a national meeting.[6] Research suggests that effective mentoring may help faculty increase career satisfaction and productivity and reduce their risk for burn-out.[7] Hospitalist groups might benefit nationally from focusing specifically on finding adequate mentorship either within or outside their groups. In addition, national organizations such as the SHM and the SGIM could potentially help these groups and individual hospitalists in creating mentorship networks and a mentoring infrastructure.

Academic hospitalist leaders were concerned about the ability of their faculty to develop sustainable nonclinical activities and scholarship. Notably, more than 40% of

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surveyed leaders agreed or strongly agreed that their faculty were not developing sustainable nonclinical activities. For individual faculty, the inability to develop scholarly activities and engage in academic pursuits may create challenges in getting promoted by traditional academic pathways. Some have recognized this issue and tried to develop practical solutions.[2] In addition, academic hospitalists often engage in nonclinical activities such as quality improvement or patient safety which do not fit in the traditional "tripartite" mission of academics (clinical care, education, and research). In this survey, more than 90% of groups were engaged in quality improvement projects and over half in peer review exercises (Table 1). As many of these scholarly activities require innovation, sophisticated data analysis, and can have far-reaching and substantial impacts on healthcare, some have argued these should be considered as part of the promotion process.[8] Notably, the SGIM Academic Hospitalist Taskforce has created the Quality Portfolio, a structured adjunct to promotions packets to organize and document work in quality improvement and patient safety.[9]

While there were few CI in the divisions surveyed, building CI programs was a major priority of programs. In programs reporting the presence of CI's, they report limited access to research support. This highlights the potential role and benefit of post residency training in designing and conducting clinical research whether in a traditional general internal medicine fellowship or in 1 of the many growing hospital medicine fellowships.[10] There also appears to be a need for funding to support the research careers of junior hospitalists. While access to effective mentorship is integrally linked to achieving increased academic accomplishments, there is certainly an ample call for research in the areas of quality improvement, patient safety; systems-based practice, hospital efficiency, transitions of care,[11] perioperative medicine,[12] and education.[2,13,14] While providing lower costs per admission and lower lengths of stay, hospitalists seem well-positioned to spearhead active research in cost-effectiveness in the hospital.[14] Additionally, a quality portfolio, documenting such quality improvement projects, has been suggested as an effective means to provide a record of this work for academic promotion.[9]

The diverse activities of today's hospitalists are transforming the traditional view of academic work and are critical to the growth of hospitals, patient care, and development of the field of hospital medicine itself. Until these areas are fully embraced as legitimate areas of academic productivity and scholarship, the academic advancement of hospitalists will be slow.

It is unclear from our survey if academic hospitalist programs are truly getting the support they need to succeed. On one hand, there was general agreement that the Departments of Medicine and Divisions of General and Hospital Medicine were invested in the development of the academic accomplishments. Yet, the majority of program directors believed that they are viewed by the Department or Division as a clinical rather than an academic program. Moreover, over half of program directors report that their hospital was not supportive and therefore have limited the expansion of their hospitalist groups' educational and research activities. Lastly, for a large majority of programs, unavailable funding also acted to limit growth and expansion of academic functions. In a mere 2 decades, Emergency Medicine has become one of the largest US specialties and yet research and funding in the field have been lagging and are limiting academic expansion. Junior faculty seeking research careers struggled to find support and mentorship within their emergency medicine divisions.[15] Challenges faced by academic emergency medicine provide important historical perspective for the even more rapidly growing field of academic hospital medicine. Learning from the Academic Emergency Medicine experience, academic hospitalists should proactively identify scholarship and research opportunities unique to hospitalist and fitting the needs of academic institutions. Involvement in national medical organizations, such as SGIM-SHM-ACGIM Academic Hospitalist Academy, or the SGIM Academic Hospitalist Task Force, where skill and career development is the focus, will undoubtedly promote the success of academic hospitalist. Expanding valuable niches of expertise, such as quality control, perioperative medicine and care transitions, create an indispensible component of hospital care. Lastly mentoring programs for academic hospitalist within SHM and SGIM are also essential for networking and career development. There are several limitations to our study. Our response rate of 40% was relatively low, and our results may not be representative of all academic hospitalist division chiefs and their programs, may be overstating the perceived difficulties of the survey sample, or conversely missing a large portion too overwhelmed by current duties who lacked the time to complete the survey. Having said this, our survey methodology targeted sites where we could identify potential—not confirmed—hospitalist groups and hospitalist group leaders. For this reason, our response rate could be higher (if some of our contacts were in error). Our results are a cross-sectional survey based on self report and are subject to recall bias. In addition, our study was carried out in 2007, and while issues such as mentorship may remain important, our results regarding financial arrangements may not be applicable to the current economic climate. Finally, while improving mentorship was identified as a principle objective for program leaders, we did not explore the existing quality of mentorship, nor perceived shortfalls. This should be the subject of future exploration.

The vast majority of academic hospital medicine programs continue to view inadequate support, expanding research, mentorship, and academic promotion as critical issues for the future. Thus, further understanding of these features, and interventions to allow for success, are of crucial importance in the continued development of academic hospitalists. Our study supports the need for mentoring and career development programs, targeting academic hospitalists and their leaders. In addition, attention should be paid to activities that support "career fit," creating sustainable

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and viable job descriptions for academic hospitalists, and preventing burnout.[16] At the same time we must expand the traditional view of scholarship and training and advocate for promotion criteria that value the unique contributions of hospitalists to become in line with the broad areas that hospitalists work.

Address for correspondence and reprint requests:
Rebecca Harrison, MD, FACP, Division of Hospital Medicine, Department of Medicine, Oregon Health & Science University, 3181 SW Sam Jackson Park Road, Portland, Oregon; Telephone: 503-494-0792; Fax: 503-494-0979; E-mail: harrisor@ohsu.edu Received 9 February 2010; revision received 14 May 2010; accepted 13 July 2010.

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