

Mental Health Activities of Family Physicians

Donald M. Cassata, PhD, and Bradford L. Kirkman-Liff, DrPH
Chapel Hill, North Carolina, and Tempe, Arizona

A questionnaire survey of residency trained graduates and nonresidency trained family physicians showed both groups reporting relatively infrequent practice of behavioral medicine. Referrals and counseling sessions/visits produce a combined total of 20 activities per month, or two to four percent of all patient encounters, even though the physicians in the sample reported that 33 percent of their diagnoses were behavioral/psychological. More than 85 percent of the physicians reported access to more than one mental health provider. The six most common health problems encountered in the office were depression, anxiety, obesity, marital discord, alcohol abuse, and sexual problems. Physicians responding to this survey expressed an interest in continuing education programs that emphasize individual, marital, and parenting counseling, and psychopharmacology. There is a major need to improve the mental health component of residency training, which will enable physicians to better manage psychosocial problems in practice settings.

Behavioral medicine has been a neglected component in the armamentarium of the traditional general practitioner.¹ Prior to the advent of the new specialty of family medicine, the general practitioner was primarily concerned with the physiological aspects of patient care. Emotionally troubled patients were typically referred to the clergy, or in resourceful communities to a psychologist or psychiatrist.²⁻⁴ It was the exceptional general practitioner who integrated psychiatry into

general medical practice and provided effective mental health care.⁵ In general, behavioral problems were ignored and psychosomatic illness was a rubric under which nonphysiological complaints could be placed without requiring serious treatment.⁶ This treatment of behavioral/psychological problems was by no means specific to general practitioners—internists, pediatricians, and other primary care specialists also viewed the psychosocial aspects of patient care with a mixture of disdain and misunderstanding.⁷⁻¹⁰

Changes have occurred in general practice during the past 15 years, bringing a new focus to behavioral medicine.¹¹ The development of hundreds of residency programs has distinguished the discipline of family medicine as the fastest growing medical specialty.¹² An important characteristic of

From the Department of Family Medicine, School of Medicine, University of North Carolina-Chapel Hill, Chapel Hill, North Carolina, and the Center for Health Services Administration, Arizona State University, Tempe, Arizona. Requests for reprints should be addressed to Dr. Donald M. Cassata, Department of Family Medicine, School of Medicine, University of North Carolina-Chapel Hill, Trailer 15, 269H, Chapel Hill, NC 27514.

family medicine is an emphasis on knowledge about the psychosocial aspects of patients' lives, family structures, and the recognition of emotional illness. In addition to helping patients anticipate and cope with "problems of living," family physicians should be skilled in short-term supportive counseling and crisis intervention.¹³⁻¹⁵

To achieve the goal of developing the behavioral medicine skills of family physicians, special training in behavioral medicine was incorporated into many residency curricula.^{16,17} Several alternative structures and theoretical paradigms allow for the inclusion of behavioral medicine training in residency programs,^{18,19} but when implemented, these programs have encountered several problems. Collaboration between physicians and behavioral scientists is often difficult due to differences in communication styles, theoretical models, and patient care and professional priorities.²⁰ Attitudes towards patients can differ greatly among physicians and behavioral scientists. Complicating the situation further are attitudes held by each profession toward the other.²¹ Inadequate basic learning in behavioral medicine during medical school adds to the difficulty of teaching behavioral medicine in the residency.²² Despite these problems, there are many ongoing efforts to integrate behavioral medicine into family medicine residency programs.

The goal of this study was to provide some indications of the level of success of current efforts; it was hoped this information would lead to the strengthening of behavioral medicine training in family medicine residencies. Because of this limited goal, this study was not intended to examine the therapeutic choices made by physicians when treating behavioral problems,²³ nor was it intended to produce mental health morbidity statistics.²⁴⁻²⁶

Methods

This study was designed to obtain comparative data on the stated behavioral medicine activities of recent family medicine residency graduates and a sample of community physicians who identify themselves as family physicians, but are not graduates of family medicine residencies. The activities examined include referral rates to mental

health professionals and the frequency of a variety of patient counseling activities.

The questionnaire-derived data were examined to provide four sets of information: (1) overall behavioral medicine activities of the surveyed physicians; (2) differences between the two groups in behavioral medicine practice style and content; (3) possible causes of variation in the amount of behavioral medicine practiced; and (4) a subjective evaluation of residency training in behavioral medicine and an indication of areas of need for continuing medical education programs.

