American Health Care Systems and Depression: The Past, Present, and the Future

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American medicine has witnessed 3 major periods in this century that have all played key roles in the evolution of today's medical systems, practice, and education. The first of these periods followed the publication of the Flexner report in the early 1900s that was critical of the then current medical education system. The second came with the development of specialties in the 1920s and 1930s, and the third with the growth of HMOs and managed care and with the reemergence of primary care. Mental health practice has also evolved, moving from a specialist-based direct access to a primary care model. Although great strides have been made regarding the treatment of depression, an overwhelming majority of patients are still undertreated. Treatments for the future must focus on programs to improve recognition of depression, reduce stigma, and increase compliance.

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FUNDAMENTAL DEVELOPMENTS IN AMERICAN MEDICINE IN THE 20TH CENTURY

Historical Periods in American Medicine

American medicine has seen 3 major periods in this century that have all played a large role in the evolution of today's medical systems and education. The first of these major periods followed the publication of the Flexner report in the early 1900s. The second was the burgeoning of specialties beginning in the 1920s and 1930s. The third arose in the 1990s with the growth of HMOs (Health Maintenance Organizations) and managed care and with the reemergence of primary care.

In 1908, the American Medical Association asked the Carnegie Foundation to conduct an investigation of the adequacy of medical schools in the United States. Abraham Flexner, a high school teacher with no background in medicine or medical education, was commissioned to undertake this study. After traveling to several medical schools, Flexner prepared and published a report in 1910 that was extremely critical of the then current system of medical education. At that time, many of these schools were experiencing great financial distress and were therefore able to hire as part-time basic science instructors only local physicians whose knowledge of new material was limited.[1] Flexner's report spearheaded a change in educational approaches, which emphasized research and academic activities instead of apprenticeship training.

The period beginning in the 1920s witnessed the emergence and rapid growth of medical specialties. Part of this growth can be attributed to the injuries and illnesses associated with the 2 world wars. The need for psychiatrists in particular skyrocketed as a result of these conflicts. During this time, both prestige and financial incentives strongly favored specialists over primary care providers.

This favoring of specialties over primary care providers began to change in the late 1980s. During the ensuing decade, the growth of HMOs, managed care, and the reemergence of primary care have occurred. These recent changes are the result of 3 factors—the cost of health care in the United States, variability in practice patterns, and inequity in availability and quality of medical care.

The Cost of Health Care

Figure 1 depicts the substantial rise in cost of health care as a percentage of the gross domestic product in 5 industrialized countries, including the United States.[2,3] This percentage has more than doubled in the 30 years between 1960 and 1990 (6% to 14%) and is still rising. This trend sharply contrasts with other industrialized countries around the world, such as Japan and England where this percentage has grown modestly and ranges from approximately 4% to 7%. Intermediate are Canada and Germany. These disparities have led to competitive disadvantages for American products on the world market.

The cost of care for mental health and substance abuse services has also grown greatly. Figure 2 shows that expenditures for mental health and substance abuse services

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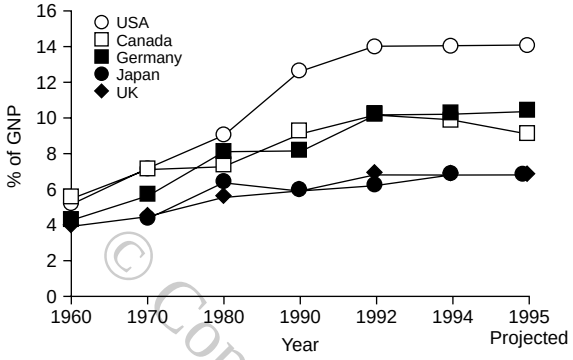
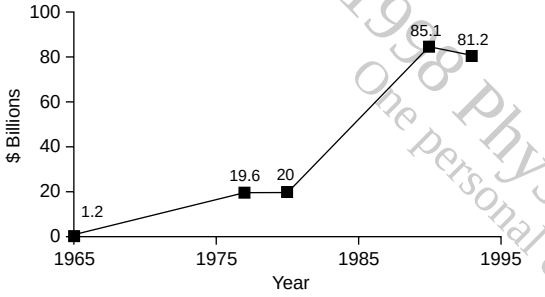
Figure 1. National Health Expenditures as a Percentage of Gross Domestic Product*



*Data from references 2 and 3.

