Alternative Approaches to Ambulatory Training: Internal Medicine Residents' and Program Directors' Perspectives

Kris G. Thomas, MD[1], Colin P. West, MD, PhD[1], Carol Popkave, MA[2], Lisa M. Bellini, MD[3], Steven E. Weinberger, MD[2], Joseph C. Kolars, MD[1], and Jennifer R. Kogan, MD[3]

[1]Mayo Clinic College of Medicine, Rochester, MN, USA; [2]American College of Physicians, Philadelphia, PA, USA; [3]University of Pennsylvania Health System, Philadelphia, PA, USA.

BACKGROUND: Internal medicine ambulatory training redesign, including recommendations to increase ambulatory training, is a focus of national discussion. Residents' and program directors' perceptions about ambulatory training models are unknown.

OBJECTIVE: To describe internal medicine residents' and program directors' perceptions regarding ambulatory training duration, alternative ambulatory training models, and factors important for ambulatory education.

DESIGN: National cohort study.

PARTICIPANTS: Internal medicine residents (N= 14,941) and program directors (N=222) who completed the 2007 Internal Medicine In-Training Examination (IM-ITE) Residents Questionnaire or Program Directors Survey, representing 389 US residency programs.

RESULTS: A total of 58.4% of program directors and 43.7% of residents preferred one-third or more training time in outpatient settings. Resident preferences for one-third or more outpatient training increased with higher levels of training (48.3% PGY3), female sex (52.7%), primary care program enrollment (64.8%), and anticipated outpatient-focused career, such as geriatrics. Most program directors (77.3%) and residents (58.4%) preferred training models containing weekly clinic. Although residents and program directors reported problems with competing inpatient-outpatient responsibilities (74.9% and 88.1%, respectively) and felt that absence of conflict with inpatient responsibilities is important for good outpatient training (69.4% and 74.2%, respectively), only 41.6% of residents and 22.7% of program directors supported models eliminating ambulatory sessions during inpatient rotations.

CONCLUSIONS: Residents' and program directors' preferences for outpatient training differ from recommendations for increased ambulatory training. Discordance was observed between reported problems with conflicting inpatient-outpatient responsibilities and preferences for models maintaining longitudinal clinic during inpatient rotations. Further study regarding benefits and barriers of ambulatory redesign is needed.

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INTRODUCTION

Education in the ambulatory setting has been a focus of discussions on optimizing internal medicine residency training.[1–4] Some proposals have called for increased ambulatory training time.[3] Others have recommended changing the structure of ambulatory training to incorporate focused experiences in ambulatory care,[3,5–7] such as 'block' experiences where residents are assigned exclusively to the ambulatory setting for 1 or more months, thus avoiding the conflict between outpatient and inpatient responsibilities. Redesign proposals are a result of the growing concern that current ambulatory training experiences insufficiently prepare residents for office-based patient care.[3,8–10]

Although the majority of health care is currently delivered in the outpatient setting,[11] most internal medicine training occurs in the inpatient setting. The presence of this "training gap"[12] suggests that additional emphasis on outpatient training may be needed. Physicians must be able to provide both longitudinal, coordinated care of the complex medical patient[13] as well as burst continuity care (i.e., more frequent monitoring during illness exacerbations).[14] Although the Internal Medicine-Residency Review Committee (IM-RRC) requires that at least 1/3 of the total training time be spent in ambulatory care settings,[15] current requirements may not be of sufficient intensity to ensure optimal ambulatory medicine training.

Driven by these concerns, the IM-RRC has recently revised the program requirements in support of alternative models for ambulatory training. These new requirements, approved by the Accreditation Council for Graduate Medical Education (ACGME) effective July 1, 2009, include increasing the number of required outpatient clinic sessions, limiting the contribution of emergency medicine toward the required 1/3 ambulatory time, and explicitly requiring longitudinal evaluation of residents' clinical performance data for chronic disease management and preventive health care.[16] In addition, several internal medicine programs participating in the ACGME-sponsored Educational Innovation Project (EIP) have developed rede-

signed ambulatory training models aimed at improving ambulatory education within their institutions. Little is known, however, about the perceived benefit of alternative models for ambulatory training or the ideal balance of inpatient-outpatient experiences.

