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Abstract

This study examines recent trends in the organization of partial-hospitalization services in the United States. Contrary to two recent reports describing declining support for partial hospitalization, data from the National Institute of Mental Health's Inventory of Mental Health Organizations reveal that the number of "partial-care" providers increased by 20% between 1984 and 1988, with increases occurring among privately and publicly funded programs. However, there has been a 56% decline in the average length of stay, with both privately and publicly funded programs showing proportional shifts to more acute care. An increase in the number of long-stay "day care" programs may be attributable to educational and rehabilitation programs that report as partial-care providers. Future study is proposed to create a better typology of partial-hospitalization programs.

Introduction

A recent report by Hoge, Davidson, Hill et al.[1] appraises the current status of partial hospitalization in the United States and concludes that this treatment modality has not flourished as cost- and treatment-effectiveness research would have otherwise suggested. The authors argue that despite its apparent effectiveness, support for partial-hospitalization programs appears to be declining among both public and private payers. This paper reviews the evidence on this apparent decline and investigates the organization of partial-hospitalization services using data from the National Institute of Mental Health's (NIMH) Inventory of Mental Health Organizations (IMHO).[2-4]

The status of the partial-hospitalization industry should be of particular interest to mental health administrators, given the appeal to payers of less costly alternatives to inpatient care. The proliferation of competing ambulatory-care technologies, such as intensive outpatient, assertive community treatment, and psychosocial rehabilitation, likewise makes the issue of partial hospitalization's relative growth or decline an important one for persons engaged in service planning. Changes in the level of support for partial hospitalization from public and private payers and the degree to which partial-hospitalization programs are changing to adapt to payer concerns should likewise be of critical interest to program administrators. The study reported here examines these trends.

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A Growing or Declining Industry?

With the increasing application of managed care and other cost-containment measures to control rising health-care expenditures, the availability of a comparably efficacious and relatively less expensive alternative to inpatient care for the mentally ill would seem to have intuitive appeal to payers. However, in the case of partial hospitalization, this intuitive appeal has not been borne out, at least according to two recent research reports on the subject. Krizay,[5] in a study commissioned by the American Psychiatric Association, reports that the number of partial-hospitalization providers and the rate of persons treated in such settings have failed to increase as early advocates of partial hospitalization had anticipated, that partial hospitalization has consequently remained a relatively insignificant part of the overall mental health treatment system, and that, indeed, there was a widespread closure of partial-hospitalization programs in the mid-1980s. Hoge et al.[1] use Krizay's data and anecdotal evidence to support similar arguments that reimbursement for intermediate and long-term partial hospitalization is declining across payers and that the use of short-term partial hospitalization has been diminishing in the public sector, as these treatment functions have been subsumed by intensive outpatient and psychosocial rehabilitation programs.

Krizay's conclusion that the number of partial-hospitalization programs has not grown significantly in recent years is based on data from the 1986 IMHO, from the American Hospital Association (AHA), and from follow-up surveys conducted by Krizay on samples of respondents in the AHA survey. Limitations to the data sources (described below) led Krizay to qualify his report as illustrative; however, several significant errors in the reporting and analyses of the data raise additional questions as to Krizay's conclusions.

First, Krizay mistakenly reports that the 1986 IMHO lists 4,026 providers of partial-care services, a figure that, if correct, would imply that the partial-care provider network more than doubled from 1984 and that more than 80% of the specialty mental health providers in the United States provide partial care. Nevertheless, based on these data, Krizay concludes that the partial-hospitalization provider pool has grown at a rate of just over 2% a year between 1983 and 1986. In contrast, NIMH's summary of the 1986 IMHO[6] reports that there were 1,943 partial-care providers in 1986, a 7% increase over 1984.

Unfortunately, the use of the term *partial care* instead of *partial hospitalization* in the IMHO creates a further complication. Three types of partial care are included in the IMHO designation: (1) intensive short-term therapy and rehabilitation; (2) recreational and/or occupational programs, including sheltered workshops; and (3) education, training, and vocational programs. Partial hospitalization, on the other hand, is defined by the American Association of Partial Hospitalization (AAPH) as a "time-limited, ambulatory, treatment program that offers intensive, coordinated, and structured clinical services within a stable therapeutic milieu." The IMHO classification for partial care is therefore likely to inflate the true extent of partial hospitalization relative to AAPH's more restrictive definition.

