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Chapter 2

Training of Mental Health Providers

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Introduction

Late in 1987, research staff from the American Psychiatric Association, the American Psychological Association, the National Association of Social Workers, and representatives of professional psychiatric nursing formed a work group on human resources data with staff from the National Institute of Mental Health (Dr. Manderscheid). This work group had several major purposes:

- To identify common, core data that can be reported on human resources by each of the mental health disciplines.
- To prepare one or more chapters for *Mental Health, United States*, that present and describe these data.
- To improve survey comparability and quality among the mental health disciplines so that the essential pool of common core data can be expanded.

To date, the work group has primarily addressed the first two of these objectives. A chapter was written for *Mental Health, United States, 1990*, as the first product of the joint effort. The chapter was designed to present comparable information on the size and characteristics of the clinical population in each of the four disciplines. Results were restricted to those data elements that were comparable across the disciplines. The focus of the present chapter for *Mental Health, United States, 1992*, was on presenting parallel, comparable information on trainees in each of the disciplines. Since the completion of the first chapter, the work group has been expanded to include research staff from the American Association of Marriage and Family Therapists, the National Board for Certified Counselors, and the International Association of Psychosocial Rehabilitation Services. Hence, information is presented on trainees from these disciplines as well.

Clearly, a strong need exists in the mental health field for increased precision and comparability of human resource data. Because mental health is a very labor-intensive field, the policy, services delivery, and resource implications of human resource data are enormous. To increase the availability of sound data, the work group has developed a minimum data set for use by all disciplines and has begun planning for a joint survey to be conducted in the future.

Psychiatry

Training Practices

Although psychiatry is a specialty of medicine, training to become a psychiatrist begins at the pre-baccalaureate level.

To meet the requirements for admission to medical school, college students who aspire to become psychiatrists generally must complete course work in biology, organic and inorganic chemistry, mathematics, and physics.

Following college graduation and admission to a school of medicine, students take courses in the behavioral sciences, biochemistry, endocrinology, genetics, microbiology, anatomy, human physiology, and pharmacology, among other subjects. They also receive introductory training in the medical specialties of obstetrics and gynecology, internal medicine, pediatrics, surgery, and neurology, as well as psychiatry. After completing the M.D. degree, psychiatrists-to-be are required to complete a residency program, at least four years in length, that covers in detail all aspects of mental illness.

Many doctors who choose psychiatry as their specialty, elect to begin their residencies immediately after medical school, entering a program that provides experience in general medical care (usually 4 to 6 months in internal medicine, family medicine or pediatrics), neurology (at least 2 months), and emergency care, in addition to at least 36 months in psychiatry. Although the patterns of rotations differ from one program to another, they all share an emphasis on the clinical care of patients. Child psychiatry residencies generally involve at least an extra year of training beyond that required in general psychiatry programs.

Since the 1987-88 academic year, all psychiatry residency programs in the nation have participated in the Association of American Medical Colleges' (AAMC) National Residency Matching Program (NRMP), a computerized process that simultaneously matches all U.S. senior medical students into residency positions, based on the preferences of both the graduates and the residency program directors.

Some psychiatry programs accept residents only at the second post-M.D. year level. Many programs are flexible about allowing entry after the first year, so that students who are undecided can have a transitional first year or a first year in a clinical specialty other than psychiatry.

All psychiatry residents (except for the small number enrolled in a 5-year combined program in general psychiatry, child psychiatry, and pediatrics), spend at least 2 years in the basic general residency. This time usually includes rotations on an inpatient service, emergency room, walk-in or crisis clinic, and ambulatory services. These experiences are complemented by didactic and participatory seminars and case supervision. Introductory experiences in public health/community psychiatry, child psychiatry, geriatric psychiatry, and consultation/liaison programs usually are included in the second and third years.

The final year of the psychiatry residency program generally offers opportunities for electives. Some residents become chief residents of inpatient or ambulatory care units. Others concentrate on special clinical or research experiences.

Besides child psychiatry, subspecialty training is also available in geriatric psychiatry, emergency psychiatry, hospital psychiatry, forensic psychiatry, rural psychiatry, chemical dependency and substance abuse, consultation/liaison, administrative and community psychiatry, and research. Training in these subspecialties may take the form of full-time or part-time year-long programs, or brief electives.

Pool from Which Psychiatric Residents are Drawn

Although most applicants for residencies are U.S. medical school seniors, some positions are filled by graduates of Canadian and other non-U.S. medical schools (some of whom are U.S. citizens), U.S. physicians who graduated from medical school in previous years, and osteopaths. According to the AAMC, 897 first-year residency positions were filled through the NRMP in 1989 (an occasional position is filled outside the NRMP, but this practice is discouraged and has declined in recent years). Of those, 722 (80.4 percent) were filled by U.S. medical school graduates and 110 (12.3 percent) by international medical school graduates—non-U.S. citizens graduating from schools outside the U.S. and Canada. The remaining 65 (7.2 percent) were filled by a combination of the other categories mentioned above.

Licensure and Certification

As a medical doctor, the psychiatrist is licensed to practice medicine rather than psychiatry as such. The licensing process is administered by State medical boards, and the license may be obtained immediately on completion of medical school.

After completing an Accreditation Council for Graduate Medical Education (ACGME) accredited residency program, a psychiatrist may apply to the American Board of Psychiatry and Neurology (ABPN) to take the written and oral examinations for certification in general or child psychiatry, or for added qualifications in geriatric psychiatry. Certification in administrative psychiatry may be obtained from the American Psychiatric Association. Certification is not required to practice psychiatry but is a requirement for many specific positions that psychiatrists may hold.

Trends in Numbers and Characteristics of Psychiatric Residents

Geographically, psychiatric residents are concentrated mostly in the Middle Atlantic, South Atlantic, East North Central, and Pacific regions (table 2.3). Five States—Idaho, Montana, Nevada, Wyoming, and Alaska—contain no psychiatric residency training sites and hence no psychiatric residents. This distribution reflects the fact that teaching hospitals and other residency training sites are affiliated with medical schools, which tend to be located in or near large population centers.

Two characteristics of the psychiatric resident population have been topics of much attention and discussion in the psychiatric community in recent years: the number of new residents entering the field, (table 2.1), and the steadily growing percentage of women residents, (table 2.2). The number of first-year residents in psychiatry programs grew more or less steadily during the 1980s, showing an overall increase of almost 40 percent between academic year 1979-80 and academic year 1989-90. The trend flattened at the end of the decade, however, dropping slightly from 1988-89 to 1989-90

(results not shown). First year enrollments may not show the true picture, as some graduating medical students with plans to enter psychiatry take a transitional first year of residency, waiting until the second year to begin their psychiatry training. The trend in the number of second-year psychiatry residents, however, appears to be similar to that of first-year residents. Although a perfect consensus does not exist among expert observers about the future direction of the trend in numbers of entering residents, few if any expect it to turn substantially upward in the foreseeable future.

Growth in the total number of psychiatry residents in the 1980s was largely attributable to growth in the number of women entering the specialty. Psychiatry has long had one of the highest representations of women among all medical specialties and continues to do so, although in recent decades other, more heavily male-dominated specialties, such as surgery, have begun to catch up somewhat (De Titta, et al. 1991). The continuing increase in the percentage of women among psychiatric residents has been the topic of considerable speculation. Differences in earnings, practice patterns, and rates of board certification have been among the findings of studies that compared male and female psychiatrists (Goldstein, et al. 1981; Fenton, et al. 1987; Roback, et al. 1991). As the ratio of female to male psychiatry residents approaches 50/50, training programs are responding to their female trainees' needs by making adjustments in such things as program structure and curriculum content (Reider, 1988).

