

PERSPECTIVES

The Medical Interview and Psychosocial Aspects of Medicine:

Block Curricula for Residents

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PROFICIENCY in the psychosocial aspects of medical care is essential for physicians¹⁻⁵ and requires the development of appropriate interviewing, diagnostic, and therapeutic skills.⁶⁻¹⁷ Professional organizations, including the American Board of Internal Medicine (ABIM), have defined training needs in psychosocial medicine and interviewing.¹⁸⁻²² Physicians must demonstrate competence in these areas to receive ABIM certification.²⁰⁻²³ Primary care residency programs must provide training in these areas in order to receive federal funds.^{24, 25}

The average internal medicine residency devotes only five to nine hours of formal psychosocial teaching per year to each resident.^{26, 27} A few hours are insufficient for residents to master the necessary but unfamiliar biological, psychological, and sociological knowledge base; to become aware of attitudes, feelings, and behaviors that interfere with their effectiveness in these areas; to adopt new attitudes; and to develop new skills. Like learning a new language, such learning is best done intensively. Providing blocks of time free from competing responsibilities can permit learners to focus, to read, to think, to process their feelings, to integrate new knowledge and skills, and to practice the skills to the point of fluency.

We have developed block rotations in psychosocial medicine within our residency programs. By summarizing our experience and presenting consensus recommendations, we hope to help others developing curricula in this area.

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CURRICULUM OBJECTIVES

Lipkin et al.²⁸ have identified a body of knowledge, skills, and attitudes that define proficiency in interviewing skills and the psychosocial domain of medical care and can serve as a basis for curricular development. Recommended general objectives for a block rotation are listed in Table 1.^{9, 28} Table 2 demonstrates the type of specific objectives that are suggested for each content area.

EDUCATIONAL METHODS

General Strategies

Although residents at all levels can learn this material,²⁹ new interns are immersed in the transition from student to physician, and second- and third-year residents have often developed defenses that interfere with learning.³⁰ Three to twelve months into internship, therefore, is recommended as the optimal time for learning. The numbers of residents in training at a given time should be limited to permit sufficient individual attention and involvement in experiential learning exercises.

Experiential learning is used to involve learners actively, engage their interest, and provide the practice necessary for them to apply new knowledge and learn new skills. Experiential learning requires residents to expose their strengths and weaknesses to themselves and others. Interpersonal skills, feelings, biases, and psychological defenses are revealed and need to be discussed.

Creation of a *safe, supportive learning environment* is, therefore, essential. Methods include: the development of faculty-resident rapport; disclosure by faculty of their own inadequacies and problems with the material; explicit recognition and reinforcement of the resident's strengths; and provision of feedback about deficiencies in a factual, nonjudgmental, and positive manner.³¹ By focusing on a limited number of specific skills, initial learning experiences can be designed to ensure success, provide positive reinforce-

ment, and stimulate further exploration. Later these skills can be integrated with other skills in more complex learning exercises.

Because residents have a range of skills and prior learning experiences in the psychosocial domain of medicine, facilitating further learning demands an *individualized approach* to each resident that is based upon the resident's particular needs. A *self-directed learning approach*³²⁻³⁴ is used to encourage residents to assess their own needs, set their own learning objectives, choose learning content and methods, and assess whether they have accomplished their learning objectives. The advantages of these approaches include a sense of relevance and ownership by the learner, a high level of learner activity and creativity, and a high level of retention and application of the material learned. This is illustrated by the following example, from a videotaped resident-patient clinic visit in one of our programs.

The patient rambled, had many somatic complaints, and appeared anxious. The resident reported spending two hours, instead of the scheduled 45 minutes, with this patient. The resident chose "feeling overwhelmed" and "having difficulty setting limits" as the focus for the review session, and was challenged to further explore these feelings. This focus led to the resident's recognition of his need to please people, to an exploration of ways to respectfully set time limits and clarify agendas, and to further learning about somatizing patients.

To facilitate self-directed learning, teachers must, paradoxically, provide learners with considerable structure. Features that enhance success include: preparation of residents through careful orientation; written learning agreements; regular review of learner objectives during the rotation; periodic resident self-assessment; provision of a menu of options for content, learning methods, and resources; regular supervision, observation, and nonjudgmental feedback by faculty; and scheduled time (with or without faculty) for self-directed learning activities. Conflicts may arise between a teacher's desire to ensure adequate coverage of teacher-defined objectives and the desire to allow the learner to feel free to learn. We limit teacher-defined material to a number of core objectives (Table 1) and have found that residents, under their own direction, invariably focus on relevant and important issues related to the goals for the rotation.

