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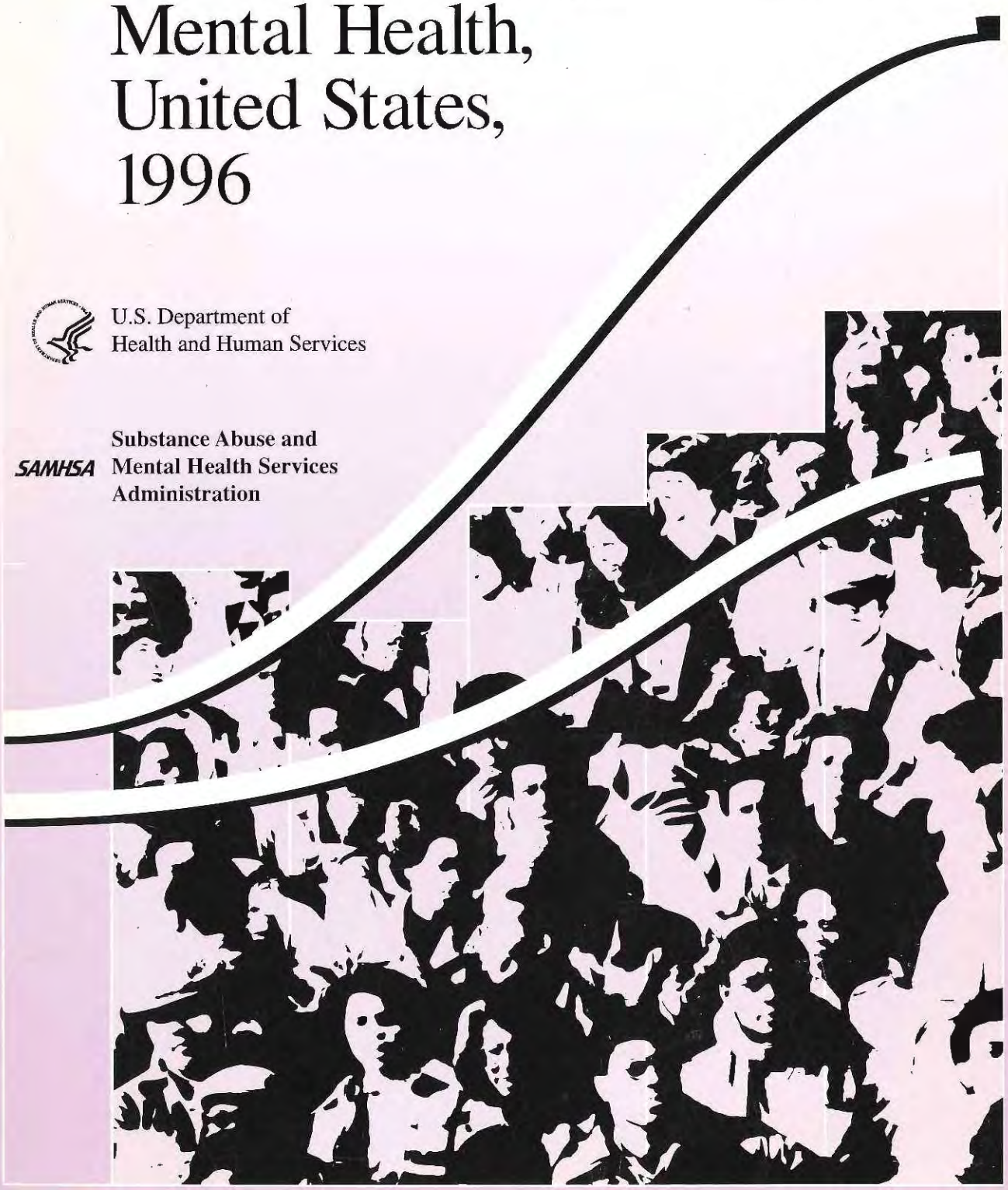

Chapter 10

An Update On Human Resources in Mental Health

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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 four core mental health disciplines.
- To prepare a chapter for *Mental Health, United States, 1990*, that presents and describes these data.
- To identify data gaps, and plan steps by which these gaps might be corrected.
- To improve survey comparability among the four core disciplines, so that the essential pool of common core data can be expanded.

The work group has addressed each of these purposes: a common, minimum data set was identified; a hapter was developed on human resources for *Mental Health, United States, 1990*; a chapter was eveloped on trainees for *Mental Health, United States, 1992*; and a plan was developed to improve data omparability. Early in the 1990s, representatives of clinical mental health counseling, marriage and amily therapy, and psychosocial rehabilitation were added to the work group. More recently, epresentatives of school psychology have also been added.

The present chapter is designed to update information contained in the 1990 and 1992 chapters, and to dd information on disciplines incorporated into the work groups since 1990. The chapter presents omparable information on the size and characteristics of each of the eight disciplines. Results are estricted to those data elements that are comparable across the disciplines. Exceptions to this general pproach are noted in the footnotes and in the appendix to this chapter (p. 238). Readers are encouraged o review the appendix for descriptions of the survey methodologies used to collect the data reported here.

Clearly, a strong need exists in the mental health field for increased precision and comparability of human resources data. Because mental health is a very labor-intensive field, with the preponderance of financial resources spent in this area, the policy and resource implications of human resource data are enormous. To plan adequately for future services, both the public and private sectors require access to such data. In this context, the present chapter is another step along a path that is of potential benefit to the entire field.

At the outset, it is important to specify the scope and limitations of the data. The reader needs to be sensitive to data coverage both across and within disciplines, as well as over time.

The chapter addresses two types of human resources:

- *Clinically trained mental health personnel* - Professionals who, because of recognized formal training and/or experience could perform direct clinical mental health care, whether or not they are doing so at present.

- *Clinically active mental health personnel* - Those professionals who are currently engaged in the provision of direct clinical mental health care (a subset of total mental health personnel.)

The numbers of clinically trained mental health personnel and clinically active mental health personnel are specified only for professionals from the eight mental health disciplines in the work groups. Other groups have not been considered in this report. The reader should note that clinical supervision of trainees is considered to be a direct clinical activity in the analyses of activity type.

When possible, coverage includes an entire discipline, rather than the membership of a professional association. The analyses for each discipline specify the scope of coverage. Timeframes for the statistical information vary somewhat from discipline to discipline. The reader should note the variability within and between disciplines.

Psychiatry

Introduction

The past decade has been a period of transition for psychiatry as a result of the dramatic changes in the nation's health care delivery system. This chapter describes the current workforce in psychiatry. Demographic and training characteristics, as well as professional activities are emphasized. It also reports on psychiatrists' professional activities.

Data sources for this chapter include the American Medical Association (AMA) *Physician Characteristics and Distribution in the United States* (1996); the 1996 membership records of the American Psychiatric Association (APA); the 1994 APA Membership Directory Survey; and the 1988-89 APA Professional Activities Survey (PAS). The AMA data contain information on all physicians practicing in the United States who are self-designated or self-identified as psychiatrists. As a result, the AMA data may include some physicians with no specialty psychiatric training. In comparison, all psychiatrists included in the APA data, which supplement the AMA estimates, by providing data not otherwise available, are board-eligible or board-certified. It should be noted that the APA data do not represent the universe of psychiatrists in the United States. The membership of the APA does, however, include a significant majority of the nation's psychiatrists.

Demographic and Training Characteristics

In 1995, there were 33,486 clinically trained psychiatrists in the United States, reflecting a 29.9 percent increase in the number of psychiatrists since 1982, and a 3 percent increase since 1992 (table 10.1). Table 10.2 provides data on the basic demographic characteristics of the clinically trained APA members in the United States. Approximately 75 percent of the APA members are male, and 25 percent female. In 1996, the median age of APA members was 52 years. The median age of female APA members was 46 years compared to a median age of 54 years for male APA members. Female members under the age of 39 comprise 26.4 percent, compared to only 12.0 percent of male members. Female APA members who are under the age of 50 comprise 64.1 percent, compared to 38.2 percent of male APA members (table 10.2).

Psychiatrists who are white comprise 75.2 percent of APA members, compared to 83.1 percent of the general population (U.S. Bureau of the Census 1995). Individuals of Asian origin represent 8.9 percent of the APA membership and 3.2 percent of the general population. Hispanics, African Americans, and American Indians are underrepresented in the APA membership when compared with their proportion in the U.S. population. Persons of Hispanic descent account for 4.3 percent of the APA membership, and 10.0 percent of the general population, African Americans comprise 2.1 percent of the APA membership, compared to 12.5 percent of the general population, and American Indians constitute .1 percent of the APA membership and .8 percent of the general population. To address the underrepresentation of racial and ethnic minorities among psychiatrists, the American Psychiatric Association encourages high school, college, and medical school programs to recruit minorities to pursue careers in the field of psychiatry.

There are approximately 12.7 psychiatrists per 100,000 individuals in the U.S. population. The distribution of psychiatrists varies across geographic regions, ranging from 4.9 per 100,000 in Mississippi, and 5.9 per 100,000 in Iowa and Idaho, to more than 26.5 per 100,000 in New York, 29.6 per 100,000 in Massachusetts, and 61.1 per 100,000 in the District of Columbia.

Table 10.3 reports the number and rate per 100,000 in the population of clinically active psychiatrists practicing in the United States. The percent of clinically trained psychiatrists in the United States who are clinically active is 90.5 percent. South Dakota reported the highest percentage of clinically active psychiatrists (98.1 percent), followed by Idaho (97.0 percent) and Alaska (95.2 percent). The District of Columbia reported the lowest percentage of clinically active psychiatrists (81.0 percent). Other States which reported relatively low rates of clinically active psychiatrists were Maryland (85.1 percent), Rhode Island (86.8 percent), Connecticut (86.9 percent), and Massachusetts (87.6 percent).

The residency program in general psychiatry has for most of its history been a 4-year program of full-time training that follows the completion of medical school (Dial et al. 1990). The number of medical students entering psychiatric residencies has increased 24.6 percent since 1982. However, since 1990, the number of residents has remained relatively constant. During the 1994-1995 academic year, 6,089 medical residents were trained in psychiatry (table 10.8), a slight increase from the 6,072 psychiatrists

trained during the 1989-1990 academic year. During the past five years, the percentage of male and female residents has remained relatively stable. In 1995, 56.3 percent of psychiatric residents were male and 43.7 percent were female.

Since 1990, there has been a 64.7 percent increase in the number of International Medical Graduates entering psychiatric residencies (American Psychiatric Association, Census of Residents 1995). During 1995, 35.4 percent of psychiatric residents graduated from an IMG compared to 21.5 percent of psychiatric residents in 1990. During this five year period, the number of white residents decreased 16.2 percent, the number of Asian residents increased 65.3 percent, and the number of residents of Hispanic origin increased 22.5 percent. The number of African American residents increased 11.3 percent, and the percentage of American Indian psychiatric residents remained stable at .2 percent. These changes reflect a significant increase in the number of International Medical Graduates trained in psychiatric residencies and indicate a movement toward greater representation of minority and ethnic groups in psychiatry.

Professional Activities

The majority of psychiatrists work in more than one setting during the course of a week. During 1988, the mean number of settings for psychiatrists was 2.3 (Dorwart et al. 1992). Psychiatrists working full time in the U.S. in 1988, and who worked in two or more settings comprised 77.9 percent (table 10.5). Compared with other mental health care providers, a greater percentage of psychiatrists work in two or more settings when employed in a part-time capacity. Psychiatrists working part-time in the U.S., and who work in two or more settings comprise 58.8 percent. Work in secondary settings may reflect both physician preference and the availability of part time positions (Fenton 1987).

Individual or group private practice historically has been the primary work setting for the greatest number of psychiatrists, but substantial changes in the health care delivery system have resulted in a decline in the proportion of psychiatrists primarily working in these settings. Between 1982 and 1988 the proportion of psychiatrists reporting private practice as their primary work activity decreased from 57.7 percent to 45.1 percent (Dorwart et al. 1992).

Growth in the number of private psychiatric hospitals, general hospital psychiatric units, and organizations providing outpatient mental health care has created new employment opportunities for psychiatrists (Olfson et al. 1994). Setting data reported in the 1994 APA Membership Directory Survey indicate 28.2 percent of APA members worked in some form of hospital as their primary work setting (i.e., general, public psychiatric, private psychiatric, or Federal). Specifically, 8.6 percent worked primarily in a public psychiatric hospital, 7.6 percent in a private psychiatric hospital, and 6.8 percent in a general hospital. Respondents who reported working primarily in a community mental health center comprised 6.6 percent.

Approximately 71.8 percent of psychiatrists reported working in a secondary work setting (table 10.6). Private psychiatric hospitals were the most commonly reported secondary employment setting (15.8 percent), followed by individual private practice (15.7 percent), general hospitals (15.1 percent), medical schools (12.4 percent), and Community Mental Health Centers (7.7 percent).

In addition to working in more than one setting, psychiatrists are usually involved in more than one work activity (table 10.7). In 1988, 84.6 percent of psychiatrists were involved in patient care, 52.5 percent in administration, 49.0 percent in some form of teaching, and 17.4 percent in research. Psychiatrists spent a mean number of 32.6 hours per week in direct patient care in 1988, 2.5 fewer hours per week (a 7.4 percent reduction) than in 1982. In addition, in 1988, psychiatrists were spending more time in administrative activities and research, and less time in teaching, than in 1982. The decrease in direct patient care hours, and increase in administrative hours during this period is most likely due to changes in the roles of psychiatrists associated with changes in the organization and financing of the

nation's health care system.

Conclusion

Over the past fourteen years, the number of clinically trained psychiatrists has increased; however, the rate of growth in clinically trained pscyhiatrists has decreased. There has been an increase in the number of female psychiatrists entering the field, and the median age of psychiatrists has slightly increased. The number of psychiatric residents has remained relatively constant since 1990. There has, however, been significant growth in the number of international medical graduates entering psychiatric residencies.

The average psychiatrist works in more than one setting. Individual and group private practice has declined somewhat as psychiatrists' primary work setting, while there has been an increase in the number of psychiatrists working in organized care settings. Psychiatrists continue to be involved in many types of work activities, including direct patient care, research, administration, and teaching.

Psychology

Because of its content and evolution, psychology has traditionally occupied a unique place within the mental health professions. Prior to World War II, psychologists were primarily employed in academic institutions, with only a small core of individuals working outside the university, and actively engaged in mental health services. In fact, only relatively recently has the discipline cultivated a strong and visible practitioner base. It was not until 1977, with the passage of the Missouri psychology licensure, that all 50 States and the District of Columbia granted statutory recognition to the profession (DeLeon et al. 1984). Since then, the number of licensed psychologists has burgeoned, rising from an estimated 20,000 in 1975 to almost 46,000 in 1986, to almost 70,000 in 1995.

Coupled with the dramatic growth in the number of practitioners was a significant expansion in psychologists' roles as direct mental health service providers. Today, psychologists are involved in almost every type of mental health setting, be it institutional or community based, reseach- or treatment-oriented, or general health or specialty focused. Within these environments, psychologists' roles also have expanded beyond the traditional activities of diagnostic assessment and psychotherapy, to include primary prevention, community-level intervention strategies, assessment of service delivery systems, and client advocacy.

Demographic and Training Characteristics

The last two decades have witnessed substantial growth in the number of doctoral-level psychologists who might be called upon to provide mental health services. Since 1983, the number of doctoral psychologists trained in health services provision has risen from an estimated 44,600 (Stapp et al. 1985), to nearly 70,000 in 1995 (table 10.1). Fueling this growth has been increasing degree production; the number of new Ph.Ds and Psy.Ds awarded each year in the practice specialties of psychology increased from 1,571 in 1979 to almost 2,400 in 1989, and was approximately 2,500 in 1995 (Pion 1991: Research Office, American Psychological Association 1996) (table 10.8). Similarly, the training system also has expanded. The number of doctoral psychology programs in clinical, counseling, and school psychology that are accredited by the American Psychological Association has more than doubled, rising from 134 in 1979, to 234 in 1989, and 307 in 1995. The total number of graduate students enrolled in these doctoral programs has risen from 14,586 in 1984-85 to at least 18,773 ten years later (Williams 1996).

Despite this growth in psychologists trained to provide direct services, services by psychologists continue to be relatively inaccessible in many areas of the country, and shortages of mental health personnel appear for certain target populations. These include seriously emotionally disturbed children and adolescents, adults with serious mental disorders, rural residents with mental health needs, and the

lderly, to name a few.

Tables 10.2-10.4 present basic information on the demographic characteristics of psychologists who ould provide mental health services (the clinically trained pool). In many ways, this group reflects the hanging demographic characteristics of psychologists as a whole. For example, women comprised 44 ercent of all clinically trained psychologists in 1995 (table 10.2) -- up from 38 percent in 1989 (Dial et l. 1990). This growth is not surprising, given that the participation of women in psychology as a whole as grown significantly over the past two decades (Pion et al. 1996). In 1995, 64 percent of all Ph.Ds in sychology were awarded to women, as compared to 49 percent in 1985 and 32 percent in 1975 Henderson 1996). Currently, women account for 67 percent of all full-time doctoral students in sychology (Williams 1996).