Psychology

Training Practices

Entry to and advancement in most psychological careers generally requires the doctoral degree.[1] This training occurs in graduate psychology programs that specialize in one or more subfields. Some focus on preparing individuals for mental health practice and research, while others train psychologists in such areas as cognitive psychology, educational psychology, industrial-organizational psychology, and psychopharmacology. Programs are housed in a variety of academic settings, including departments of psychology, interdisciplinary programs, schools of education, and medical schools. In addition to these, training in direct services provision is carried out by schools of professional psychology that are either affiliated with universities or are free-standing entities.

Formal training to become a qualified health/mental health services provider, the focus of this chapter, is typically in one of three recognized specialties — clinical psychology, counseling psychology, or school psychology.[2] Depending upon the program's broad goals and the practices of its host institution, the degree awarded is either a Ph.D. (Doctor of Philosophy), Psy.D. (Doctor of Psychology), or Ed.D. (Doctor of Education). For the most part, programs aimed at training individuals for careers in clinical research, teaching, and practice award the Ph.D.; the Psy.D. is offered by programs stressing the preparation of practitioners for the direct delivery, evaluation, and improvement of professional services (Fox et al. 1985; Korman 1976).

The distribution of these degree options tends to differ across specialties and training environments. In clinical psychology, the majority of programs located in departments of psychology are committed to training clinician-scientists and scientist-practitioners and thus award the Ph.D. In contrast, practitioner-focused training programs, particularly those located in universities, grant the Psy.D.[3] The Ph.D. is typically the degree offered by counseling psychology and school psychology programs, with the Ed.D. occasionally awarded because it is the degree authorized by the institution (Psychology Rating Committee, New York State Board of Regents Doctoral Education Project 1990).

In general, there are four stages in the educational path to becoming a health/mental health service provider in psychology. After admission into a doctoral program, all students must: (1) accrue the necessary credit hours through an appropriate mixture of didactic courses and clinical practica, and successfully pass oral and written comprehensive exams; (2) complete a predoctoral internship designed to provide intensive training in all major professional functions; (3) complete a scholarly dissertation either prior or subsequent to the internship; and (4) after receipt of the doctorate, satisfy the specific licensure/certification requirements of the State(s) in which (s)he intends to practice.

In addition to the quality control mechanisms of the programs and their host institutions, the American Psychological Association (APA) has served since 1947 as the major accrediting body for doctoral training programs and predoctoral internships in the recognized specialty areas. In 1992, there were 170 APA-accredited programs in clinical psychology; 60 in counseling psychology; 42 in school psychology; and 4 in combined professional-scientific areas, e.g., clinical-school psychology. A total of 144 predoctoral internship sites, located in a range of practice settings, such as veterans' hospitals, community mental health centers, outpatient clinics, and schools, also hold APA accreditation status. Although participation by a training program or internship site in the accreditation process is voluntary, graduation from an APA-accredited program and completion of an APA-accredited internship are often viewed as facilitating employment and career advancement opportunities.

In addition to requirements governing the length of full-time study, the quality of faculty, student selection criteria, and the adequacy of institutional resources for doctoral training, APA accreditation requires programs to provide training in:

(a) *Substantive areas,* including the biological bases of behavior (e.g., neuropsychology, psychopharmacology, and physiological psychology), cognitive-affective bases of behavior (e.g., memory, perception, cognition, and motivation), social bases of behavior (e.g., cultural, ethnic, organizational, and group processes), and individual behavior (e.g., human development, abnormal psychology, and individual differences);

(b) Specific assessment and therapeutic techniques, such as psychological assessment, group and individual psychotherapy, behavioral therapy, consultation, and program evaluation;

(c) Research methodologies that cover a range of strategies for use in both laboratory and natural settings;

(d) Ethical and professional responsibilities as set forth by recognized APA standards for providing psychological services, administering educational and psychological tests, conducting research involving human subjects, and so forth.

The median time required to earn the doctorate in psychology has steadily crept upward, rising from 5.9 years in 1967 to 7.5 years in 1986 (Tuckman et al. 1990). This increase in the time required to earn the degree has been witnessed in almost all scientific fields, but its specific causes remain as yet unclear. In psychology, there are probably numerous factors responsible, including reductions in Federal training support. For example, the number of full-time graduate students in all fields of psychology who received at least some Federal training support declined from 3,055 in 1981 to 2,208 in 1989—a reduction of 28 percent (National Science Foundation 1990a). Decreases in terms of clinical training support have been even more dramatic; the number of NIMH supported traineeships in clinical psychology has declined from 1,553 in 1979 to a mere 168 in 1986 (Wohlford 1990).

Pool from Which Psychology Students are Drawn

Although the exact number is unknown, those pursuing graduate study in psychology comprise only a small subset of the total pool of psychology baccalaureate recipients. For example, the proportion of 1985 psychology baccalaureates who were enrolled in a graduate or professional degree program in any field was between 30-40 percent (National Science Foundation 1987), and only a fraction of these were pursuing full- or part-time study in doctoral psychology programs. At the same time, the majority of psychologists were undergraduate psychology majors; in 1990, three of every five doctorate recipients in psychology had obtained psychology baccalaureates, with the remainder primarily coming from education and other professional fields (Thurgood and Weinman 1991).

Of those who pursue a doctorate in clinical, counseling, or school psychology, some apply to, and are accepted by, programs immediately after completion of their baccalaureate, whereas others postpone entry until some later time. This latter strategy is apparently becoming more commonplace; the mean length of time prior to graduate entrance has increased from 0.9 years in 1967 to 1.5 years in 1986 (Tuckman et al. 1990). A small number of doctoral degree holders in other related fields also enroll in formal clinical respecialization training programs. In 1991, there were 15 such programs, located primarily in professional schools of psychology (American Psychological Association 1990) and enrolling a total of about 50 students.

Although some prospective doctoral students first apply to a master's psychology program, the typical path is to apply directly to a doctoral program. The competition for acceptance is keen, particularly in clinical psychology; in 1989, the median acceptance rate was 10 percent, with rates of less than 2 percent for some programs (Kohout et al. 1991). Although admission requirements vary across programs, criteria typically include academic excellence, significant undergraduate exposure to psychology, previous research and/or field experience, and interests that are compatible with program emphases, e.g., children's mental health issues. Nearly half of all programs also require a face-to-face interview before making a decision (Kohout et al. 1991).

Licensure and Certification

Receipt of a doctoral degree in psychology is not the final step before engaging in psychological practice as a psychologist; all 50 States and the District of Columbia require licensure or certification as a psychologist. Three criteria are stipulated by the majority of State psychology laws: (1) the receipt of a doctoral degree in psychology or in a field primarily psychological in nature from a regionally accredited institution; (2) two years of supervised clinical experience, of which one year typically occurs at the predoctoral level and the other after receipt of the doctorate; and (3) passing a State-administered examination.

Trends in Number and Characteristics of Psychology Students

As can be seen in table 2.1, the attractiveness of psychology as a profession has not diminished. Not only has the number of doctorates in these specialty areas increased at an average annual rate of 4 percent from 1979-80 to 1989-1990, but there also is every indication that this figure may continue its steady growth. For example, compared to 1984-85, the population of fulltime enrollments in clinical, counseling, and school psychology programs has expanded by 19 percent. This growth is not surprising, given that the number of APA-accredited doctoral training programs increased by 54 percent over a ten-year period, totaling nearly 250 in 1989-90. The majority of growth both in terms of new programs and enrollments has occurred in the specialty of clinical psychology.

