Mental Illness and Nursing Home Reform: OBRA-87 Ten Years Later

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Objective: **This literature review examined data on the effects of nursing home reform initiated by the Omnibus Budget Reconciliation Act of 1987 (OBRA), with particular attention to use of antipsychotic medications, use of physical restraints, and preadmission screening.** ***Methods:*** **Data on the outcomes of the nursing home reform were obtained from a MEDLINE search of peer-reviewed articles from January 1985 through January 1997 and from PsycINFO from 1967 through 1997.** ***Results and conclusions:*** **Survey and observational data suggest that the reform legislation is having the intended impact, especially in reducing the use of antipsychotic medications and physical restraints in nursing homes. Preadmission screening of nursing home residents with mental illness is the most widely criticized component of the reform, and the component that has been the subject of the fewest data-based studies. More data are needed to describe the economic costs of the reform and to link the reform to improvements in nursing home residents' quality of life. (*Psychiatric Services* 49:229–233, 1998)**

Passage of the nursing home reform provisions of the Omnibus Budget Reconciliation Act of 1987 (OBRA) was the major policy event of the past decade for mental health care of nursing home residents. OBRA (P.L. 100-203) required preadmission screening and annual resident review to ensure that mentally ill persons were not inappropriately admitted to nursing homes and to increase mental health services to residents who were appropriately placed. The law specifically prohibited the use of physical restraints for discipline or convenience or if they were not necessary to treat actual symptoms. Similarly, specific indications for the use of antipsychotic medications were established to decrease their inappropriate use as chemical restraints.

The growing interest in reducing the federal budget deficit has focused attention on Medicare, and Medicare reimbursements of mental health services in nursing homes are under close scrutiny (1). Provision of services by nonmedical practitioners such as psychologists, social workers, and occupational therapists, which had been encouraged by the OBRA legislation, may soon be limited by decreased reimbursement. The requirement for preadmission screening and annual review of residents was amended in 1996 to eliminate routine annual reviews (2). Recommendations for increased nursing staff to better implement changes in care required by the law may not be implemented (3).

This paper reviews published data on the impact of the OBRA legislation during the ten years since its enactment. The review focuses on use of psychotropic medications, use of physical restraints, and mental illness screening.

The review first examines data on direct effects of the legislation, such as decreases in the use of antipsychotic medications and in the use of restraints. We then explore indirect effects, such as changes in rates of use of other psychotropic medications and changes in rates of falls among nursing home residents. We then look at possible negative consequences of the changes, including psychotic relapses among residents taken off antipsychotic medications. It is hoped that the review will provide useful information for the ongoing policy debate about the funding of services for mentally ill residents of nursing homes.

Methods

We located peer-reviewed articles that reported data on the outcomes of the nursing home reform through a MEDLINE search covering the period from 1985 through April 1997 and an on-line review of PsycINFO for the period from 1967 through January 1997. Major search terms included nursing home reform, OBRA, preadmission screening, and restraints. Additional materials include editorials and documents from mental health advocates and advocates for the aging, such as the American Association of Retired Persons (AARP). The review covers specific aspects of the reform, beginning with areas for which the strongest data exist and concluding with areas for which the data are weaker.

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Antipsychotic medications

Reduced use of antipsychotic medications in nursing homes was a major goal of the OBRA legislation, and the law resulted in the federal government's issuing specific clinical indications for these drugs. In response, geriatric psychiatrists expressed concern that needed treatments might be withheld (4). Several researchers examined changes in use of antipsychotic medications, which became the most studied aspect of the reform.

Most studies before passage of OBRA showed that between 20 and 50 percent of nursing home residents received prescriptions for antipsychotic medications. Studies after the law's passage universally found reductions in the use of antipsychotic medications. Reductions occurred through decreases in the doses prescribed (5) or through decreases in the number of residents who received the drug (6–11).

In general, these studies showed a decrease of about 30 percent in the number of residents receiving antipsychotic medications, with a range from 6 to 75 percent. Higher rates of change were found in settings that counted both residents with dose reductions and those who discontinued taking the medications. No studies specifically commented on the use of newer, atypical antipsychotic medications, which may be useful in treating elderly patients and which are associated with less risk of parkinsonian side effects and tardive dyskinesia.