Although psychology attracts a greater percentage of racial and ethnic minorities relative to many other lisciplines, their representation remains relatively small. Only a small percentage (6 percent) of all linically trained psychologists are racial and ethnic minorities -- a figure that is lower than their epresentation in the U.S. adult population. In terms of doctoral production, the percentage of psychology Ph.Ds earned by racial and ethnic minorities has hovered around 9 percent (National Science Foundation 1994). As table 10.2 shows, the pool of clinically trained women is slightly more racially and ethnically liverse than that of their male counterparts.

In general, the pool of clinically trained psychologists is growing older. The median age in 1995 was 48 years, as compared to 44.2 in 1989. Similarly, the median years since the doctorate increased from 12 years in 1989 to 15 years in 1995. Once again, results show that women are slightly younger than men and have earned their doctorate more recently; the median age for women was 46 years, while the corresponding figure for men was 49 years; the median number of years since awarding of the doctorate was 12 years for women and 17 years for men. These findings are not surprising, given the trends in degree production described above.

Professional Activities

Table 10.1 indicates that the majority (82 percent) of psychologists actively providing services are working full time, and at least half of these individuals are doing this by a combination of two or more positions. For those who are working part time, however, it is more likely that they have only one job or position.

The primary and secondary employment settings of active health service providers in psychology are presented in table 10.6. Over half (52.5 percent) report that their primary employment setting is independent practice, with the majority having their own solo practices, rather than working in a group psychological or medical/psychological practice. The next most frequent setting, albeit a distant second, is hospitals, with 7 percent working in specialty hospitals (e.g., psychiatric, children's, and rehabilitation inpatient facilities), and 5 percent in general hospitals. Another 11.2 percent of clinically active psychologists worked primarily in academic institutions. Clinics and other human service organizations each were the primary employers of 6-7 percent, and a small percentage (3.1 percent) were primarily working in schools and other educational settings. About 8 percent were employed by other types of settings, such as government or business.

Forty-six percent or about 24,500 of all clinically active psychologists worked in more than one setting in 1995 (table 10.6). Again, the most typical employment setting was independent practice (46.8 percent), with universities and four-year colleges ranking a distant second (17.9 percent). Much smaller percentages listed their secondary position in hospitals (8.8 percent), clinics (5.1 percent), and the other types of settings surveyed.

Data in table 10.7 indicate that over three-quarters of those who are trained to provide direct services, in fact, view this as their primary activity. The remaining 24.0 percent, although qualified to carry out assessment, psychotherapy, and other related services, serve in other major roles, most likely as college faculty, clinical researchers, and program administrators. Despite the emphasis on service provision as a major work responsibility, the data in table 10.7 reveal that psychologists are involved in more than one activity; almost one third teach, slightly less than one fifth conduct research, and over one fourth have administrative duties. In fact, of those reporting direct services provision as their primary activity, only one third are solely involved in services delivery. Nearly two fifths are involved in both direct services provision and another effort such as teaching, administration, and research, and the remainder are involved in direct services plus two or more different activities.

Social Work

Social work has always been closely identified with the provision of public social services, such as income maintenance, child welfare, family planning, and other welfare issues. Social workers have also been major providers of mental health services since the early 1920s, when they were an integral part of the beginning of the child guidance movement. Social workers are trained to intervene when the individual and the environment do not mesh smoothly, causing discomfort or disruption for the individual or family, or demonstrating the need for social restructuring.

Thus, social workers are found in the public sector -- public welfare and child welfare, as well as publicly funded health and mental health clinics, and public schools; in the private sector--family agencies, clinics, hospitals, and in private practice; in the workplace -- employee assistance programs, alcohol and chemical dependency programs; in community organization settings -- public housing, policy analysis for city councils, identifying and structuring new programs as the need is demonstrated; and in religious settings -- working for outreach programs and pastoral counseling.

The advent of psychoanalytic understanding, and the impetus this gave to the mental health movement placed great emphasis on the individual, and individual causation of so-called neuroses, as well as psychoses. The social work focus on the person-in-the-environment and the impact of this interaction on individuals and their psyches was a unique contribution to the mental health movement.

In addition, social work early identified the importance of the family as a central focus rather than an individual in isolation. Much early professional literature emphasized this importance, and spoke of the family as the identified unit for treatment. This had an impact on the early child guidance movement, as well as other mental health efforts, and powerfully influenced the development of family therapy.

In the 1960s and 1970s, with the establishment and development of comprehensive community mental health centers, clinical social workers were heavily utilized, and, in fact, provided a major proportion of outpatient mental health treatment services.

In the 1980s, an increasing number of clinical social workers moved into full-time or part-time private practice. As we move into the 1990s, private group practice and work in outpatient organizations are the fastest growing settings for clinical social workers.

Demographic and Training Characteristics

The data for this analysis include only members of the National Association of Social workers (NASW), and significantly understate the total population of clinically trained social workers. Estimates of the number of social workers who belong to NASW range from 30 to 50 percent. This report is based upon 94,396 NASW members with a master's or doctoral degrees, excluding students and retired social workers (see table 10.1).

Conservatively assuming that 50 percent of social workers belong to NASW, there are probably 188,792 clinically trained social workers now in the United States. This means that social work figures in all tables in this section could be doubled when comparing to the other disciplines that are estimating the entire universe of their professions.

Membership in NASW has been rising steadily since the inception of the Association in 1955 when seven predecessor social work organizations merged. The NASW membership of 129,092 in June of 1990 had grown to 152,067 by April of 1996. All data for these tables is drawn from membership applications and renewal forms which routinely solicit demographic and practice data. Whereas clinically trained social workers represent all non-retired masters and doctoral graduates, clinically active social workers are the subset that report themselves in direct or supervisory practice as their primary function.

Examination of table 10.2 indicates that social workers are overwhelmingly female (76.8 percent), and white (89 percent). The participation by females is increasing, as shown by comparing the 1996 figures to the 1990 data of 72 percent female. In 1996, non-white social workers were about 11 percent of the overall total, with African Americans comprising 5 percent and all Hispanic groups representing 2.6 percent of the total. The age distributions for male and female social workers are similar, although decreasing numbers of male practitioners can be seen in the younger age category, reflecting the increasing female dominance. Table 10.4 indicates that over 40 percent of the clinically trained social workers have had between 6 and 15 years of experience.

Table 10.3 portrays the distribution of clinically trained social workers by State and region. It varies widely from State to State, from a low of 11.3 per 100,000 residents in Mississippi to a high of 107.8 per 100,000 residents in the District of Columbia. The New England and Middle Atlantic Regions demonstrate the highest distributions of social workers by populations, which is not surprising, given that these areas have traditionally provided greater support for human service programs. For the same reason, it is not unexpected that the lowest social work distribution per population is in the east and west south central regions. The national rate of clinically active to clinically trained social workers is 61.9, varying from a low in West Virginia of 53.6, to a high in Montana of 72.2 percent. This distinction by Montana reflects the economics of greater reimbursement, as Montana is one of the few States with a fee-for-service Medicaid program that compensates social workers in independent mental health practice.

The number of trainees in social work has grown appreciably in every category between 1989-90 and 1994-95, as seen in table 10.8. The total number of full-time social work students in academic year 1994-95 was 21,622, the largest ever (Lennon 1995). During this year, part-time also reached its largest mark at 11,590 students. This reflects the recent trend in which student enrollment has grown every year since 1986, except for 1989.

The total number of social work programs is 420, of which 37 are graduate programs, 308 are baccalaureate only, and 75 are joint programs. The highest concentration of programs is in the Midwestern States, and 68 percent of social work programs are in the eastern half of the country. The majority of programs are in State institutions, with 63 percent of social work faculty being employed by the States. Of the social work programs in private institutions, 68 percent are in church-related institutions.

Female students continue to dominate, comprising 81.9 percent of the 1994-95 student bodies. Ethnic minorities constitute 19.2 percent of those awarded social work degrees. Of these, the largest groups are African Americans at 11.5 percent, Latinos at 3 percent and Asian Americans at 2 percent. The majority did declare a field of practice, with mental health being the most popular at 11.7 percent. Other popular fields include family services at 8.6 percent, health at 7.4 percent, and child welfare at 7.1 percent.

Professional Activities

Table 10.6 presents the primary employment settings of clinically active social workers. Health and mental health hospitals and clinics employ almost 40 percent of clinically active social workers. In comparing 1989 and 1996 data, it is not surprising that with managed care in ascendancy, a reduction of social workers has occurred in hospital settings, and an increase has occurred in outpatient clinic work.

Individual and group practice settings include more than a fourth of all social workers, demonstrating growth that probably reflects the greater inclusion in the 1990s of the social work profession under managed care and other insurance reimbursement. There is a decline of social workers in social services to 16.2 percent of clinically active social workers, showing the long-term loss of social work inclusion in public social services.

Secondary employment information is similar with a few notable exceptions. Individual and group practice are almost fifty percent of all secondary employment, indicative of the large number of part-time practices of many social workers. Again, outpatient settings--either health or mental health--predominate over inpatient settings.

Of the 94,396 non-retired clinically trained social workers, about 91.7 percent identified themselves as engaged in direct practice, supervision, or agency-based training (table 10.7). This represents a growth from 1989, perhaps influenced by the larger numbers of social workers in private and group practice. Approximately 34.9 percent of social workers state that they perform administrative functions. Teaching (at 11.1 percent), and research (at 1.3 percent), show some growth from previous years.

Psychiatric Nursing

Demographic and Training Characteristics

Educational preparation to practice in psychiatric nursing begins at the pre-baccalaureate level. While there are registered nurses practicing in psychiatric settings who have been educated in associate degree and hospital diploma programs, the nursing profession accepts the baccalaureate degree in nursing as the basic education required for beginning general practice in psychiatric nursing. These nurses, with basic education, are considered "generalists," and may be employed in psychiatric specialty settings or may work with clients with mental illness in other general health care settings. The American Nurses' Association provides a certification process and examination for generalist psychiatric nurses, as well as a certification for advanced practice psychiatric nurses.

Advanced practice psychiatric nurses are educated in graduate programs and are required to complete at least a master's degree in psychiatric nursing. In 1988, it was estimated that there were 13,045 nurses with graduate education in psychiatric mental health nursing: in 1988, 3,497 were certified as specialists in psychiatric mental health nursing. Credentialing as a certified specialist in adult and/or child and adolescent psychiatric and mental health nursing is provided by the ANA's national certification program. In addition, some States have procedures for credentialing advanced practice psychiatric nurses.

Criteria for ANA certification as a specialist in psychiatric mental health nursing requires graduate education in psychiatric mental health nursing, clinical practice with expert supervision for a required number of hours following a graduate degree, as well as successful completion of a written examination after the required clinical practice and supervision have been completed. The ANA criteria for certification has been recently changed to require that all nurses seeking certification have successfully completed graduate education in psychiatric mental health nursing. Previously, applicants for certification could have been educated in related, but non-psychiatric nursing graduate programs. In the past five years

another psychiatric nursing educational and practice model has emerged; the psychiatric nurse practitioner. Limited data available on psychiatric nurse practitioners will be presented in a later section of this discussion.

The data presented in the tables of this chapter reflect information only on the Certified Specialists in Psychiatric and Mental Health Nursing. **Nurses with graduate degrees in psychiatric mental health nursing who are not currently certified, are not reflected in these tables.** As of October 1995 there were 6,030 Certified Clinical Nurse Specialists in Adult Psychiatric and Mental Health Nursing; there were 770 Certified Clinical Nurse Specialists in Child and Adolescent Psychiatric Mental Health Nursing, for a total of 6,800.

There were 6,090 Certified Specialists as of Spring 1994. It is estimated that 90 of these nurses are retired and not employed, that 207 are not currently working, and that 45 are students. Table 10.1 indicates that the number of Certified Specialists in Psychiatric and Mental Health Nursing is increasing.

Table 10.2 presents demographic information on this population. This group of specialists is primarily female (95 percent) and white (95 percent). Despite profession-wide efforts to increase the diversity, there are few men or minorities among these Certified Specialists. An encouraging trend is reflected however, as there are higher percentages of men in younger age groups which may result in an increase over time. Discouragingly, there are few minorities in the younger age categories suggesting a continuing problem in recruiting minorities into the specialty.

Table 10.8 shows that the number of nurses enrolled in graduate education in psychiatric nursing is continuing to decline. Psychiatric nursing leaders have documented this decline since the early eighties; the decline parallels the reduction of Federal funding for psychiatric nursing graduate education (Chamberlain 1983, 1989). As of 1994 there were 1,674 enrollees in psychiatric mental-health graduate programs, with only 26 percent (439) enrolled full time. In 1994 there were 568 graduates of such programs. This table shows there has been a steady decrease in enrollees. Additionally, a decrease in the percent of students enrolled full time has contributed to the decline in graduates in any one year. The number of graduates decreased from 781 in 1979-80 (which was an undercount), to 568 in 1994. Table 10.4 documents the number of years since the specialists obtained their highest degrees. Few certified specialists completed their education within the last two years; this is expected, given the requirement for post-graduate clinical practice. Of concern is the low percentage of specialists finishing their highest degree within the last 3-5 years. The low percentage reflects the decrease in graduates from psychiatric-mental health graduate programs in recent years.

Employment

Seventy-six percent of employed certified psychiatric clinical nurse specialists are estimated to be working full time, and 24 percent part time. Approximately 45 are students; students may or may not be employed. These specialists function in a variety of positions and hold a variety of job titles, ranging from clinical nurse specialist to educator, administrator, consultant, nurse practitioner, researcher and case manager. Their primary work activity is predominantly direct patient care. As Table 10.7 shows, most were involved in many of these activities within professional nursing positions. Ninety-four percent were involved in either providing or supervising direct patient care; the majority participated in teaching and administrative activities. Only 25 percent reported participating in research.

Clinically Active Specialists

Table 10.3 provides an estimate of the State by State geographic distribution of clinically trained Certified Specialists in Psychiatric Mental-Health Nursing. In parallel to the distribution of the population of trained Certified Psychiatric Nurses, there is uneven geographic dispersion of these nurses. *(Mental*

Health, United States, 1990; Merwin and Fox 1992).

Eighty-five percent of trained and employed specialists were determined to be clinically active. The primary and secondary work settings of these individuals is presented in Table 10.6. In primary work settings 29 percent of these nurses are employed in hospitals, 24 percent in clinics, rehabilitation, or other outpatient settings, 14 percent in academic settings, and 25 percent in either solo or group independent practice. In secondary work settings, most Certified Clinical Nurse Specialists (46 percent) work in independent practice (solo 34 percent, or group 12 percent). Academia (17 percent) is the next most frequent work setting, with hospitals serving as secondary work site for only 13 percent of these nurses. Table 10.5 shows that most clinically active specialists work in more than one setting.

Discussion

There are several trends occurring in the education and practice of specialty psychiatric mental health nursing. The recent proliferation of nurse practitioner educational programs in all clinical specialty areas, including psychiatric nursing, is producing a different nursing workforce than previously existed. In 1991, few nurse practitioner students specialized in psychiatric nursing or only 89 (two percent) (NLN 1994 p.107-8). By 1992, 183 individuals (three percent of total of all types of NPs) were enrolled. In 1994, there were 364 enrollees of such programs, with 70 graduates (NLN 1994, personal communication). The requirements for regulation/licensure of psychiatric nurse practitioners vary by State. The role of psychiatric nurse practitioners in providing general, as well as mental health care also varies.

Enrollees of graduate programs in psychiatric mental health nursing are enrolled in either nurse practitioner, advanced clinical practice, or teaching programs. In 1991 there were 8 percent of graduates from nurse practitioner programs, 84 percent from advanced clinical practice programs, and 8 percent in teaching (NLN 1994 p.111). In 1994 there were 12 percent of graduates from nurse practitioner programs, 83 percent from advanced clinical practice programs, and 5 percent in teaching. By 1994, enrollees choice of program also shifted. Twenty-two percent of enrollees in graduate psychiatric mental health nursing were in nurse practitioner programs, 74 percent advanced clinical practice programs, and 4 percent in teaching programs (NLN 1994 personal communication).

The shift to nurse practitioner programs has been stimulated by health reform efforts which have promoted the potential cost effectiveness of advanced practice nurses who are able to provide integrated primary and mental health care (NLN 1994). Accompanying this shift has been a decrease in barriers to independent practice, as well as increased legislation supporting independent prescription authority for these nurse practitioners. The scope of prescription authority differs from State to State, with some States granting wide authority, and others inhibiting prescriptive authority all together (Talley and Brooke 1992). Two types of authority governing prescriptive practices of nurse practitioners, collaborative and substitutive, reflect differences in the degree of medical supervision required. Substitutive authority does not require supervision by a physician. Complementary authority, by far the most common to date, requires physician collaboration and supervision. Currently, it has been estimated that 35 States provide some type of prescriptive authority to nurse practitioners. (Washington Consulting Group 1994; Talley and Brooke 1992).