Growth has primarily occurred within those doctoral programs that emphasize the practitioner model of training. In 1984-85, 39 percent of all full- and part-time graduate students were enrolled in these types of programs (Pion 1992). Five years later, this proportion had increased to 48 percent.

While total enrollments have increased by more than 2,000 students, the characteristics of these individuals have changed (table 2.2). Although female doctoral students already outnumbered males in 1984-85, their number and share of the graduate student pool have continued to grow. In 1989-90, 62 percent of all full-time graduate students in professional psychology were women compared to 58 percent in 1984-85.

This trend corresponds with other data indicating the growing participation of women in all aspects of graduate study and employment sectors (Howard et al. 1986; National Science Foundation 1990).

As of 1989-90, 88.4 percent of all students in the professional areas of psychology were white. Approximately 4 percent each were black and Hispanic, and another 2 percent were Asian. The participation of American Indians, similar to most graduate fields, remains extremely low. These percentages mirror those reported for 1990 doctorate recipients (Thurgood and Weinman 1990) and for the population of graduate students in all areas of the discipline (Kohout and Pion 1990). While the proportion of white students has remained relatively stable since 1984-85, changes have occurred among the other ethnic/racial groups. The number of black graduate students, particularly those enrolled full-time, declined slightly, resulting in a downward shift in the percentage from 5.7 percent in 1984-85 to 4.7 percent five years later; at the same time, both the numbers and proportions of Asians and Hispanics increased, and this growth was especially evidenced in terms of part-time enrollments.

The regions reporting the greatest share of total enrollments for 1989-90 were the Middle Atlantic, East North Central, South Atlantic, and Pacific regions (table 2.3). These proportions are not surprising, given that these regions encompass several major population centers and thus a significant number of academic institutions offering doctoral degrees in psychology. It is interesting to compare these loci of major training sites with the geographical distribution of clinically active psychologists as expressed by rate per 100,000 resident population (Dial et al. 1990) (results not shown). The degree of correspondence is not perfect; the regions with the highest rate of practitioners per 100,000 population are New England (30.4), Middle Atlantic (23.7), Pacific (20.2), and Mountain (17.3), suggesting that service providers are somewhat mobile in terms of their employment options.

Social Work

Training Practices

Social workers come to their professional education with a wide range of experiences and interests, and there is enormous diversity in the settings where they ultimately practice. However, in the training programs, students spend at least a year studying subjects which form the foundation of all social work practice.

In the United States, social work education is provided at three levels: baccalaureate, master's, and doctorate. As of 1990, a total of 365 baccalaureate and 99 master's programs were accredited by the Council on Social Work Education (CSWE). In addition, there are approximately 48 accredited doctoral programs. All except one are found in settings also providing master's level training programs.

Clinical social workers have a master's degree, while bachelor's degree students learn generic social work functions excluding clinical social work. Doctoral degree students may or may not be clinically trained. Some individuals enter doctoral programs from fields other than social work and may never receive clinical social work training. Thus, not all MSWs are clinically trained, but all clinical social workers have MSWs.

Since its inception, the CSWE has been the accrediting body for all master's degree programs. In July 1974, CSWE also began accrediting baccalaureate programs. Doctoral programs are accredited by regional accrediting bodies. Master's programs are reviewed for continued accreditation every seven years.

Social work education consists of a foundation and an advanced curriculum. Baccalaureate students complete a foundation curriculum of five core components, including courses in: (1) social welfare policy and services, (2) human behavior and social environment, (3) social work research, (4) social work practice, including a minimum of 400 hours in field instruction, and (5) administration. The social welfare policy and services courses provide a historical perspective, understanding of law and other policy components, knowledge about policy formulation and analysis, and understanding of major social and health care issues. The human behavior and social environment courses include study of growth, maturation, and aging processes, as well as cognitive, psychological, and social development over the entire lifespan and major theoretical explanations of personality development. Social research courses include study of the scientific method, statistics, and program evaluation. Schools of social work place a particular emphasis on teaching students to evaluate their own practice. The social work practice curriculum provides students with skills in working with all sized systems—individual, family, group, and community, and includes a field practicum, in which students are expected to apply the skills and knowledge they are obtaining during their didactic sessions.

Students in master's degree programs also are required to complete a core curriculum containing the basic components noted above, with considerably more depth. During the course of their master's program, students also are required to complete 900 hours of field practice. Field settings vary greatly. They may be in private or public agencies across a wide spectrum of health, mental health, and social service programs. Placements may involve the provision of clinical or administrative services, or focus on policy issues. Whenever possible, students are placed in a setting corresponding to their major practice interest. Field placements are organized either on a block system with the student completing a block of full time placement subsequent to course work, or on a concurrent basis, with the student spending part of the time in class and part in the placement setting.

Although students' individual supervisors may not have an advanced social work degree, field study programs must be directed by a faculty member who has at least a social work master's degree. The foundation curriculum courses and the field placement provide the basic training for students who will be providing mental health services. In addition, all schools place a heavy emphasis on educating students to understand cultural diversity, particularly differences

in race, gender, age, country or origin, and sexual orientation. This focus on diversity permeates the entire curriculum.

During the second year of a master's program, social work students enter the advanced curriculum and receive intensive training in an area of practice in which they are particularly interested. The advanced curriculum in the master's programs may differ somewhat. Many programs are organized around methods such as casework, group work, community organization, and administration; others are organized around fields of practice, such as family and children, corrections, health, and mental health. Still other programs focus on population groups such as children and youth, the aged, urban disadvantaged, and disadvantaged minorities. Another distinction frequently found in programs is between micro, or direct social work practice, which focuses on small systems, such as the family; and macro, or indirect practice, which focuses on large systems, such as organizations and delivery systems. Finally, some schools of social work are organized to provide training for generalist practice, which includes some aspects of all the areas just discussed.

Students in social work doctoral programs are required to complete an intensive period of study and a major research study. Most doctoral students are preparing for academic careers. However, there are some clinical doctoral programs and some that focus primarily on research or on administration.

Pool from which Social Work Students are Drawn

Students come to master's degree programs from two primary sources. Many MSW students are returning to school after some work experience. They tend to have received liberal arts degrees, are out of school and have worked in a social work or related setting for at least a year. In contrast, another group of master's students comes directly from colleges or universities with a BSW degree and, for the most part, are younger and less experienced.

Licensure and Certification

All fifty States, Puerto Rico, the Virgin Islands, and the District of Columbia regulate the practice of social work. All except three have either certification or licensure laws. Puerto Rico, Michigan, and Hawaii have a registration program for social work. Many States license at three levels corresponding to the bachelors, master's, and advanced master's or doctoral level of training. Most States require that an applicant have had at least two years of supervised experience and that the applicant pass an exam to obtain a license, and many States require continuing education for maintaining a current license.

In addition, social workers are encouraged to apply for and receive several types of post-graduate credentials. When a master's level student has completed two years of supervision by a master's level social worker, the student is eligible to take an examination to be admitted to the Academy of Certified Social Workers (ACSW).

Trends in Number and Characteristics of Social Work Students

In 1989-90, 17,688 students were enrolled in full-time baccalaureate degree programs, 27,420 in master's degree programs, and 1,794 in doctoral degree programs. After a decline in enrollment and degrees earned in the mid 1980s, both enrollment figures and degrees awarded in social work programs appear to be on the rise again (table 2.1).

In a field historically composed predominately of women, there appears to be an increase in the percentage of women enrolled in both MSW and DSW programs, with a concomitant decrease in the percentage of men. The percentage increase of women in doctoral programs is greater than the increase of women in master's programs. An increasing number of students over the age of 40 are enrolled in both the MSW and DSW programs. With the exception of an increase in the number of white BSW students, the ethnic distribution of students seems to be steady over time (table 2.2).