Other psychotropic medications

Clinicians and researchers were initially concerned that reductions in the use of antipsychotic medications as a result of OBRA would be offset by increases in the use of other tranquilizers and sedating medications that put elderly patients at risk for falls and delirium (5). Several studies of antipsychotic use also tracked the use of benzodiazepines and antidepressants. The results were mixed, with no studies showing significant increases in use of benzodiazepines (6,9–11) and some studies documenting small increases in the use of antidepressants (8,10).

Negative consequences

Most investigations of use of antipsychotic medications were large, population-based studies, and only a few looked at the clinical characteristics of the residents who were being withdrawn from antipsychotic medication. Geriatric psychiatrists were particularly concerned that improper implementation of the OBRA guidelines would lead to decreased access to appropriate treatment for those who could clinically benefit from antipsychotic medications (4).

In one study that looked at whether residents taken off antipsychotic medications were subsequently restarted on the drugs, researchers found that 20 percent of residents in the discontinued group were restarted on the medications and that 33 percent of those residents had axis I psychiatric disorders other than dementia (7). One finding of concern was that residents restarted on antipsychotic medications received higher doses than before the discontinuance, suggesting clinical worsening after the antipsychotic medications had been stopped.

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Future research

Future research in this area should pay more attention to methods for decreasing the use of antipsychotic medication in order to identify ways of reducing inappropriate discontinuance. Similarly, more data are needed on the use and outcome of newer atypical antipsychotic drugs, which may have fewer side effects but are more costly than older medications.

Although several studies suggest that rates of antipsychotic use have decreased, little is known about whether this change has improved the quality of life of nursing home residents. Similarly, no studies have specifically addressed whether other mental health interventions are being used in place of antipsychotic medications or whether more nursing staff time is required to manage residents who have been taken off these medications. Such data would inform policy debates about funding for interventions to be used in place of antipsychotic medications.

Restraints

Estimates of the incidence and prevalence of the use of restraints in nursing homes have been published, as have data on the use of restraints to prevent falls. Before implementation of OBRA, Evans and Strumpf (12) found that the prevalence of the use of restraints ranged widely from 25 to 85 percent. More recent studies suggest a range from 25 to 59 percent (13–18). Tinetti and colleagues (15) documented a 31 percent incidence of the use of restraints in a longitudinally followed cohort. Independent risk factors for use of restraints include increasing age, disorientation, and lack of independence in activities of daily living.

The wide range of study results and the range of study settings make it difficult to accurately determine the impact of OBRA on use of restraints. In addition, the definition of restraint varies, sometimes including use of vest-style soft restraints and chairs that prevent independent ambulation. We could find no single study that compared pre- and post-OBRA data on use of restraints.

Better evidence for the impact of the OBRA legislation comes from survey data, which suggest marked decreases in use of restraints. One newsletter that described HCFA survey data reported a 47 percent decrease (19). In her 1994 report to AARP, Lombardo (20) reported that 77 percent of directors of nursing services in nursing homes who responded to a survey reported a significant reduction in the use of re-

straints since implementation of OBRA. In a 1994 survey of nursing homes, Janelli and associates (21) noted that 89 percent of respondents reported a mean decrease of 42 percent in the prevalence of use of restraints. Marek and colleagues (22) cited a survey of 132 nursing home staff, administrators, and residents in which reduction in the use of restraints was the most commonly observed outcome of the OBRA legislation.

However, Graber and Sloane (16) conducted a statewide, cross-sectional study after implementation of OBRA and found that 32 percent of nursing home residents were restrained. This finding suggested that despite the decreases reported in survey data, use of restraint remained excessive. The generalizability of survey data is problematic because of biased participation that may overrepresent facilities that have experienced a positive change.

Restraints and falls

The literature on use of restraints often cites prevention of falls as a reason for initiating restraints. Thus we wanted to know if the data suggest that the incidence of falls increased as a secondary effect of reduction in the use of restraints. A few researchers have linked data from studies of the prevalence of use of restraints with data from studies on the incidence of falls (17,18). They found that use of restraints was associated with a subsequent increased risk of serious falls—those involving fractures or requiring bed rest. Their results suggest that the use of restraints, rather than reductions in use, may be associated with falls.