Becoming adept at recognizing, critically assessing, and understanding one's own feelings, behaviors, and skills (self-awareness) is important for the resident's continued growth and self-directed learning.³⁵ Physicians' feelings influence their behaviors and affect the quality of their interactions with patients.³⁶⁻³⁸ Hence, each program deals explicitly with the learners' emotional responses to their patients, the teaching, and the subject material, and with the learners' skills in self-assessment. For example, residents are routinely

TABLE 1

General Objectives of the Psychosocial Curriculum^{9, 28*}

The resident will:

1. Become proficient in patient-centered interviewing and treatment:
 - gathering information that will produce consistent, unbiased data and complete, fully meaningful data.
 - managing emotions and developing a helpful physician-patient relationship.
 - informing and motivating the patient (behavioral management).
2. Become proficient in an integrated (biopsychosocial) approach to clinical reasoning and patient care.
3. Become efficient in organizing patient interviews.
4. Enhance personal growth, self-awareness, and the development of humanistic values.
5. Develop proficiency in diagnosis and treatment of psychosocial problems commonly encountered in practice.
6. Demonstrate self-directed learning and maintenance of psychosocial skills.
7. Develop the ability to teach psychosocial skills (optional).

*For references 9 and 28, see the reference list.

asked to assess their own feelings, reactions, and/or performances before a faculty member provides comments. When necessary, faculty elicit or bring to residents' attention unrecognized behaviors and feelings, and explore how they might be understood and/or used.³⁹⁻⁴⁰ If the learning atmosphere is safe, most residents thrive on enhancing their self-awareness as they come to realize how useful it is.⁴¹

Specific Methods

A variety of specific learning methods are used by our programs.

Role playing,⁴² during which the resident plays the role of physician and another resident or faculty member plays the role of patient, allows the resident to experience both patient and physician roles. Role playing permits the resident to try, observe, and discuss alternative techniques until a satisfactory approach has been identified. It is efficient, inexpensive, portable, and able to be used spontaneously in any setting. Role playing is used early in the rotation to teach basic interviewing skills, and on an ad hoc basis to address other problems. Limitations include a variable sense of artificiality and keeping residents from being too tough on one another.

Standardized (simulated) patients are actors or real patients trained to play the roles of patients with specific problems. As with role play, the use of standardized patients ensures that important content areas are covered and allows residents to try new techniques,

make mistakes, and repeat parts of encounters using different approaches. Standardized patients also can give useful feedback about their reactions to the interview, their degrees of understanding of physician explanations and instructions, and their intentions to comply. Unlike in real patient–doctor encounters, in encounters with simulated patients the amount of relevant information that can be elicited is known. “Blinded” physicians cannot usually distinguish well-trained standardized patients from real patients.⁴³ The method has proven efficacy, both for teaching and for evaluating housestaff.^{6, 44} A major limitation is the effort to train, schedule, and pay standardized patients.

Work with *real patients* (inpatient or outpatient) validates and reinforces observations made and techniques practiced during role play or standardized patient sessions and is the bedrock of our curricula. It does have some limitations. Repeating parts of the encounter, using different techniques, is seldom possible, as is the elicitation of uninhibited, skilled feedback from the patient. There is an element of chance in the type of doctor–patient interaction available for review. Performance of a large number of interviews renders the latter less of a problem.

Residents in our programs participate in *specialized patient care experiences* as consultants, on a consultation–liaison service, or in a clinic that deals with emotionally distressed medical outpatients. These experiences are directly supervised by a psychosocially expert internist or psychiatrist faculty member. Residents thus gain basic proficiency in evaluating and managing patients with psychosocial syndromes common in primary care. In addition, they are exposed to the psychological dimensions of patients with organic disease or with severe life stresses. This experience expands residents’ repertoires of skills and helps residents develop judgment about when to seek specialist consultation.

Review of taped (audio or video) interviews of doctor–patient interactions provides an opportunity to observe and analyze key elements of patient behaviors, personality styles, and illness beliefs. Similarly, resident attention to verbal or nonverbal cues and to threads of the patient’s story can be explored.^{10, 45} Taped resident–patient encounters also allow residents to observe themselves and to explore their emotional responses to patients. It is a powerful means for deepening residents’ self-awareness.