The scope of practice of nurse practitioners prepared as clinical specialists in psychiatric nursing is related to graduate education and State regulations. Practice patterns range from specialty mental health practice alone, to dual certification, as both a psychiatric specialist and as a nurse practitioner in a general health care specialty, such as family, adult, or pediatric nurse practitioner. There is considerable overlap between Nurse Practitioner and Certified Clinical Nurse Specialist preparation and nurses may be certified in both areas. The Division of Nursing of the U.S. Department of Health and Human Services conducted a study of Advanced Practice Nursing (APN), and determined that 39 percent of APN's classified as Nurse Practitioners in Psychiatry were also certified Clinical Nurse Specialists (CNS's); 8 percent of

CNS's were also NP's (Washington Consulting Group, 1994).

Health care reform has increased the recognition of Advanced Practice Psychiatric and Mental Health Nurses as important providers within the mental health care delivery system (Krauss 1993; SERPN 1996). Rapidly changing regulations stimulate the need for determining the effect on patient outcomes of different regulations/licensure laws. The availability, recruitment, retention, and practice patterns in rural areas also needs study (Merwin, Goldsmith, and Manderscheid 1995). The effectiveness of psychiatric nursing care in improving patient outcomes is evident from outcome studies (Merwin and Mauck 1995). Additional research is needed to further identify the influence of provider, treatment, and regulatory changes upon the outcomes of clients treated by psychiatric nurses. Specifically, research is needed which clarifies the emerging role of psychiatric nurse practitioner and its effect on outcomes of care.

[1]**Acknowledgement:** The Society for Education and Research in Psychiatric-Mental Health Nursing, Advanced Practice Project Taskforce Members conducted the survey used in the nursing component of this paper. These members include: Lorna Mill Barrell, Ph.D., R.N.; Margery Chisholm, Ed.D.,R.N.,C.S.; Jeanne Clement, Ed.D., R.N., C.S.; Kathleen R. Delaney, D.N.Sc., R.N.; Doris Greiner, Ph.D., R.N., C.S.; Patricia Howard, Ph.D., R.N., C.N.A.A.; Elizabeth Merwin, Ph.D., R.N.; Elizabeth C. Poster, Ph.D., R.N.

Counseling

Professional counseling, as we know it today, began in the early years of this century as a response to the need for vocational counseling. Such counseling was needed to assist individuals trying to make their way in a rapidly-changing industrial age. Thus, professional counselors were likely to be found in governmental agencies dealing with career selection. Soon, these positions were established in educational settings in a logical pairing of training and career selection. Thus, vocational counseling in both educational and agency settings prevailed as the defined specialties of counseling in the first half of the century.

Following World War II, the National Mental Health Act of 1946 not only established the National Institute of Mental Health, but also marked the beginning of publicly funded mental health services. Many counselors received training from the Veterans Administration (VA), in order to provide counseling to veterans returning from World War II. In the 1950s, many trained counselors began to find work in clinical settings where they received supervision and experience in therapy milieus.

In regard to the training of counselors, the passage of the National Defense Education Act (NDEA) in the late 1950s made it possible for graduate schools of education to establish funded programs to train guidance counselors. This decision became a landmark in history, linking personal needs, education, and our nation's well-being. The Act provided grants to States for stimulating the establishment and maintenance of local guidance programs, and grants to institutions of higher education for the training of guidance personnel to staff local programs (Gibson and Mitchell 1990). The intent of the school counseling addressed in the Act was to establish a national cadre of counselors adept in helping students plan for post-high-school education. More specifically, Congress wanted talented math and science students to be screened and encouraged to further their education.

Thus, in an indirect but significant manner, the Soviet space and arms race gave rise to the establishment of counselor education programs across the nation. Although school counselors began to serve a much broader role than envisioned by the NDEA, there is no question that the Act provided a base from which counseling could grow. By the mid-1960s, notable contributions achieved by the Act could be easily identified. These contributions included supporting 480 institutes designed to improve counseling capabilities, and granting 8,500 graduate fellowships which took a step in meeting the needs of many

college teachers. By the end of the 1960s, more than 300 academic units housed counselor education postgraduate training programs.

In the early 1960s, the education of the public on mental illnesses and their treatment became pronounced. This awareness sparked the community's involvement in raising the standards of treatment for mental disorders. In 1963, the Community Mental Health Centers Act (Public Law 88-164) was passed, establishing 2,000 such centers to provide a range of clinical counseling services. This act was amended in 1975 (Public Law 94-63) to further define the mental health services that each center was mandated to provide. This proliferation of outlets for mental health treatment provided opportunities for mental health counselors to utilize their skills.

During this period, post-graduate counselor education programs began to provide training with more emphasis on clinical training. The number of programs increased to 550 by 1980, and the number of programs stabilized in the mid-I980s at about 500. The numbers of degrees being granted annually in counseling stabilized at about 10,000 in the late 1980s. The numbers of master's degree students seem to be increasing in the early 1990s.

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. The 56,000-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 10,000-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.

As of June 1996, 41 States and the District of Columbia have credentialing statutes regulating nearly 50,000 counselors. The National Board for Certified Counselors, Inc., (NBCC) is the voluntary credentialing agency for counselors in the U.S., certifying over 24,000 counselors. NBCC standards are the baseline used in model licensure legislation.

Demographic and Training Characteristics

Clinical mental health counseling is considered the specialty area of professional counseling that requires extensive course work and clinical preparation and supervision. NBCC certifies the specialty of clinical mental health counselors, which requires a 60-semester-hour master's degree, as well as clinical supervision, taped therapy samples and examination for certification as a clinical counselor. For the purposes of collecting data for this chapter, the assumption has been made that the requirements for providing mental health services as a professional counselor can be met in a number of ways. First, certification as one of 1,700 Certified Clinical Mental Health Counselors (CCMHC's) is the most uniform and comprehensive method. Counselors regulated by State boards of professional counseling are thus granted independent, clinical practice privilege within the scope of their training. This second group constitutes the majority of the 50,000 State-licensed/certified counselors. Third, members of the American Counseling Association (ACA) and their divisional affiliate, the American Mental Health Counselors Association (AMHCA), are almost all master's or above trained, and statistics delineating clinicians were available. Thus, table 10.1 figures represent a combination of counselors from each of these sources, with a conservative attempt to closely estimate numbers being cross counted. Data in table 10.1 reflect elimination of all identifiable cross counting.

The Council for Accreditation of Counseling and Related Educational Programs (CACREP) accredits

150 academic programs. Most other counselor education programs emulate the standards of the body. Table 10.8 shows estimates of trainees derived from two major sources. The book, *Counselor Preparation 1993-1995* (Hollis and Wantz 1993), is the eighth edition of a twenty-three-year-long longitudinal study of counselor training. Information in this book provides a valuable data source. Combining *Counselor Preparation* and CACREP data has created an avenue of finding a surprising number of current students. Most programs are taught to part-time students who average over four years to receive a master's degree. Thus, the number of students is matriculating and active, but creates a larger number base that cannot be compared to structural, full-time master's programs.

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 1993). Graduate programs have totaled about 5,000 clinically trained counselors per year. Most master's degree programs averaged over four years to complete, meaning that roughly 18,000 are in training at this time.

Professional Activities

Professional counselors practice in a wide variety of settings, and with a wide group of clientele. Further, like many mental health providers, counselors often define their specialty of practice to a subdiscipline. So setting (such as a clinic), population (such as children), and academic subdiscipline (such as group counseling) often define the professional counselor. The profession defines practice and ethics standards and creates the training standards. Counselors are expected to have core training and supervised practice, and many go on to specialize after core training. The profession monitors the practice of professional counseling to not exceed the training of the individual.

The American Counseling Association defines the Practice of Professional Counseling as the application of mental health, psychological, and human development principles in order to:

- facilitate human development and adjustment throughout the life span:
- prevent, diagnose, and treat mental, emotional or behavioral disorders and associated distresses which interfere with mental health;
- conduct assessments and diagnoses for the purpose of establishing treatment goals and objectives; and
- plan, implement, and evaluate plans using counseling treatment interventions.

Counseling treatment interventions shall mean the application of cognitive, affective, behavioral, and systemic counseling strategies, which include principles of development, wellness, and pathology that reflect a pluralistic society. Such interventions are specifically implemented in the context of a professional counseling relationship.

The practice of professional counseling includes, but is not limited to:

- individual, group, and marriage and family counseling and psychotherapy; assessment;
- crisis intervention;
- diagnosis and treatment of persons with mental and emotional disorders;
- guidance and consulting to facilitate normal growth and development, including educational and career development;
- utilization of functional assessment and counseling for persons requesting assistance in adjustment to a disability or handicapping condition;
- consulting, research; and

- referral.

The use of specific methods, techniques, or modalities within the practice of professional counseling is restricted to counselors appropriately trained in the use of such methods, techniques or modalities. This definition is contained in the April 1994 minutes of the ACA governing council.

Marriage and Family Therapy

Marriage and family therapy grew out of the public's demand for professional assistance with marital difficulties, and from the development of a family systems therapy orientation by psychotherapy professionals and others (Nichols 1992). From their beginnings in the 1930s and 1940s, marriage and family therapists have developed into uniquely qualified healthcare professionals who are officially recognized as a core mental health discipline, along with psychiatry, psychology, social work and psychiatric nursing (42 U.S. Code 242a).

Federal law defines a marriage and family therapist as "an individual (normally with a master's or doctoral degree in marital and family therapy, and at least two years of supervised clinical experience), who is practicing as a marital and family therapist and is licensed or certified to do so by the State of practice; or, if licensure or certification is not required by the State of practice, is eligible for clinical membership in the American Association for Marriage and Family Therapy" (42 CFR Part 5).

Marriage and family therapists apply both psychotherapeutic and family systems theories, and clinical interventions to the delivery of healthcare services to individuals, couples and families. They diagnose and treat mental and emotional disorders, whether cognitive, affective or behavioral in origin. Research has found the services provided by marriage and family therapists to be effective (often more effective than standard treatments) for many severe disorders, and result in improved outcomes in both the health and functioning of clients (Pinsof and Wynne 1995; Doherty and Simmons 1996).

The profession of marriage and family therapy has burgeoned since the 1970s, with the number of therapists increasing from an estimated 1,800 in 1966, to 7,000 in 1979, to 46,000 in 1995.

Demographic and Training Characteristics

An estimated 46,227 marriage and family therapists were clinically active in the United States in 1995 (table 10.1). Female practitioners (55 percent) slightly outnumber male practitioners (45 percent) (table 10.2), and the mean age of marriage and family therapists is 52 years old (Doherty and Simmons 1996).

African Americans and those of Hispanic descent are underrepresented among marriage and family therapists, compared to their proportion in the U.S. population. The ratio of marriage and family therapists of Asian origin and Native Americans are more in line with their size in the total population. As with the other mental health disciplines, whites are significantly overrepresented among marriage and family therapists (table 10.2). Whites make up 95.5 percent of marriage and family therapists, compared to 75.6 percent of the U.S. population. Differences exist, however, between males and females. There are slightly more minorities among male than female marriage and family therapists (5.2 percent vs. 3.9 percent) (table 10.2). Increased representation of minorities among marriage and family therapists appears promising. Over 12 percent of the student members of American Association for Marriage and Family Therapy (AAMFT) are from minority population groups, according to a 1995 AAMFT Membership Survey.

Access to marriage and family therapists varies considerably across the United States, as shown in table 10.3. The ratio of therapist-to-population range from under 3 marriage and family therapists per 100,000 population in West Virginia, Delaware, Ohio, North Dakota, Louisiana and Arkansas, and more than 20

per 100,000 in Oklahoma, Indiana, Texas and Nevada, to over 73 per 100,000 population in California. The national average is 17.6 marriage and family therapists per 100,000 population. These variations can be explained by the existence (or lack thereof) of State regulation of the practice of marriage and family therapy and/or the presence of accredited university/college training programs.

In 1995, an estimated 6,776 individuals were in training to be marriage and family therapists (table 10.8). This includes 4,646 students in pre-degree academic programs, and 2,130 graduates who are completing their required supervised face-to-face contact with individuals, couples and families.

Most marriage and family therapists hold a master's degree (54.3 percent), including 12.7 percent who hold the M.S.W. social work degree. About 40 percent (39.5 percent) of marriage and family therapists hold a doctoral degree, including the degrees of Ph.D. (24.6 percent), Psy.D. (1.7 percent), Ed.D. (7.2 percent), M.D. (1 percent), and D.Min. (4.9 percent) (Doherty and Simmons 1995).

The primary national accrediting body for marriage and family therapy training programs is the AAMFT's Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), which received recognition from the U.S. Department of Education as a national accrediting body in 1978. As of 1995, COAMFTE accredited 44 master's degree programs, 12 doctoral degree programs, and 16 post-graduate clinical training programs in marriage and family therapy in the United States. This represents a 132 percent increase in the number of master's degree programs, and a 33 percent increase in the number of doctoral programs accredited by COAMFTE between 1988 and 1995. In addition, 15 master's training programs in marriage and family counseling/therapy are nationally accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP). Most marriage and family therapy students receive their training in programs of regionally accredited universities and colleges.

The majority (55.3 percent) of the 46,227 clinically active marriage and family therapists in 1995 are estimated to have completed their training between 6 and 15 years ago, making them highly experienced therapists as a group. Only 2.3 percent completed their training within the last two years (table 10.4).

In-service education requirements vary greatly among the State marriage and family therapy regulatory boards. Many States have no formal continuing education requirements, presumably because of the cumbersome and expensive bureaucratic mechanisms necessary to monitor and enforce the regulations, and to evaluate and sanction the providers. For those States with continuing education requirements, the typical requirement is between 30 to 40 hours per two-year renewal cycle (Sturkie and Johnson 1994).

Professional Activities

Most marriage and family therapists (67.5 percent) work full time (table 10.1), usually in one setting (60.4 percent) (table 10.5), that is a private solo or group clinical practice (65.1 percent) (table 10.6). While most marriage and family therapists are in private practice, the distribution between solo and group practices appears to be changing. According to a 1995 AAMFT Membership Survey, over a third of those in private practice reported being in group practices, including both group medical and behavioral health care group practices.

Also, growing numbers of marriage and family therapists are employed in organized care settings. Nearly one in four (22.6 percent) marriage and family therapists now work in community mental health centers and other community clinics and agencies, hospital inpatient and outpatient units, and other settings such as Employee Assistance programs (EAP) and Health Maintenance Organizations (HMOs) (table 10.6). In addition, the 1995 AAMFT Membership Survey suggests that those in the "Other/not specified" employment setting in table 10.6 include about 6 percent of marriage and family therapists in academic settings, and 2 percent employed as consultants to businesses.

Increasingly, as shown in table 10.7, marriage and family therapists are involved in roles other than direct treatment, such as administration of human service and agency settings (56.0 percent), teaching (46.7 percent), research (16.5 percent), and other activities such as prevention program development, public welfare (especially child welfare through family preservation services), public policy development, client advocacy, consultation to businesses, and more recently, managed care case managers.

Marriage and family therapists treat the full spectrum of American society. Over half of the clients seen by marriage and family therapists are female (58 percent), yet males are still a significant percentage (42 percent) of the cases seen. Nearly 12 percent of the clients are racial and ethnic minorities, and 64 percent of marriage and family therapists say they feel competent from their training to treat racial and ethnic minorities (Doherty and Simmons 1996). About half of the adult clients of marriage and family therapists have a college or postgraduate degree, while the other half have a high school degree and/or some college. Clients range in age from 1 to 74, with a median of about 38 years of age (Doherty and Simmons 1996).

Marriage and family therapists treat a wide range of individual, couple, and family problems. Depression is most often the presenting issue (43.9 percent), followed by individual psychological problems (35.1 percent), marital problems (30.1 percent), and anxiety (21.1 percent). The DSM-IV diagnoses most frequently used are adjustment disorder (25.3 percent) and depressive disorder (including dysthymia) (22.9 percent). The other diagnoses used in more than 5 percent of the cases are anxiety disorders, including post-traumatic stress disorder (14 percent), and personality disorder (6.5 percent). V-codes are only used in 10.6 percent of all cases (Doherty and Simmons 1996).

The presenting problems treated by marriage and family therapists tend to be severe. Nearly half (49 percent) of the problems treated by marriage and family therapists are rated as severe or catastrophic; another 45 percent, moderately severe; and 6 percent, mild. The severity of client problems is further supported by the fact that 29.3 percent of clients are taking psychotropic medication; 10.2 percent had been hospitalized in the past year; and 6.1 percent were hospitalized while under treatment by a marriage and family therapist (Doherty and Simmons 1996).