In 1979, the Department of Family Medicine of the University of North Carolina at Chapel Hill undertook a survey involving recent graduates of family medicine residency programs and other family physicians in North Carolina and Ohio. A 243-item mail questionnaire was developed with input from several departmental faculty. The questionnaire focused on several areas of concern, a major one being mental health activities of graduates and nongraduates and evaluation of the behavioral/ psychological aspects of their training.

Volume of mental health activities was measured by estimated number of referrals per month, individual counseling sessions/visits per month, and total counseling sessions/visits per month. Physicians were also asked to evaluate: (1) the adequacy of their training in short-term counseling—the therapeutic technique most often used in dealing with psychological problems and in psychiatry/behavioral medicine; and (2) the adequacy of their training in behavioral medicine—the broader area of mental health/psychological illness. The survey further collected opinions from residency graduates and nongraduates concerning their preferences for various mental health training activities to be included in continuing medical education programs.

Sample and Returns

The questionnaire was mailed to 595 physicians. The membership lists of the North Carolina and Ohio Academies of Family Practice were used for the nongraduate sample, employing a 20 percent and 10 percent sampling rate, respectively. All graduates of nine residency programs (five in North Carolina, four in Ohio) were used for the graduate sample. A second mailing was sent to

Table 1. Physicians in Survey

Training	Type of Practice		Location of Practice		Years in Practice Average (%)	Total
	Solo (%)	Group (%)	Urban (%)	Rural (%)		
Family Medicine Residency Graduates	39 (33.6)	77 (66.4)	56 (48.3)	60 (51.7)	(2.9)	116
Nonresidency Trained Family Physicians (Nongraduates)	52 (62.7)	31 (37.3)	40 (48.2)	43 (51.8)	(17.8)	83
Total	91	108	96	103	(9.1)	199

nonrespondents, after which remaining nonrespondents were contacted by telephone.

The initial mailing produced 153 returns for an initial response rate of 27 percent. The initial response rate for family medicine graduates was almost double that of nongraduates (46 percent vs 21 percent). The mailing and telephone follow-up procedures produced 48 additional returns for a total return of 207, or a 35 percent return rate. A review of the returns found eight family medicine residency graduates (7 percent of those responding) in full-time emergency room practice. Because the focus of the survey was on office practice, these physicians were deleted from the study, leaving a final sample of 199 physicians (116 residency graduates and 83 nongraduates).

While many variables can be used to describe physician practices, three important measures are the type (group or solo), location (rural or urban), and years of existence of the practice. Table 1 shows the distribution of the survey sample along these variables.

There was a difference between residency graduates and nongraduates in choice of practice type. Graduates tended to have joined or formed group practices, while nongraduates tended to be in solo practice. Comparing the 31 nongraduates to the 77 graduates in group practice, it was found that nongraduate groups averaged 3.9 physicians