Demonstration, role modeling, and observation serve as important adjuncts to experiential exercises. Faculty can demonstrate interview techniques during role plays, standardized patient exercises, and real patient interviews. Demonstration videotapes can be used. Residents can observe faculty members use the skills being taught in real practice settings. Residents can visit hospital and community programs that they will use.

A variety of nonexperiential learning methods are used. The authors provide a *syllabus* of readings and direct residents to relevant articles after specific experiences. Other methods used include assigned readings about specific topics, case conferences, seminars, resident presentations, and impromptu resident–faculty discussions.

Several educational methods in concert seem necessary to help residents attain the attitudes, knowledge, and skills required. Acquisition and application of a relevant knowledge base, practice of new skills, observation, personal experience, nonjudgmental discussion of attitudes and assumptions, the chance to reflect, and the influence of others all contribute to attitude change³⁹ and are requisite parts of intensive block rotations.

It is not necessary to use all the methods in any single program. Lack of resources for a specific method should not be a deterrent to developing a curriculum.

TABLE 2

Educational Objectives for the Diagnosis and Management of Somatization

Knowledge

The resident will be able to describe:

1. Physiologic, psychological, behavioral, and sociocultural factors that underlie the presentation of somatic complaints.
2. A working definition of somatization.
3. The diagnostic criteria for the major somatoform disorders.
4. Differential diagnosis of somatization: depression, anxiety, adjustment disorder, somatization disorder, hypochondriasis.
5. Personality characteristics of somatizing patients.
6. Role of psychotropic medication in management of somatizing patients.
7. Role of behavioral therapies and supportive management with somatizing patients.

Skills

In caring for somatizing patients, the resident will demonstrate ability to:

1. Elicit the relevant biopsychosocial data to identify somatization and make a diagnosis.
2. Identify and legitimize emotional aspects of the patient’s illness experience.
3. Characterize the patient’s personality type and coping style.
4. Elicit patient’s beliefs about illness and goals for treatment.
5. Develop and negotiate a comprehensive treatment plan.
6. Assess and monitor risk of addictive behavior in patients given sedatives, hypnotics, and narcotics.
7. Prescribe medication appropriately.
8. Employ behavioral and supportive management strategies.
9. Avoid inappropriate testing and treatment, while maintaining rapport with patient.
10. Utilize medical and psychiatric consultants judiciously as part of a coordinated management plan.

Attitudes and self-awareness

In caring for somatizing patients, the resident will demonstrate willingness to:

1. Acknowledge negative feelings generated in self in the care of the patient.
2. Establish a useful physician–patient relationship.
3. Express respect for patient beliefs and preferences.
4. Display unconditional positive regard for the patient.
5. Provide coordinated and continuing care of the patient.

EXAMPLE PROGRAMS

The block rotations that have been developed at Francis Scott Key Medical Center (FSK),^{6, 46} Michigan State University (MSU),^{41 45} and New York University/Bellevue (NYU) are summarized in Table 3. At each program, residents are first oriented to the goals and objectives of the rotation, and develop explicit written personal goals for their work during the rotation. These are discussed, reassessed, and refined regularly throughout the rotation, and new learning experiences are planned accordingly. Topics that are commonly addressed include attention to time efficiency, dealing with difficult patients, somatization, substance abuse, common psychiatric problems such as depression and anxiety, adaptation to illness, dealing with dying patients, awareness of patient personality characteristics that influence the doctor-patient relationship, and simple office therapies such as relaxation and brief psychotherapy. The programs differ in the extents to which subject areas for scheduled sessions are faculty- vs. resident-determined and specific teaching methods and activities are utilized. For example, simulated patients are used regularly at FSK, intermittently at NYU, and not at all at MSU.

IMPLEMENTATION

Integrating a new rotation into an existing internal medicine residency requires administrative actions, fiscal actions, faculty and staff development, and the acquisition of needed materials and space.

Each of our programs ensured that the leaders at the institution understood the new curriculum, agreed that it was needed, and supported its implementation by making available needed time and resources. In each program, control for the rotation has been established in the *department of medicine*. In this way credibility and clinical relevance of the curriculum are ensured. Residents are exposed to internist faculty role models who integrate psychosocial and biomedical approaches in their own patient care. Residents have been involved in planning, evaluating, and revising curricula. Colleagues from other institutions have been consulted.*

Our programs identified the costs of the block curriculum and devised ways to meet them. Grant support was helpful. Institutional contributions were required and included support for faculty, housestaff, simulated patients, ancillary staff time, space, and materials. Each

program has needed a secretary-administrative assistant (10%) for scheduling, assembling curricular materials, and attending to administrative details.