Figure 2. Cost of Direct Care in the United States for Mental Health and Substance Abuse*



*Data from references 4–6.

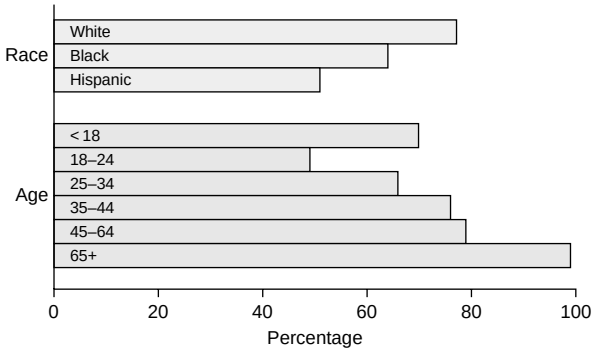
in the United States rose from $1.2 billion in 1960 to over $80 billion in the 1990s.[4–6]

Two other developments have contributed to substantial increases in health care costs. First was the initiation of the federal government in paying for direct health care services. In 1964, Congress established Medicare, whose outlays have grown to over $210 billion, representing 13% of the federal budget in 1997.[2] The second was the growth of health insurance as an employment benefit. When wage freezes were imposed after World War II, employers introduced health insurance and other benefits as incentives to workers.[7] These 2 third party payers, the federal government and private insurance companies, had very deep pockets and were neither the consumers nor the providers of health care services. The consumers (i.e., the patients) obviously wanted the best care possible and were not constrained by having to pay directly for it. Correspondingly, the providers were incentivized to deliver more care in the fee-for-service system. This situation was rife for increasing expenses.

Variability in Practice Patterns

Variability in practice patterns also provided a stimulus for change in the health care system. In the mid-1980s,

Figure 3. Continuous Health Insurance (28 months) 1992–1994*



*Data from reference 9.

John E. Wennberg[8] examined rates for various surgical procedures across the country. He uncovered wide disparities in prevalence rates, such as between 8% to 70% for tonsillectomy in Vermont, 15% to 60% for prostatectomies in Iowa, and 20% to 70% for hysterectomies in Maine. The only factor that could explain these differences was individual doctor practice and not a difference in patient characteristics or disease expression.

Inequities in Care Received

The third stimulus for change in the health care system was a substantial inequity in the availability and quality of medical care. Differences in the rates of continuous health care insurance help illustrate this inequity. For example, in a 2-year period (1992–1994), 77% of whites had continuous health insurance for an entire 28-month period, as compared to 51% for Hispanics.[9] Figure 3 displays this disparity as well as rates for different age groups, demonstrating wide variability.

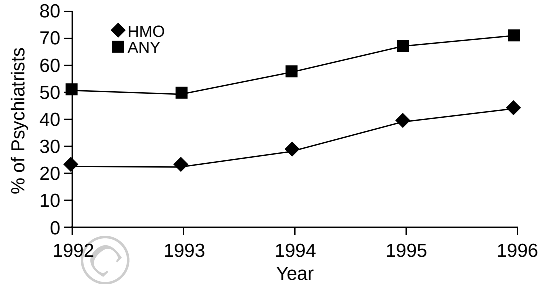
There are substantial differences in practice patterns for psychiatrists as well. For example, in 1995, 70% of psychiatrists in San Francisco provided psychotherapy to more than half of their patients, whereas only 20% did so in Houston. Similarly, over 90% of psychiatrists in Kansas City prescribed medications to more than half of their patients, whereas only half of those in San Francisco did so.[10]

THE 1990s AND MANAGED CARE

Managed care may be defined as a system for determining whether specific *proposed* health care services for an *individual* patient will be reimbursed by a third party payer. The purpose of managed care is to reduce cost for the health care purchaser. It is not necessarily to improve patient care.