Despite their focus on family systems, marriage and family therapists do not treat only couples and family units. Indeed, half of the cases seen by MFTs are individuals (49.4 percent), with 23.1 percent being couples, and 12 percent being families (Doherty and Simmons 1996).

Clients report being highly satisfied with the services of marriage and family therapists. In a recent national survey of clients, nearly all (98.1 percent) rated the services as good or excellent; 97.1 percent said they got the kind of help they wanted; and 91.2 percent said they were satisfied with the amount of help they received. Furthermore, 94.3 percent said they would return to the same therapist in the future, and 96.9 percent said they would recommend their therapist to a friend (Doherty and Simmons 1996).

Overwhelmingly positive changes in functioning also were reported by clients: 83 percent reported that their therapy goals had been mostly or completely achieved. Nearly 9 out of 10 (88.8 percent) reported improvement in their emotional health; 63.4 percent, improvement in their overall physical health; and 54.8 percent, improvement in their functioning at work (Doherty and Simmons 1996).

Treatment by marriage and family therapists is naturally brief and cost-effective. The average length of treatment for couples therapy is 11.5 sessions; 9 sessions for family therapy; and 13 sessions for individual therapy. The average fee is $80 per hour, which makes the average cost per case $780 (Doherty and Simmons 1996).

As of 1995, 37 States regulated the practice of marriage and family therapy, with most other States considering licensure bills. California was the first State to regulate the profession in 1963 (under the title

Marriage, Family and Child Counselor), followed by Michigan in 1966, and New Jersey in 1968. The most impressive growth in State regulation began in the 1980s, with the vast majority (86 percent) of State regulatory laws being adopted since 1980.

States' definition of the practice of marriage and family therapy vary in the specific language used, but are consistent with AAMFT's Model Licensure Law, as follows:

> "Marriage and family therapy" means the diagnosis and treatment of mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Marriage and family therapy involves the professional application of psychotherapeutic and family systems theories and techniques in the delivery of services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders."

While the overwhelming majority (80.8 percent) of the 46,227 marriage and family therapists nationwide hold a State marriage and family therapy license or certification, half (50.4 percent) hold additional professional licenses. This reflects the multidisciplinary nature of marriage and family therapy. The other licenses held in addition to the marriage and family therapy license include psychologist (7.2 percent), social worker (10.0 percent), professional counselor (12.5 percent) and nursing (1.1 percent) (Doherty and Simmons 1996). Just under one-third (30.4 percent) of marriage and family therapists hold only a marriage and family therapist license, and 12.4 percent hold three or more licenses. But regardless of their training, the preponderance of marriage and family therapists (60.6 percent) describe their primary professional identity as a marriage and family therapist (Doherty and Simmons 1996).

Psychosocial Rehabilitation

Psychosocial Rehabilitation (PSR) is a rapidly growing approach to working with individuals with severe mental illness in the community. Specifically, psychosocial rehabilitation programs usually provide residential services, training in community living skills, socialization services, crisis services, residential treatment services, recreation services, vocational rehabilitation services, case management services, and/or educational services. In recent years, PSR has been identified as a necessary ingredient for maintaining persons with severe mental illness in the community. PSR services reduce hospitalization, increase employment, and increase the quality of life for persons served. Thus, PSR services are an important part of mental health care in the community, addressing the practical, day to day needs, such as housing, income, work, friends, and the skills to cope with serious mental illness.

The focus of PSR activities is in teaching individuals with severe mental illness the skills necessary to attain goals of their choice in the community, and in developing innovative supports. In providing these services, PSR providers draw upon theories and practices of psychology, education, sociology, social work, and rehabilitation. In addition, PSR has been at the forefront of disability and rehabilitation movements working towards the empowerment of individuals with severe mental illness through the delivery of services, and in the integration of the client and the services into the normal life of the community. PSR has been successfully utilized with individuals who have disabilities other than mental illness, who have concurrent disabilities of substance abuse, mental retardation, hopelessness, as well as deafness, and other physical disabilities. Specialized programs have also been developed for individuals over 65 years of age.

The importance and success of the field is evidenced by its rapid growth. In 1988, 965 facilities identified themselves as offering PSR services. In 1990, 2,200 facilities were identified as offering psychosocial rehabilitation services to persons with severe mental illness. By 1996, 7,000 agencies were identified. With an average agency staff size of 16, a conservative estimate of the PSR work force is 100,000 (table 10.1).

Demographic and Training Characteristics

Similar to other mental health workers, PSR workers are predominantly female (65 percent), and white. Seventy four percent are white, 19 percent are African American, 5 percent are Hispanic and 2 percent are Asian and Native American. They have an average age of 38 and have been in the field for an average of 5 years (table 10.4). Those with advanced degrees have been in the field an average of 8 years. PSR workers can be found in all fifty States, the District of Columbia and the Virgin Islands.

Thirty-eight percent of all workers have a bachelor's degree, 22 percent have only a high school degree, 13 percent have some college or an associate degree, 24 percent have a master's degree, and 2 percent have a doctoral degree. In addition, 25 percent of all individuals with bachelor's degrees are currently working to attain a master's degree. Among individuals currently employed as PSR workers with master's or doctoral degrees, 24 percent have degrees in psychology, 36 percent in social work, 4 percent in psychiatry, 3 percent in counseling, and 3 percent in education. Sixteen percent have licenses or certificates in social work; 8 percent are certified as counselors; six percent are certified as teachers; and 3 percent are certified as addiction counselors.

As the value of PSR has become recognized, academic programs have developed which specialize in PSR, or which include PSR as a specialized part of their curriculum. Currently, throughout the nation, there are 13 Ph.D. programs; 3 combined M.D. and Ph.D. programs; 10 master's level programs; one bachelor's program, and one associate program. The number of these programs is expanding rapidly as the field grows.

Because PSR encompasses an approach, a philosophy, and patterns of interpersonal interactions, as well as didactic material, many agencies hire interested, caring people and train them on the job, through supervision, in-service training and experience. In-service training, which imparts various combinations of knowledge, attitudes and skills, is provided in 19 States, by 7 county-level mental health authorities, 21 agencies, and 15 centers or institutes, 8 of which are affiliated with universities. These workshops and training sessions, which may last from 1-3 days, typically cover principles and values of PSR; functional assessment; choosing a rehabilitation goal; employment; case management; supported housing; teaching skills; stigma/discrimination issues; cultural diversity; clinical interviewing skills; program evaluation/research; supported employment; and career development. It is typical for a practitioner to emphasize one of these fields over another.

Professional Activities

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. A majority of PSR workers are employed in a single setting (table 10.5).

Currently a registry is being implemented for PSR practitioners. This registry maintains the emphasis on rehabilitation worker competencies, at the same time reflecting the increased training needs of the field. Workers may become a Registered Psychiatric Rehabilitation Practitioner if they have at least a bachelor's degree, or an Associate Psychiatric Rehabilitation Practitioner if they have less than a bachelor's degree. The exact requirements for registration will vary according to the level and area of education, number of years in the field, and amount of training received in the last three years. In addition, each registrant will be required to provide three professional references in order to become certified.

As the field of PSR has grown in size, it has developed some of the characteristics of a profession. Not only have a registry and a code of ethics been created, but also common outcome measures and best practice interventions have been identified. A literature which focuses on process as well as outcome has emerged in the major community mental health journals and newsletters. PSR is a frequent intervention of

choice for federally funded demonstration projects.

School Psychology

Professional school psychology has grown significantly over the last 25 years. In 1996 it is estimated that there are over 24,000 school psychologists in the United States, an increase of 17,000 since 1970 (Fagan and Sachs-Wise 1994). The vast majority of school psychologists are found serving in 15,000 local education agencies and 85,000 schools, in all States and territories, as well as Department of Defense schools nationally and internationally (NASP 1993; Reshly and Wilson 1992).

School psychologists are involved in delivering a broad array of activities related to the delivery of mental health services in the schools. These include: consultation with teachers, parents and school personnel about learning, social, emotional and behavior problems; developing and implementing educational programs on classroom management strategies, parenting skills, substance abuse, teaching and learning strategies; evaluating academic skills, social skills, self-help skills, personality and emotional development; and intervening directly with students and families, as well as helping solve conflicts related to learning and adjustment. School psychological services are one of the *related services* available to students with disabilities who are in need of special education and related services as part of the Individuals with Disabilities Education Act (IDEA). School psychologists, as part of the *pupil services*, are also a designated service under Title I and other titles of the 1994 Improving America's Schools Act.

Demographic and Training Characteristics

The professional association representing school psychology is the National Association of School Psychologists, which has 19,148 members (NASP 1996). Demographic data on school psychology reflected in tables 10.1, 10.2, 10.3, 10.4. 10.5, 10.6, 10.7 and 10.8 are based upon data compiled yearly by the U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS) for its *Annual Report to Congress on the Implementation of The Individuals with Disabilities Education Act* (USDOE 1991, 1994, 1995), and membership surveys (NASP 1993, 1995, 1996). The U.S. Department of Education data represent the "clinically active" professional school psychologists certified in each State who are actually providing services in the schools. This base number of "clinically active" school psychologists, combined with self report surveys of the membership of the National Association of School Psychologists, gathered yearly, provides the most accurate data available on school psychologists who are clinically trained, and data on sex, ethnicity, years of experience, and other factors found in the tables.

According to the NASP membership surveys, school psychology in its present numbers is a relatively young profession. Prior to 1975, there were reported to be about 5,000 school psychologists employed in more progressive school systems in urban/suburban areas primarily in California, New York, Pennsylvania, and Ohio (Fagan and Sachs-Wise 1994). The recognition of the civil right to education by children with disabilities increased that number to its present level, with a distribution across all communities: urban, suburban and rural. As the profession has grown, it has become increasingly more female. As 1986 survey data show, approximately 59 percent were female, and 41 percent male. Table 10.2 shows that in 1993, 69.5 percent of the professional school psychologists were female, and 30 percent male. Table 10.4 shows that nearly half have ten or fewer years of experience as professional school psychologists, the median being 8.9 years (Reshly and Wilson 1992). Ethnic information reported in survey data indicates that there are few minorities in the profession, with African American members accounting for 2.5 percent, Hispanic/Latino 3.1 percent, Asian, 1.2 percent and Native American, 0.6 percent. The ethnic distribution has remained relatively the same over the years, with a slight drop in total non-White membership of about 1 percent. When comparing 1993 data to survey data reported by Fagan (1994), table 10.4 shows school psychologists are not evenly distributed across the nation. Some States and regions have adequate school psychological services, but most regions and States do not meet the NASP standard of one school psychologist for every 1,000 students. For example, Connecticut has a ratio of about 1:800, whereas Missouri has a ratio of

1:20,000. The average is about 1:2,100 with a bi-modal distribution showing a bi-modal 37 percent having a ratio of 1:1,000 or less, and 24 percent having a service ratio of 1:2,001-1:2,500. As might be expected, affluent school systems have better ratios than do poor systems.

All professional school psychologists are required to be certified and/or licensed by the State in which services are provided. Most States use certification, and authorize the State's education agency for that responsibility. A few States (i.e. Texas) designate the Board of Examiners of Psychology to license school psychologists to function in the schools. Although requirements vary from State to State, the National Association of School Psychologists offers a national certification, (Nationally Certified School Psychologist), to all those eligible. The National Certification (NCSP) is recognized by several States for certification eligibility. The requirements are a Master's degree or higher, Specialist degree in school psychology, with a minimum of 60 graduate semester hours, a 1,200 hour internship, 600 hours of which must be in a school setting, a passing score (660) on the National School Psychology exam, and course content to ensure substantial preparation in school psychology. The students represented in table 10.8 are predominantly studying for a sixty-credit Master's or Specialist degree. Seventy-four percent of school psychologists have documented the requirements to be Nationally Certified (NCSP); 21 percent also hold a doctorate in school psychology, education or related fields. School psychologists who are members of NASP or hold the NCSP are required to abide by the *Standards for the Provision of School Psychological Services & Principles of Ethics* adopted by NASP (Revised 1992). *School Psychology Review* is a refereed journal published quarterly by the National Association of School Psychologists. With a circulation of over 19,000, it has the second largest circulation among professional psychology journals.

Nationally, there are over 212 school psychology training programs which are accredited by the NASP/NCATE. Approximately 1,800 school psychology students graduate annually from graduate training programs, earning the specialist degree (Eds). The U.S. Department of Education reports yearly that there have been, on average, over 1,100 unfilled, funded vacancies or additional certified personnel needed by the public schools.

Professional Activities

Table 10.6 shows school psychologists are typically employed in the following settings: public or private schools, universities, clinics, institutions, private practice, community agencies and hospitals. However, the majority, 94 percent, practice in primary and secondary schools. Most school psychologists are employed by local education agencies. Cooperatives are also found in rural areas and areas which have numbers of small school systems. Some school psychologists are employed by mental health agencies which provide school psychological services to the schools. Survey data indicates that of those listed as employed in a school setting on table 10.6, only 2 percent practice in private schools. There are no officially recognized sub-specialties within the profession of school psychology.

The 1989 Membership Directory of NASP did provide survey data on the percent of time members spent in various professional activities. Less than half of the school psychologists' time was spent in the assessment of children. Consultation, behavioral and other therapeutic interventions accounted for thirty percent of professional time. The remainder was spent in service training provided and received, administration, and research. Reshly and Wilson reported 55 percent of time for assessment, 42 percent for consultation and interventions and 2 percent for applied research and evaluation. Included in the process of assessment is the presentation of results to parents and school/other staff.

Sociology

The revival of the sociological practice movement can be traced back to the late 1970s (Friedman 1987), a turbulent era in higher education, in which many academic institutions -- particularly "small private liberal arts colleges, two-year private colleges, middle-level private urban universities, and a spate of remote State

colleges and universities" (Bingham 1987; Smith and Cavusgil 1984) -- experienced: 1) declining enrollments among aging "baby boomers," and increasing enrollments among non-traditional adult and minority students (Strang 1986); 2) closures, cooperative arrangements with other institutions, and mergers (Bingham 1987); and 3) reduced government funding, amid rising education costs, necessitating, in turn, the need for relief from private funding sources, such as alumni, foundations, and corporations (Bryant 1983). These changes, not typically shared by their larger, private academic counterparts, necessitated a conceptual shift in sociology away from "theory and statistical testing," characterizing the discipline's post-World War I efforts to "legitimize" itself, and toward a return to its original mission of "social reform," based on "application and intervention" (Clark 1986; Parsons 1959; Franklin 1979; Kuklick 1980; and Huber 1984, 1986). The creation of new "hands on" academic incentives -- particularly workshops, supervised field work, and internships -- were designed to attract the changing student demographic, and to effectively respond to the referenced economic constraints. They also integrated sociology departments into their respective communities, and with their publics, whereby students' substantive disciplinary interests were balanced with "more vocationally oriented courses" (Ruggiero and Weston 1986; Fleming and Francis 1980; Olzak 1981).

In an era of managed care, sociologists' entry into the heavily regulated behavioral healthcare industry has led many to realize the value of acquiring supplemental association and State professional credentials. Serving as recognizable mandates of their competence in service to the public welfare, health, and safety, and the quality of social life, sociologists understand that without practice credentials, their opportunities as unregulated applied researchers, clinical interventionists, behavioral healthcare caseworkers, and administrators will continue to decline in this interdisciplinary field. As a result, sociologists have started to organize their own accreditation and credentialing programs. The Commission on Applied and Clinical Sociology, established in February 1995, as a joint initiative of the Society for Applied Sociology, and the Sociological Practice Association (both founded in 1978, with the latter chartered as the Clinical Sociology Association), is currently preparing sociology program accreditation guidelines for departments interested in augmenting their traditional educational emphases with clinical and applied curricula. These guidelines, sensitive to evolving behavioral healthcare training and administration standards, will permit practicing sociologists to apply their unique perspectives and skills, assessments and interventions, to the complex set of interactions characterizing social relations between and among sundry behavioral healthcare populations, providers, networks, payers, employers, and their institutional environments. These concerns and practices have all too often been overlooked or underutilized in the allied healthcare marketplace. Sociologists' treatments will significantly add to the mix of existing approaches. The Commission's plan entails the development of a national sociology registry in which practitioners will become eligible for SPA certification (currently under revision), and State professional credentialing (to be included in model sociological practice legislation, sponsored by the American Sociological Association, through its Academic and Professional Affairs Program, and the Committee on Certification and Licensure). Like other professions, different classes of association and State professional credentials will be awarded on the basis of recipients' specific educational and training accomplishments. A pilot sociology accreditation program is slated to be introduced to a select number of departments in 1998, with full implementation expected in 1999. Provisions will be made to "grandfather" non-program accredited, qualified sociologists into the registry. Comparable core data will be incorporated into upcoming editions of *Mental Health, United States.*

Discussion

The information in this chapter is important in examining the current status of human resources and care delivery in mental health, particularly within the context of managed care. Unfortunately, many critical issues are not addressed by these data. Given the increasing demand for cost-effective service, it is critical that evaluations focus on determining the cost effectiveness of specific treatment and intervention outcomes. This necessary shift of attention away from the process of delivery to outcome will demand analyses of economic and clinical substitutability of mental health professionals. Presently available data do not permit

examination of these questions in an effective manner.