The aim of this study was to describe the perceived (1) optimal percentage of training that should be spent in the ambulatory setting, (2) barriers to and factors important for good ambulatory training experiences, and (3) preferences for alternative models of ambulatory-based training among internal medicine residents and program directors.

METHODS

This is a national cohort study assessing the opinions of internal medicine residents and program directors that completed the Internal Medicine In-Training Examination (IM-ITE) 2007 Residents Questionnaire and IM-ITE 2007 Program Directors Survey, respectively.

The Internal Medicine In-Training Examination® (IM-ITE) is a standardized examination used for self-assessment of medical knowledge.[17,18] Developed through a collaboration involving the American College of Physicians (ACP), the Association of Professors of Medicine (APM), and the Association of Program Directors in Internal Medicine (APDIM), the IM-ITE is offered annually to internal medicine residents at over 400 residency programs in the US. Nearly all ACGME-accredited internal medicine residency programs and over 19,500 residents participate in this examination annually.

IM-ITE Residents Questionnaire

Following completion of the examination, residents are asked to voluntarily complete a survey (the IM-ITE Residents Questionnaire) designed to collect information about the examination and to capture opinions regarding other issues important to internal medicine training. The 2007 Residents Questionnaire, distributed to all residents who took the Internal Medicine In-Training Examination in October 2007, was a 15-item self-administered survey. Four items assessed residents' opinions regarding outpatient training (Appendix Fig. 1). Questionnaires were returned to the room monitor prior to exiting the examination site.

A total of 20,806 residents completed the IM-ITE in October 2007; 19,467 (94%) returned the survey. Using the test identification number as the linking variable, survey data were combined with IM-ITE demographic data. Survey results were excluded if linkages could not be made to demographic data (e.g., missing or improperly recorded identification numbers; mismatch in reported postgraduate year of training) or if residents were not in their first, second, or third year of internal medicine training (e.g., fourth-year residents or higher). Merging survey and demographic data produced a data file containing 17,691 records from first-, second-, and third-year residents, representing 91% of surveys and achieving an 85% response rate of all individuals taking the examination. From this data set, respondents were excluded if enrolled in residency programs outside the US (N=1,152). An additional 1,402 residents not reporting enrollment in categorical or primary care programs were excluded: preliminary programs (N=366), internal medicine-pediatric programs (N=816), non-internal medicine programs (N=165), and no reported program type (N=55). Data were also excluded for any additional individuals who did not answer the survey questions regarding outpatient training (N=196).

IM-ITE Program Directors Survey

The IM-ITE Program Directors Survey is a voluntary, Web-based survey distributed to internal medicine residency program directors following program participation in the examination. This survey is designed to capture information regarding program directors' use of the IM-ITE score report and to solicit their opinions regarding other issues important to internal medicine training. The IM-ITE 2007 Program Directors Survey, available on the Web from December 21, 2007 through March 3, 2008, contained four items assessing program directors' opinions regarding outpatient training, which were identical in content to the Residents Questionnaire (Appendix Fig. 1). All residency programs participating in the 2007 IM-ITE had the opportunity to respond to the Web survey. Respondents could access the survey using links contained in the online IM-ITE Score Report or in e-mails, including two e-mail reminders, sent by the ACP.

A total of 418 residency programs participated in the 2007 IM-ITE. Surveys were returned by 268 (64%) of program directors whose programs participated in the examination. Data were excluded from program directors of residency programs outside the US (N=29) and from individuals who did not answer the outpatient training survey questions (N=17).