The largest percentages of social work graduate students are found in the Middle Atlantic, East North Central, and South Atlantic regions, respectively. Seventy-eight percent of the DSW students and 59 percent of the MSW students are educated in these three regions. BSW students are more broadly distributed, with the greatest percentages in the East North Central, West North Central, South Atlantic, and Middle Atlantic regions, respectively. Sixty-two percent of the BSW students are located in one of these four regions (table 2.3).

Psychiatric Nursing

Training Practices

Specialty training in psychiatric nursing occurs within graduate programs in nursing. Such training experienced consistent growth, spurred by Federal support, from the late 1940s until the mid 1970s (Chamberlain 1983). Master's education in psychiatric nursing focuses on knowledge about mental disorders and the development of advanced practice skills, such as psychotherapy, psychoeducation, and psychosocial rehabilitation. This training builds on generalist education provided in baccalaureate nursing programs. Curricular content areas consistently identified as important for graduate education in nursing include: psychopathology-neuropathology, psychopharmacology, individual, family, and group therapies (Fox and Chamberlain 1988; NIMH 1987). With the increase of doctoral programs in nursing designed to prepare researchers for the profession, many master's programs have reduced the research course work required in their master's program, thus reducing program length and increasing clinical practice requirements (Fox and Chamberlain, p. 298). Master's programs in nursing range from 9-60 months in length, with the average being 27.5 months (American Association of Colleges of Nursing (AACN) 1990). There are 96 programs with a specialization

in psychiatric mental health (AACN unpublished data, verbal communication, Carol Bush, NIMH). The National League of Nursing (NLN) reports there are 12 programs preparing nurse practitioners with a psychiatric mental health specialty area (NLN 1991a).

While some registered nurses continue to be prepared in diploma and associate degree programs, the professional educational standard is clearly baccalaureate education as a basic requirement for entry to nursing practice. Admission to psychiatric nursing master's programs requires the baccalaureate degree. Recent trends in baccalaureate nursing education include "Second Degree" programs designed for students with a prior baccalaureate degree in another discipline, and also "R.N. to M.S.N." educational programs. "R.N. to M.S.N." programs admit nurses without a baccalaureate degree into programs of study that lead to baccalaureate and master's degrees in nursing. Another trend in undergraduate programs identified by Peplau (1989), integrating psychiatric content into the total curriculum (versus providing specific psychiatric content and clinical experiences), reduces the exposure of student nurses to the field and may decrease the likelihood that they will pursue graduate education in psychiatric nursing.

The total number of graduate nursing students is influenced by the pool of available registered nurses. The R.N. workforce has expanded by 45 percent since 1977 to over 2 million in 1988 (Moses 1990). However, the percentage of R.N.'s employed in psychiatric nursing was less than 5 percent in 1955 (Rosenthal 1984), and is essentially the same today. Just 4 percent of the R.N. work force (NIMH 1983; Merwin and Fox 1990) is employed in psychiatric settings. However, approximately 9.8 percent or 67,327 R.N.'s working in inpatient hospital units spent the majority of their time caring for psychiatric patients (Moses 1990).

The number of nurses working as generalists in psychiatric settings can be expected to influence the number of nurses seeking specialist education. The number of full time equivalent registered nurses working in mental health organizations grew from 31,110 in 1972 to 66,180 in 1986. This increase resulted in registered nurses comprising 13.4 percent of all staff in 1986, up from 8.3 percent in 1972 (NIMH 1990).

Pool from which Psychiatric Nurse Students are Drawn

Despite the increasing supply of registered nurses, there is increasing concern about the future supply of both generalist and specialist psychiatric nurses. Enrollments in basic educational programs to prepare registered nurses declined between 1984 and 1988 (Rosenfeld 1990), but are beginning to increase (NLN 1991). In 1980, approximately 3,000 new R.N.'s (4 percent of all graduates) annually could be expected to work in psychiatric settings. The total number of new R.N. graduates declined from 75,523 to 61,660, between 1980 and 1989 (NLN 1991), so only 2,500 new graduates could be expected to enter the psychiatric nursing work force in 1989. These declining enrollments and graduations from all types of registered nurse programs influenced the Secretary's Commission on Nursing statement that there is a current nursing shortage which is "real, widespread, and of significant magnitude" (p. iv). Further, this shortage may greatly increase the risk of the nation for ill health (p. x) if mechanisms to support undergraduate and graduate nursing education are not implemented.

There has been a decline in enrollments in psychiatric nursing master's programs which parallels the decrease in NIMH funding of graduate students enrolled in these programs (Chamberlain 1987). Decreased financial support is reflected in increasing difficulty in recruiting master's prepared psychiatric nurses. While no national study describes a shortage of master's prepared nurses, of 32 organizations providing psychiatric services in Virginia, only 6 percent reported that there was an adequate supply of master's prepared psychiatric nurses available for hire; 34 percent reported that several months were required to recruit such a specialist; 31 percent reported they were not usually able to recruit a specialist and therefore hired either a nurse without a master's degree or another type of professional; and 9 organizations reported no need for these nurses (Merwin et al. 1991).

Licensure and Certification

Licensure as a registered nurse is granted to an individual by a State following completion of an approved basic educational program for registered nurses, and a written examination. There are three main types of educational programs whose graduates are eligible to seek licensure as registered nurses: hospital diploma programs, associate degree programs and baccalaureate programs. Registered nurses prepared in any of the above programs may chose to work in the specialty area of psychiatric nursing. Credentialing in psychiatric nursing is obtained through national certification by the American Nurses Association (American Nurses Credentialing Center pp. 6-7). The first level of credentialing is as a generalist psychiatric nurse. The ANA describes the practice of generalist psychiatric nurses as having "expertise in psychiatric and mental health nursing practice," understanding "theories concerning personality development and the behavior patterns involved in the treatment of mental illness," and possessing "knowledge of the expected effects of treatment upon client behavior, and of the relationship this has to nursing care" (American Nurses Credentialing Center 1991 p. 7). Advanced credentialing is required for specialists in psychiatric mental health nursing. These specialists are registered nurses who have completed graduate education in this area of nursing. Each State determines how licensure laws affect the specialty practice of nursing. Most commonly, States have added an "additional acts clause" to the basic nursing practice act to allow for advanced practice (LaBar 1983). Other approaches have included definitions of types of advanced nursing practice and delineating related activities, as well as adding sections of laws that authorize the practice of a particular type of specialist (LaBar 1983). Licensure and regulatory requirements for the practice of specialists of psychiatric nursing vary from State to State, depending on the State's approach to advanced practice (LaBar 1983).

The American Nurses Association provides certification for clinical specialists in adult and in child/adolescent psychiatric nursing. Requirements for certification include master's level education, post-master's experience and clinical supervision/consultation, as well as successful completion of a nationally administered written examination (American Nurses Credential Center 1991). Specialist nurses are required to demonstrate "a high degree of proficiency in therapeutic and interpersonal skills. These specialists not only influence and modify attitudes and behaviors of the patient, but also assume responsibility for the advancement of nursing theory and therapy. In addition to therapy, their role includes teaching, research, consultation, supervision, management and coordination of patient care" (American Nurses Credentialing Center 1991 p. 15).