Other questions cannot be answered about how mental health professionals provide services. Additional information is needed on characteristics of the providers, clientele treated, actual services delivered, sources of referrals, and relationships with other health and social service professionals. This information deficit plagues all mental health professions. Given the severe consequences of psychiatric disability, it is essential that relevant policy makers work together to improve the quality of information currently available on human resources in mental health.

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Appendix E

Sources and Qualifications of Data - Chapter 10

Psychiatry

1996-97 American Medical Association Physician Characteristics and Distribution in the U.S.

Scope of Data.--Data are derived from the American Medical Association's (AMA) Masterfile which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA Physicians Professional Activities (PPA) questionnaire which is sent to approximately one-third of all physicians each year. Data presented in the Physician Characteristics and Distribution in the U.S. are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to accurately reflect clinically trained and clinically active psychiatrists.

Limitations.--Because the AMA Masterfile includes physicians who are self-designated or self-identified as a psychiatrists, the data may include some physicians with no specialty psychiatric training.

1996 American Psychiatric Association Membership Data

Scope of Data.--The 1996 American Psychiatric Association (APA) Membership estimates were taken from the July 1996 APA membership database. At that time, the total APA membership was 40,866 which included 28,970 active psychiatrists practicing in the United States. The remaining 11,896 APA members included: 5,438 psychiatric residents, 3,105 medical students, 2,035 psychiatrists not practicing in the United States, and 1,318 inactive psychiatrists.

Limitations.--The APA membership data are limited in that not all of the nation's psychiatrists are members of the APA. The APA membership data, does, however, include a significant majority of the physicians in the American Medical Association Masterfile. Unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

1988-89 American Psychiatric Association, Professional Activities Survey (PAS)

Scope of Survey.--The 1988-89 American Psychiatric Association (APA) Professional Activity Survey (PAS) gathered data on both APA members and non-members who had identified themselves in the American Medical Association Masterfile as primarily specializing in psychiatry. APA Members and non-members were combined and cross-checked against the APA membership file in order to remove duplicate records resulting in a residual list of 10,091 self-designated psychiatrists, and 34,164 APA members.

Response Rate.--Of the 34,164 APA members included in the study, 23,126 or 67.7 percent responded to the survey. The sample of 10,091 self-designated psychiatrists yielded a response rate of 28.9 percent or 2,922 completed surveys. Of the 2,922 completed surveys, 341 respondents were found not to be psychiatrists and 125 psychiatrists were already members of the APA. The remaining total of 25,582 yielded 19,498 "active" psychiatrists, or psychiatrists who are not residents or fellows, not retired, and are primarily active in psychiatry, of which 17,930 were APA members and 1,568 were non-members.

Data Limitations.--In order to assess potential sources of survey non-response bias, an analysis was conducted in which demographic characteristics of respondents were compared with nonrespondents. This analysis revealed no major differences between the groups. Other possible limitations may include self-reporting error of psychiatrists with respect to the recollection and estimation of weekly and monthly activities. (Dorwart et al. 1992).

The 1994 APA Membership Directory Survey

Scope of Survey.--The APA Membership directory was a full membership survey of 38,242 members. The primary purpose of the survey was to compile an updated directory of APA members, with a secondary purpose to gather data on psychiatrists primary and secondary practice settings and professional activities.

Response Rate.--Of the 38,242 members included in the study, 27,843 (72.8 percent) completed the survey. Of those who completed the directory, 20,579 provided data on their primary practice setting, while 14,773 psychiatrists provided data on their secondary employment setting.

Data Limitations.--Because this survey did not include responses from non-members of the APA, the setting data obtained from this population are not directly comparable with the 1982 APA PAS and the 1988-89 APA PAS setting estimates. Consequently, inferences and trends in work setting data cannot be directly drawn between these populations. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias.

Psychology

The American Psychological Association Member Survey

Sources and Qualifications of the Data.--Who is to be counted as a mental health services provider in psychology?

Not all psychologists are trained for health service provider roles, and not all of those with the necessary training are actively engaged in providing these services. In order to determine the actual number of psychologists who are qualified to function as health service providers and the number who actually deliver relevant services, it was necessary to consider the type and amount of training and the acquisition of the appropriate credentials for delivering those service. This resulted in examining several variables:

- Licensure as a psychologist - In all 50 States and the District of Columbia, licensure as a psychologist by a State board of psychological examiners is required for the independent practice of psychology. As is the case with most professions, these licensing statutes are designed in part to protect the public by ensuring that minimum training and competency requirements have been met by practitioners.

- Doctoral degree in psychology - A significant amount of advanced and highly specialized training is required in order to independently provide the full spectrum of mental health services. In psychology, the doctoral degree meets this requirement, and this definition is incorporated into State licensing laws and criteria used by third-party payers to recognize psychologists as eligible for reimbursement for their services.

- Training in mental health services - Only some of the basic subfields in psychology deal directly with the provision of health and mental health services; these are clinical, counseling, and school psychology. Although these three fields constitute those for which graduate training programs are

accredited, a host of other postgraduate specializations exist in which psychologists can earn additional credentials (e.g., forensic psychology, clinical neuropsychology, behavior therapy, family psychology, and clinical hypnosis). Both field of degree and current major field were considered in this analysis.

Reported counts or estimates of mental health service providers in psychology often vary, and have resulted from the differential application of these criteria by the individual "counters." For example, simple counts of licensed psychologists, frequently reported at the State level, typically fail to take into account the fact that some individuals may be licensed in more than one State -- a situation that is more characteristic in large metropolitan areas such as New York City and Washington, D.C. In addition, early versions of State statutes governing licensure did not specify the doctoral degree as a major criterion, with the result that individuals with less than a doctoral degree may have been "grandfathered" in when new statutes were enacted.

Another problem with relying on counts of licensed psychologists is that, although the primary aim of licensure is to identify those individuals who are competent in the areas of clinical, counseling, and school psychology, a few States (e.g., New York) allow and encourage individuals in other subfields who provide other types of services to the public (e.g., organizational consulting) to become licensed.

The APA Member Survey.--The majority of data on psychologists were derived from the 1993 Member Survey with updates for 1994 and 1995. This survey is conducted every four years, with interim updates in intervening years when some piece of data changes in a record (such as the mailing address), or when a new member joins the Association. It is intended to be a census of all individuals who belong to the APA. The purpose of the survey is twofold: (1) to compile individual listings for publication in the Directory of the American Psychological Association and (2) to gather data on the demographics, employment and professional activities for describing and monitoring changes in the characteristics of Association members.

In Section I of the questionnaire, all members are asked to provide new or update existing basic information, including their current mailing, e-mail and fax addresses, date of birth, field and year of highest degree, major field and specialty areas, position title, employer and licensure status. The majority of this information is published in their Directory listing. Section II requests more detailed information on: (1) the nature of the person's employment, such as his or her primary and secondary employment settings, and a ranking of the three top work activities that the person performed for each setting; (2) the individual's involvement as a psychologist in specific activities during the past three years; (3) additional demographic information such as race, ethnicity, and receipt of professional degrees in areas other than psychology.

In September 1992, the APA member survey was sent to all members of the Association. Only one mailing of the survey was conducted. Of the 75,000 members who received the survey, 52,720 (70.3 percent) had responded by late May 1993, and provided some usable data. In addition, 70 percent of the 6,181 individuals who joined APA in 1994 responded, along with 63 percent of the 5,110 newly elected members in 1995.

Procedures for identifying health service providers in psychology.--As previously mentioned, individuals who are trained, or employed, in psychology, work in a wide range of subfields and career roles. Thus, the criteria for inclusion as an active health service provider in psychology were as follows: (1) the person was currently a U.S. resident; (2) the individual had earned a doctoral degree; (3) the member indicated that he or she was licensed by one or more States for the independent practice of psychology; (4) the person reported being employed in psychology; and (5) involvement in the provision of health and mental health services was indicated.

Those who are clinically trained to provide health and mental health services--a slightly larger group--included all of the above, as well as those who (1) were licensed and trained in a health service provider subfield, but who reported no current involvement in direct services, or (2) were not licensed but stated that they had received their doctorate in a practice-related subfield.

Given these criteria and the information available on members, attempts were made to derive estimates of the population of both clinically active and clinically trained personnel in psychology, rather than to simply report figures pertaining only to the APA membership. First, estimates were made of the number in the APA membership who were clinically trained, and what percentage of this group was clinically active. This percentage (76 percent) was then used to adjust the numbers of licensed psychologists reported by each State licensing board. Unduplicated counts of licensed psychologists (i.e., the number of doctoral-level psychologists who were licensed and residing in the respective State) were located for almost 80 percent of the States. For the remaining group of States, duplicated counts were used. Consequently, these numbers represent estimates of the total numbers of clinically trained and clinically active psychologists overall, in each of the regions, and in each of the States. The percentages reported in the table were based on the responses to the APA membership survey.

Qualifications of the data.--As previously mentioned, the information reported in the tables in Chapter 10 was based on analyses of the APA membership coupled with State by State data on the population of licensed psychologists, including those who did not belong to the APA. This strategy assumes, of course, that those who are licensed, but do not belong to the APA, are similar to licensed psychologists who are APA members. Previous research on both APA and non-APA members indicated that the APA membership has been quite representative of doctoral-level providers in psychology with respect to demographic characteristics, education, and employment (Howard et al. 1986; Stapp, Tucker, and VandenBos 1985). In addition, the growth in the membership of APA who report being active direct service providers appears to parallel the growth in degree production in the relevant fields. Although we realize that better data are needed, no such information is available currently.

Because not all members responded to the APA membership survey, the extent to which the results are affected by nonresponse bias is unclear. Earlier comparisons of basic biographical information for nonrespondents with the data for respondents did not indicate marked differences with respect to highest degree, sex and age. But conclusions could not be developed for information on employment. Thus, for example, we cannot be sure whether psychologists in certain types of employment settings, for example, were less likely to respond.

Subdoctoral degree holders in psychology also work in the general medical and mental health specialty sectors. These individuals were not included in our analysis, because the data are based on the APA membership, and it is the case that this membership is not representative of those with less than a doctoral degree. Second, because the current licensing laws in most States require a doctorate in order to sit for licensure, this group is an increasingly small minority of psychologists qualified for the independent practice of psychology.

For additional information on the data presented in Chapter 10, and on the characteristics of psychologists, please contact the Research Office, American Psychological Association, 750 First Street, NE, Washington, D.C., 20002, or call (202) 336-5980 or e-mail at jfp.apa@email.apa.org.

Social Work

Data Collection for the National Association of Social Workers.--The data for NASW were collected from both applications for new membership and from annual membership renewal forms. As the data are collected, they are entered into the membership data base on a continuous basis. Data exist for the large

majority of the NASW membership and all tables had less than 20 percent missing data, Tables are based upon current membership information of April 30, 1996.

The data collection forms ask for the highest degree awarded, either in social work or in another field, sex, and date of birth. Other questions request information about:

- *ethnic* origin;
- *auspices* of both primary and/or secondary jobs (auspices include such things as public, private, sectarian, etc.)
- *function* on the job (primary and/or secondary), such as direct service, supervision, research;
- *setting* of primary and/or secondary jobs, such as social service agency, private practice, hospital, outpatient facility;
- *practice area* of primary and/or secondary jobs, such as children and youth, family services, mental health, school social work, alcohol/drug abuse, services to the aged; and
- *total years* of social work experience since first social work degree.

The data was drawn from the 152,067 total NASW members, selecting the clinically trained as those with masters or doctoral degrees that were not retired. Clinically active social workers were the subset that reported they were engaged in direct practice, supervision or agency-based training, the last category representing less than 1 percent. It is critical to note that these numbers only represent NASW members and that the universe of social workers is two to three times larger. Comparing to Census Bureau numbers, NASW has between 30 to 50 percent of the total number of trained social workers. Therefore, the numbers in the tables significantly understate the total numbers of trained social workers.

Psychiatric Nursing

The psychiatric nursing section of this chapter utilizes data from a 1994 survey of Certified Specialists in Psychiatric-Mental Health Nursing, conducted by the Society for Education and Research in Psychiatric-Mental Health Nursing.

Survey design.--All psychiatric clinical nurse specialists certified by the American Nurses Association in Spring of 1994 were included in the population for this survey. The Society for Education and Research in Psychiatric-Mental Health Nursing (SERPN) conducted the survey using a mailing list of clinical specialists in psychiatric and mental health nursing provided by the American Nurses Association. The purpose of the study was to provide an up to date database on the advanced practice of psychiatric mental health nursing to inform ongoing health care reform issues. A monograph of the SERPN study and results will be available in the Fall of 1996 for purchase from the SERPN National Office, 437 Twin Bay Drive, Pensacola, Fl. 32534 (904)-474-9024.

Sampling frame and sample size.--The population of Certified Specialists in Psychiatric Mental Health Nursing included 6,090 individuals certified in the Spring of 1994 as either adult and/or child specialists. The mailing list did not allow for separation of specialists into adult and child categories; the population as a whole was used as a basis for a 20 percent random sample. A sample of 1,211 served as the specialists included in this study.

Sample design.--This study used a simple random sample. All certified psychiatric clinical nurse specialists were included in the universe of the study.

Data Collection and Instrument.--SERPN's Advanced Practice Project Taskforce was responsible for the development and implementation of this study. The survey was developed to include issues of importance to psychiatric nursing as well as to collect baseline data based on CMHS' draft core human resources minimum data set. Surveys which influenced the development of this tool included: ANA (1986)

Survey of Psychiatric Clinical Nurse Specialists; Merwin E., and Fox, J. (1989) Survey of Psychiatric Clinical Nurse Specialists; Merwin E. et al (1991) Survey of Advanced Practice Nurses in VA; and the Center for Mental Health Services' Ad Hoc Human Resource Data Group, Draft Core Minimum Human Resource Data Set. The survey instrument consisted of items from prior surveys, the minimum data set, and original questions developed for this survey. The 16 page survey tool included fifty questions including several open ended questions.

The validity of the survey was established through a review of the questions by content experts representing the four psychiatric nursing organization represented in the Coalition of Psychiatric Nursing Organizations (COPNO) including the Association for Child and Adolescent Psychiatric Nursing, the American Psychiatric Nurses Association, the American Nurses Association, and the Society for Education and Research in Psychiatric Mental Health Nursing. Representatives from the four psychiatric nursing organizations met to review the instrument and made recommendations which improved the survey tool. The survey and procedures for data collection were formally endorsed by the COPNO representatives.

A response rate of 55 percent (675) was achieved following three mailings. A complete survey instrument was sent out in the first two mailings. The final mailing was a shortened form of the most important questions. The initial mailing took place in the Summer of 1994; the first follow-up took place in Fall, 1994. The final mailing took place in March of 1995.

Estimation.--The following weighting procedures were employed to derive population estimates. The population of Certified Specialists in Psychiatric Mental Health Nursing was 6,090 in Spring,1994. This population count served as the basis for estimation. Operationally the formula (6,090 population/675 responses) was used to generate a weight of 9.02. To establish a population estimate of clinically trained individuals who were not retired from the workforce the number of retired individuals in the population was identified. There were 10 retired, non-working respondents; they were deleted from the responses resulting in 665 respondents. A population estimate of clinically trained individuals who are not retired was determined to be 6,000 (6090-[9.02*10]), with a weight of 6000/665=9.02 For clinically trained individuals 23 were unemployed; it was estimated that there were 207 unemployed with in the population [6000-(9.02*23)] resulting in a population estimate of 5,793. Additionally 4 non-working students and 16 individuals for whom their working status was unknown were eliminated from the respondents for a final respondent number of 622 clinically trained and working individuals. The population estimate of clinically trained and working specialists in the population is estimated to be 5,610 (622*9.02).

Of the 622 clinically trained individuals 530 were clinically active for a clinically active population of 4,780 (530*9.02). Clinically active was defined as providing either direct patient care or providing clinical supervision of direct patient care; thus 85 percent of clinically trained individuals provide direct care. It is noted that the direct care may be provided in any of the individual's work settings.

Therefore the base numbers of 6,000 trained, 5,610 trained and working, and 4,780 clinically active specialists were used in these tables. Missing values on age (13), race (15), and primary setting (13) were spread across categories in proportion to frequency of respondents to maintain a constant base number for the tables. For example, the 13 observations who were missing information for primary setting, when weighted resulted in 117 observations missing for primary setting. These were distributed according to percentages of respondents working in each setting; 29 percent of respondents reported working in hospitals so 34 (29 percent) of 117 missing respondents were classified as working in hospitals.