Data Analysis

Data were analyzed for differences in resident perceptions regarding outpatient training by program type (categorical versus primary care internal medicine), reported career plan, sex, year of training, and location of medical school (US versus international). Differences in perceptions between residents and program directors were also assessed. We primarily report descriptive results, but, where appropriate, we used Cochran-Mantel-Haenszel tests for categorical data comparisons. Due to multiple comparison issues, statistical significance was set at an α value of 0.01. Analyses were performed using the SAS statistical package (SAS Institute, Inc., Cary, NC). This study was approved by the institutional review boards of the Mayo Clinic, Rochester, Minnesota, and the University of Pennsylvania, Philadelphia, Pennsylvania. This analysis was not supported by any funding source.

RESULTS

Data analysis was performed on 14,941 residents and 222 program directors, representing 67% of the 22,310 residents enrolled in US 3-year IM residency programs and 58% of the 385 ACGME-accredited US internal medicine residency programs for the 2007–2008 academic year.[19] Of the resident participants responding to each demographic question, there were 30.7% first-year, 37.5% second-year, and 31.8% third-year residents; 57.2% were male; 94.4% were enrolled in categorical and 5.6% in primary care internal medicine programs.

Overall, program directors favored a higher percentage of residency training time in the outpatient setting compared to residents (p<0.0001), (Table 1). Resident preferences for one-third or more outpatient training time increased with higher levels of training (38.6% PGY1, 44.0% PGY2, 48.3% PGY3, p<0.0001), female sex (52.7% female versus 37.0% male, p<0.0001), and enrollment in primary care training programs (64.8% primary care versus 42.5% categorical residents, p<0.0001). Support for one-third or more outpatient training time was most frequently reported among residents planning careers in geriatrics (69.0%) and least frequently reported among residents planning careers in cardiology (28.2%).

Most program directors (77.3%) and residents (58.4%) preferred one of the outpatient training models that maintained some presence of a weekly half-day clinic (Table 2). While residents (41.6%) were relatively more supportive than program directors (22.7%) of models that eliminate ambulatory sessions while on inpatient services, these were not preferred models overall. No relationships were found between resident preferences for outpatient training models and program type (categorical vs. primary care), career plan, sex, year of training, or medical school location (US versus international) (data not shown).

Residents and program directors frequently cited problems with the presence of a weekly half-day longitudinal outpatient experience while on inpatient rotations (Table 3). Program directors were somewhat more likely than residents to report competing inpatient and outpatient responsibilities to be problematic (88.1% versus 74.9%, p<0.0001). Program directors and residents were least concerned with impacts on duty hours regulations and travel time between clinic and inpatient units, although these concerns were still reported by more than 1/3 of respondents. No relationships were found between resident opinions regarding problems resulting from the presence of a weekly half-day longitudinal outpatient experience during inpatient rotations and program type (categorical versus primary care), career plan, sex, year of training, or medical school location (US versus international).

Factors identified similarly by program directors and residents as important for providing a good outpatient experience for residents included experience in a variety of outpatient settings and absence of conflict with inpatient responsibilities (Table 4). Residents were more likely than program directors to perceive increased subspecialty clinics to be important for a good outpatient experience (71.0% versus 54.3%, p<0.0001). Conversely, program directors placed a higher degree of importance than residents on the priority of continuity clinic (86.9% versus 68.3%, p<0.0001) and time with outpatients (86.4% versus 70.6%, p<0.0001). Resident opinions regarding factors important for providing a good outpatient training experience were not associated with program type (categorical versus primary care), career plan, sex, year of training, or medical school location (US versus international).

