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TREATMENT

Health Services Research in Anorexia Nervosa

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ABSTRACT
The present paper reviews studies of the delivery of health services for individuals with anorexia nervosa, utilizing four interrelated concepts that guide much of health services research: equity, effectiveness, efficiency, and economy. It identifies major gaps in knowledge regarding health services utilization and costs. © 2005 by Wiley Periodicals, Inc.

Keywords: anorexia nervosa, health services, health services cost

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The present paper seeks to provide an update of what is known regarding the delivery of health services for individuals with AN and is organized around four interrelated concepts that guide much of health services research: equity, effectiveness, efficiency, and economy. Meeting demand with equitably allocated service resources ("equity"), ensuring that patients receive evidence-based treatments that work not only in the controlled context of randomized clinical trials but also in the context of daily clinical practice ("effectiveness"), and providing the right mix of care within given resources ("efficiency") are important public health goals. Economic considerations ("economy") play a major role in equity, effectiveness, and efficiency; in turn, the efficiency and type and quality of services and who receives them influence costs associated with treatment.

Equity
The implicit assumption underlying studies of equity is that the allocation of treatment should be based primarily on the given set of clinical symptoms rather than on factors unrelated to the patient's medical condition. From epidemiological studies, much is known about socioeconomic, geographic, and cultural factors as well as patient characteristics that influence equity of mental health services delivery. For example, females are more likely than males to access or receive mental health treatment, rural populations are under-served relative to urban populations, and those with more severe symptomatology or greater psychosocial impairment are more likely to receive more intensive treatment than those with relatively milder symptoms or less impairment. Regrettably, these excellent studies typically do not report data for eating disorders (EDs), despite the fact that with their samples these studies could have identified a substantial number of AN cases.

Experts have noted that mental disorders often go untreated, are treated only long after onset, or are treated with inadequate intensity. In the United States, treatment costs or lack of insurance were reported as a major barrier to accessing ED treatment. The typical onset of AN during adolescence, it is of concern that in the U.S. adolescents have the highest rates of being uninsured. The few studies offering data about treatment history among individuals with an ED typically do not report information by ED diagnosis; there is some indication that those with AN are more likely to receive care than those with bulimia nervosa or binge eating disorder. Likely, these high treatment rates reflect the clinical severity of AN and the fact that severe emaciation is easily diagnosable. Symptom severity is associated with increased likelihood of seeking treatment and of receiving more intensive treatment. Experts have urged the introduction of ED screening as part of routine preventive care for adolescents to facilitate early case detection across the broadest possible spectrum of the population.

Gender does not appear to predict seeking care or delays between AN onset and initiation of treatment. For example, Striegel-Moore and colleagues found that the proportion of female-to-male patients (10:1) who had received treatment for AN was consistent with the gender ratios of female-to-male cases of AN identified in epidemiological studies. Braun, Sunday, Huang, and Halmi found no gender difference in the duration of illness among patients at an in-patient facility EDs. These results need to be replicated in studies that overcome the

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S31
methodological limitations inherent in studying patient samples; they are remarkable nonetheless, given that, in general, men are less likely to seek or receive mental health treatment than women. The severe impairment associated with AN may outweigh the gender-related differences in help seeking or, alternatively, perhaps the very vulnerability factors that predispose a male to develop AN (a "female" disorder) may make him more receptive to seeking help (a "female" behavior). There is some evidence of gender inequity in treatment intensity: male patients were found to receive shorter inpatient (16 days) or outpatient (9 days) treatment than females (26 and 17 days, respectively) in a study of insurance claims data of 4 million individuals.

Minority populations in the U.S. are underrepresented in patient samples. It appears that ethnic minority populations are not less likely to seek treatment for an ED, rather, when ethnic minority patients seek treatment, they appear less likely than white patients to be diagnosed with or treated for an ED. It is unclear whether this inequity reflects clinician bias or differences in the clinical presentation of EDs in minority.

**Effectiveness**

The most pressing concern regarding health services research on AN is the bleak fact that there is no empirically validated treatment for AN (Fairburn, this issue). This results in uncertainty about effectiveness of treatment and leaves the door open for denial of services based on the lack of evidence that a given treatment works.

Standards of care for those with AN are based on clinical experience derived from experts across the world whose treatment approaches reflect a considerable degree differences in resources available for health care rather than evidence about efficacy or effectiveness. No study has examined what constitutes "usual care"; such information would be helpful for determining the extent to which clinical care corresponds to standards of care. One study examined the cost of AN treatment as incurred in usual care in the U.S. The authors were able to analyze only treatment setting (inpatient versus outpatient) and number of service days. Results suggested great variability in treatment intensity. Furthermore, only 20% of patients with AN received inpatient treatment, and the average annual cost of all treatments per patient was about $6,000 for females and $3,000 for males with AN. Using calculations based on clinically indicated (rather than actually provided) services, Crow and Nyman estimated that treatment costs U.S. $119,200 per AN patient, assuming that treatment would occur over the course of two years. This is well within the range of costs associated with other severe mental illness such as schizophrenia and, compared to other medical interventions, is highly cost-effective. It bears repeating that these costs are based on assumptions regarding adequate care and not on evidence about the effectiveness of the various components (e.g., inpatient treatment, medication costs) factored into the calculations of total costs and cost effectiveness.