Limitations.--A higher than 55 percent sample response rate would improve the population estimates generated. An assumption is made that the 45 percent of non-responders is similar to those who did respond. This assumption cannot be tested, therefore this response rate remains a limitation.

There were few missing values for most variables reported in this chapter. Exceptions were the variables used to estimate types of work activities of nurse specialists. The item including these variables was not included in the shorter version of the survey used in the final mailing and therefore is missing for responders to the last mailing. Only 387 (62 percent) of the respondents (387/622) have data available regarding types of work activities. In addition the questions which sought information related to this item were considered confusing to participants. Extensive data cleaning was necessary to obtain useable responses. For this analysis all 387 respondents were used for analyses since the variable was constructed only to reflect the participation in a specific work activity in any of one's work settings. However about 15-20 percent of cases would not have reliable responses if specific numbers of hours in work activities needed to be defined. A different set of variables was available to determine which of the clinically trained nurses were clinically active (in any position); 85 percent were clinically active. This differs from the 94 percent of nurses providing direct patient care as a work activity based on only the 387 respondents due to a difference of 235 respondents used for the creation of the two variables.

Clinical Mental Health Counseling

Clinical Mental Health Counselors may be defined in a number of ways. The purpose of this report is to estimate the number of available counselors who have the training necessary to provide independent or team treatment of populations in need of therapeutic mental health intervention and prevention. Sources used in calculations are U.S. Government figures; data obtained from a 1995 comprehensive survey of counselor practitioners completed for the American Counseling Association (ACA); ACA 1996 membership data; database queries of the National Board for Certified Counselors, Inc. (NBCC); the NBCC Clinical Mental Health Counselor Academy; and *Counselor Preparation 1993-1995*, by Hollis and Wantz.

Most figures reflect a conservative estimate based upon membership, State licensure, national certification and 1990 Census data. These data, both estimated and actual, will serve as a baseline delineator for more systematic collection. The collection of these data has pointed out the immediate need for the counseling profession to collect systematic and equivalent data with other mental health professions.

Marriage and Family Therapy

Data Collection.--The data for marriage and family therapy were collected from several sources. These are the Marriage and Family Therapist Practice Patterns Survey, the AAMFT Membership Database, the Annual Report for Accredited Programs submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), and data collected by AAMFT from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists.

The count of marriage and family therapists for each State, and the U.S. total in table 10.3 was derived from data collected by AAMFT in 1995 from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists. For those States that did not regulate marriage and family therapists in 1995, the count of Clinical Members from the AAMFT Membership Database was used.

The count for the U.S. total (46,227) from table 10.3 was used for tables 10.1, 10.2, 10.4, 10.5, 10.6, and 10.7, with the data on the details of these tables coming from the Marriage and Family Therapist Practice Patterns Survey, conducted by William J. Doherty of the Family Social Science Department of the University of Minnesota in the Summer and Fall of 1994, and reported by Doherty and Simmons (1996).

The data for table 10.8 are from the Annual Report for Accredited Programs, submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), and the count of Associate Members (post-degree supervision students in other accredited programs), and Student Members (pre-degree students in other accredited programs) from AAMFT Membership Database.

The Marriage and Family Therapist Practice Patterns Survey.--The Marriage and Family Therapist Practice Patterns Survey was commissioned by the American Association for Marriage and Family Therapy (AAMFT) Research and Education Foundation, and built upon an investigation of the clinical practice patterns of marriage and family therapists in Minnesota, which was published by Doherty and Simmons (1995). The Marriage and Family Therapist Practice Patterns Survey consisted of three parts. Part I asked general questions about the respondent's demographic and educational background and practice setting, along with a series of questions about current caseload, types of problems seen, and diagnoses used, types of therapy employed (individual, couple, family, group), areas of competency, and a variety of questions about reimbursement. Part I was intended to be completed with minimal reference to clinical records, and for some of the questions - such as frequency of presenting problems and diagnosis - the therapist was expected to estimate answers.

Part II of the survey asked for detailed information on the therapist's three most recently completed cases. A completed case was defined as one "where therapy has ended, at least for now, and no specific follow-up is scheduled." One-session assessments and consultations were excluded. Detailed information on presenting problems was sought, as well as diagnosis assigned, frequency of sessions, number of sessions, method of payment, presence of chronic illness or other health care problems, and other case information. A series of questions was also posed regarding the therapists' perceptions of the outcomes of treatment for a variety of areas of functional change in clients' lives. Data were requested on up to eight participating clients for each case. Client demographics were reported (age, gender, racial or ethnic background, education), as were client relationships (marital or committed partners, parent-child relationships). One item in Part II required coding of presenting problems, which therapists were asked to list in their own words. Therapists' responses were coded into more than 30 non-overlapping categories.

Part III, completed anonymously by clients, included questions on their satisfaction with the services they received, and with the functional outcomes of their treatment. For cases which primarily involved the treatment of a child, parents were asked to complete a child version of the outcome questionnaire. Therapists answered the same outcome questions that clients did. The client satisfaction measure was adapted from Attkisson and Zwick's eight-item Client Satisfaction Questionnaire (1982), an instrument with established reliability and validity in the area of psychotherapy research. It uses a 4-point Likert scale with a range from "very dissatisfied" to "very satisfied". The client outcome measure, the Client Change Questionnaire, was developed for this study. It consists of nine health transition questions in which clients are asked to compare their current level of functioning in various life domains (such as overall health, emotional health, work, and family), with their level of functioning prior to starting therapy (Feinstein 1987). Each item included a 5-point Likert response scale ranging from "much worse" to "much better".

In August and September 1994, AAMFT clinical members in the participating States received a joint letter from their State leadership and volunteer coordinator outlining the challenges facing the practice and profession of marriage and family therapy at both the Federal and State levels. That letter also advised members about the practice patterns survey and encouraged maximum participation in the study.

The participating States were selected from those State divisions of AAMFT that volunteered in response to a Request for Proposals distributed by the AAMFT Research and Education Foundation to all of its State and provincial divisions in the United States and Canada. The fifteen participating States are: Alabama, California, Colorado, Florida, Illinois, Massachusetts, Michigan, Mississippi, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Wyoming. A random sample of 1,716 clinical members was drawn from a population of more than 8,600 clinical members in the 15 States. States with fewer AAMFT members were oversampled relative to larger States, in order to provide State-level data as well as national data. Throughout the data collection period, therapists received letters from the volunteer coordinator and divisional leaders in each State encouraging them to participate in the study.

In September 1994, each therapist received a letter of invitation to participate in the study, along with the survey, from William J. Doherty, Ph.D., and Deborah S. Simmons at the University of Minnesota. A stamped return envelope, addressed to the volunteer coordinator in each State, was also enclosed. In addition, each member of the sample received stamped return envelopes, addressed to the researchers at the Family Social Science Department of the University of Minnesota, to be sent to clients whose cases were being reported on. Therapists were asked to complete and return the survey within 3 weeks of receiving it.

Volunteers in each State contacted the therapists by telephone within two weeks after the survey had been mailed, to ensure that they had received the survey and to answer any questions. Of the 1,716 therapists in the sample, 178 were ineligible because they were deceased, had moved out of State, were no longer practicing marriage and family therapy, or were ill.

After 3 weeks, many of the volunteer coordinators contacted nonrespondents by letter, postcard, or telephone and often sent a second copy of the survey. Another round of follow-up phone calls was made by the volunteers in each State within a week after the reminder contact had been made to answer nonrespondents' questions and urge therapists to participate in the study. Finally, after the surveys were returned, many therapists in the sample received a telephone call from the volunteer coordinator to clarify responses or to request missing data.

The final response rate was 34.3 percent, or 526 of the eligible 1,538 therapists. This response rate is typical for questionnaires sent to professionals, and varied considerably among the States. The principle reason given for nonparticpation was being too busy to complete the lengthy questionnaire. All of the responding therapists completed Part I of the survey and 53.8 percent completed Part II, providing data on 850 cases. The response rate for clients was 62.3 percent. A State by State comparison of the major findings showed a pattern of similarity, irrespective of State response rate. The findings are quite similar to those of the Minnesota study, which had an 80 percent response rate.

The AAMFT Membership Database.--Data for the AAMFT Membership Database are collected from both applications for new membership and from annual membership renewal forms. As the data are collected, they are entered into the membership data base on a continuous basis.

Members of AAMFT are coded in the membership data base according to their category of membership, as follows: clinical membership, associate membership, student membership, and affiliate membership. The definition of each category is as follows:

Clinical Membership - persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution, and two years post-degree supervised clinical experience in marriage and family therapy.

Associate Membership - persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution, but have not yet completed two years post-degree supervised clinical experience in marriage and family therapy. Associate Membership is limited to five years, since it is anticipated that Associate Members will advance to Clinical Membership.

Student Membership - persons currently enrolled in a qualifying graduate program in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) in a regionally accredited educational institution or a COMAFTE-accredited graduate program or post-degree institute. Student Membership is limited to five years, since it is anticipated that Student Members will advance to Associate, then Clinical Membership.

Affiliate Membership - members of allied professions, and other persons interested in marriage and family therapy. Affiliate Members come from related fields such as family medicine, family mediation, family policy and research. The Affiliate Membership is a non-credentialing, non-evaluative and non-voting membership category.

COAMFTE Annual Report for Accredited Programs.--Annually the programs accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) submit standard written reports concerning compliance with the accreditation standards, including, among other data, a listing of all students currently enrolled in the marriage and family therapy program. Data reported include the student's name, year in program, gender, ethnicity and academic background. Data on the number of students in each program were collated for table 10.8 from the most recent annual report of the accredited programs, which was either 1995 or 1994.

School Psychology

Sources and Qualifications of the Data.--Who is counted as a school psychologist? In most States, professional school psychologists are certified to practice within school settings and non-school settings by each State's department of education. Every State has a certification for school Psychology; however, some States use more than one title for professionals qualified to be called school psychologists. State-by-State standards for certification and licensure are published by the National Association of School Psychologists (1995). Forty-seven States (including the District of Columbia), require academic standards consistent with the NCSP. One State, Hawaii, requires a doctorate to use the title. Three States require a master's degree with unspecified credit hours. All States require a supervised internship. Students graduating from NASP/NCATE approved programs meet the NCSP credentialing standard, and may receive the NCSP upon receiving a satisfactory score on the national examination. States which have upgraded their standards over the past ten years have "grandparented" persons who do not meet the academic requirements of a 60 credit hour master's or specialist degree, a 1,200 hour supervised internship, and other requirements noted in the body of the report.

Data Base.--The data in this report is based upon data gathered yearly by the U.S. Department of Education. The data reported by the U. S. Department of Education (USDOE) is found in its *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.* These data are required to be reported by each State education agency (SEA) which, in turn has data reports from each local education agency (LEA). These data are required to be gathered to assure that each school system is maintaining its effort to provide a "free and appropriate public education" to all children who are disabled and in need of special education and related services. These data use the following categories for special education teachers and other personnel (i.e. school psychologist), employed to provide services to students with disabilities.

- Employed/Fully Certified or Licensed: -The number of FTE personnel employed or contracted who had appropriate State Certification or licensure for the position held.

- Employed/ Not Fully Certified: the number of FTE personnel employed or contracted who were employed in an emergency, provisional, or other basis if they did not hold standard State Certification or licensure for the position to which they were assigned.

The data reported from each State education agency only lists as school psychologists persons who are State certified or licensed. In fact it considers persons provisionally providing school psychological services under the category of unfilled positions. Therefore, the supposition that these USDOE data accurately reflect a consistent professional standard can be assumed. The data were corrected for two States, Missouri and Arkansas, where the USDOE reported data from those two States seriously underestimated the number of actual school psychologists practicing by a total of 140. This correction

was based upon NASP membership data (for 1993) and personal contacts with professional leadership in both States.

NASP Membership Data.--NASP total membership was 19,148 members, as of July 1996. NASP has several membership categories of which three are critical to this report: Regular; Student and; Retired. These categories are defined as follows:

Regular membership in NASP requires that the applicant certify that they are:

1. Currently credentialed and working as a school psychologist;
2. Certified and working as a supervisor or consultant in school psychology;
3. Primarily engaged in the training of school psychologists at a college or university.

Excluding international membership, NASP regular membership as of July 1996 was 14,006. Student membership includes students enrolled half-time or more leading to an advanced degree or post masters certificate in school psychology or doctorate, as verified by their program advisor. Student membership as of July 1996 was 4,290.

Retired membership requires the retired school psychologist to have been a member for five consecutive years and retired from remunerative professional activity. Retired membership as of July 1996 was 609. It is presumed that these retired members are not clinically active in the profession of school psychology.

All regular and student members and all those holding an NCSP must agree to abide by the NASP professional standards and code of ethics published by NASP. By 1991, nearly 15,000 school psychologists received the NCSP credential.

There are approximately 2,300 school psychologists certified as NCSP who are not members of NASP. As noted above, most State certification systems require the equivalent academic requirements of NCSP. Several States will now accept NCSP as the necessary documentation for State certification.

Data reported in Tables.--Each year NASP requests that membership respond to a set of computer recorded demographic questions including: age; sex; ethnicity; position; employment setting; salary; student service ratio; and years of experience. There is no obligation to complete these data requests, and more than 10 percent ignore all requests. Each of the 13 items is responded to at different rates and, therefore, the accuracy of the data is unknown.

For example only 12,006 responded to "employment setting" and fewer, (9,634) responded to "years of experience." However, when the responses are compared to mailed, random surveys carried out over the years, (Fagan 1988; Reshly and Wilson 1992), the patterns are quite similar, giving a degree of assurance that these data can be applied to the general population of certified, employed, clinically active school psychologists reported by the U. S. Department of Education.

To determine the number of "clinically trained" reported in table 10.1, the authors used the ratio of NASP members who are certified, including those who are university trainers and administrators, to those who are not so specified. This produced a ratio of one clinically active to 1.07 clinically trained. The number reported by the USDOE was then multiplied by that ratio to secure the total of 21,693. The same ratio was applied to USDOE data from 1988 and 1992 for table 10.1 to provide some longitudinal reference consistent with other professions. It is important to note that the last year for data from the USDOE was 1993, as reported in the 1995 *Report to Congress* . The 18th USDOE *Report to Congress* is expected to be published in October 1996, containing data on school psychology and other related service professions for the school year ending June 1994.

The data in table 10.2, 10.4, 10.6, and, 10.7 are based upon ratios and percentages reported by NASP members' responses to the membership questionnaire applied, when appropriate, to the USDOE adjusted number. The data in table 10.3 is the State-by-State data reported for 1993, which is the best data that exists for school psychologists who are "clinically active" at the present time. Table 10.5 is based on the assumption that most school psychologists are limited to a single employment setting. This is most generally the case. Since about 10 percent of school psychologists are licensed to practice outside the school setting, there may be a second setting for these professionals. However, NASP does not request any data on this factor. Therefore, "NA" is noted both for "two or more settings," and the "part time" category.

Table 10.8 represents the number of school psychology students in programs approved by NASPNCATE as reported by the Director of Certification from the NASP database.

Qualifications of the Data.--The USDOE data is a record of State certified or licensed school psychologists reported for 1993, who serve children with disabilities in schools, or school-related settings. These reported data are based upon "full time equivalents," rather than individuals. Therefore there may be more individuals certified than this number. Furthermore, the data do not exclude some contracted persons. The data also may exclude school psychologists who are employed who do not provide services to children with disabilities under IDEA. For example, there are school psychologists employed in Head Start programs which may be administered by another State agency. School psychologists serving under Part H the "infant and toddlers" disability program may not be included in this USDOE count. Finally, many States have school psychologists employed under State "pupil services" laws, and under Title I of the Improving America's Schools Act of 1994.

Without referencing the USDOE data, Fagan and Sachs-Wise (1994) report a "consensus figure" of between 20,000 and 22,000 school psychologists. It may be that these numbers underrepresent the total clinically active population (and, thus, clinically trained) of school psychologists by as much as 5-10 percent, but there is no reliable way to make this determination.

Adjusting the USDOE data required the application of membership percentages to those data. Since the membership data is consistent with the data on a random sample of 6,470 school psychologists (Reshly and Wilson 1992), it may be assumed that the membership data can be generalized to the USDOE data without any known bias. For example, Reshly and Wilson showed that 86 percent of school psychologists worked for school systems, whereas 4 percent were in private practice, frequently serving school systems. One percent reported working in hospitals, one percent in universities, one percent in clinics, one percent in residential settings, and five percent in the category "other." The USDOE data would suggest that either a higher percentage of school psychologists are employed by the schools, or that the "full-time-equivalent" factor plays a larger role than the authors estimate.