Case examples of key administrative and fiscal actions taken to establish each of our programs are provided below.

At FSK, the codirectors of the division of general internal medicine developed the block rotation and gained administrative support from the department chairman, who observed parts of the pilot program. Additional backing was gained by involving several other faculty in the implementation and ongoing development of the rotation. Funds from a general internal medicine (GIM) residency grant were used to support core faculty and simulated patient time, purchase audiovisual material, and add one housestaff position, necessary to permit integration of the block rotation into interns' schedules. A teaching commitment was obtained from the department of psychiatry in return for the provision of resident services, which, in turn, permitted development of a liaison-psychiatry service. The popularity of the rotation with residents contributed greatly to its success. Resident and faculty evaluations were used to modify and improve the rotation. The block rotation was expanded to include traditional as well as GIM track interns and became a factor in recruiting interns to the program. The hospital supported the program when grant funds ended.

At MSU, the head of the block rotation, a senior faculty internist, achieved support for the idea through extensive consultation with key administration, faculty, and residents, and by intermittent reinforcement from visiting professors. Aided by the enthusiastic support of the residency program director, the training committee and housestaff approved the final plan. With the active support of the dean and the chairpersons of medicine and psychiatry, faculty time for a consultation-liaison psychiatrist and one to two internist faculty to teach in the block rotation was provided. The space in the residents' curriculum was obtained by converting from 12 to 13 rotations per year. This necessitated an expenditure of an additional \$32,000 in salaries for the year. Following initiation, advocacy for the rotation was strengthened by consistent attention to resident feedback and subsequent modifications in the program, informal validation of enhanced resident performances, and published research demonstrating the effectiveness of the rotation.⁴¹ Major grant support was first obtained in year four of the program.

At NYU, the program director of the primary care internal medicine residency was committed to developing a block rotation. A second internist on the faculty with extensive training in psychosocial medicine was named coordinator of behavioral sciences, and this core group developed the block curriculum. A portion of a federal grant of \$40,000 supported the initiation of the rotation. Some elective and ward medicine time was dropped to make room for the block rotation. After its inception, at the request of the residents, the rotation was expanded from one to two months.

FACULTY DEVELOPMENT

The most important task related to the development and implementation of a successful block rotation is the identification, preparation, and maintenance of faculty. The development of a *small core group* of gen-

*Detailed curricular materials for each program are available from the authors. A Directory of Educational Resources and an Annotated Bibliography on the Medical Interview have been developed by the Task Force on Doctor and Patient and are available from the first author, as is information about faculty development opportunities offered by the Task Force on Doctor and Patient.

TABLE 3
Characteristics of the Three Block Rotations

	Francis Scott Key Medical Center	Michigan State University	New York University
Size of residency program			
No. GIM* housestaff	15–18	13	16
No. traditional housestaff	16–19	13	78
No. trainees/year who take rotation			
GIM	5–7	13†	5
Traditional	8–9	5	0
No. trainees/rotation	1–2	2–4	2–5
PGY‡ level of trainees	1	1	1
Length of rotation	1 month	1 month	2 months (part time)
Resources			
Faculty (FTE)§			
Internists	2 (0.30)	1 (0.50)	4 (0.40)¶
Behavioral scientists	2 (0.50)	1 (0.10)	0 (0)
Psychiatrists	2 (0.50)	1 (0.25)	0 (0)
Administrative staff (FTE)	1 (0.10)	1 (0.10)	1 (0.10)
Special resources	Video, simulated patients	Audio	Video, audio, simulated patients
Special conditions	No night call	No night call	No night call
Scheduled faculty–resident interaction			
Content faculty-determined	39 hours/mo	8–10 hours/mo	0 hours/mo
Content resident-determined	18 hours/mo	24–30 hours/mo	32 hours/mo
Specific activity			
Interview skills training	42 hours/mo	32 hours/mo	32 hours/mo
Ambulatory patient care	17.5 hours/mo	20 hours/mo	60 hours/mo
Consultation–liaison	95 hours/mo	50 hours/mo	0 hours/mo
Scheduled conferences	6 hours/mo	16 hours/mo	12 hours/mo
Reading time	6.5 hours/mo	8 hours/mo	Daily
Other	Observe AA, Al-Anon Home care visit, discussion of case scenarios	Observe AA	
Teaching methods			
Audiotape/review	0 hours/mo	32 hours/mo	All methods available—negotiated with residents
Videotape/review	4 hours/mo	0 hours/mo	
Simulated patients	14 hours/mo	0 hours/mo	
Role play	12 hours/mo	8 hours/mo	
Faculty observe residents with patients	18 hours/mo	50 hours/mo	42 hours/mo
Residents observe faculty with patients	12–18 hours/mo	16 hours/mo	0 hours/mo
Specific linkages with 3-year curriculum	GIM conferences, visiting professors Intern & resident support groups Grand rounds Follow-up electives Menu of options offered to residents	Weekly conference psychologist in resident clinic, 1/mo Grand rounds, visiting professors, follow-up electives, research Balint group	Weekly conference Follow up electives Visiting professors, grand rounds Psychosocial fellows and psychiatrist available in clinic
Content	Interviewing skills, counseling skills, alcoholism, adjustment disorders, anxiety, compliance, delirium, depression, organization of an office visit, somatization, smoking cessation, and topics chosen by residents	Interviewing skills, self-awareness, substance abuse Other content negotiated based on daily audiotaped reviews of ward and clinic patients, supervised consultation–liaison patients	Interviewing, diagnosis, management skills including psychiatry, counseling, adaptation of illness, substance abuse, etc. Content negotiated based on daily psychosocial rounds with new and follow-up patients
Amount of time program in existence	11 years	4 years	7 years