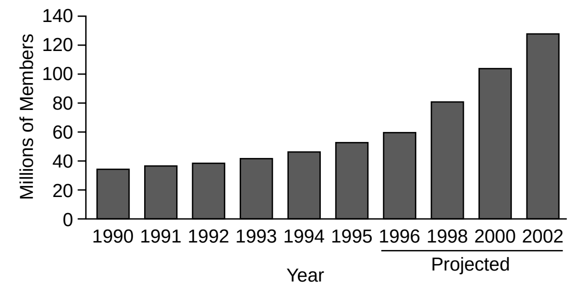
This system of introducing a screening procedure for most medical activity represents a radical change in the process of health care delivery. Prior to this, the only re-

Figure 4. Proportion of Psychiatrists With Managed Care Contracts*



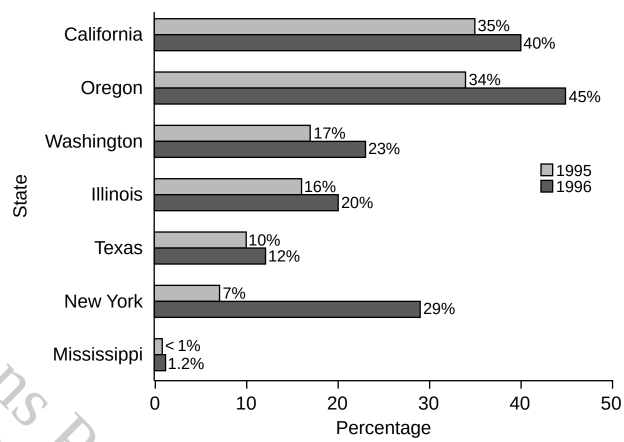
*Data from references 11–15.

Figure 5. Individuals Receiving Care in HMOs*



*Data from reference 16.

Figure 6. Total HMO Enrollment as a Percentage of State Population*



*Data from reference 16.

strictions on most medical services were the limits of an insurance benefit package. In a system of managed care, patients may receive far less care than a particular benefit package will provide. Authorization for a specific treatment may be denied, even if it is included in the benefit package, the physician recommends it, and the patient desires it. Managed care programs usually require demonstration of medical necessity and often involve guidelines for treatment.

Managed care has substantially penetrated the mental health sector (Figure 4). For example in 1996, 72% of psychiatrists reported having some form of managed care contracts as opposed to 51% of psychiatrists in 1992.[11–15]

Although HMOs were first established over 80 years ago, their importance nationally has been very recent. In contrast to fee-for-service, an HMO's fee is paid in advance for medical services on a per-head basis ("capitation"). Thus, medical care services become an expense rather than a source of revenue. Profit comes from efficient and effective rationing of services and not from providing them. Figure 5 shows the estimated growth in membership in HMOs since 1990.[16]

Enrollment in HMOs varies widely from state to state. Figure 6 shows rates for 1995 and 1996. As can be seen from the figure, penetration in a state can change extremely quickly. For example, New York went from 7% capitation in 1995 to nearly 30% in 1996.[16]

MENTAL HEALTH TREATMENT IN HMOs

Treatment for mental disorders in HMOs differs from that in fee-for-service environments. There are fewer visits per user, more use of therapeutic groups, less individual therapy, more nonpsychiatric providers, and more treatment by primary care providers in HMOs.[17,18]

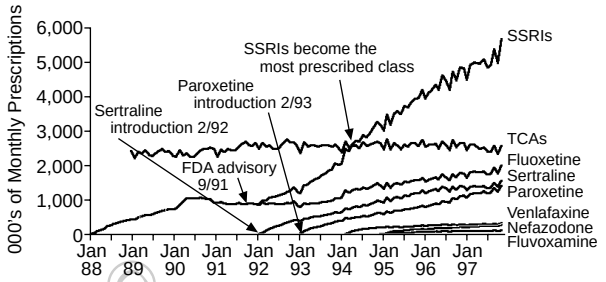
Treatment for depression is also different in HMOs than in fee-for-service environments as illustrated in a recent review by McFarland.[19] In a large West Coast group-model HMO, all patients with depression were seen first by a primary care provider. Of these, 19% were referred to the mental health department for treatment. Only a fraction of the 19% saw psychiatrists; many saw nonmedical mental health professionals. Among all of the patients with depression, only 25% had an antidepressant prescribed (obviously much by primary care providers), and less than half had more than 1 visit.

An HMO model uses fewer psychiatrists than other models. There is often 1 psychiatrist for every 20,000 or even more persons in these models.[19] Translated to the current situation, estimating with most recent data, there are approximately 268,000,000 people in the United States.[9] Using the conservative figure of 1 psychiatrist for 20,000 persons, we estimate a need for about 13,400 psychiatrists for the entire U.S. population. Since there are currently over 42,000 psychiatrists in the United States,[19] this could make substantial changes in the lives of psychiatrists.