Although these studies attempted to control for numerous factors that might confound the relationship between restraints and falls, the researchers rightfully acknowledged that the nonexperimental designs they used limited their ability to determine cause and effect. However, of concern are findings of increases in nonserious falls (23) and hip fractures (24) in facilities that instituted programs to reduce use of restraints. Factors that may contribute to these falls include nursing home residents' deconditioning from inactivity while restrained, their motor impairment from tranquilizers frequently given for the increase in agitation associated with initiation of restraints, and staff's failure to alternate restraints and to exercise and reposition residents who are in restraints (25).

Staffing levels and reduction in use of restraints

Many authors who commented on the OBRA regulations on restraints suggested that implementation of the requirements would necessitate hiring additional staff (3). The data on staffing and costs associated with reduced use of restraints are somewhat mixed. One study compared costs of care for nursing home residents who were restrained with those for similar residents who were not restrained and found that nursing care costs were higher for residents who were restrained (26). Other epidemiologic studies of restraint have attempted to determine if low staffing levels are associated with higher rates of use of restraints. Although a study of a small number of nursing homes (12 homes) did not find an association between staffing ratio and use of restraints (17), studies of larger numbers of homes (150 or more homes) have consistently found that those with fewer nursing staff were more likely to restrain residents (13,16).

The OBRA mandate for annual resident review was modified by Congress in the fall of 1996, and the program's ultimate future is unclear.

Some studies found that inappropriate use and management of restraints were common (16,27). In particular, residents were not briefly released from restraints, exercised, and repositioned in accordance with state and federal regulations, even though chart notes indicated that proper monitoring had occurred (27). Clearly, iatrogenic complications of restraints such as deconditioning and pressure ulcers are only exacerbated by noncompliance with the established safety regulations. The findings that lower staffing levels were associated with higher rates of antipsychotic use (6) and that individualized treatment plans often included increased staff care when reduction in the use of restraints was attempted strongly suggest a relationship between staffing levels and use of restraints. Furthermore, inappropriate management of restraints may be increased in facilities with lower levels of staffing.

Future research

Most of the data on the impact of OBRA on use of restraints come from surveys and are subject to the biases that commonly affect survey data. Observational data that were collected before and after the legislation was enacted would strengthen the argument that OBRA caused the changes in use of restraints. Similarly, studies with an experimental design that compare alternatives to restraint with standard care are needed. Such studies should use data at the level of resident and facility and should analyze outcomes such as falls, costs, staffing levels, and re-restraint. The results would help clarify how use of restraints can best be reduced, among which patients, and at what cost.

Additional studies addressing compliance with rules for using restraints are needed. Such studies could determine how widespread are such practices as fraudulent documenation and failure to release residents from restraints at regular intervals. The data would help clarify the risks and benefits to nursing home residents of reducing use of restraints and help determine whether more funds are needed for restraint-free care.

Preadmission screening

The 1986 report of the Institute of Medicine on improving the quality of care in nursing homes suggested that patients with severe mental illness who were being deinstitutionalized from state mental hospitals were being discharged to nursing homes that could not provide the specialized services they needed (28). The report also raised concerns that even the former state hospital patients who were appropriately placed in nursing homes were not receiving the minimally necessary level of mental health treatment.

The OBRA legislation's provisions for preadmission screening and annual resident review had much potential to rectify this historic undertreatment of mentally ill residents in nursing homes. Unfortunately, we found only two peer-reviewed publications on the screening and review program. Eichmann and colleagues (29) used data from the 1985 National Nursing Home Survey to project how many residents would need "active" treatment comparable to inpatient psychiatric hospital care as defined in the OBRA guidelines and how many would need to be discharged from the nursing home to alternate dispositions. They suggested that 17 percent of residents would need alternate dispositions, that 8 percent of the residents who were eligible to remain in the nursing homes would need active treatment, and that another 20 percent would require some level of mental health treatment. No outcome data on these residents were available, so it remains to be seen how accurate the projections were.

A qualitative study of the implementation of preadmission screening and annual resident review among 83 nursing home residents in Washington State documented the difficulties in developing viable alternate dispositions for nursing home residents and highlighted the ongoing commitment necessary to maintain mentally ill nursing home residents in the community (30).