Trends in Numbers and Characteristics of Psychiatric Nurse Students

Table 2.1 indicates that the actual number of students enrolled in psychiatric nursing specialty programs has declined from 1979-80 until 1989-90. The percentage of full-time master's students with a focus on advanced clinical practice who specialized in psychiatric nursing has declined from 18 percent in 1979 to 11 percent in 1989. Of 25,887 enrollees in graduate nursing programs in Fall of 1990, only 1,979 (7.6 percent) were enrolled in psychiatric nursing specialty areas (NLN, unpublished data). Further, as table 2.1 indicates, a sharp decline has occurred in the percentage of students enrolling on a full-time basis. Although the 941 full-time students reported in 1979-80 is probably an undercount, since it doesn't include student specializing in the functional role of teaching, it still is almost twice as large as the number of full-time enrollees in 1989-90. The percentage of full-time enrollees declined to 22 percent, or 442 in 1990-91. In addition to a decline in the actual number of students enrolled in psychiatric nursing master's programs, the escalation of part-time enrollments from approximately 51 percent in 1979-80 to 72 percent in 1989-90, and to 78 percent in 1990-91 has resulted in a sharp decrease in actual graduations. In the academic year 1979-80, 781 master's degrees were awarded to nurses specializing in psychiatric nursing; only 503 degrees were awarded in 1988-89, with 643 being awarded in 1989-90. The percentage of graduates of master's programs in nursing who specialized in psychiatric-mental health nursing declined from 16.4 percent in 1979-80 to 10.3 percent in 1989-90 (Rosenfeld 1990; NLN 1991a).

Specific data are unavailable on the demographic characteristics of graduate students of psychiatric nursing; however, it is assumed that psychiatric nursing students' characteristics are similar to characteristics of all graduate nursing students. Graduate nursing students can be profiled as 95.5 percent female, with a racial/ethnicity composition of enrollees including: 88.9 percent white, 5.7 percent black, 2.8 percent Asian and Pacific Islander, 1.8 percent Hispanic, 0.4 percent American Indian and Alaska Native, and 0.4 percent foreign (AACN 1990-91, p. 14). However, practicing R.N.'s with master's degrees in psychiatric nursing reflect a lower minority representation than that represented in the overall graduate nursing student body (NIMH 1990, p. 206). It is not known if minority representation among psychiatric nursing students is comparable to other specialties in nursing. The age distribution for graduate students of nursing is unknown. The lack of demographic data on psychiatric nursing graduate students inhibits planning and policy making. It is not possible to consider questions about the age of the work force related to planned retirements or adequate minority representation due to this lack of data.

Currently, about 33 percent of certified psychiatric specialists received their master's degrees outside of nursing in a variety of other areas, with psychology and education being most prevalent (Merwin et al. 1992). One justification for seeking a degree outside nursing is a reported lack of geographically accessible programs in psychiatric nursing.

Table 2.3 demonstrates the geographical distribution of students enrolled in psychiatric nursing master's degree programs. Twenty-one percent of the students are in the Middle Atlantic region of the country, while the West North Central and East South Central regions have only 5.5 percent of enrollments each. Noteworthy is the fact that 10 States have no enrollees, signifying the lack of available training programs.

Developing Areas of Practice

Marriage and Family Therapy

Marriage and family therapy has been developing for over fifty years. The development of the marriage and family therapy profession represented a merger of the initially separate fields of marriage therapy and family therapy within a systems framework. Today, marriage and family therapists are recognized mental health professionals who apply family systems theories and intervention techniques in clinical practice. Marriage and family therapists diagnose and treat mental and emotional disorders and other health and behavioral problems, as well as address a wide array of relationship issues within the context of the family system. Individuals, couples, and families benefit from the unique perspective and skills of marriage and family therapists, whether the presenting problem is a specific mental and emotional disorder or is related to marital and family relationships.

Marriage and family therapists practice in many health and mental health settings in both the public and private sectors. For example, marriage and family therapists frequently practice in private clinical practices, community mental health centers and other community clinics and agencies, general and psychiatric hospitals, schools and other human service delivery settings. Increasingly, they are also involved in roles other than direct treatment, such as administration of human service and agency settings, prevention program development, public welfare (especially child welfare through family preservation services), public policy development, client advocacy, and consultation.

Education and training requirements in marriage and family therapy are both intensive and extensive. Entry-level requirements for education and training are embedded both in the clinical membership requirements of the American Association for Marriage and Family Therapy (AAMFT) and in State regulatory laws, which are modeled on the curriculum established by the AAMFT Commission on Accreditation for Marriage and Family Therapy Education, the national accrediting body for this profession recognized by the U.S. Department of Education. The Commission accredits master's, doctoral and post-degree clinical training programs in marriage and family therapy throughout the United States and Canada. Typically, the requirements for accreditation include a minimum of a master's degree program in marriage and family therapy, with course work in the theoretical foundations of marriage and family therapy, assessment and treatment in marriage and family therapy, human development and family studies, ethics and professional studies, research, and a supervised clinical practicum.

Traditionally, however, there have been two routes for completing entry-level education and training as a marriage and family therapist:

The first route involves completion of a graduate program in marriage and family therapy accredited by the Commission on Accreditation for Marriage and Family Therapy Education. The Commission accredits both university based graduate-level programs in marriage and family therapy and post-degree clinical training programs located in hospitals, clinics and free-standing institutions. The second route involves completion of a graduate program in mental health (i.e., psychiatry, psychology, psychiatric nursing or social work), which may have included some education and training in marriage and family therapy, followed by completion of post-degree education, training and supervised clinical practice in marriage and family therapy, often through a post-degree institute.

AAMFT also has instituted an approved supervisor designation to identify those professionals who have met the association's education, experience and supervision requirements to supervise marriage and family therapy trainees. AAMFT Approved Supervisors have completed not less than 180 post-degree hours of experience as a marriage and family therapy supervisor, including at least 36 hours of supervision under the guidance of an experienced Approved Supervisor. In addition, AAMFT Approved Supervisors also have completed a minimum of 3,000 hours of post-graduate clinical work in marriage and family therapy over at least three years of clinical practice.

At present, there are more than 2,000 AAMFT Approved Supervisors, with nearly 1,500 more marriage and family therapist professionals as supervisors-in-training.

A total of 29 States license or certify marriage and family therapists at the present time. These States include: Alaska, Arizona, California, Colorado, Connecticut, Florida, Georgia. Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Nevada, New Hampshire, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Utah, Washington, Wisconsin, and Wyoming. The regulatory laws in these States typically include criteria for marriage and family therapists from either of the routes described above to apply for licensure or certification and sit for the required examination.

At the present time, there are 73 accredited and candidate marriage and family therapy educational programs. During the 1991-92 academic year, approximately 1,000 students were enrolled in accredited educational programs.

There are approximately 40,000 licensed/certified marriage and family therapists in the United States who reside and practice in the 29 jurisdictions that currently regulate this profession. In addition, the total approximate number of practicing marriage and family therapists and marriage and family therapy trainees in the United States exceeds 75,000.

Clinical Mental Health Counseling

In the early years of the 20th century, professional counseling began with vocational counseling. Counselors were then likely to be found in governmental agencies dealing with career selection. Later, these positions were established in educational settings in a logical pairing of training and career selection. Vocational counselors in agency settings and guidance counselors in educational settings prevailed as the defined specialties of counseling in the first half of the century.

In the 1950s, many trained counselors found work in clinical settings where they received supervision and experience in therapy milieus. Others opted for positions titled as social work. In the late 1950s, the passage of the National Defense Education Act paved the way for scores of graduate schools of education to establish funded programs to train guidance counselors. The intent of the school counseling addressed in the Act was to establish a national cadre of counselors adept in helping students planning for post-high-school education. More specifically, Congress wanted talented math and science students to be screened and encouraged to further their education. Thus, the Soviet space and arms race gave rise to the establishment of counselor education programs across the nation.