DEVELOPMENTS IN PHARMACOTHERAPY OF DEPRESSION

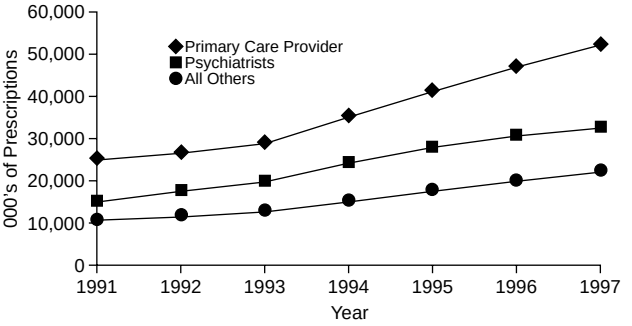
In addition to the enormous changes in the general health care scene occurring in the last decade, there have been very large changes in the treatment of depression.

Figure 7. Antidepressant Historical Perspective*



*Data from reference 20.

Figure 8. Total Antidepressant Prescriptions by Specialty*



*Data from reference 20.

Figure 7 gives an overview of prescriptions for depression in the last decade. In 1988, fluoxetine under the trade name of Prozac was the first in a new class of antidepressants, called the serotonin selective reuptake inhibitors (SSRIs), to be introduced in the United States. By 1991, nearly 11 million prescriptions for fluoxetine had been written. In February of the following year, the second SSRI sertraline, under the trade name of Zoloft, was introduced, followed by paroxetine, under the trade name of Paxil in 1993. By 1994, the number of SSRI prescriptions surpassed that of the tricyclics and has nearly doubled in the 3 years since then.[20]

The SSRIs have substantial advantages over their predecessors—the tricyclic antidepressants and monoamine oxidase inhibitors. The SSRIs have a benign side effect profile, are safe in overdose, have little cardiotoxicity, and are also relatively easy to prescribe and monitor. Dose titration is usually fairly straightforward. This profile has enabled a substantial growth in prescriptions by primary care providers and has shifted substantially the number of antidepressant prescriptions written by primary care providers compared with psychiatrists.

In 1991, nearly 25 million antidepressant prescriptions were written by primary care providers compared with about 15 million for psychiatrists.[20] In 1997, over 50 million were written by primary care physicians, while 33 million were written by psychiatrists (Figure 8).[20]

TREATMENT OF DEPRESSION IN PRIMARY CARE AND IN SPECIALIST SETTINGS

In the early 1980s, according to the Epidemiologic Catchment Area survey, the proportion of people with unipolar major depression who sought help in general medical settings was 25%, approximately the same as in specialty care settings (28%). Whether there are differences in the treatment received by patients in these 2 settings has been a subject of considerable controversy and of some research. Katzelnick et al.[21] investigated differences in treatment provided by psychiatrists and primary care providers in a medium-size, group-model HMO (DeanCare HMO) between 1991 and 1993. Patients suffering from depression who had received antidepressant treatment during this time were included. Minimum adequate dose of depression was defined by the *American Association Practice Guideline for Major Depressive Disorder in Adults*,[22] and the minimum adequate duration was 90 consecutive days. With these criteria for adequate dose and duration of antidepressants, 57% of the patients seen by psychiatrists received an adequate dose and duration of antidepressants as compared with 47% for nonpsychiatrists. When broken down by type of medication, compliance with adequate dose and duration was highest for the SSRIs (59%) as compared with the tricyclics (46%).[21]

The outcome of those people who received an inadequate dose or duration of antidepressant was also investigated. Overall 47% of patients with depression received an inadequate dose and duration of antidepressant. Of this 47%, only 20% went on to receive a second antidepressant, of whom only 44% received an adequate dose and duration of the medication. Therefore, only 9% of those who initially received an inadequate dose or duration of antidepressant subsequently received an adequate dose or duration.