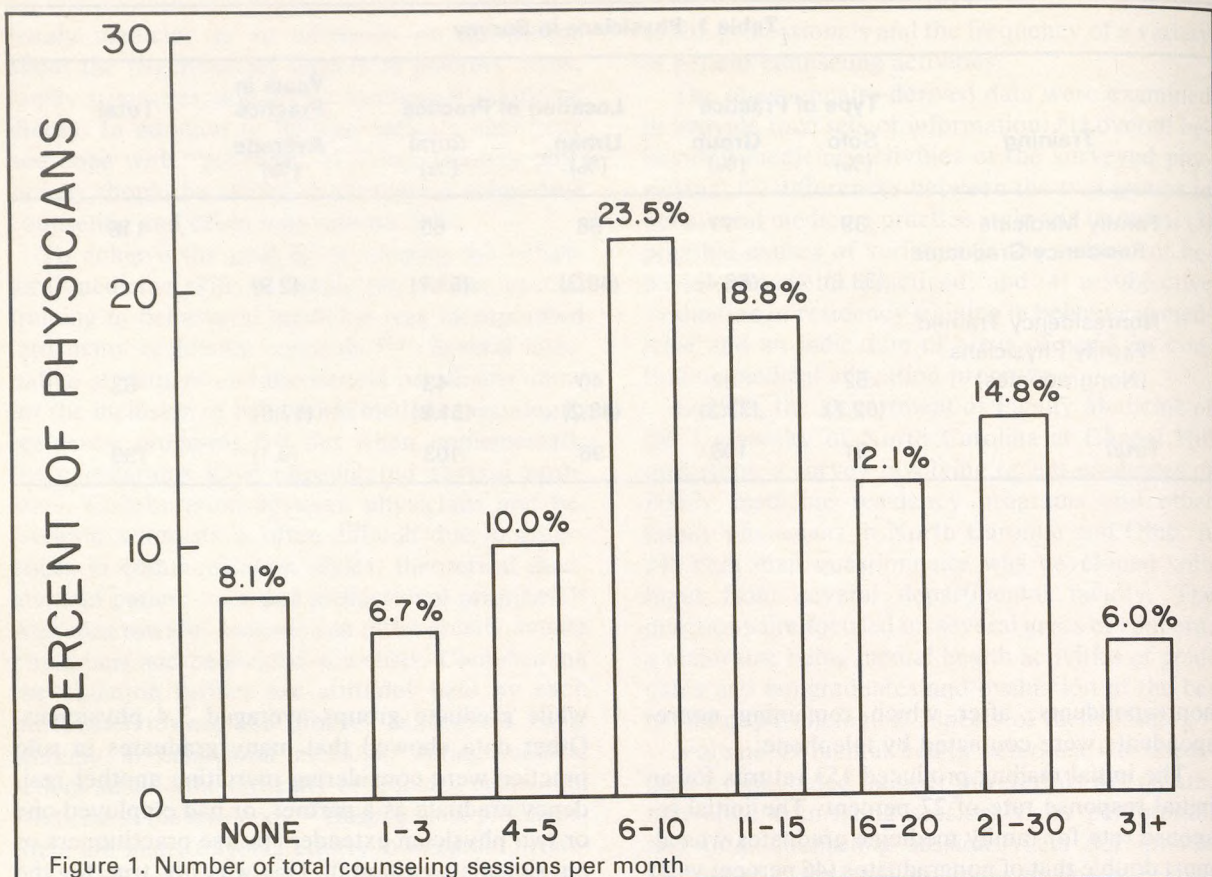
while graduate groups averaged 3.4 physicians. Other data showed that many graduates in solo practice were considering recruiting another residency graduate as a partner, or had employed one or two physician extenders (nurse practitioners or physician's assistants). This was not true for the nongraduates. This indicates that many residency graduates in solo practice were not truly "solo."

Practice location data depicted similarity between graduates and nongraduates in choice of urban or rural location. Graduates, however, tended to be located in larger urban areas and more densely populated rural areas than nongraduates. As expected, residency graduates have been in practice for a significantly shorter length of time than nongraduates.

Results

Volume of Mental Health Activities

The volume of mental health activities was measured by physicians' estimates of the average number of referrals made to mental health providers, the reported number of counseling sessions or visits with individual patients, and the total number of counseling sessions/visits provided to individuals and families.



Almost one third of the physicians reported six to ten counseling sessions/visits per month. More than seven percent reported no individual counseling sessions/visits, while almost four percent reported more than 30 sessions/visits per month. The average number of counseling sessions/visits per month was nine, less than one office visit every two days.

Thirty-five percent of the physicians reported between one and three referrals per month, 27 percent reported four to five referrals per month, and more than 68 percent reported five or fewer referrals per month.

Total counseling sessions/visits per month are displayed in Figure 1. The addition of family and other forms of counseling increases the volume of

mental health activities. While six to ten sessions/visits per month remains most common, almost 46 percent of the physicians reported between 11 and 30 counseling sessions/visits a month. This gives an average of 13 counseling visits per month.

The physicians surveyed reported approximately 520 patient visits per month, from which it was estimated that 2.5 percent of all office visits involved counseling. A recent analysis of the National Ambulatory Medical Care Survey by Noren et al²⁶ revealed that approximately 3.3 percent of all office visits to general or family physicians involved support for emotional problems. This supports the contention that the physicians in this survey provided a relatively small number of counseling sessions/visits for their patients.

Behavioral/Psychological Aspects of Care

Physicians in this survey estimated that 71.8 percent of their patients presented *complaints/symptoms* that were organic/physical, and 28.2 percent presented behavioral/psychological *complaints/symptoms*. The physicians estimated an average of 67.1 percent physical/organic *diagnoses* and 32.9 percent behavioral/psychological *diagnoses*. Thus, they estimate that three out of ten of their patients have psychological problems, but as reported above, only provide on the average less than one counseling session/visit per day.