Table 1. Program Directors' and Residents' Preferences for Percentage of Training Time in the Outpatient Environment, 2007*

	Percentage of training preferred in the outpatient environment, no. (%)						
	< 25%	25–32%	33–49%	50–66%	67–75%	>75%	Missing
Program directors (n=222)	9 (4.1)	83 (37.6)	101 (45.7)	23 (10.4)	5 (2.3)	0 (0.0)	1 (0.5)
Residents (n=14,941)	2,444 (16.4)	5,942 (39.9)	4,143 (27.8)	1,887 (12.7)	348 (2.3)	134 (0.9)	43 (0.3)
Year of training							43 (0.3)
First-year	846 (18.5)	1,961 (42.9)	1,161 (25.4)	487 (10.7)	76 (1.7)	41 (0.9)	
Second-year	891 (15.9)	2,239 (40.1)	1,545 (27.6)	730 (13.1)	138 (2.5)	45 (0.8)	
Third-year	707 (14.9)	1,742 (36.8)	1,437 (30.3)	670 (14.1)	134 (2.8)	48 (1.0)	
Sex							104 (0.7)
Male	1,698 (20.0)	3,642 (42.9)	2,101 (24.8)	833 (9.8)	150 (1.8)	58 (0.7)	
Female	738 (11.6)	2,271 (35.7)	2,024 (31.8)	1,050 (15.5)	197 (3.1)	75 (1.2)	
Program type							43 (0.3)
Primary care	70 (8.4)	223 (26.8)	300 (36.1)	183 (22.0)	38 (4.6)	18 (2.2)	
Categorical	2,374 (16.9)	5,719 (40.7)	3,843 (27.3)	1,704 (12.1)	310 (2.2)	116 (0.8)	
Career plan							70 (0.5)
Pulmonary/ Critical Care	271 (26.9)	445 (44.2)	218 (21.6)	61 (6.1)	10 (1.0)	2 (0.2)	
Cardiology	516 (24.6)	992 (47.2)	417 (19.9)	151 (7.2)	22 (1.0)	2 (0.1)	
Hospitalist	208 (26.5)	339 (43.2)	177 (22.6)	49 (6.3)	7 (0.9)	4 (0.5)	
Nephrology	148 (16.5)	409 (45.5)	241 (26.8)	83 (9.2)	15 (1.7)	2 (0.2)	
Infectious disease	105 (17.4)	256 (42.5)	167 (27.7)	61 (10.1)	9 (1.5)	4 (0.7)	
Gastroenterology	214 (16.7)	542 (42.2)	370 (28.8)	138 (10.7)	13 (1.0)	7 (0.5)	
Hematology/ oncology	179 (13.7)	538 (41.0)	387 (29.5)	166 (12.7)	33 (2.5)	8 (0.6)	
General internal medicine	264 (9.5)	853 (30.8)	915 (33.1)	553 (20.0)	124 (4.5)	58 (2.1)	
Endocrinology	52 (7.4)	230 (33.0)	256 (36.7)	118 (16.9)	31 (4.4)	11 (1.6)	
Rheumatology	31 (7.9)	114 (29.1)	138 (35.2)	85 (21.7)	14 (3.6)	10 (2.6)	
Geriatrics	7 (4.1)	46 (26.9)	62 (36.3)	44 (25.7)	11 (6.4)	1 (0.6)	
Other†	72 (17.7)	141 (34.6)	109 (26.8)	60 (14.7)	17 (4.2)	8 (2.0)	
Undecided Subspecialty	209 (14.2)	642 (43.6)	405 (27.5)	188 (12.8)	22 (1.5)	6 (0.4)	
Undecided	166 (17.1)	379 (39.0)	274 (28.2)	124 (12.8)	18 (1.9)	10 (1.0)	

**This table shows program directors' and residents' preferences regarding the percentage of training time that should be spent in the outpatient setting for the subset of 222 program directors and 14,941 categorical and primary care internal medicine residents responding to each question on the 2007 Internal Medicine In-Training Examination Program Directors Survey and Residents Questionnaire. Survey items used to solicit this information are shown in Appendix Fig. 1*

†*Includes other subspecialties and non-internal medicine careers*

Table 2. Program Directors' and Residents' Opinions Regarding Preferred Options for Ambulatory Training, 2007*