Lock described how major changes in the U.S. health care industry away from "fee for service medicine" to "managed care" profoundly changed the treatment of AN. Costs are tightly controlled by restricting access to care: hospitalization rates and length of stay have decreased; the number of outpatient psychotherapy visits has decreased; use of medications for the treatment of mental disorders has increased. The practices of "carving out" mental health services, severely limiting the amounts permissible under insurance plans, or excluding mental disorders altogether have created discontinuities between medical and mental health care and resulted in poorly coordinated, inadequate, or completely lacking care.

Martin and Leslie found a shift in the intensity and reimbursement of inpatient and outpatient mental health services among privately insured children age 17 and younger: from 1997 to 2000, inpatient psychiatric days and outpatient visits decreased 20% and 11.3%, respectively, and, in addition, payments per outpatient services declined 6.1%. Over the same period, the proportion of youth receiving medication increased by 4.9%. The study did not report data specifically for AN, and it is unclear, therefore, how much the patients with AN were affected by the cost-containment efforts that appear to drive these shifts in the availability of mental health services. The increasing emphasis on medications in treating adolescent mental disorders poses a particular challenge in AN because to date no specific drug treatment has been identified for AN.

Fox, McManus, and Reichman examined available health services offered by 49 health maintenance organizations (HMO) and 49 point of service plans (POS) in the U.S. for a hypothetical 14-year-old girl with AN who presented with bradycardia, malnutrition, and comorbid depression. In principle, most plans would cover primary-care visits, short-term hospitalization for medical stabilization, and outpatient mental health visits. However, in practice, all plans would restrict services on a case-by-case...
basis. For example, hospitalization would be covered in all plans if the diagnosis at admission was due to the explicit exclusion of services for AN. All plans would restrict the number of outpatient visits (typically to 20 sessions), and one in four plans would not pay for such visits if they involved family therapy. One in five plans would not pay for medication treatment. Indeed, even though the authors used "best-case scenarios" for all plans (i.e., the most generous provision of care permissible under the plan), they found that only 3% of these plans would fully cover the treatment recommended for the hypothetical patient with AN.

Efficiency

Experts have noted that EDs tend to go untreated yet, paradoxically, use of health care services is elevated in those with an ED. Some of the general medical service use may be due to inefficiencies such as delays in the detection and treatment of AN; it also may reflect inadequate treatment to prevent costly secondary health problems arising from the nutritional deficits, such as amenorrhea or bone mass loss. The fact that ED patients do utilize medical services presents an opportunity for screening and detection in primary care that has yet to be fully realized.

Sensitive and specific screening tools are needed for early case identification. Research is needed to determine how best to implement screening efforts. A study of facilitators and barriers to care for adolescent mental health problems reported that the strongest correlate of access to specialty mental health care was the impact of the child’s disorder on the family. This study did not report on AN, but its findings are intriguing considering the profoundly disruptive effect AN can have on a family trying to cope with a child’s refusal to eat. Educating parents about the signs of AN may be a more effective way of identifying cases early than screening children via self-report. A study of pathways into mental health services found that schools represent the most common point of entry for adolescents. Therefore, directing educational efforts at school personnel might improve the early detection of AN. Research exploring these various screening efforts also needs to assess the risk of adverse outcomes due to screening (e.g., stigmatization).

There are no data to guide the choice of treatment setting (inpatient, day hospital, outpatient). Some have advocated for hospitalization as part of an efficient, cost-effective treatment program for AN. For example, Wiseman and colleagues documented that with a sharp decrease in length of hospital stay for patients with AN, prompted by changes in the economics of health care, there was a concurrent dramatic increase in re-admission rates, presumably due to an increased rate of relapse. Shorter hospital stays were correlated with lower weights at discharge; it is unclear whether better weight outcomes always require hospitalization or could also be achieved in outpatient settings with comprehensive case management, as appears to be the norm in some countries.

In conclusion, this brief review highlights major gaps in health services research knowledge. Randomized clinical trials urgently are needed to test theory based psychosocial and medical treatments for AN (Fairburn, this volume; Strober, this volume). Yet, the best efficacy studies will not improve the care of patients in clinical practice unless equity is also improved. International collaborative efforts are needed to determine whether the more equitable and integrated delivery of services in countries with national health care systems results in better outcomes than in the U.S., where managed care now dominates. Moreover, studies need to identify strategies for reducing personal barriers to seeking care and improving screening methods. Major advocacy efforts are needed to ensure that AN becomes a more prominent focus of mental health research.

References