By the end of the 1960s, more than 300 academic units housed counselor education postgraduate training programs. That number increased to 550 by 1980, and the number of programs stabilized in the mid-1980s at about 500. As many as 20,000 advanced degrees in various specialties of counseling were being granted in the late 1970s. By the late 1980s, the number of advanced degrees being granted annually in counseling stabilized at about 10,000. In 1990, 9,401 master's degree students and 664 doctoral students were graduated.

The large number of counselor education graduates was accompanied by an increased number of students seeking work settings outside education. The intriguing nature of clinical work and the preponderance of clinically trained counselor educators gave rise to specialized degree concentration in clinical mental health counseling, family counseling, community agency counseling, and rehabilitation counseling.

Clinical mental health counseling is considered the specialty area of professional counseling that requires extensive course work and clinical preparation and supervision. The Academy

of Clinical Mental Health Counselors (ACMHC) requires a 60-semester-hour master's degree, as well as clinical supervision, taped therapy samples and examination for certification as a clinical counselor. Those standards are considered the minimum entry level requirements for clinical counselors.

The Commission on Rehabilitation Education (CORE) and the Council for Accreditation of Counseling and Related Educational Programs (CACREP) accredit 79 and 150 academic programs, respectively. Most other counselor education programs emulate the standards of these two bodies.

The 60,000-member American Counseling Association (ACA) is the largest group of counselors representing the various specialties of the discipline. About two-thirds of the members are females.

The ACA division most closely identified with clinical/therapeutic counseling is the American Mental Health Counselors Association, a 12,000 member division. However, an estimated 44 percent of the total ACA membership identify themselves as practicing in clinical settings, indicating that a variety of specialty areas of the profession include clinical work.

About 124,000 counselors were working in the United States in 1988, according to the Occupational Outlook Handbook, 1990-91. Of this number, an estimated 41,000 actively practice in a clinical setting.

As of June 1992, thirty-seven States and the District of Columbia have credentialing statutes regulating nearly 50,000 counselors (Vroman and Bloom 1991; National Board for Certified Counselors 1992). National specialty boards certifying master's-level and above counselors, include the Commission on Rehabilitation Counselor Certification (CRCC), the Academy of Clinical Mental Health Counselors (ACMHC), and the National Board for Certified Counselors (NBCC). Respectively, these boards certify a total of 9,000, 2,000, and 17,000 counselors.

In 1990, graduates of master's training programs of a clinical nature totaled 4,977 (3,303 females and 1,674 males). Doctoral programs graduated 367 students (215 females and 152 males). Every State and Territory has a number of counselor preparatory programs roughly proportional to the regional population (Hollis and Wantz 1990). Graduate programs have totaled about 5,000 clinically trained counselors per year. Most master's degree programs averaged 3 years to complete, meaning that roughly 15,000 are in training at this time.

Psychosocial Rehabilitation

Psychosocial rehabilitation is a relatively new development in the mental health field. In the early 1970s, a handful of agencies were experimenting with providing services to persons with serious mental illness, which would address the practical, day-to-day needs of life in the community, such as housing, income, friends, a job, and the skills to cope with a serious mental illness. These early efforts were characterized by a practical, experiential approach; an emphasis on developing coping skills; empowerment of the disabled person; and integration of the client and the services into the normal life of the community. As the effectiveness of these early programs was demonstrated by the reductions of rehospitalization rates and the improvement of the quality of life of the clients (often called members), psychosocial rehabilitation practices began to spread.

The growth of the field was further spurred by the deinstitutionalization movement and an emphasis on community treatment. The NIMH Community Support Program was instrumental in supporting the growth of psychosocial rehabilitation and community support services throughout the United States. As an example of this rapid expansion, the first National Directory of Organizations Providing Psychosocial Rehabilitation Services listed 965 facilities which identified themselves as offering psychosocial rehabilitation services. The second edition of this Directory, published in 1990, listed 2,200 facilities. Rehabilitation services are seen as a necessary part of the interventions required to support individuals in the community, helping them to overcome the disabilities associated with their mental illness (Gunderson et al. 1984; Hogarty et al. 1986; NIMH 1991).

Over the last 20 years, the concepts that evolved have spawned a new field of practice—psychosocial rehabilitation. Psychosocial rehabilitation programs usually provide residential services, training in community living skills, socialization and recreation, vocational rehabilitation, case management and/or education. It is typical for a practitioner to emphasize one of these areas of service over another. Interventions in psychosocial rehabilitation draw from several fields including mental health treatment, rehabilitation, and education.

The International Association of Psychosocial Rehabilitation Services (IAPSRS) estimates there are approximately 2,000 to 3,000 agencies and/or programs offering psychosocial rehabilitation services to persons with serious mental illness, each with an average staff of 16. A conservative estimate of the work force is 32,000. Most of the agencies are publicly funded.

Many psychosocial rehabilitation workers enter the field with previous training in another mental health related area. Approximately one-quarter have a master's or doctoral degree and approximately 40 percent have a bachelor's degree. These degrees are in such areas as psychology, social work, nursing, sociology, counseling, and psychiatry. Until recently, little formalized training has been available in the practice of psychosocial rehabilitation. Agencies providing psychosocial rehabilitation services hire interested, caring people and train them on the job, through supervision, inservice training and experience. Most States now require that in-service training be provided to all psychosocial rehabilitation practitioners, and frequently dictate the content of training. Many psychosocial rehabilitation agencies provide structured training for their own staff, as well as practitioners throughout the field. A handful of training organizations, some university-based, have developed training materials and courses for psychosocial rehabilitation providers. Universities and colleges have only recently begun developing curricula in this area.

Until recently, almost no data have been available to describe psychosocial rehabilitation providers. In 1992, IAPSRS surveyed the practitioners in the field through a

grant from the National Institute on Disability and Rehabilitation Research. Based on responses from 9,450 providers, the survey results indicate that two-thirds of the providers are female. Seventy-four percent of the workers are white, 19 percent are black, 5 percent are Hispanic, one percent Asian, and one percent Native American or self-labeled "other."

The average age is 38 years, with a mean of 5.5 years of experience in psychosocial rehabilitation. About one-third of the workers have been in the field less than 2 years, which may be a reflection of the rapid expansion of psychosocial rehabilitation. Seventy-eight percent of the workers are in direct service. Thirty-six percent work in residential programs, 32 percent in daytime facility-based programs, 15 percent in case management, 9 percent in vocational, and 6 percent in other areas.

Discussion of Trends and Issues

Trends evident from the training data presented in this chapter include: (a) the increasing percentage of women students of psychiatry, psychology, and social work; (b) an increase in part-time enrollment in social work and psychiatric nursing; and, (c) a geographically uneven distribution of trainees (reflecting the location of training programs).

The increase of women students to approximately 60 percent in psychology and 42 percent in psychiatry, concomitant with the historical dominance of women in nursing and social work, will affect the character of professional staff practicing in mental health settings. Related to the increase in women students is the increase of part-time students in psychiatric nursing and social work. Childbearing and rearing typically take place during the years when many women complete their education and may influence a woman's decision to enroll as a part-time student. This increase can also be traced to a decline in financial assistance for full-time study in psychiatric nursing and is made possible by the availability of tuition assistance for part-time graduate education as a common fringe benefit for nurses who are employed full time.

The low percentages of minorities in the mental health professions are a critical concern. Efforts to increase minority enrollments do not appear to have been effective thus far. Although actual numbers of minority trainees have increased, higher enrollments across the board have negated any percentage increases of minorities within the trainee populations of the different disciplines (except for a small percentage increase in social work). While the importance of cultural diversity has been recognized and in fact emphasized since the 1980s, the relatively small number of racial and ethnic minorities is reducing the future mental health workforce's potential to reflect the racial/ethnic composition of clients. The NIMH National Advisory Mental Health Council has called for research to evaluate the advantages of having minority practitioners available to treat minority clients (NIMH 1991, p.24). Even if these benefits are established through research, it will be impossible to increase the availability of minority professionals for years to come unless efforts to modify t current distribution of trainees are vigorously initiated.