Krizay's use of AHA data to determine the true extent of partial-hospitalization provision is also problematic. Krizay reports that a 1985 AHA guide lists "an estimated universe of 797" partial-hospitalization providers, and based on the author's own follow-up survey to a sample of 132 respondents (response rate of 53%), the author reports that 41% had no such program, despite the AHA designation. The author fails to note that the AHA listing is limited to hospital-based providers of partial hospitalization and cannot therefore be an approximation of the universe of partial-hospitalization providers. Moreover, the author fails to note that, correcting for the apparent reporting problem in the AHA data, the result may not be inconsistent with the NIMH's IMHO from 1986, which lists 440 hospital-based providers of partial hospitalization.[6]

A comparison by Krizay of the 1985 and 1988 AHA partial-hospitalization directories revealed that 28.9% of the former provider group had been dropped in the intervening years, suggesting to

Krizay widespread closure of partial-hospitalization programs. However, it is possible that most of those dropped from the list never provided partial hospitalization and were inappropriately designated as doing so in 1985. Indeed, Krizay's own follow-up survey suggests as much, finding that, of those programs dropped or inappropriately listed, a minority, 28%, had actually dropped a previously existing program.

Finally, Krizay argues that partial hospitalization has not become a significant part of the overall mental health treatment system, estimating that partial-hospitalization admissions were only 7.6% of the total inpatient mental health and substance abuse admissions nationally in 1986. However, the data could be cast to show a different reality. For example, looking at specialty mental health providers in general, the 188,819 admissions to partial care reported in 1986 represent about 10% of the total 1.8 million inpatient admissions to those same facilities, a figure that was only 4% in 1969. Moreover, while inpatient admissions grew 42% from 1969 to 1986, partial-care admissions grew 240% in that same period and 6% between 1984 and 1986.

In the only other published report specifically on organizational change in the field of partial hospitalization, Hoge et al.[1] provide a broad discussion of issues confronting the field, citing some of Krizay's figures to document its slow growth and even its decline (vis a vis the 28.9% closure rate). Hoge et al. develop a more specific discussion of partial hospitalizations' reimbursement difficulties in both the private and public sectors that, while conceptually more precise than the Krizay piece, is illustrated with case examples and not with supportive survey data. Nonetheless, given the historic underutilization of partial-hospitalization programs, the discussion provided therein is important and is summarized here to develop hypotheses that will be tested in this study.

Hoge et al. cite a decline in public support for partial hospitalization in all three categories of partial hospitalization (day care, day treatment, and day hospitals). Hoge et al. describe criticisms that patients in long-stay programs (day care) may suffer from "institutionalization," and state that "public-sector funding for day-care programs has been shrinking rapidly ...," although no specific evidence is offered to demonstrate that reduction. The authors argue that intermediate-stay programs (day treatment) are of an inappropriate duration for persons whose primary need from partial hospitalization is short-term symptom stabilization and whose need for long-term rehabilitation is best met outside of a partial-hospitalization program. Though Hoge et al. describe the relative advantages of converting to shorter partial-hospital stays and substituting with psychosocial rehabilitation aftercare in the community, they cite no evidence on the pervasiveness of this shift, other than to note an explicit reallocation of resources in this direction by the Rhode Island Division of Mental Health. The authors argue that publicly financed short-stay partial-hospitalization programs (day hospitals) are being criticized for having lengths of stay longer than the typical acute inpatient episode, thereby increasing the likelihood of patient regression relative to the combination of an acute inpatient stay with assertive community treatment or intensive outpatient. Again, however, the authors rely on anecdotal accounts to document this shift and offer no data to support the relative efficacy of this alternative treatment approach. Additional problems of underutilization and program vacancies are cited as working against public-sector day hospitals, and Hoge et al. state that program directors fill slots with persons who would not otherwise require hospitalization. Again, no evidence is offered to support this claim. All of these factors are reported as restraining public payers' enthusiasm for partial hospitalization and as resulting in the withdrawal of public support from many partial-hospitalization programs.