Access to Mental Health Care Providers

Almost all of the physicians surveyed had access to community mental health centers. More than 85 percent had access to alcoholism and drug treatment services, private counseling, and family and children's services. There was limited access to inpatient psychiatric facilities, with nearly three of ten physicians reporting no access to such facilities. Only 2.2 percent of the physicians did not have access to any source of mental health care, while 90.5 percent had access to three or more sources, and 66.4 percent had access to all five sources of mental health care.

Over one third of the physicians reported employing a designated mental health care provider. Most of these were in group practices, but some solo practices employed mental/psychiatric/social health workers on a part-time basis. One physician reported being the designated mental health care provider for a group practice, receiving referrals from other physicians in the practice.

Comparison of Family Medicine Residency Graduates with Nongraduates

Because family medicine residency programs are giving increased attention to the behavioral and psychological aspects of patient care, it is interesting to explore the relationship between mental health activities and residency training. The data reported in previous sections of this paper were reanalyzed to look for differences between residency graduates and nongraduates. In addition, survey respondents' rankings of 16 behavioral problems (by frequency of encounter) were examined for differences between residency graduates and nongraduates.

Compared to nongraduates, residency graduates had more mental health referrals per month

(6.6 vs 5.9), but this difference is not statistically significant. Graduates in solo practice had more referrals per month than nongraduates in solo practice (6.9 vs 5.9), and graduates in group practice had slightly more referrals per month than nongraduates in group practice (6.4 vs 6), but these differences were also not statistically significant.

Compared to nongraduates, residency graduates had more individual counseling sessions/visits per month (10.4 vs 8.5). Both graduates and nongraduates in solo practice averaged nine counseling sessions/visits per month, but graduates in group practices averaged 3.5 more sessions/visits per month than did nongraduates (11.1 vs 7.6, significant at ten percent confidence level).

The data on total counseling sessions/visits revealed that nongraduates averaged one more counseling session/visit per month than did graduates (14 vs 13). This difference was constant across practice settings, but was not statistically significant.

Neither completion of a residency training program nor practice type seems to have affected the volume of mental health referrals or total counseling sessions/visits provided by physicians in this survey. However, graduates did tend to estimate more individual counseling sessions/visits, and nongraduates (especially in group practice) estimated more family counseling sessions/visits.

Residency graduates reported that 74.5 percent of their patients presented organic/physical complaints/symptoms, and 25.5 percent presented behavioral/psychological complaints/symptoms. Nongraduates reported 70.7 percent of their patients presenting organic/physical complaints/symptoms and 29.3 percent, behavioral/psychological. According to these figures, nongraduates were seeing 3.8 percent fewer patients presenting organic problems. This would seem to indicate that the patients of residency graduates had fewer behavioral/psychological problems, but the data on final diagnoses contradicts this assumption. The graduates' reported final diagnoses were 63.6 percent physical and 36.4 percent psychological, compared to the nongraduates who reported final diagnoses of 70.5 percent physical and 29.5 percent psychological. Residency graduates, then, reported 6.9 percent more psychological diagnoses. The difference between the percentage of behavioral complaints presented and behavioral diagnoses was 10.9 percent for residency graduates and .2 percent for

Table 2. Most Frequent Mental Health Problems for all Study Physicians, Residency Graduates, and Nongraduates (percent of physicians stating that problem was one of their five most frequent patient mental health problems)

Problem	All Physicians	Percent	
		Residency Graduates	Nongraduates
Depression	90.6	90.0	91.1
Anxiety-Stress*	89.9	94.3*	86.1*
Obesity	78.5	75.7	81.0
Marital Discord*	58.4	65.7*	51.9*
Alcohol Abuse	43.0	40.0	45.6
Sexual Problems	25.5	25.7	25.3
Work-Career Difficulties	18.8	18.6	19.0
Adolescent Rebellion	16.1	12.9	19.0
Grief Response	14.8	15.7	13.9
Drug Abuse	13.4	13.4	12.9
Suicide Attempts	6.7	4.3	8.9
Spouse Abuse	5.4	7.1	3.8
Psychoses	3.4	2.9	3.8
Retirement Difficulties	3.4	1.4	5.1
Mental Retardation	2.7	2.9	2.5
Child Abuse	1.3	0	2.5

*Significant at the 10 percent confidence level

nongraduates. This may suggest that residency graduates were more effective than nongraduates in detecting behavioral/psychological problems.