Approach	Residents no. (%)	Program directors no. (%)
Weekly half-day ambulatory sessions	3,627 (24.9)	42 (19.1)
Frequent block rotations (both general medicine and ambulatory subspecialties) interspersed between inpatient rotations; no ambulatory sessions while on inpatient service	4,723 (32.4)	34 (15.5)
Prolonged continuous ambulatory experience (both general medicine and ambulatory subspecialties); no ambulatory sessions while on inpatient service	1,350 (9.3)	16 (7.3)
Weekly half-day ambulatory sessions plus occasional block rotations	3,270 (22.4)	80 (36.4)
Weekly half-day ambulatory sessions while on inpatient services interspersed with an occasional prolonged (3 to 4 months), continuous ambulatory experience	1,615 (11.1)	48 (21.8)

**This table shows program directors' and residents' preferences regarding the best way to obtain ambulatory training, including experience in the longitudinal care of general medical patients, for the sample of 220 program directors and 14,585 categorical and primary care internal medicine residents responding to these questions on the 2007 Internal Medicine In-Training Examination Program Directors Survey and Residents Questionnaire. Survey items used to solicit this information are shown in Appendix Fig. 1*

DISCUSSION

In the past 20 years, the percentage of required ambulatory training time has increased from 25% to 33% of total clinical exposure,[20] and ongoing national discussions highlight the outpatient-inpatient training gap.[12] Despite recommendations for more ambulatory training,[1–5,12] we were surprised to find that 42% of program directors and 56% of residents favored *less* training (i.e., <33% of clinical exposure) in the ambulatory setting. Residents intending to pursue general internal medicine or disciplines that often have a prominent outpatient component (e.g., endocrinology, rheumatology) supported more outpatient training time compared to those planning to pursue inpatient-based careers. Nevertheless, approximately one-third of residents planning careers in geriatrics, rheumatology, general internal medicine, or endocrinology supported *less* than 33% ambulatory training time. These data indicate discordance between recommendations of national leaders for expanded outpatient training time and a substantial proportion of residents and program directors who reported counter opinions.

Reasons for this discordance are unclear but worthy of further exploration. Dysfunctions inherent in many resident clinics, including lack of continuity, inadequate information technology, limited support staff, inefficient care systems, and financial constraints[21] may negatively affect residents' and program directors' attitudes about the quality of this experience. It may be that residents and program directors are reluctant to support additional ambulatory training time unless the dysfunctions prevalent in many resident outpatient clinics are addressed. In addition, because the focus of residency training historically has been in the inpatient setting, innovative and outstanding ambulatory education models may be lacking. A multi-institutional survey of internal medicine residents suggested that residents value their outpatient training experience significantly less than medical ward and intensive care unit rotations.[22] Finally, residents and program directors may be influenced by the inability to offset inpatient service demands where residents are often viewed as irreplaceable. As such, they may be responding more from a perspective of work that needs to get done rather than learning that needs to take place.

In our study, the majority of program directors and residents believed that minimizing conflict with inpatient responsibilities was essential for a good outpatient training experience. These perspectives are consistent with prior literature demonstrating that tension between conflicting inpatient and outpatient duties contributes to decreased physician and resident satisfaction.[23,24] Residents on inpatient rotations are less likely to start their clinic on time, are more likely to be interrupted in clinic by pages, and are less satisfied with their clinic during busy ward rotations.[24] Increased pressure to return to inpatient duties also can

Table 3. Program Directors' and Residents' Opinions Regarding Problems Resulting from the Presence of a Weekly Half-Day Longitudinal Outpatient Experience During Inpatient Rotations, 2007*

Variable	No (%)		A little (%)		A lot (%)	
	Residents	Program directors	Residents	Program directors	Residents	Program directors
Competing inpatient and outpatient responsibilities	25.1	11.9	46.6	51.4	28.3	36.7
Duty-hours regulations	61.0	58.7	26.5	30.7	12.5	10.6
Fragmentation of inpatient care	30.8	24.4	44.4	52.5	24.8	23.0
Inpatient "hand-offs"	42.7	40.5	39.9	39.5	17.4	20.0
Interruption/delays in providing outpatient care because of inpatient responsibilities	38.5	31.3	39.4	47.5	22.2	21.2
Travel time between clinic and inpatient units	58.8	56.1	27.7	32.7	13.5	11.2