The growth in the USDOE numbers over the five year data span of 1988 through 1993 is not dramatic, and suggests a stable number. The number of elementary and secondary students may be growing, thus causing a shift in the ratio of professionals to population. Table 10.3 should be read with extreme caution. It is erroneous to perceive the State population as the potential service population for school psychologists. School psychologists serve children ages 5 through 18, in general, and a subset of children ages 0 through 21, who have, or are at risk of having, a disability. There are about 45 million children ages 6-21 or about 16 percent of the total population (USDOE 1995). Data for ages 6-21 for each State were not available to the authors at the time this report was drafted.

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Appendix E

Sources and Qualifications of Data - Chapter 10

Psychiatry

1996-97 American Medical Association Physician Characteristics and Distribution in the U.S.

Scope of Data.--Data are derived from the American Medical Association's (AMA) Masterfile which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA Physicians Professional Activities (PPA) questionnaire which is sent to approximately one-third of all physicians each year. Data presented in the Physician Characteristics and Distribution in the U.S. are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to accurately reflect clinically trained and clinically active psychiatrists.

Limitations.--Because the AMA Masterfile includes physicians who are self-designated or self-identified as a psychiatrists, the data may include some physicians with no specialty psychiatric training.

1996 American Psychiatric Association Membership Data

Scope of Data.--The 1996 American Psychiatric Association (APA) Membership estimates were taken from the July 1996 APA membership database. At that time, the total APA membership was 40,866 which included 28,970 active psychiatrists practicing in the United States. The remaining 11,896 APA members included: 5,438 psychiatric residents, 3,105 medical students, 2,035 psychiatrists not practicing in the United States, and 1,318 inactive psychiatrists.

Limitations.--The APA membership data are limited in that not all of the nation's psychiatrists are members of the APA. The APA membership data, does, however, include a significant majority of the physicians in the American Medical Association Masterfile. Unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

1988-89 American Psychiatric Association, Professional Activities Survey (PAS)

Scope of Survey.--The 1988-89 American Psychiatric Association (APA) Professional Activity Survey (PAS) gathered data on both APA members and non-members who had identified themselves in the American Medical Association Masterfile as primarily specializing in psychiatry. APA Members and non-members were combined and cross-checked against the APA membership file in order to remove duplicate records resulting in a residual list of 10,091 self-designated psychiatrists, and 34,164 APA members.

Response Rate.--Of the 34,164 APA members included in the study, 23,126 or 67.7 percent responded to the survey. The sample of 10,091 self-designated psychiatrists yielded a response rate of 28.9 percent or 2,922 completed surveys. Of the 2,922 completed surveys, 341 respondents were found not to be psychiatrists and 125 psychiatrists were already members of the APA. The remaining total of 25,582 yielded 19,498 "active" psychiatrists, or psychiatrists who are not residents or fellows, not retired, and are primarily active in psychiatry, of which 17,930 were APA members and 1,568 were non-members.

Data Limitations.--In order to assess potential sources of survey non-response bias, an analysis was conducted in which demographic characteristics of respondents were compared with nonrespondents. This analysis revealed no major differences between the groups. Other possible limitations may include self-reporting error of psychiatrists with respect to the recollection and estimation of weekly and monthly activities. (Dorwart et al. 1992).

The 1994 APA Membership Directory Survey

Scope of Survey.--The APA Membership directory was a full membership survey of 38,242 members. The primary purpose of the survey was to compile an updated directory of APA members, with a secondary purpose to gather data on psychiatrists primary and secondary practice settings and professional activities.

Response Rate.--Of the 38,242 members included in the study, 27,843 (72.8 percent) completed the survey. Of those who completed the directory, 20,579 provided data on their primary practice setting, while 14,773 psychiatrists provided data on their secondary employment setting.

Data Limitations.--Because this survey did not include responses from non-members of the APA, the setting data obtained from this population are not directly comparable with the 1982 APA PAS and the 1988-89 APA PAS setting estimates. Consequently, inferences and trends in work setting data cannot be directly drawn between these populations. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias.

Psychology

The American Psychological Association Member Survey

Sources and Qualifications of the Data.--Who is to be counted as a mental health services provider in psychology?

Not all psychologists are trained for health service provider roles, and not all of those with the necessary training are actively engaged in providing these services. In order to determine the actual number of psychologists who are qualified to function as health service providers and the number who actually deliver relevant services, it was necessary to consider the type and amount of training and the acquisition of the appropriate credentials for delivering those service. This resulted in examining several variables:

- Licensure as a psychologist - In all 50 States and the District of Columbia, licensure as a psychologist by a State board of psychological examiners is required for the independent practice of psychology. As is the case with most professions, these licensing statutes are designed in part to protect the public by ensuring that minimum training and competency requirements have been met by practitioners.

- Doctoral degree in psychology - A significant amount of advanced and highly specialized training is required in order to independently provide the full spectrum of mental health services. In psychology, the doctoral degree meets this requirement, and this definition is incorporated into State licensing laws and criteria used by third-party payers to recognize psychologists as eligible for reimbursement for their services.

- Training in mental health services - Only some of the basic subfields in psychology deal directly with the provision of health and mental health services; these are clinical, counseling, and school psychology. Although these three fields constitute those for which graduate training programs are

accredited, a host of other postgraduate specializations exist in which psychologists can earn additional credentials (e.g., forensic psychology, clinical neuropsychology, behavior therapy, family psychology, and clinical hypnosis). Both field of degree and current major field were considered in this analysis.

Reported counts or estimates of mental health service providers in psychology often vary, and have resulted from the differential application of these criteria by the individual "counters." For example, simple counts of licensed psychologists, frequently reported at the State level, typically fail to take into account the fact that some individuals may be licensed in more than one State -- a situation that is more characteristic in large metropolitan areas such as New York City and Washington, D.C. In addition, early versions of State statutes governing licensure did not specify the doctoral degree as a major criterion, with the result that individuals with less than a doctoral degree may have been "grandfathered" in when new statutes were enacted.

Another problem with relying on counts of licensed psychologists is that, although the primary aim of licensure is to identify those individuals who are competent in the areas of clinical, counseling, and school psychology, a few States (e.g., New York) allow and encourage individuals in other subfields who provide other types of services to the public (e.g., organizational consulting) to become licensed.

The APA Member Survey.--The majority of data on psychologists were derived from the 1993 Member Survey with updates for 1994 and 1995. This survey is conducted every four years, with interim updates in intervening years when some piece of data changes in a record (such as the mailing address), or when a new member joins the Association. It is intended to be a census of all individuals who belong to the APA. The purpose of the survey is twofold: (1) to compile individual listings for publication in the Directory of the American Psychological Association and (2) to gather data on the demographics, employment and professional activities for describing and monitoring changes in the characteristics of Association members.

In Section I of the questionnaire, all members are asked to provide new or update existing basic information, including their current mailing, e-mail and fax addresses, date of birth, field and year of highest degree, major field and specialty areas, position title, employer and licensure status. The majority of this information is published in their Directory listing. Section II requests more detailed information on: (1) the nature of the person's employment, such as his or her primary and secondary employment settings, and a ranking of the three top work activities that the person performed for each setting; (2) the individual's involvement as a psychologist in specific activities during the past three years; (3) additional demographic information such as race, ethnicity, and receipt of professional degrees in areas other than psychology.

In September 1992, the APA member survey was sent to all members of the Association. Only one mailing of the survey was conducted. Of the 75,000 members who received the survey, 52,720 (70.3 percent) had responded by late May 1993, and provided some usable data. In addition, 70 percent of the 6,181 individuals who joined APA in 1994 responded, along with 63 percent of the 5,110 newly elected members in 1995.

Procedures for identifying health service providers in psychology.--As previously mentioned, individuals who are trained, or employed, in psychology, work in a wide range of subfields and career roles. Thus, the criteria for inclusion as an active health service provider in psychology were as follows: (1) the person was currently a U.S. resident; (2) the individual had earned a doctoral degree; (3) the member indicated that he or she was licensed by one or more States for the independent practice of psychology; (4) the person reported being employed in psychology; and (5) involvement in the provision of health and mental health services was indicated.

Those who are clinically trained to provide health and mental health services--a slightly larger group--included all of the above, as well as those who (1) were licensed and trained in a health service provider subfield, but who reported no current involvement in direct services, or (2) were not licensed but stated that they had received their doctorate in a practice-related subfield.

Given these criteria and the information available on members, attempts were made to derive estimates of the population of both clinically active and clinically trained personnel in psychology, rather than to simply report figures pertaining only to the APA membership. First, estimates were made of the number in the APA membership who were clinically trained, and what percentage of this group was clinically active. This percentage (76 percent) was then used to adjust the numbers of licensed psychologists reported by each State licensing board. Unduplicated counts of licensed psychologists (i.e., the number of doctoral-level psychologists who were licensed and residing in the respective State) were located for almost 80 percent of the States. For the remaining group of States, duplicated counts were used. Consequently, these numbers represent estimates of the total numbers of clinically trained and clinically active psychologists overall, in each of the regions, and in each of the States. The percentages reported in the table were based on the responses to the APA membership survey.

Qualifications of the data.--As previously mentioned, the information reported in the tables in Chapter 10 was based on analyses of the APA membership coupled with State by State data on the population of licensed psychologists, including those who did not belong to the APA. This strategy assumes, of course, that those who are licensed, but do not belong to the APA, are similar to licensed psychologists who are APA members. Previous research on both APA and non-APA members indicated that the APA membership has been quite representative of doctoral-level providers in psychology with respect to demographic characteristics, education, and employment (Howard et al. 1986; Stapp, Tucker, and VandenBos 1985). In addition, the growth in the membership of APA who report being active direct service providers appears to parallel the growth in degree production in the relevant fields. Although we realize that better data are needed, no such information is available currently.

Because not all members responded to the APA membership survey, the extent to which the results are affected by nonresponse bias is unclear. Earlier comparisons of basic biographical information for nonrespondents with the data for respondents did not indicate marked differences with respect to highest degree, sex and age. But conclusions could not be developed for information on employment. Thus, for example, we cannot be sure whether psychologists in certain types of employment settings, for example, were less likely to respond.

Subdoctoral degree holders in psychology also work in the general medical and mental health specialty sectors. These individuals were not included in our analysis, because the data are based on the APA membership, and it is the case that this membership is not representative of those with less than a doctoral degree. Second, because the current licensing laws in most States require a doctorate in order to sit for licensure, this group is an increasingly small minority of psychologists qualified for the independent practice of psychology.

For additional information on the data presented in Chapter 10, and on the characteristics of psychologists, please contact the Research Office, American Psychological Association, 750 First Street, NE, Washington, D.C., 20002, or call (202) 336-5980 or e-mail at jfp.apa@email.apa.org.

Social Work

Data Collection for the National Association of Social Workers.--The data for NASW were collected from both applications for new membership and from annual membership renewal forms. As the data are collected, they are entered into the membership data base on a continuous basis. Data exist for the large

majority of the NASW membership and all tables had less than 20 percent missing data, Tables are based upon current membership information of April 30, 1996.

The data collection forms ask for the highest degree awarded, either in social work or in another field, sex, and date of birth. Other questions request information about:

- *ethnic* origin;
- *auspices* of both primary and/or secondary jobs (auspices include such things as public, private, sectarian, etc.)
- *function* on the job (primary and/or secondary), such as direct service, supervision, research;
- *setting* of primary and/or secondary jobs, such as social service agency, private practice, hospital, outpatient facility;
- *practice area* of primary and/or secondary jobs, such as children and youth, family services, mental health, school social work, alcohol/drug abuse, services to the aged; and
- *total years* of social work experience since first social work degree.

The data was drawn from the 152,067 total NASW members, selecting the clinically trained as those with masters or doctoral degrees that were not retired. Clinically active social workers were the subset that reported they were engaged in direct practice, supervision or agency-based training, the last category representing less than 1 percent. It is critical to note that these numbers only represent NASW members and that the universe of social workers is two to three times larger. Comparing to Census Bureau numbers, NASW has between 30 to 50 percent of the total number of trained social workers. Therefore, the numbers in the tables significantly understate the total numbers of trained social workers.

Psychiatric Nursing

The psychiatric nursing section of this chapter utilizes data from a 1994 survey of Certified Specialists in Psychiatric-Mental Health Nursing, conducted by the Society for Education and Research in Psychiatric-Mental Health Nursing.

Survey design.--All psychiatric clinical nurse specialists certified by the American Nurses Association in Spring of 1994 were included in the population for this survey. The Society for Education and Research in Psychiatric-Mental Health Nursing (SERPN) conducted the survey using a mailing list of clinical specialists in psychiatric and mental health nursing provided by the American Nurses Association. The purpose of the study was to provide an up to date database on the advanced practice of psychiatric mental health nursing to inform ongoing health care reform issues. A monograph of the SERPN study and results will be available in the Fall of 1996 for purchase from the SERPN National Office, 437 Twin Bay Drive, Pensacola, Fl. 32534 (904)-474-9024.

Sampling frame and sample size.--The population of Certified Specialists in Psychiatric Mental Health Nursing included 6,090 individuals certified in the Spring of 1994 as either adult and/or child specialists. The mailing list did not allow for separation of specialists into adult and child categories; the population as a whole was used as a basis for a 20 percent random sample. A sample of 1,211 served as the specialists included in this study.

Sample design.--This study used a simple random sample. All certified psychiatric clinical nurse specialists were included in the universe of the study.

Data Collection and Instrument.--SERPN's Advanced Practice Project Taskforce was responsible for the development and implementation of this study. The survey was developed to include issues of importance to psychiatric nursing as well as to collect baseline data based on CMHS' draft core human resources minimum data set. Surveys which influenced the development of this tool included: ANA (1986)

Survey of Psychiatric Clinical Nurse Specialists; Merwin E., and Fox, J. (1989) Survey of Psychiatric Clinical Nurse Specialists; Merwin E. et al (1991) Survey of Advanced Practice Nurses in VA; and the Center for Mental Health Services' Ad Hoc Human Resource Data Group, Draft Core Minimum Human Resource Data Set. The survey instrument consisted of items from prior surveys, the minimum data set, and original questions developed for this survey. The 16 page survey tool included fifty questions including several open ended questions.

The validity of the survey was established through a review of the questions by content experts representing the four psychiatric nursing organization represented in the Coalition of Psychiatric Nursing Organizations (COPNO) including the Association for Child and Adolescent Psychiatric Nursing, the American Psychiatric Nurses Association, the American Nurses Association, and the Society for Education and Research in Psychiatric Mental Health Nursing. Representatives from the four psychiatric nursing organizations met to review the instrument and made recommendations which improved the survey tool. The survey and procedures for data collection were formally endorsed by the COPNO representatives.

A response rate of 55 percent (675) was achieved following three mailings. A complete survey instrument was sent out in the first two mailings. The final mailing was a shortened form of the most important questions. The initial mailing took place in the Summer of 1994; the first follow-up took place in Fall, 1994. The final mailing took place in March of 1995.

Estimation.--The following weighting procedures were employed to derive population estimates. The population of Certified Specialists in Psychiatric Mental Health Nursing was 6,090 in Spring,1994. This population count served as the basis for estimation. Operationally the formula (6,090 population/675 responses) was used to generate a weight of 9.02. To establish a population estimate of clinically trained individuals who were not retired from the workforce the number of retired individuals in the population was identified. There were 10 retired, non-working respondents; they were deleted from the responses resulting in 665 respondents. A population estimate of clinically trained individuals who are not retired was determined to be 6,000 (6090-[9.02*10]), with a weight of 6000/665=9.02 For clinically trained individuals 23 were unemployed; it was estimated that there were 207 unemployed with in the population [6000-(9.02*23)] resulting in a population estimate of 5,793. Additionally 4 non-working students and 16 individuals for whom their working status was unknown were eliminated from the respondents for a final respondent number of 622 clinically trained and working individuals. The population estimate of clinically trained and working specialists in the population is estimated to be 5,610 (622*9.02).

Of the 622 clinically trained individuals 530 were clinically active for a clinically active population of 4,780 (530*9.02). Clinically active was defined as providing either direct patient care or providing clinical supervision of direct patient care; thus 85 percent of clinically trained individuals provide direct care. It is noted that the direct care may be provided in any of the individual's work settings.

Therefore the base numbers of 6,000 trained, 5,610 trained and working, and 4,780 clinically active specialists were used in these tables. Missing values on age (13), race (15), and primary setting (13) were spread across categories in proportion to frequency of respondents to maintain a constant base number for the tables. For example, the 13 observations who were missing information for primary setting, when weighted resulted in 117 observations missing for primary setting. These were distributed according to percentages of respondents working in each setting; 29 percent of respondents reported working in hospitals so 34 (29 percent) of 117 missing respondents were classified as working in hospitals.

Limitations.--A higher than 55 percent sample response rate would improve the population estimates generated. An assumption is made that the 45 percent of non-responders is similar to those who did respond. This assumption cannot be tested, therefore this response rate remains a limitation.