The necessity of preadmission screening and annual resident review has been the subject of much debate. The procedures are viewed by some as creating an unnecessary distinction between how nursing home residents with mental illness are treated and how those with physical illness are treated. Survey data suggest that many nursing home staff and long-term-care professionals were dissatisfied and felt that the procedures should be eliminated (20,22). Some researchers have questioned whether the specific assessment needs of persons with mental illness in nursing homes could be met through the minimum data set of the existing Resident Assessment Instrument (31–35). The usefulness of the minimum data set—a standardized, comprehensive assessment instrument—is unclear. Its behavioral and mood domains appear less valid than its cognitive and functional domains, compared with traditional research instruments, and its reliability appears to decrease as subjects' cognitive deficits increase (31–35).

The OBRA mandate for annual resident review was modified by Congress in the fall of 1996, and the program's ultimate future is unclear (2). Data documenting both the degree of implementation of preadmission screening and annual resident review and whether the procedures meet the goals of more appropriate placement and mental health treatment are clearly needed. Data showing that other mechanisms are meeting these objectives would provide a safer climate for repeal of the requirements for screening and review, as the problems that led to their development may still exist.

Conclusions

OBRA sharply focused attention on the mental health care of nursing home residents. Much evidence suggests that the legislation has in fact improved care (36), with reductions in the use of antipsychotic medications and physical restraints the most widely demonstrated effects. Survey data suggest that only 31 percent of nursing home industry workers feel no improvement from the reform, but that only 20 percent of residents note an improvement in the quality of care (22).

More needs to be done to ensure that the changes in care stimulated by the legislation result in changes in quality of life that are perceptible to residents. We need to link decreased use of antipsychotic medications and restraints to improvements in functioning, health status, and quality of life. Continued research and monitoring of potential side effects of reform, such as inappropriate cessation of antipsychotic medications and restart at higher doses, are needed. Because some residents will remain on antipsychotic medications and in restraints, continued efforts to ensure standard-of-care use of these interventions are necessary.

Assessment of nursing home residents has been standardized, but more needs to be done to ensure that the methods used to identify the status of residents with mental illness are reliable and valid. The preadmission screening and annual resident review program mandated by the original OBRA legislation has been highly criticized. We eagerly await publication of data to guide this program and aid the next round of reform. Finally, in the era of increased fiscal scrutiny of the Medicare program, we need to document the use of resources associated with the treatment alternatives fostered by OBRA, so that benefits of ending inappropriate tranquilization and restraint are not taken away by removing financial support for more appropriate care.♦

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References

1. Mental Health Services in Nursing Facilities in the Operation Restore Trust States. Pub OEI-02-91-00861. Washington, DC, Department of Health and Human Services, Office of the Inspector General, May 1996
2. House Resolution 3632. Congressional Record, Sept 28, 1996, p H11635
3. Francese T, Mohler M: Long-term care nurse staffing requirements: has OBRA really helped? Geriatric Nursing 15:139–141, 1994
4. Board of Directors of the American Association for Geriatric Psychiatry, Clinical Practice Committee of the American Geriatrics Society, Committee on Long-Term Care and Treatment for the Elderly of the

American Psychiatric Association: Psychotherapeutic medications in the nursing home. Journal of the American Geriatrics Society 40:946–949, 1992

5. Slater E, Glazer W: Use of OBRA-87 guidelines for prescribing neuroleptics in a VA nursing home. Psychiatric Services 46:119–121, 1995

6. Shorr R, Fought R, Ray W: Changes in antipsychotic drug use in nursing homes during implementation of the OBRA-87 regulations. JAMA 271:358–362, 1994

7. Semla T, Palla K, Poddig B, et al: Effect of the Omnibus Budget Reconciliation Act of 1987 on antipsychotic prescribing in nursing home residents. Journal of the American Geriatrics Society 42:648–652, 1994

8. Lantz M, Giambanco V, Buchalter E: A ten-year review of the effect of OBRA-87 on psychotropic prescribing practices in an academic nursing home. Psychiatric Services 47:951–955, 1996

9. Meador K, Taylor J, Purushottam B, et al: Predictors of antipsychotic withdrawal or dose reduction in a randomized controlled trial of provider education. Journal of the American Geriatrics Society 45:207–210, 1997

10. Rovner B, Edelman B, Cox M, et al: The impact of antipsychotic drug regulations on psychotropic prescribing practices in nursing homes. American Journal of Psychiatry 149:1390–1392, 1992