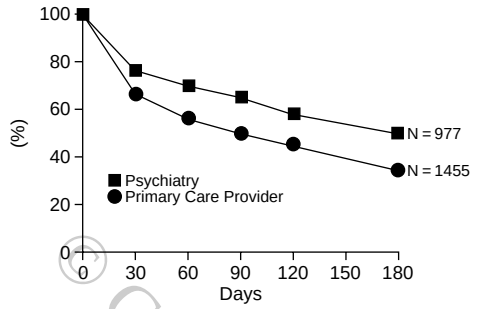
In another study, Simon et al.[23] investigated the likelihood of continuing antidepressant medication after initial prescription in a large staff-model HMO (Group Health Cooperative of Puget Sound (GHC). After 180 days, only 50% of patients of psychiatrists and 40% of patients of primary care providers had continued medication (Figure 9).

Table 1 summarizes the major changes in the treatment of depression over the last decade. These include a shift away from mental health professionals, increases in pharmacotherapy, and increased ambulatory care.

RECOGNITION AND TREATMENT OF DEPRESSION

In the context of these changes in health care delivery systems and the development of new pharmacotherapy, how has the recognition and treatment of depression fared?

Figure 9. Likelihood of Continuing Antidepressant Medication After Initial Prescription in a Large Staff-Model HMO*



*Data from reference 23.

Table 1. Changes in the Treatment of Depression Over the Last Decade

Many more prescriptions for the newer antidepressants
More treatment by primary care providers
More psychotherapy by nonpsychiatric mental health professionals
More ambulatory care; fewer and shorter hospitalizations
Increased compliance on antidepressants
Increased longer term usage of antidepressants

Since the latter 1970s, the National Institute of Mental Health (NIMH) Collaborative Program on the Psychobiology of Depression has followed over 900 patients with mood disorders presenting for treatment at 1 of 5 major academic medical centers around the country.[24,25] Keller et al.[26] examined the treatment of the first 338 patients with nonbipolar major depressive disorder during the first 8 weeks after study entry. Of the 250 patients that entered as inpatients, only 31% received either no antidepressant therapy or "very low or unsustained levels," and only 49% received 200 mg or more of imipramine or equivalent for 4 consecutive weeks.

Unfortunately, the situation has not improved substantially in the ensuing 2 decades. For example, in a 1989 study at the University of California, Los Angeles (UCLA), depressed patients presented at a variety of primary care and specialist care offices. Only 29% of those with depression of high severity even received an antidepressant. Psychiatrists were most likely to prescribe an antidepressant (34% compared with 16% for other clinicians).[27] Another study examined distressed high utilizers of primary care service.[28] Among these, 45% were judged by a psychiatrist to need antidepressant therapy. Unfortunately among these 45%, only 1 in 9 received an adequate dose and duration of antidepressant. In a very recently conducted study of chronic and double depression in which patients averaged over 9 years in their current episode, over 50% never had pharmacotherapy.[29]

The situation in Europe appears not to be significantly better. In a recent door-to-door survey of 6 countries[30] including Belgium, France, Germany, Netherlands, Spain, and the United Kingdom, nearly 60% of those with major depression received no treatment. Unfortunately, the vast majority of these people did not even seek treatment for their symptoms. Only a quarter of these people received an antidepressant.

SUMMARY

The last decade has witnessed fundamental changes in the practice of medicine in the United States. Mental health practice has been included in these changes. In general, treatment is shifting from a specialist-based direct access paradigm to a primary care gatekeeper who will often treat the depression directly and occasionally refer patients to specialists.

The reasons for this are both substantive and economic. The pharmacotherapy of depression is much simpler than it was in the past, due principally to the introduction of the SSRIs and other new antidepressants. Also, there are strong financial incentives for primary care providers to manage depressive illness.

Whatever the system, the overwhelming majority of patients suffering from depression do not get the treatment they need. This is due to a combination of factors resulting in a gap between what clinicians know about the correct diagnosis and treatment of depression and the actual treatment received by those suffering from depression.[31] These factors include the patient, provider, and health care systems.

Clearly the task of those concerned about improving the lot for depressed patients in the future is to focus on programs to improve recognition of depression, to reduce stigma, and to increase compliance. By a combination of efforts, substantial inroads in the suffering experienced by millions of people can be achieved.

Drug names: fluoxetine (Prozac), imipramine (Tofranil and others), paroxetine (Paxil), sertraline (Zoloft).

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Disclosure of Off-Label Usage

The author of this article has determined that, to the best of his clinical estimation, no investigational or off-label information about pharmaceutical agents has been presented that is outside Food and Drug Administration–approved labeling.