The geographical distribution of trainees suggests disp ities. Several regions reflect a heavy representation of all d ciplines. All disciplines are heavily represented in the Mi dle Atlantic, East North Central and South Atlantic regior while psychology is also heavily represented in the Pacifi Further assessment of the impact of the geographical dist bution of training programs upon mental health practice p terns needs to occur. This evaluation should take place the country reviews its use of health care dollars and attemp to determine improved methods of delivering health car

The high cost of health and mental health care also is spu ring regulatory debates related to the Federal funding educational programs. Medicare payments to teaching hosp tals are an important source of support for residency trai ing in psychiatry, as well as other medical specialties. F ture levels of those payments are uncertain due to poli proposals aimed at reducing overall Medicare spendin While this payment mechanism only affects the preparatio of psychiatrists, the relative absence of psychiatrists in com munity mental health agencies and the shortage of ps chiatrists in public inpatient facilities will only be exacerbate by such a decrease in trainee support.

The continued increase in health care costs is pressurin the health care system to find more cost-effective metho of delivering care. With the ongoing growth of the agin population in our country, these cost concerns are increas ing. Current responses to these concerns have included th use of managed care, expansion of roles and reimbursemen for different providers, and the desire to increase consume involvement in health care decisions. The effect of thes changes on costs and quality is frequently debated.

Managed care poses challenges to the professions to reor ganize the mental health service delivery system. While th prior reimbursement issue has been the attainment of in dependent reimbursement for individual provider groups managed care is likely to promote a substitution of less costl providers for others (Knesper 1989). Coverage of menta health care is often more restrictive under managed care, a compared to general health care. Training programs will need to increase their focus on short-term treatment, as their graduates are likely to need to treat clients under more re strictive utilization conditions than traditionally used.

The issue of substitutability of mental health professionals is poorly understood beyond the interchangeable use of core professionals as psychotherapists (Knesper 1989). Research is sparse that would allow for a comprehensive evaluation of the cost-effectiveness of mandatory reimbursement of specialists that have not traditionally been reimbursed. There has been strong advocacy by the professions to gain indepen dent reimbursement for psychotherapy. The issues of sub stitutability highlight the need to identify competencies of each discipline (Merwin and Fox 1992), as well as to over come expected increases in competition for resources sparked by strategies to reduce health care costs (Pion 1991). The evolving proposals for establishing a national health plan will result in decisions that will affect the mental health delivery system.

The role of consumers in the design of educational programs has generally been overlooked. However, the last decade has demonstrated increased involvement of consumers (both individual clients and their families) in policy-making. Consumer and family influence on changes in care delivery is well recognized as a permanent contributor to quality mental health service. Consumers' concerns about professional education and training may differ from professionals' concerns (Garrard, J. et al.1988). The National Alliance for the Mentally Ill and consumer mental health organizations are challenging professional mental health educators and service providers to prepare students to practice in a manner consistent with the needs of the consumer.

The aging population, changes in the knowledge base related to treating mental illnesses, alterations of practice patterns, increases in the availability of information technologies, and changes in reimbursement policies collectively influence the need for curricular response from our educational programs. These changes accentuate the need for training in biophysiological, psychosocial, rehabilitative, and preventive aspects of mental health care.

The recent promising research on biologically-based mental illnesses will require an increased emphasis on the biological bases of mental illness in curricula. The Health Agenda for the year 2000 requires an increased focus on preventive activities to meet the nation's health goals. The aging population will require a closer integration of physical with mental health care. These changes are likely to result in a decreasing emphasis on psychotherapy in many training programs; multiple modalities will need to be learned. Indeed, as research is advancing knowledge in the behavioral, biological, social, and health sciences, it will be necessary for these varied perspectives to be integrated into professional training programs.

In the past, training practices and philosophies grew from the research efforts of faculty, resulting in an uneven diffusion of knowledge. Diagnostic technology is expected to become increasingly sophisticated as knowledge increases about factors that lead to certain diagnoses. Training in diagnostic technology appears uneven and needs to be integrated into the training of students and the retraining of faculty. Advanced education in management for the professions' leaders, including development of computer skills, will be necessary to practice within an increasingly complex reimbursement system, and to participate in increasingly complex quality of care monitoring and evaluation, including research on the outcomes of mental health care. Increased knowledge of information technologies will enhance professionals' abilities to use telecommunications and bibliographical data bases, and it will increase ease of communication among professionals.

The NIMH National Advisory Mental Health Council has identified the most prominent human resources development need as modifying the "values, roles, and skills of the core mental health professionals . . . as the focus shifts from State hospitals to innovative, community programs" (p. 45). Specific issues they raise with implications for higher education include: fostering collaboration between academic and public mental health agencies; research-based human resources planning, and evaluation of "collaborative training" (p.46); improved methods to "train technicians to become managers and administrators" (p.46); and regulatory influences on the roles of these core professionals (pp.45-46).

Innovative community-based treatment poses a challenge to many academic programs where faculty themselves may have learned to practice their discipline in traditional settings. Community-based treatment offers the opportunity for increased involvement of mental health professionals in prevention activities. Developing curricula that challenge students and faculty to identify opportunities for preventive interventions will assist the mental health system to emphasize maintaining mental health rather than training therapists whose main interest and skill is in treating already developed mental illness.

Programs also need to include training necessary to the rehabilitation of severely mentally ill individuals. Training programs should ensure that trainees are adequately prepared to meet the needs of these individuals and that they have backgrounds necessary to practice in the public sector. Encouragement of trainees to seek future employment in the public sector is important; it is also difficult, as many students incur large debts from student loans and seem increasingly unable and/or unwilling to accept relatively low salaries offered in many public settings. This concern could be addressed through increasing Federal assistance to students planning careers in the public mental health system.

Perhaps the most critical variable in the future of quality public mental health services is fostering collaboration among disciplines, and between academics and service providers. The future care providers of public mental health services will of necessity learn new knowledge, new interventions and new service delivery models. Educational programs that collaboratively educate and train multiple professional mental health students (psychiatrists, psychologists, psychiatric social workers, psychiatric nurses, psychosocial rehabilitation and mental health counselors, and marriage and family therapists) with the most current knowledge about mental illness and effective interventions are likely to determine how public mental health care will be delivered in the next century.

Footnotes

[1] The focus of this section is on doctoral-level training. However, training for involvement in direct services also is carried out by programs offering the master's or specialist degrees (e.g., the Ed.S. or Educational Specialist). The graduates of these programs, although not included in our discussion and the corresponding tables, constitute an integral component of the psychological workforce in health/mental health services delivery. For example, approximately three-fourths of the 20,000 school psychologists hold nondoctoral degrees, but are certified or licensed for practice at some level (Fagan 1986). The rationale for targeting attention at doctoral psychologists and training stems from the fact that the doctoral degree is now required by most States for the independent practice of psychology (i.e., performing diagnostic assessments and psychotherapy without supervision by another professional). In addition, sound data on nondoctoral education and employment are sparse at the present time.

[2] A small number of programs train individuals in a combination of these specialties (e.g., clinical-school psychology).

[3] The correspondence between training model and degree awarded is not perfect since some free-standing schools of professional psychology, although embracing a practitioner-focused training model, award the Ph.D.

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Response Rates.—Through repeated follow-ups with department chairs and residency training directors, the Annual Census of Residents consistently obtains responses from 100 percent of U.S. psychiatric residency programs.