Declining private support for partial hospitalization is reported as primarily a function of managed care, with day-care and day-treatment coverage increasingly being denied by insurers because of the long stays associated with them. However, no specific data are offered by Hoge et al. to document this shift. Day hospitals are described as continuing to offer a cost-effective alternative to inpatient care for private insurers, but Hoge et al. argue that these programs remain unfamiliar to many insurers and that utilization review has forced shorter lengths of stay within them. Hoge et al. cite data from a 1988

survey of 16 insurers showing that most of them either do not cover partial hospitalization or do so only through extracontractual agreement. Anecdotal evidence is cited showing increasing insurer and provider interest in the development of day hospitals for "step-down" care. Finally, Hoge et al. cite NIMH data that reveal an increase of 131% in the number of partial-care programs in private psychiatric hospitals from 1986 to 1988, suggesting that there could be growing interest in partial hospitalization in the private sector despite the aforementioned problems.

Research Questions and Hypotheses

Given the dearth of empirical data that has been reported on the current status of partial-hospitalization programs, the following study was undertaken using data from the 1988 IMHO. The first question was to assess whether or not there has been a decline in the number of partial-care providers since 1984, and, secondly, to determine the degree to which programs closed between 1984 and 1988. Borrowing the conceptual framework of Hoge et al.[1] the following hypotheses were also tested: (1) the average length of stay has declined across facility types; (2) the number of partial-hospitalization programs that rely primarily on public support for their revenues has declined across program types (day care, day treatment, day hospital); and (3) the number of partial-hospitalization programs that rely primarily on private support has declined in the case of day-care and day-treatment programs, and has increased in the case of day-hospital programs.

Methods

Data

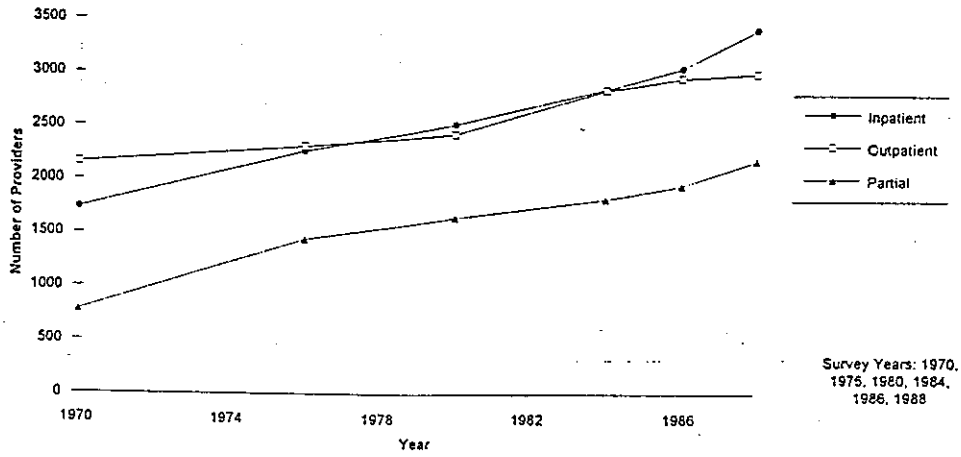
Data for this study comes from the Inventory of Mental Health Organizations (IMHO), the biennial survey of the National Institute of Mental Health. The IMHO survey has a 97% completion rate for core items, and the data's reliability is assured through range checks and error checks conducted through clerical and computer edit routines.[5] Data from the 1984 and 1988 surveys have been extracted for all organizations that report partial-care services. Partial care is defined as "a planned program of mental health treatment services generally provided in visits of three or more hours to groups of patients." As noted earlier, beginning with the 1982–83 survey, the IMHO definition is limited because it includes sheltered workshops and educational programs as partial-care providers. Therefore, all figures reported in this study should be qualified as potential overestimates of the actual number of partial-hospitalization providers. Because comparable information from the IMHO for general hospitals is only partially available for 1984, some general hospital data from 1988 will be reported separately.

Variable Construction

Length of Stay. The total number of partial-care visits divided by the total number of partial-care episodes (any continuous period of treatment) has been used as a proxy measure for average length of stay (visits per episode). This measure underestimates average length of stay (ALOS) by not adjusting for treatment periods that begin or extend beyond the reporting period.