The data on access to mental health care providers were reanalyzed, finding that physicians in urban areas reported slightly greater access. These findings are probably due to the family medicine residency graduates' tendency to locate their practices in more densely populated areas than those chosen by nongraduate family physicians.

Most Frequent Mental Health Problems

A critical question of this study was to determine the types of mental health problems that physicians were encountering in their practices. Several physicians associated with family medicine residencies were asked to list the five most common problems encountered in their patient care activities, producing an initial list which was circulated and supplemented to produce a final list of 16 common problems. The surveyed physicians were

asked to indicate the five problems that they encountered most frequently. Table 2 presents these results for all physicians surveyed and a breakdown of residency graduates and nongraduates.

In all three analyses the top two problems were depression and anxiety-stress, though residency graduates reported more anxiety-stress and less depression than did nongraduates. The next four problems were ranked the same in all three analyses: obesity, marital discord, alcohol abuse, and sexual problems.

Evaluation of Training

Comparing the evaluation of training in behavioral medicine with that for short-term counseling, both residency graduates and nongraduates perceived their behavioral medicine training as more adequate. Comparing graduates to nongraduates, graduates felt that they had superior training (Table 3).

Table 3. Evaluation of the Adequacy of Training (percent of physicians)

Training Activity	Evaluation	Percent	
		Residency Graduates	Nongraduates
Short-Term Counseling	Very Adequate		
	Adequate	34.8	11.5
	Inadequate	46.4	55.1
Behavioral Medicine	Very Adequate	18.8	33.3
	Adequate	51.4	34.1
	Inadequate	31.4	38.3
		17.2	27.7

Table 4. Average Reported Mental Health Activities per Month, by Evaluation of Adequacy of Short-Term Counseling Training

Activities	Evaluation		
	Very Adequate	Adequate	Inadequate
Mental Health Referrals*	8.3	5.9	5.4
Individual Counseling** Sessions	12.4	8.2	7.4
Family and Other Counseling Sessions	6.0	4.5	3.3
Total Counseling Sessions†	18.4	12.7	10.7
Percentage of Presenting Complaints that are Behavioral/Psychological	28.1	26.7	29.2
Percentage of Behavioral/Psychological Diagnoses	37.8	30.7	32.3

*=significant at 10 percent level
 **=significant at 5 percent level
 †=significant at 1 percent level

More than one half of the graduates, as compared to one third of the nongraduates, reported that their behavioral medicine training was "very adequate." More than one third of the graduates, compared to slightly more than one tenth of the nongraduates, believed their short-term counseling training had been "very adequate."

Table 4 shows the results of an examination of six measures of physician mental health activity, according to adequacy of short-term counseling training. Physicians rating their short-term counseling training "very adequate" had a significantly higher volume of mental health referrals, individual counseling, family and other counseling, and

Table 5. Evaluation of Training Activities and Continuing Medical Education Programs (percent of physicians expressing positive response)

	Training Activities (%)		Desired Continuing Medical Educational Programs (%)	
	Residency Graduates	Non-graduates	Residency Graduates	Non-graduates
Case/Chart Review	65.7	32.5	32.9	31.3
Co-Counseling	58.6	32.5	37.1	28.8
Conferences/Seminars	64.3	35	48.6	57.5
Retreats	20	5	28.6	18.8
Audiovisual Reviews	37.1	12.5	28.6	37.5
Visiting Consultants	52.9	32.5	51.4	45.0
Personal Projects/ Self-Study	20.0	23.8	14.3	10.0

percent of diagnoses that were behavioral/psychological.

The three groups of physicians (those with "very adequate," "adequate," and "inadequate" training) estimated similar percentages of patients presenting psychological complaints, but there was significant difference in the estimated percent of psychological/behavioral diagnoses. Comparing the percent of presenting complaints/symptoms to the percent of behavioral/psychological diagnoses, the "very adequate" group had a difference of +9.7 percent, the "adequate" group had a difference of +4.0 percent, and the "inadequate" group had a difference of +3.1 percent. This may indicate that the "very adequate" group was able to distinguish those patients with physical complaints and with underlying psychological problems.

This analysis of the impact of the perceived adequacy of training on mental health activities shows training to be a central variable in determining physicians' activities and performance in this area.