Psychology

Sources of Data.—Several sources of information were used to compile the numbers reported in tables 2.1-2.3:

- *Graduate student enrollments.* The data on full- and part-time enrollments in doctoral clinical, counseling, and school psychology programs were assembled, using data reported in *Graduate Study in Psychology and Associated Fields* published by the American Psychological Association (APA). This volume is produced annually by staff in the APA's Education in Psychology Office who survey department chairs on a variety of program and student characteristics (e.g., number of faculty, number of student openings, and focus of the program). Beginning in 1983-84, information was provided on the numbers of full- and part-time students enrolled in doctoral departments[1] and reported by subfield of program (e.g., clinical psychology vs. experimental psychology) and by type of doctoral degree (e.g., Ph.D. or Psy.D.). As such, they provide the best data available on graduate enrollments in the health service provider specialties.[2] Although the exact response rate is unknown, the participation of department chairs in providing information is high due to the widespread use of the volume as a reference source on graduate psychology education.

  Information on full- and part-time enrollments for each department with doctoral programs in clinical, counseling, or school psychology was compiled for the years 1984-85 and 1989-90. For those programs not reporting updated information, figures from either the prior or subsequent year were used; wherever possible, these two were averaged to derive an estimate for the respective program.

  Although trend data were not available, an estimate of first-year, full-time enrollments in professional psychology training programs was developed for 1989-90, based on figures collected in the Survey of Graduate Departments of Psychology. This survey is conducted annually by APA's Office of Demographic, Employment, and Educational Research and canvases the same population of chairs covered by *Graduate Study in Psychology and Associated Fields.* Each chair is mailed a questionnaire that requests additional information (e.g., faculty salaries and graduate student support). In 1989-90, chairs were asked to provide data on the number of first-year enrollments by subfield of psychology. These data were used to calculate percentages of total first-year enrollments for each subfield, and those relevant to mental health training were applied to the total full-time enrollments obtained from *Graduate Study in Psychology and Associated Fields.* The response rate for departments offering the doctoral degree was 68 percent in 1989-90.
- *Sex and race-ethnicity of graduate students.* Once again, the Survey of Graduate Departments of Psychology provided the source of these data. In the 1984-85 and 1987-88 efforts, chairs were asked to report information on the sex and race/ethnicity of their currently enrolled graduate students by type of program (masters vs. doctoral) and broad field of psychology (health service provider vs. research/other), and the response rates were 70 percent and 68 percent, respectively. The percentages obtained in the 1984-85 survey were applied to the total enrollments compiled from *Graduate Study in Psychology and Associated Fields* for that year. With regard to the characteristics of 1989-1990 students, the percentages derived from the 1987-88 survey were used, given that this was the most recent information available.
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Limitations of the Data.—As in most data collection efforts on graduate education and training, surveys are used to gather the information, and the quality of the resulting data depends on the adequacy of population coverage, the questionnaire items, the response rates achieved, and the estimation procedures (if applicable). In addition, the degree to which the information is accurate depends on the accuracy of the self-report data provided. The two annual APA surveys described above are censuses of doctoral programs in psychology and achieve reasonably high response rates; however, no precise figures are available on the consistency and accuracy of the information reported by chairs (e.g., as compared to information compiled by graduate dean's offices or other relevant institutional sources responding to similar surveys). While there is no reason to suspect biased reporting, it is likely that some loss of precision results from differences such as those in record-keeping strategies and different definitions of "full-time" status across institutions.

Social Work

Source and Scope of the Data.—The Council on Social Work Education conducts annual surveys of CSWE-accredited social work programs. The surveys they conducted in 1980, 1985, and 1990 are the sources of data used in this report. These data include information about numbers of students enrolled, their sex, ethnicity, age, and the geographic distribution of the schools.

In 1990, 311 (85.2 percent) of the 365 CSWE-accredited baccalaureate programs, 96 (97 percent) of the 99 CSWE-accredited master's programs, and 46 (90 percent) of the 48 social work doctoral programs in the United States provided information.

In 1985, the data were provided by 293 (83.5 percent) of the 351 CSWE-accredited baccalaureate programs, by 86 (96.6 percent) of 89 CSWE-accredited master's programs, and by 40 (85.1 percent) of the 47 social work doctoral programs in the United States.

In 1980, the data were provided by (83.9 percent) of the 261 CSWE-accredited baccalaureate social work education programs, 100 percent of the 87 CSWE-accredited masters programs, and 100 percent of the 37 doctoral programs in the United States.

Special Features.—The data for the social work student population reflect the fact that the field recognizes three different levels of competence: BSW, MSW and DSW, and that there are a significant number of part-time as well as full-time students.

Limitations.—No data are available for part-time BSW students. In addition BSW counts include only junior and senior college students because many universities do not have students declare a major until they reach their junior year.

Generalizability.—There is a lower response rate from baccalaureate programs. Although the response rate remains similar over the years, allowing for comparison, nevertheless, the lower rate means greater caution must be taken in generalizing from these data.

An additional concern is the low graduate level response rate in 1985. Since the response rates are lower than usual, particularly for the doctoral programs, the Council suggests that caution should be taken when comparing them to other years.

Psychiatric Nursing

Scope of Survey.—Data in the tables comes from Annual Surveys conducted by the Division of Research at the National League for Nursing (Rosenfeld 1990; NLN 1991a; NLN 1991b). The NLN surveys all basic and graduate programs in nursing annually. The NLN defines an academic year from August 1 through July 31. The surveys are sent out in September and are due in October. Enrollment data is collected as of October 15. Graduation data reflects the August to July time period. A second and third mailing, followed by an individual phone contact result in a 100 percent response rate on major variables including graduations and enrollments (Hodge, J. Personal communication, May 1992).

Sample Design.—The population of known master's programs in nursing are surveyed by the NLN. NLN continuously updates its files to maintain a current list of graduate programs in nursing (Hodge, J. Personal communication, May 1992).

Data Collection and Instrument.—The NLN distributes a survey tool to all known programs, and conscientiously follows up on non-responders. This results in a near 100 percent response rate on essential items.

Estimation Procedures.—NLN uses extrapolation procedures to account for missing values. The total number of enrollments for a program is assumed to be the most accurate data point. Extrapolation procedures are used to ensure that sub-categories within a program total the overall enrollment figures (Hodge, J. Personal communication, December 1991).

American Association for Marriage and Family Therapy

The American Association for Marriage and Family Therapy (AAMFT) has engaged in limited collection of data regarding human resources issues pertinent to the community of marriage and family therapists in the United States. Data that have been collected and reviewed in connection with the preparation of this chapter include:

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Given the relative paucity of accessible information regarding human resources in the marriage and family therapy profession, information from the resource files of the American Association for Marriage and Family Therapy also were reviewed in the preparation for this chapter.

Psychosocial Rehabilitation

The data on the psychosocial workforce was generated from a survey in 1992 of psychosocial agencies across the nation. The agencies contacted were those listed in the 1990 National Directory of Organizations Providing Psychosocial Rehabilitation and Related Community Support Services in the United States. A total of 532 of the 2,000 agencies contacted responded. The low response rate can be attributed to the fact that many of the questionnaires were not received by the appropriate person in the agency. The agencies that did respond were representative of the size, geographical location and funding source characteristics of those listed in the Directory. The completed responses were filled out by the agency head, agency personnel person, or a designated representative with access to personnel data and thus have a high degree of validity.

Footnotes

[1] For ease of reading, the term "department" has been used to refer to all academic units housing doctoral programs in clinical, counseling, and school psychology (e.g., university academic departments of psychology, divisions within university departments, and professional schools of psychology).

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