Type of Program. Programs have been divided on the basis of their ALOS to conform as closely as possible to those specified by Hoge et al.[1] Day hospitals are reported to have an ALOS of between four and eight weeks (defined here as 40 days or less, assuming five-day treatment weeks); day-treatment programs have an ALOS between three and six months (defined here as between 41 and 130 days); day-care programs have an ALOS of greater than 130 days. Hoge et al. offer conflicting estimates of the ALOS for day-treatment programs. This paper adopts the latter of those estimates (between three and six months) and its necessary corollary for day care.

Figure 1
Growth in Providers of Inpatient, Outpatient, and Partial-Care Services, 1970 through 1988



Primary Source of Funds. Organizations receiving more than 50% of their annual revenues from governmental sources (state, federal, and local) were classified as public, and organizations receiving 50% or less of their annual revenues from governmental sources were classified as private. Thirty-seven percent of the partial-care providers in 1984 did not report revenues and therefore are excluded from the analyses based on funding source.

Analyses

Frequencies were calculated for all partial-care providers in 1984 and 1988, and cross-tabulations of partial-care providers by primary funding source and program type were also calculated. The partial-care provider group from 1988 was crossed with the provider group in 1984 to determine the number of program closures. Cross-tabulations of partial-care providers by facility type and average length of stay and by program type and primary funding source were computed for 1984 and 1988 to determine any shifts in the organization of services.

Results

Provider Growth

According to the NIMH report *Mental Health U.S., 1990*,[6] there were 778 providers of partial-care services in 1970. IMHO data reveal that the number of providers rose to 2,178 by 1988, a 180% increase. The trend during the period 1984 through 1988 was consistent, with the number of partial-care providers growing from 1,817 in 1984 to 1,943 in 1986 to 2,178 in 1988 (see Figure 1). That growth represented a 20% increase from 1984 to 1988 and an average annual rate of growth of about 5% (double Krizay's estimate of 2.5%). Approximately 44% of all specialty mental health providers in the United States offered partial-care services in 1988, an increase of 4% over 1984. This growth occurred across all facility types from 1984 to 1988, with only state and county mental hospitals showing a decline in the provision of partial-care services over the 1970 through 1988 period (–44.2%).

Table 1
Average Length of Stay for Partial-Care Providers, 1984–1988, and Percent Change by Facility Type

Type of Organization	Avg. Length of Stay (Visits Per Episode) 1984	1988	% Change
All organizations	115.9	50.5	–56.4
State & county mental hospitals	79.7	68.7	–13.8
Private psychiatric hospitals	68.8	21.6	–68.6
V.A. medical centers	62.6	25.7	–58.9
Residential treatment centers for emotionally disturbed children	124.6	85.5	–31.4
Multiservice MHOs	115.4	56.7	–50.9

Note: Data for general hospitals is excluded.

Thus, according to the IMHO data, there has not been a decline in the number of partial-care providers, but a significant increase, with nearly half of all specialty mental health providers offering some partial-care services in 1988, and with the rate of increase stable throughout the four-year period examined here.

Program Closures

Regarding partial-care closures, a match of the 1,817 providers in 1984 with the 2,178 providers in 1988 revealed that 262 (14%) of the former partial-care provider group had closed or did not report the operation of a program in the intervening period. However, 623 new programs were created in that same period, producing a net growth of 20%. Therefore, while the rate of closure among partial-care providers was significant, it was half of that estimated by Krizay and is contrary to the statement of Hoge et al.[1] that "closings offset the number of partial hospital openings."

Average Length of Stay by Facility Type

Regarding a shift in ALOS, however, this study substantiates the claim of Hoge et al. that there has been a significant decline in the length of treatment across facility types from 1984 to 1988 (general hospital data are excluded for both years). In 1984, the ratio of visits per episode was 115.9. By 1988 that had declined to 50.5, a drop of 56% (see Table 1). The relative decline in ALOS was greatest among private psychiatric hospitals (–68.6%) and least among state and county mental hospitals (–13.8%). Whereas all facility types in 1984 had an average length of stay in excess of 12 weeks (assuming a 5-day treatment week), in 1988 only state and county mental hospitals and residential treatment centers continued to have such a typical treatment period.

Frequency of Program Types

Dividing the partial-care providers by program type (according to average length of stay), as shown in Table 2, absolute and proportional increases are noted in both the day-hospital and the day-care provider groups. The day-treatment category is the only program type that shows a decline, with 20 fewer programs in 1988 than in 1984, and accounting for 13.3% less of the overall provider pool.