Effects of Training on Most Frequent Mental Health Problems

Given the impact of perceived training adequacy on volume of behavioral medicine activi-

ties, it was speculated that perceived training adequacy might also affect the types of problems most frequently encountered. The physicians were again divided into three groups according to their evaluation of their short-term counseling training. The frequency of various types of mental health problems estimated by each physician was examined, and the results were the same for all three groups. Depression and anxiety-stress were the top two problems. The next four, in descending order of frequency, were obesity, marital discord, alcohol abuse, and sexual problems. The "very adequate" group rated marital discord slightly higher than obesity. All three groups listed ten other problem areas (such as career difficulties, adolescent rebellion, grief response) in the same order.

As illustrated in Table 5, residency graduates felt that case/chart reviews, conferences/seminars, and co-counseling had been most useful during their residencies. Their preferences for continuing medical education were visiting consultants and conferences/seminars. Nongraduates, who had little or no mental health training, indicated a preference for conferences/seminars and visiting consultants for continuing education. This similarity of preference and other research indicates that

Table 6. Content Areas for Training and Continuing Education (percent of physicians expressing great need)		
	Percent	
	Residency Graduates	Non-graduates
1. Individual Counseling	75.7	66.7
2. Marital Counseling	65.7	60.3
3. Parenting Counseling	65.7	60.3
4. Family Counseling	52.9	57.7
5. Psychotropic Medication	60.0	53.3
6. Crisis Counseling	57.9	45.5
7. Working as Part of a Mental Health Team	29.3	28.9

programs could be designed to serve both groups at the same time.^{27,28}

It is interesting to note that the graduates' third preference for continuing medical education is co-counseling, while nongraduates' third preference was audiovisual reviews—a technique which few of them would have experienced in their medical training. Less than 40 percent of the graduates believed that audiovisual reviews were a useful training method, possibly implying that this training method was not used effectively in residencies. Nongraduates, presumably with little or no exposure to audiovisual review, were more interested in the technique.

Information on the preferences of graduates and nongraduates for a variety of content areas is shown in Table 6. The most preferred content area for both groups is individual counseling, followed by marital counseling. A higher percentage of residency graduates than nongraduates expressed a need for parenting counseling, but more nongraduates than graduates expressed a need for family counseling. This differentiation may be due to the different types of families being seen by graduates and nongraduates. For both groups, training in psychotropic medication was rated higher than crisis counseling, and working as part of a mental health team was the lowest priority.

Discussion

A comparison of graduates' and nongraduates' mental health/behavioral medicine practices shows

that both groups reported relatively infrequent practice of behavioral medicine. Referrals and counseling sessions produce a combined total of 20 activities per month, or two to four percent of all patient encounters. Considering the physicians' estimates of 30 to 36 percent of their patients having psychological or behavioral problems as fundamental diagnoses, the volume of behavioral medicine activities should be significantly greater than the current reported level.

This discrepancy between need and treatment has been noted earlier.²⁶ There is a major need to improve the mental health component of residency training to enable physicians to better manage psychosocial problems in practice settings. Continuing medical education in mental health care is clearly advisable for both recent graduates and other family physicians. These continuing medical education programs should be focused on the problems which family physicians encounter most frequently in their practices: depression, anxiety-stress, obesity, marital discord, and alcohol abuse.

This descriptive study has explored some of the factors that may affect the volume of family physicians' mental health activity. Perceived adequacy of training in short-term counseling had a significant positive correlation to counseling and referral activity, and was correlated to the proportion of behavioral/psychological diagnoses. Previous analyses have found no relationship between type of practice (solo vs group) or residency training and volume of mental health activity. The evi-

dence reported here indicates that the perceived adequacy of training in short-term counseling and behavioral medicine is a major influence on mental health activities of family physicians, whether or not they received residency training.

Given the relatively low volume of behavioral medicine activity and the high levels of need in this area as reported in this study, there emerges a major implication that a *great need* exists to strengthen behavioral medicine and mental health components of family medicine residency training. Another implication is that residencies may not be providing adequate training to their recent graduates, and an immediate need exists among residency graduates for continuing medical education programs in behavioral medicine.

Continuing medical education programs which incorporate visiting consultants, conferences, seminars, and co-counseling would have broad appeal to residency graduates. Developing and implementing such programs should be a high priority for residency programs, and efforts in this area would have the additional advantage of directing improvements in the behavioral medicine training of family medicine residents.

Further study is called for, not only on the effectiveness of training methods, but also on patient care outcomes. The data reported are not conclusive and this study needs to be replicated prospectively, particularly across programs and geographical regions. Furthermore, direct observation, assessment of patient visits and status, and categorization of psychosocial/behavioral intervention used per visit should be conducted as a validation of the estimated survey data.