**This table shows program directors' and residents' responses to the question "…on an inpatient rotation, has the presence of a weekly half-day longitudinal outpatient experience been problematic with regard to any of the following" for the sample of 218 program directors and 14,510 categorical and primary care internal medicine residents responding to these questions on the 2007 Internal Medicine In-Training Examination Program Directors Survey and Residents Questionnaire*

Table 4. Residents' and Program Directors' Opinions Regarding Factors Important for Providing a Good Outpatient Training Experience, 2007*

Variable	Very/somewhat unimportant (%)		Neutral (%)		Somewhat/very important (%)	
	Residents	Program directors	Residents	Program directors	Residents	Program directors
Continuity clinic experience is considered high priority	10.1	7.7	21.6	5.4	68.3	86.9
Cross-coverage of outpatients while on inpatient service	15.5	20.4	36.5	28.1	48.0	51.6
Experience in a variety of outpatient settings (e.g., clinic, private practice)	8.6	14.5	22.4	16.7	69.0	68.8
Increased subspecialty clinics	7.4	14.0	21.6	31.7	71.0	54.3
No conflict with inpatient responsibilities	6.2	11.3	24.4	14.5	69.4	74.2
Time with outpatients	6.5	7.7	22.9	5.9	70.6	86.4

*This table shows program directors' and residents' responses to the question "how important are each of the following in providing a good outpatient experience for internal medicine residents?" for the sample of 221 program directors and 14,789 categorical and primary care internal medicine residents responding to these questions on the 2007 Internal Medicine In-Training Examination Program Directors Survey and Residents Questionnaire

impair residents' ability to focus on their continuity practice,[24] and such pressures may compromise reflective observation, inquiry, and feedback, important components of ambulatory learning.[25] Patient satisfaction may also suffer when patients are seen by a resident with a larger inpatient clinical workload.[26]

Residents and program directors clearly reported that the absence of inpatient-outpatient conflict is important for a good outpatient training experience and that weekly clinic during inpatient rotations results in competing inpatient and outpatient responsibilities. Despite these views, the majority of program directors and residents still favored a training model that maintained the presence of a weekly half-day clinic. These conflicting data may highlight the inherent tension between advocating for systems perceived to maintain continuity of care, an important determinant of resident and faculty satisfaction with their outpatient experience,[27–30] and the desire to minimize competing inpatient-outpatient responsibilities. Alternatively, these discordant data may reflect forces of inertia in favor of the status quo. Of note, while program directors seemed more concerned than residents about competing inpatient and outpatient responsibilities, they were less supportive of eliminating ambulatory sessions during inpatient rotations. This may reflect program directors' investment in their current systems, as well as an enhanced understanding of the resources needed for ambulatory redesign and the potential ramifications of redesign initiatives such as reduction in the resident inpatient workforce and graduate medical education funding.

Regardless of preferences for weekly clinic, many program directors and residents supported models that included interspersed or prolonged ambulatory blocks. Little is known, however, about the educational benefits of ambulatory blocks.[6,31,32] Increased clinic time can improve continuity between residents and their patients, especially for patients requiring acute care.[33] Sufficiently frequent block rotations may also be designed to promote effective delivery of longitudinal continuity care.[6] At one institution, a "long block" 12-month continuous ambulatory group-practice experience enhanced resident and patient satisfaction and improved patient outcomes.[6] As different models for resident ambulatory training are considered, further outcome-based research assessing patient care and resident educational endpoints should be pursued.

Despite being one of the largest national studies capturing internal medicine residents' and program directors' opinions about ambulatory training, there are several important limitations. We did not ask residents or program directors about the current structure or quality of ambulatory training at their institution, and, as such, were unable to determine how their current training environment influenced their perceptions. Similarly, we did not collect demographic information on program directors to know whether gender, age, or subspecialty training affected attitudes. University or community-based program status was not determined, and we were thus unable to compare responses based on this variable. Since we only used quantitative methods, we were unable to collect more nuanced information about program directors' and residents' perspectives, and we do not know the reasons behind their preferences. Finally, there is likely a variance in how some residents and program directors define continuity or access that would influence the choice of models for education in ambulatory care. Our response rate for both program directors and residents, though acceptable, raises the possibility of response bias.