Table 2
Distribution of Partial Providers by Length of Stay, 1984 and 1988

Program Type	1984 Count	1984 Percent	1988 Count	1988 Percent
Day hospital (0–40 days)	395	26.69%	592	32.10%
Day treatment (41–130 days)	919	62.09%	899	48.75%
Day care (>130 days)	166	11.22%	353	19.14%
Total	1480	100.00%	1844	100%

Note: Data for general hospitals is excluded.

The "flattening" trend in the distribution may be revealing the growing preference among payers for day hospitals and shorter lengths of stay and the concurrent expansion of rehabilitation programs, which are more likely to be represented in the day-care group. Such a trend would be consistent with the hypotheses of Hoge et al. It should be noted that the distribution of partial-care programs in general hospitals in 1988 was even more heavily weighted toward day hospitals (63%) than day treatment (33.4%) or day care (3.6%).

The distribution of program types by primary funding source (public versus private) reveals similar trends as the overall distribution in Table 2, with proportional increases in day hospitals and day care and proportional declines in day treatment. However, the privately funded providers are much more oriented to the day-hospital model (40% of the privately funded provider pool) than the publicly funded providers (28.2%), and, inversely, the public-sector providers are more oriented to day care (20.3% of the publicly funded provider pool) than the private-sector providers (16.8%).

Discussion

This study does not support the hypothesis that there was an overall decline in the provision of partial care in the 1980s. Indeed, a steady growth trend continued from 1984 to 1988. This pattern of continued growth suggests that managed care in the private sector has not hindered and may have even encouraged the development of partial hospitalization, and that, as physician and insurer knowledge of partial hospitalization grows, the field will continue to expand, both in absolute terms and relative to inpatient service utilization. Though growth rates may be lower than those anticipated by advocates of this modality, they nevertheless reflect continued interest in a cost-effective alternative/supplement to inpatient care for persons with mental illnesses. Responding to insurer interest and the overgrowth of private psychiatric hospitals in the 1980s, some providers have reported converting inpatient beds to partial-hospitalization programs.[9] Recent expansions of Medicare coverage for partial hospitalization[10] and the continued availability of Medicaid reimbursement also suggest that partial hospitalization will continue to grow as more patients, including those who are publicly supported, come under managed-care regimens.

However, there is support for the hypothesis that there has been a substantial decline in the ALOS for partial-care programs, across provider types. Consistent with the growing importance of managed care and utilization review, partial hospitalization is increasingly being used for an acute-care (day hospital) rather than an intermediate-care function. An increase was observed in the use of day care,

although it is unclear whether this is a result of rehabilitation, education, and vocational programs reporting as partial-care providers in the IMHO survey. Approximately 25% of the partial-care respondents to the IMHO survey in 1988 indicated that they did not have a program element that "place(s) heavy emphasis upon intensive short-term therapy and rehabilitation," suggesting that they are not partial-hospitalization providers. More research is needed to determine more precisely the degree to which the day-treatment and day-care provider pools consist of rehabilitation and education programs that lack a partial-hospital component, and to determine the relative rates of growth among groups. A survey of partial-care providers is currently under way by the American Association of Partial Hospitalization and the present authors to determine the extent of this reporting problem.

This study found less support for the assertion that these trends differed according to primary funding source. Though state and county mental hospitals may be providing fewer partial-hospitalization services than in the 1970s, there was an overall increase in the number of publicly supported partial-care programs, just as there was an overall increase in privately supported programs. The only differences were a greater emphasis on acute treatment in the private sector and a greater emphasis on intermediate- and long-stay programs in the public sector, reflecting the differential availability of funds and roles of these payers.

In conclusion, the pessimistic projections for the partial-hospitalization field offered in two recent reports are not substantiated by the existing data. Though the data remain limited by definitional qualifications, the partial-hospitalization field appears to continue to grow. Hoge et al. were correct in predicting a declining length of stay across providers, and they are likely to be correct in predicting that the future competition for partial hospitalization will come from intensive outpatient and assertive community treatment programs rather than from inpatient services. To assess this trend, future research should better identify the program types that exist within the field of partial care, look systematically at the emergence of alternative ambulatory-care technologies, and compare their relative efficacy to partial hospitalization. More specific definitional criteria in future surveys of the National Institute of Mental Health would greatly facilitate such investigation.

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