To meet the mission of providing comprehensive family health care, it must be demonstrated that residency trained family physicians are recognizing and managing the psychosocial needs of their patients. This should be done in a family-focused and educational-anticipatory manner.

Other important issues derived from this study are identified in the following questions: What is the commitment of the family physician to dealing with behavioral/psychosocial concerns? What is the role of the family physician in providing behavioral/psychosocial intervention (eg, screening, counseling, behavioral modification, family interviewing)? How is the existing health care delivery system (ie, costs, time scheduling, patient education, patient expectations) being modified to

provide behavioral/psychosocial support? Finally, how can mental health specialists be better utilized as part of the practices of family physicians?

References

1. Zabarenko A, Pittenger R, Zabarenko R: Research into the psychotherapeutic aspects of general practice: Problems and progress. *J R Coll Gen Pract* 14:140, 1967
2. Temperley J: Psychotherapy in the setting of general medical practice. *Br J Med Psychol* 51:139, 1978
3. Richardson HB: *Patients Have Families*. New York, Commonwealth Fund, 1945
4. Clark DF: The clinical psychologist in primary care. *Soc Sci Med* 13A:707, 1979
5. Glasser M: Psychiatry in family practice. *Can Psychiatr Assoc J* 21:483, 1976
6. Feldman A: The family practitioner as psychiatrist. *Am J Psychiatry* 135:728, 1978
7. Engel GL: Biomedicine's failure to achieve flexnerian standards of education. *J Med Educ* 53:387, 1978
8. Pellegrino EO: The generalist function in medicine. *JAMA* 198:541, 1966
9. Proger S, Williams G: *A Career in Primary Care*. Cambridge, Mass, Ballinger, 1976
10. Benson H: Behavioral medicine: A perspective from within the field of medicine. *Natl Forum* 60:3, 1980
11. Stachnik TJ: Priorities for psychology in medical education and health care delivery. *Am Psychol* 35:8, 1980
12. Berwic DM (ed): *The Roles of Family Practice, Internal Medicine, Obstetrics and Gynecology, and Pediatrics in Providing Primary Care*. Columbus, Ohio, Ross Laboratories, 1977
13. Ireton HR, Cassata DM: A psychological systems review. *J Fam Pract* 3:155, 1976
14. Conroe RM, Cassata DM, Racer HJ: A systematic approach to brief psychological intervention in the primary care setting. *J Fam Pract* 7:1137, 1978
15. Adams GL: Psychiatry and medical practice in primary care training and practice: An innovative approach. *Int J Psychiatr Med* 9:49, 1978
16. Rakel RE: *Principles of Family Medicine*. Philadelphia, WB Saunders, 1977
17. Johnson AH, Fisher JV, Guy LJ, et al: Developing behavioral science for a family practice residency. *J Fam Pract* 4:319, 1977
18. *Behavioral Science in Family Medicine*. Report of a Task Force on Behavioral Sciences. Kansas City, Mo, Education Committee of the Society of Teachers of Family Medicine, 1979
19. Hanna EA, Schachtel JG: An integration of psychosocial concepts into the education of general practitioners. *Soc Work Health Care* 4:393, 1979
20. Shapiro J: A revisionist theory for the integration of behavioral science into family medicine departments. *J Fam Pract* 10:275, 1980
21. Wales E: Behavioral scientist meets the practicing physician. *J Fam Pract* 6:839, 1978
22. Steele TE: Teaching behavioral sciences to medical students. *Arch Gen Psychiatry* 35:27, 1978
23. Johnson DAW: Treatment of depression in general practice. *Br Med J* 2:18, 1973
24. Shepherd M, Cooper B, Brown AC, et al: Minor mental illness in London: Some aspects of a general practice survey. *Br Med J* 2:1359, 1964
25. Locke BZ, Gardner EA: Psychiatric disorders among the patients of general practitioners and internists. *Public Health Rep* 84:167, 1969
26. Noren J, Grazier T, Altman I, et al: Ambulatory medical care. *N Engl J Med* 302:11, 1980
27. Callen KE, Cavis D: The general practitioner: How much psychiatric education? *Psychosomatics* 19:409, 1978
28. Fisher JV, Fowler H, Fabrega H: Family physicians want more psychiatric training. *Patient Care* 7(11):54, 1973