11. Garrard J, Chen V, Dowd B: The impact of the 1987 federal regulations on the use of psychotropic drugs in Minnesota nursing homes. American Journal of Public Health 85:771–776, 1995

12. Evans L, Strumpf N: Tying down the elderly. Journal of the American Geriatrics Society 37:65–74, 1989

13. Phillips C, Hawes C, Mor V, et al: Facility and area variation affecting the use of physical restraints in nursing homes. Medical Care 34:1149–1162, 1996

14. Burton L, German P, Rovner B, et al: Mental illness and the use of restraints in nursing homes. Gerontologist 32:164–170, 1992

15. Tinetti M, Liu W, Marottoli R, et al: Mechanical restraint use among residents of skilled nursing facilities: prevalence, patterns and predictors. JAMA 265:468–471, 1991

16. Graber D, Sloane P: Nursing home survey deficiencies for physical restraint use. Medical Care 33:1051–1063, 1995

17. Capezuti E, Evans L, Strumpf N, et al: Physical restraint use and falls in nursing home residents. Journal of the American Geriatrics Society 44:627–633, 1996

18. Tinetti M, Liu W, Ginter S: Mechanical restraint use and fall-related injuries among residents of skilled nursing facilities. Annals of Internal Medicine 116:369–374, 1992

19. Nursing homes report decreased restraint use. American Geriatrics Society Newsletter 21:1, 1992

20. Lombardo NE: Barriers to Mental Health Services for Nursing Home Residents. Washington, DC, AARP Public Policy Institute, May 1994

21. Janelli L, Kanski G, Neary M: Physical restraints: has OBRA made a difference? Journal of Gerontological Nursing 20:17–21, 1994

22. Marek K, Rantz M, Fagin C, et al: OBRA-87: has it resulted in better quality of care? Journal of Gerontological Nursing 22:28–36, 1996

23. Ejaz F, Jones J, Rose M: Falls among nursing home residents: an examination of incident reports before and after restraint reduction programs. Journal of the American Geriatrics Society 42:960–964, 1994

24. Read S, Bagheri A, Stricklan P: Are restraints all bad? Journal of the American Geriatrics Society 39:223–225, 1991

25. Thapa P, Brockman K, Gideon P, et al: Injurious falls in nonambulatory nursing home residents: a comparative study of circumstances, incidence, and risk factors. Journal of the American Geriatrics Society 44:273–278, 1996

26. Phillips C, Hawes C, Fries B: Reducing the use of physical restraints in nursing homes: will it increase costs? American Journal of Public Health 83:342–348, 1993

27. Schnelle J, Newman D, White M, et al: Reducing and managing restraints in long-term-care facilities. Journal of the American Geriatrics Society 40:381–385, 1992

28. Katz S, Adams CE, Beigel A, et al: Improving the Quality of Care in Nursing Homes. Report of the Committee on Nursing Home Regulation, Institute of Medicine. Washington, DC, National Academy Press, 1986

29. Eichmann M, Griffin B, Lyons J, et al: An estimation of the impact of OBRA-87 on nursing home care in the United States. Hospital and Community Psychiatry 43: 781–789, 1992

30. Sohng S: Supported housing for the mentally ill elderly: implementation and consumer choice. Community Mental Health Journal 32:135–148, 1996

31. Morris J, Hawes C, Fries B, et al: Designing the National Resident Assessment Instrument for nursing homes. Gerontologist 35:172–178, 1995

32. Teresi J, Homes D: Should MDS data be used for research? Gerontologist 32:148–149, 1992

33. Hawes C, Morris J, Phillips C, et al: Reliability estimates for the minimum data set for nursing home resident assessment and care screening (MDS). Gerontologist 35: 172–178, 1995

34. Frederiksen K, Tariot P, DeJonghe E: Minimum data set plus (MDS+) scores compared with scores from five rating scales. Journal of the American Geriatrics Society 44:305–309, 1996

35. Phillips C, Chu C, Morris J, et al: Effects of cognitive impairment on the reliability of geriatric assessments in nursing homes. Journal of the American Geriatrics Society 41:136–142, 1993

36. Vladeck B: The past, present, and future of nursing home quality. JAMA 275:425, 1996

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