*GIM = general internal medicine. †Includes eight family practice residents. ‡PGY = postgraduate year. §FTE = full-time equivalents. ¶Two faculty and two fellows. ||Internist and liaison psychiatrist.

eral internists and others (e.g., behavioral scientists, psychiatrists) who are responsible for these functions and who are clinically expert, enthusiastic, and talented in teaching the psychosocial domain of care is essential. Dependence on a group, rather than an individual, results in productive exchanges of ideas and skills and increases the likelihood of continuation of the rotation should a key faculty member leave.

Some programs have the necessary expertise to begin a block rotation without initial faculty development. Those not adequately trained in psychosocial medicine can develop expertise through reading, instruction with skilled colleagues, and short-term instruction at national courses and local seminars. Such opportunities are available at national meetings of the Society of General Internal Medicine, the American College of Physicians, and the biennial Teaching Internal Medicine conference, and at the faculty development courses of the Task Force on Doctor and Patient.*

Behavioral science faculty may lack familiarity with medical care and with the unique stresses and time constraints of residency training. Co-teaching with internist faculty, direct observation of trainees in their work environments, and participation in the administrative activities of the rotation are means used by our programs to address these issues. Physician faculty also learn valuable new perspectives and approaches by co-teaching with behavioral science colleagues.

Ongoing faculty development activities, in addition to co-teaching, help to clarify roles, to achieve consistency among faculty regarding concepts and language, and to further develop knowledge and skills. Periodic planning meetings, retreats, workshops, combined rounds, and seminars are used.

Additional faculty with special expertise can be recruited from other departments or from outside the medical school to perform specific functions within a rotation. Examples from our programs include psychiatrists, psychologists, anthropologists, social workers, clinicians with special interests (e.g., in smoking cessation or substance abuse), simulated patients and their trainers, and faculty with program evaluation expertise. A challenge for each program is to develop additional internal medicine faculty and residents as effective teachers in this area so that learning from the block rotation can be reinforced and further developed during the remainder of residency. On-site workshops and faculty development activities devoted to teaching or interviewing skills can be used for this purpose, as can workshops and courses offered at meetings outside the institution.

*Detailed curricular materials for each program are available from the authors. A Directory of Educational Resources and an Annotated Bibliography on the Medical Interview have been developed by the Task Force on Doctor and Patient and are available from the first author, as is information about faculty development opportunities offered by the Task Force on Doctor and Patient.

REINFORCEMENT AND ENHANCEMENT OF LEARNING

Ideally, the total residency program should create an environment and specific experiences that reinforce what has been learned during the block rotation and promote continued growth toward proficiency. To some extent continued learning occurs because: 1) already trained residents interact with, reinforce, and model for their peers some of their learning from the psychosocial curriculum; and 2) the concepts and skills stressed during the block rotation apply to every clinical encounter and, therefore, are reinforced by everyday clinical work. Reinforcement is optimal when the principles are embedded in the behavior not only of the residents, but also of the program's faculty, and in the residency program itself.