In conclusion, this study describes residents' and program directors' attitudes about ambulatory training during internal medicine residency, views that are important to consider in the midst of ongoing national discussions of ambulatory training redesign. Continued work is needed to understand the discordance between residents' and program directors' preferences about outpatient training duration and national recommendations for increased ambulatory training time. Furthermore, research is needed to understand program directors' and residents' beliefs about the benefits and barriers to ambulatory redesign and their reluctance to endorse models that minimize inpatient-outpatient conflicts. Innovation and study of the benefits and drawbacks of alternative models and venues for ambulatory training are needed. As new models for ambulatory training are piloted, medical educators and researchers should use this as an opportunity to further explore the impact on outpatient case-mix, resident-patient-preceptor continuity and satisfaction, and learner educational and patient outcomes.

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Corresponding Author: *Jennifer R. Kogan, MD; University of Pennsylvania Health System, 3701 Market Street, Suite 640, Philadelphia, PA 19104, USA (e-mail: jennifer.kogan@uphs.upenn.edu).*

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APPENDIX FIG. 1. 2007 RESIDENTS QUESTIONNAIRE AND PROGRAM DIRECTORS SURVEY ITEMS RELATED TO OUTPATIENT TRAINING

Approximately what percentage of training do you think should be spent in the outpatient (ambulatory) environment, including both general internal medicine and subspecialty ambulatory experiences?

○ Less than 25%
○ 25%-32%
○ 33%-49%
○ 50%-66%
○ 67%-75%
○ Over 75%

Which *one* of the following would be the best way (for your residents) to obtain ambulatory training, including experience in the longitudinal care of general medical patients?

Choose one.

○ Weekly half-day ambulatory sessions
○ Frequent block rotations (both general medicine and ambulatory subspecialties) interspersed between inpatient rotations; no ambulatory sessions while on inpatient service
○ A prolonged (3 to 4 months), continuous ambulatory experience (both general medicine and ambulatory subspecialties); no ambulatory sessions while on inpatient service
○ Weekly half-day ambulatory sessions plus occasional block rotations (2 to 3 months total scattered over a year)
○ A combination of weekly half-day ambulatory sessions while on inpatient services interspersed with an occasional prolonged (3 to 4 months), continuous ambulatory experience with no inpatient responsibilities

When you (your residents) are on an inpatient rotation, has the presence of a weekly half-day longitudinal outpatient experience been problematic with regard to any of the following?

	No	Yes, a little	Yes, a lot	NA
Competing inpatient and outpatient responsibilities	○	○	○	○
Duty-hours regulations	○	○	○	○
Fragmentation of inpatient care	○	○	○	○
Inpatient "hand-offs"	○	○	○	○
Interruption/delays in providing outpatient care because of inpatient responsibilities	○	○	○	○
Travel time between clinic and inpatient units	○	○	○	○

How important are each of the following in providing a good outpatient experience for internal medicine residents?

	Very unimportant	Somewhat unimportant	Neutral	Somewhat important	Very important
Continuity clinic experience is considered high priority	○	○	○	○	○
Cross-coverage of outpatients while on inpatient service	○	○	○	○	○
Experience in a variety of outpatient settings (e.g., clinic, private practice)	○	○	○	○	○
Increased subspecialty clinics	○	○	○	○	○
No conflict with inpatient responsibilities	○	○	○	○	○
Time with outpatients	○	○	○	○	○

*The above questions were asked on the Internal Medicine In-Training Examination (IM-ITE) 2007 Residents Questionnaire and Program Directors Survey to capture the opinions of internal medicine residents and program directors regarding outpatient training