There were few missing values for most variables reported in this chapter. Exceptions were the variables used to estimate types of work activities of nurse specialists. The item including these variables was not included in the shorter version of the survey used in the final mailing and therefore is missing for responders to the last mailing. Only 387 (62 percent) of the respondents (387/622) have data available regarding types of work activities. In addition the questions which sought information related to this item were considered confusing to participants. Extensive data cleaning was necessary to obtain useable responses. For this analysis all 387 respondents were used for analyses since the variable was constructed only to reflect the participation in a specific work activity in any of one's work settings. However about 15-20 percent of cases would not have reliable responses if specific numbers of hours in work activities needed to be defined. A different set of variables was available to determine which of the clinically trained nurses were clinically active (in any position); 85 percent were clinically active. This differs from the 94 percent of nurses providing direct patient care as a work activity based on only the 387 respondents due to a difference of 235 respondents used for the creation of the two variables.

Clinical Mental Health Counseling

Clinical Mental Health Counselors may be defined in a number of ways. The purpose of this report is to estimate the number of available counselors who have the training necessary to provide independent or team treatment of populations in need of therapeutic mental health intervention and prevention. Sources used in calculations are U.S. Government figures; data obtained from a 1995 comprehensive survey of counselor practitioners completed for the American Counseling Association (ACA); ACA 1996 membership data; database queries of the National Board for Certified Counselors, Inc. (NBCC); the NBCC Clinical Mental Health Counselor Academy; and *Counselor Preparation 1993-1995*, by Hollis and Wantz.

Most figures reflect a conservative estimate based upon membership, State licensure, national certification and 1990 Census data. These data, both estimated and actual, will serve as a baseline delineator for more systematic collection. The collection of these data has pointed out the immediate need for the counseling profession to collect systematic and equivalent data with other mental health professions.

Marriage and Family Therapy

Data Collection.--The data for marriage and family therapy were collected from several sources. These are the Marriage and Family Therapist Practice Patterns Survey, the AAMFT Membership Database, the Annual Report for Accredited Programs submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), and data collected by AAMFT from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists.

The count of marriage and family therapists for each State, and the U.S. total in table 10.3 was derived from data collected by AAMFT in 1995 from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists. For those States that did not regulate marriage and family therapists in 1995, the count of Clinical Members from the AAMFT Membership Database was used.

The count for the U.S. total (46,227) from table 10.3 was used for tables 10.1, 10.2, 10.4, 10.5, 10.6, and 10.7, with the data on the details of these tables coming from the Marriage and Family Therapist Practice Patterns Survey, conducted by William J. Doherty of the Family Social Science Department of the University of Minnesota in the Summer and Fall of 1994, and reported by Doherty and Simmons (1996).

The data for table 10.8 are from the Annual Report for Accredited Programs, submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), and the count of Associate Members (post-degree supervision students in other accredited programs), and Student Members (pre-degree students in other accredited programs) from AAMFT Membership Database.

The Marriage and Family Therapist Practice Patterns Survey.--The Marriage and Family Therapist Practice Patterns Survey was commissioned by the American Association for Marriage and Family Therapy (AAMFT) Research and Education Foundation, and built upon an investigation of the clinical practice patterns of marriage and family therapists in Minnesota, which was published by Doherty and Simmons (1995). The Marriage and Family Therapist Practice Patterns Survey consisted of three parts. Part I asked general questions about the respondent's demographic and educational background and practice setting, along with a series of questions about current caseload, types of problems seen, and diagnoses used, types of therapy employed (individual, couple, family, group), areas of competency, and a variety of questions about reimbursement. Part I was intended to be completed with minimal reference to clinical records, and for some of the questions - such as frequency of presenting problems and diagnosis - the therapist was expected to estimate answers.

Part II of the survey asked for detailed information on the therapist's three most recently completed cases. A completed case was defined as one "where therapy has ended, at least for now, and no specific follow-up is scheduled." One-session assessments and consultations were excluded. Detailed information on presenting problems was sought, as well as diagnosis assigned, frequency of sessions, number of sessions, method of payment, presence of chronic illness or other health care problems, and other case information. A series of questions was also posed regarding the therapists' perceptions of the outcomes of treatment for a variety of areas of functional change in clients' lives. Data were requested on up to eight participating clients for each case. Client demographics were reported (age, gender, racial or ethnic background, education), as were client relationships (marital or committed partners, parent-child relationships). One item in Part II required coding of presenting problems, which therapists were asked to list in their own words. Therapists' responses were coded into more than 30 non-overlapping categories.

Part III, completed anonymously by clients, included questions on their satisfaction with the services they received, and with the functional outcomes of their treatment. For cases which primarily involved the treatment of a child, parents were asked to complete a child version of the outcome questionnaire. Therapists answered the same outcome questions that clients did. The client satisfaction measure was adapted from Attkisson and Zwick's eight-item Client Satisfaction Questionnaire (1982), an instrument with established reliability and validity in the area of psychotherapy research. It uses a 4-point Likert scale with a range from "very dissatisfied" to "very satisfied". The client outcome measure, the Client Change Questionnaire, was developed for this study. It consists of nine health transition questions in which clients are asked to compare their current level of functioning in various life domains (such as overall health, emotional health, work, and family), with their level of functioning prior to starting therapy (Feinstein 1987). Each item included a 5-point Likert response scale ranging from "much worse" to "much better".

In August and September 1994, AAMFT clinical members in the participating States received a joint letter from their State leadership and volunteer coordinator outlining the challenges facing the practice and profession of marriage and family therapy at both the Federal and State levels. That letter also advised members about the practice patterns survey and encouraged maximum participation in the study.

The participating States were selected from those State divisions of AAMFT that volunteered in response to a Request for Proposals distributed by the AAMFT Research and Education Foundation to all of its State and provincial divisions in the United States and Canada. The fifteen participating States are: Alabama, California, Colorado, Florida, Illinois, Massachusetts, Michigan, Mississippi, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Wyoming. A random sample of 1,716 clinical members was drawn from a population of more than 8,600 clinical members in the 15 States. States with fewer AAMFT members were oversampled relative to larger States, in order to provide State-level data as well as national data. Throughout the data collection period, therapists received letters from the volunteer coordinator and divisional leaders in each State encouraging them to participate in the study.

In September 1994, each therapist received a letter of invitation to participate in the study, along with the survey, from William J. Doherty, Ph.D., and Deborah S. Simmons at the University of Minnesota. A stamped return envelope, addressed to the volunteer coordinator in each State, was also enclosed. In addition, each member of the sample received stamped return envelopes, addressed to the researchers at the Family Social Science Department of the University of Minnesota, to be sent to clients whose cases were being reported on. Therapists were asked to complete and return the survey within 3 weeks of receiving it.

Volunteers in each State contacted the therapists by telephone within two weeks after the survey had been mailed, to ensure that they had received the survey and to answer any questions. Of the 1,716 therapists in the sample, 178 were ineligible because they were deceased, had moved out of State, were no longer practicing marriage and family therapy, or were ill.

After 3 weeks, many of the volunteer coordinators contacted nonrespondents by letter, postcard, or telephone and often sent a second copy of the survey. Another round of follow-up phone calls was made by the volunteers in each State within a week after the reminder contact had been made to answer nonrespondents' questions and urge therapists to participate in the study. Finally, after the surveys were returned, many therapists in the sample received a telephone call from the volunteer coordinator to clarify responses or to request missing data.

The final response rate was 34.3 percent, or 526 of the eligible 1,538 therapists. This response rate is typical for questionnaires sent to professionals, and varied considerably among the States. The principle reason given for nonparticpation was being too busy to complete the lengthy questionnaire. All of the responding therapists completed Part I of the survey and 53.8 percent completed Part II, providing data on 850 cases. The response rate for clients was 62.3 percent. A State by State comparison of the major findings showed a pattern of similarity, irrespective of State response rate. The findings are quite similar to those of the Minnesota study, which had an 80 percent response rate.

The AAMFT Membership Database.--Data for the AAMFT Membership Database are collected from both applications for new membership and from annual membership renewal forms. As the data are collected, they are entered into the membership data base on a continuous basis.

Members of AAMFT are coded in the membership data base according to their category of membership, as follows: clinical membership, associate membership, student membership, and affiliate membership. The definition of each category is as follows:

Clinical Membership - persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution, and two years post-degree supervised clinical experience in marriage and family therapy.

Associate Membership - persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution, but have not yet completed two years post-degree supervised clinical experience in marriage and family therapy. Associate Membership is limited to five years, since it is anticipated that Associate Members will advance to Clinical Membership.

Student Membership - persons currently enrolled in a qualifying graduate program in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) in a regionally accredited educational institution or a COMAFTE-accredited graduate program or post-degree institute. Student Membership is limited to five years, since it is anticipated that Student Members will advance to Associate, then Clinical Membership.

Affiliate Membership - members of allied professions, and other persons interested in marriage and family therapy. Affiliate Members come from related fields such as family medicine, family mediation, family policy and research. The Affiliate Membership is a non-credentialing, non-evaluative and non-voting membership category.

COAMFTE Annual Report for Accredited Programs.--Annually the programs accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) submit standard written reports concerning compliance with the accreditation standards, including, among other data, a listing of all students currently enrolled in the marriage and family therapy program. Data reported include the student's name, year in program, gender, ethnicity and academic background. Data on the number of students in each program were collated for table 10.8 from the most recent annual report of the accredited programs, which was either 1995 or 1994.

School Psychology

Sources and Qualifications of the Data.--Who is counted as a school psychologist? In most States, professional school psychologists are certified to practice within school settings and non-school settings by each State's department of education. Every State has a certification for school Psychology; however, some States use more than one title for professionals qualified to be called school psychologists. State-by-State standards for certification and licensure are published by the National Association of School Psychologists (1995). Forty-seven States (including the District of Columbia), require academic standards consistent with the NCSP. One State, Hawaii, requires a doctorate to use the title. Three States require a master's degree with unspecified credit hours. All States require a supervised internship. Students graduating from NASP/NCATE approved programs meet the NCSP credentialing standard, and may receive the NCSP upon receiving a satisfactory score on the national examination. States which have upgraded their standards over the past ten years have "grandparented" persons who do not meet the academic requirements of a 60 credit hour master's or specialist degree, a 1,200 hour supervised internship, and other requirements noted in the body of the report.

Data Base.--The data in this report is based upon data gathered yearly by the U.S. Department of Education. The data reported by the U. S. Department of Education (USDOE) is found in its *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.* These data are required to be reported by each State education agency (SEA) which, in turn has data reports from each local education agency (LEA). These data are required to be gathered to assure that each school system is maintaining its effort to provide a "free and appropriate public education" to all children who are disabled and in need of special education and related services. These data use the following categories for special education teachers and other personnel (i.e. school psychologist), employed to provide services to students with disabilities.

- Employed/Fully Certified or Licensed: -The number of FTE personnel employed or contracted who had appropriate State Certification or licensure for the position held.

- Employed/ Not Fully Certified: the number of FTE personnel employed or contracted who were employed in an emergency, provisional, or other basis if they did not hold standard State Certification or licensure for the position to which they were assigned.

The data reported from each State education agency only lists as school psychologists persons who are State certified or licensed. In fact it considers persons provisionally providing school psychological services under the category of unfilled positions. Therefore, the supposition that these USDOE data accurately reflect a consistent professional standard can be assumed. The data were corrected for two States, Missouri and Arkansas, where the USDOE reported data from those two States seriously underestimated the number of actual school psychologists practicing by a total of 140. This correction

was based upon NASP membership data (for 1993) and personal contacts with professional leadership in both States.

NASP Membership Data.--NASP total membership was 19,148 members, as of July 1996. NASP has several membership categories of which three are critical to this report: Regular; Student and; Retired. These categories are defined as follows:

Regular membership in NASP requires that the applicant certify that they are:

1. Currently credentialed and working as a school psychologist;
2. Certified and working as a supervisor or consultant in school psychology;
3. Primarily engaged in the training of school psychologists at a college or university.

Excluding international membership, NASP regular membership as of July 1996 was 14,006. Student membership includes students enrolled half-time or more leading to an advanced degree or post masters certificate in school psychology or doctorate, as verified by their program advisor. Student membership as of July 1996 was 4,290.

Retired membership requires the retired school psychologist to have been a member for five consecutive years and retired from remunerative professional activity. Retired membership as of July 1996 was 609. It is presumed that these retired members are not clinically active in the profession of school psychology.

All regular and student members and all those holding an NCSP must agree to abide by the NASP professional standards and code of ethics published by NASP. By 1991, nearly 15,000 school psychologists received the NCSP credential.

There are approximately 2,300 school psychologists certified as NCSP who are not members of NASP. As noted above, most State certification systems require the equivalent academic requirements of NCSP. Several States will now accept NCSP as the necessary documentation for State certification.

Data reported in Tables.--Each year NASP requests that membership respond to a set of computer recorded demographic questions including: age; sex; ethnicity; position; employment setting; salary; student service ratio; and years of experience. There is no obligation to complete these data requests, and more than 10 percent ignore all requests. Each of the 13 items is responded to at different rates and, therefore, the accuracy of the data is unknown.

For example only 12,006 responded to "employment setting" and fewer, (9,634) responded to "years of experience." However, when the responses are compared to mailed, random surveys carried out over the years, (Fagan 1988; Reshly and Wilson 1992), the patterns are quite similar, giving a degree of assurance that these data can be applied to the general population of certified, employed, clinically active school psychologists reported by the U. S. Department of Education.

To determine the number of "clinically trained" reported in table 10.1, the authors used the ratio of NASP members who are certified, including those who are university trainers and administrators, to those who are not so specified. This produced a ratio of one clinically active to 1.07 clinically trained. The number reported by the USDOE was then multiplied by that ratio to secure the total of 21,693. The same ratio was applied to USDOE data from 1988 and 1992 for table 10.1 to provide some longitudinal reference consistent with other professions. It is important to note that the last year for data from the USDOE was 1993, as reported in the 1995 *Report to Congress* . The 18th USDOE *Report to Congress* is expected to be published in October 1996, containing data on school psychology and other related service professions for the school year ending June 1994.

The data in table 10.2, 10.4, 10.6, and, 10.7 are based upon ratios and percentages reported by NASP members' responses to the membership questionnaire applied, when appropriate, to the USDOE adjusted number. The data in table 10.3 is the State-by-State data reported for 1993, which is the best data that exists for school psychologists who are "clinically active" at the present time. Table 10.5 is based on the assumption that most school psychologists are limited to a single employment setting. This is most generally the case. Since about 10 percent of school psychologists are licensed to practice outside the school setting, there may be a second setting for these professionals. However, NASP does not request any data on this factor. Therefore, "NA" is noted both for "two or more settings," and the "part time" category.

Table 10.8 represents the number of school psychology students in programs approved by NASPNCATE as reported by the Director of Certification from the NASP database.

Qualifications of the Data.--The USDOE data is a record of State certified or licensed school psychologists reported for 1993, who serve children with disabilities in schools, or school-related settings. These reported data are based upon "full time equivalents," rather than individuals. Therefore there may be more individuals certified than this number. Furthermore, the data do not exclude some contracted persons. The data also may exclude school psychologists who are employed who do not provide services to children with disabilities under IDEA. For example, there are school psychologists employed in Head Start programs which may be administered by another State agency. School psychologists serving under Part H the "infant and toddlers" disability program may not be included in this USDOE count. Finally, many States have school psychologists employed under State "pupil services" laws, and under Title I of the Improving America's Schools Act of 1994.

Without referencing the USDOE data, Fagan and Sachs-Wise (1994) report a "consensus figure" of between 20,000 and 22,000 school psychologists. It may be that these numbers underrepresent the total clinically active population (and, thus, clinically trained) of school psychologists by as much as 5-10 percent, but there is no reliable way to make this determination.

Adjusting the USDOE data required the application of membership percentages to those data. Since the membership data is consistent with the data on a random sample of 6,470 school psychologists (Reshly and Wilson 1992), it may be assumed that the membership data can be generalized to the USDOE data without any known bias. For example, Reshly and Wilson showed that 86 percent of school psychologists worked for school systems, whereas 4 percent were in private practice, frequently serving school systems. One percent reported working in hospitals, one percent in universities, one percent in clinics, one percent in residential settings, and five percent in the category "other." The USDOE data would suggest that either a higher percentage of school psychologists are employed by the schools, or that the "full-time-equivalent" factor plays a larger role than the authors estimate.

The growth in the USDOE numbers over the five year data span of 1988 through 1993 is not dramatic, and suggests a stable number. The number of elementary and secondary students may be growing, thus causing a shift in the ratio of professionals to population. Table 10.3 should be read with extreme caution. It is erroneous to perceive the State population as the potential service population for school psychologists. School psychologists serve children ages 5 through 18, in general, and a subset of children ages 0 through 21, who have, or are at risk of having, a disability. There are about 45 million children ages 6-21 or about 16 percent of the total population (USDOE 1995). Data for ages 6-21 for each State were not available to the authors at the time this report was drafted.

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