It is important, therefore, that continued learning occur within the context of traditional learning experiences. For example, grand rounds have been given in our programs on topics such as somatization, the medical interview, and physician satisfaction. Pre- or post-clinic conferences, or noon seminars, cover topics such as anxiety, depression, compliance, management of substance abuse, and ethics. Visiting professors are used to demonstrate skills, teach new material, stimulate interest, and reinforce the core values and attitudes of the program's psychosocial curriculum. In the residents' outpatient practices, attending physicians can pay attention to residents' interviewing skills, serve as role models themselves when seeing patients with the resident, and routinely discuss relevant psychosocial aspects of cases. Attending physicians can reinforce principles and skills on inpatient rounds. Rounds can be designed to model caring and concern for patients and their ethical rights, to not embarrass residents or students, and to focus on real problems raised by residents or posed by patients.

Our residency programs sponsor ongoing meetings that reinforce and extend learning in the psychosocial domain of medical practice. Different models are used for these meetings.⁴⁷ The meeting is called a Balint group when a case is presented briefly and a psychodynamic expert is present who reflects how management difficulties relate to the personal issues of the resident.³⁵ When the focus is on the residents' personal experiences of professional life and the facilitator focuses on resident adjustment, the meeting is a support group.⁴⁸ When a patient is brought in to be interviewed, or is sometimes discussed in the group longitudinally, the meeting is a psychosocial case conference. Key features of such meetings include discussion of topics such as interviewing, diagnosis, supportive management, drug therapy, and use of other professionals as consultants or for referral. In the process, supportive discussion of the residents' feelings and problems with the patient and the work promote the incorporation of

the learning into the identities of the developing physicians.

Focused curricula and clinical or research-based elective experiences in topics such as ethics, care of HIV-positive patients, substance abuse, or care of the terminally ill can be used to further reinforce and expand learning in interviewing skills and the psychosocial domain of practice.

PROGRAM EVALUATION

Formative program evaluation, collection of information to improve a program, is critical for new curricula.⁴⁹ It begins with discussions with residents and others not only to improve the program, but also to generate a sense of common involvement, ownership, and purpose. In addition to general discussions, the authors systemically "debrief" residents at the midpoint of the rotation. At the end of a rotation the following information is obtained from the resident by questionnaire or semistructured interview: 1) the degree to which the objectives were appropriate and attained; 2) satisfaction with individual components of the teaching; 3) enthusiasm with which the resident would "recommend this rotation to others"; 4) utility and acceptability of scheduling and methods; 5) acceptability of teaching aids; and 6) recommendations for change. In two programs, residents write essays about the personal impacts of the rotation. Program faculty consistently use such input to guide decisions about the program. Residents in our programs have regularly rated the block rotation highly.

Summative program evaluation measures the effectiveness of teaching, the degree to which program goals are attained by groups of residents.^{50, 51} The measures needed for such evaluation can be based upon aggregate data obtained at the end of the rotation from individual residents. Typically, this approach uses a pre/post design.^{6, 11} Currently, standardized measures of performance are unavailable. Each of the authors' programs has developed its own evaluative tools and is currently refining them.^{41, 46, 52} Preliminary data have demonstrated that each of our programs has had an impact on residents. Controlled studies in two of these programs have demonstrated learning by residents that is attributable to the psychosocial curriculum.^{6, 11, 41, 46} Combined, this research suggests that comprehensive programs can be well accepted and produce improvement in residents' knowledge, skills, attitudes, and self-awareness.

DISCUSSION

This paper builds on existing literature that describes and evaluates psychosocial curricula by presenting guidelines for implementation of block curricula during residency. The rotations described in this

paper have achieved success in terms of subjective approval, financial and administrative support, integration into their residency programs, longevity, and program evaluation. Areas for future work include the creation of block or longitudinal experiences to expand learning in years two and three of training, the development of curricular segments for integration into existing clinical rotations, and the promotion throughout the residency program of activities that reinforce learning. The latter will require structural changes in programs and training more faculty.

Further research on the impacts of these programs, including multiinstitutional evaluations of "ideal" block rotations, is desirable. Areas that merit special study include the relative efficacies of block versus longitudinal approaches, the relationship of specific teaching methods to the acquisition and maintenance of skills, the effect of supplementary training, and the relationship between skill maintenance and a supportive environment beyond the block rotation.

In the meantime, we believe that the guidelines presented in this paper can prove useful to others who are initiating curricula in this important and now required area of clinical training.

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