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Nancy Anderson, M.D. Sharon Estee, Ph.D.

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## MEDICAL COST OFFSETS ASSOCIATED WITH MENTAL HEALTH CARE: A BRIEF REVIEW

## What are the overall conclusions of this literature review?

Mental health treatment has been shown to reduce medical costs for some populations. The cost offsets are most pronounced for individuals with chronic medical conditions, such as heart disease, who are treated for depression. Also, providing a general Medicaid population mental health treatment through a managed care arrangement has been shown to reduce subsequent medical service use and costs. However, for individuals with serious mental illness mental health treatment may not create medical cost offsets. In fact, for this population some studies have shown that mental health treatment may actually increase medical costs as symptoms of mental illness stabilize and these consumers begin to access needed medical care. Providing mental health services to aged consumers, while promising, has not yet been shown to create any medical cost offsets.

## What is the definition of medical cost offset?

Some clients use less medical care if they are able to get mental health services. When this happens, the decrease in cost of medical care may be greater than the cost associated with use of mental health services. The net savings generated are referred to as 'cost offsets.' This means that savings generated in medical care offset the costs of mental health care.

Are Medicaid clients with chronic medical conditions less costly if they receive appropriate mental health services?

The most relevant study for the proposed Washington Medicaid Integration Project pertaining to savings associated with mental health treatment is a randomized, prospective study of Medicaid enrollees in Hawaii. Two-thirds of Hawaii's Medicaid clients were randomly assigned to receive either managed mental health care or the usual form of mental health care. The managed form of care was described as structured, targeted, focused, and brief, but clients who needed more extensive care could receive it. The research focused on the costs of medical care for 4,912 Medicaid enrollees in Oahu with chronic medical conditions including ischemic heart disease, hypertension, diabetes, or respiratory problems. Study clients had 30 months of continuous eligibility. Costs were compared for a 3½ year service period for three subgroups: clients who received no mental health services, those received managed mental health care, and those who received traditional fee-

for-service mental health services. Clients were randomly assigned to the managed care group to avoid self-selection bias.

Use of managed mental health treatment was associated with a 20% decline in medical costs for the 227 clients who received it. The decline was significantly different from the change experienced by the nonuser group and the group that used traditional mental health services. The managed mental health group also spent fewer days in the hospital, used the emergency room less, and received fewer controlled drug prescriptions compared to pretreatment and to those with chronic medical conditions who did not received the focused mental health intervention. Use of traditional mental health care and non-use was not associated with a significant decline in costs in these areas (Pallak, Cummings, Dörken, and Henke 1994).

In Florida, an administrative data review was carried out for 731,596 Medicaid clients who enrolled under the fee-for-service Medipass program during Fiscal Year 1998-99. The overall objectives of the exploratory review were to examine the use of services and characteristics of clients for those with mental health co-morbid conditions compared to those without mental health co-morbidity, to consider potential subgroups for targeted special services, and to use results as a basis for the development of cost-offset measurement methods.

Results did not indicate an overall medical service cost-offset for the 191,063 clients who needed and received mental health services, compared to the 52,827 clients who needed but did not receive mental health services. In general, physical health costs per user per year were higher for the clients who used physical and mental health services, compared to those who needed but did not use mental health services, but this analysis was not limited to only clients with physical health co-morbidity. Results did show that clients with unmet need for mental health services were likely to be higher cost than clients who needed and received mental health services for some specific costs, including those of physician case management, surgery, and pharmacy. Contraceptive costs differed as well, but a greater proportion of clients in the 'unmet need' group were women (Stiles et al. 2001).

The researchers note that a longer-term cohort methodology would probably offer clearer results in terms of the relationship between mental health service utilization and other medical service utilization. In addition, the researchers suggested that the method they used to identify clients with unmet mental health need may not have been ideal. Their research may be the basis for further work that more clearly examines differences in costs of medical care with respect to mental health care for clients with specific medical conditions. Have medical cost offsets associated with mental health services been found in non-Medicaid populations?

Much of the research on medical cost offsets carried out in the non-Medicaid population has examined the importance of undiagnosed mental illness, particularly among those with chronic medical conditions (e.g. as reviewed by Lecrubier et al. 2001). A 1998 study of 1,661 commercial health plan clients in New England considered subgroups of people who were receiving treatment for depression and found that people with a number of chronic conditions, including coronary heart disease, cancer, chronic fatigue syndrome, anxiety, and at least six months of antidepressant use were more likely than other subgroups to experience large cost decreases with respect to medical services, in particular physician office services (Thompson et al. 1998). A more recent study published in 2002, carried out in the Group Health Cooperative population, concludes that people hospitalized with heart failure complicated by depression were more costly than others with the same medical condition (Sullivan et al. 2002). This conclusion strongly suggests that adequate treatment for depression would decrease the costs for care for these people. The majority of research and reviews that examine medical costs and potential cost offsets for mental health care concur with this inference: adequate and appropriate mental health services can decrease inappropriate use of other medical services (Olfson et al. 1999, APA Online 2002, Simon and Katzelnick 1997).

Some studies in the general primary care population fail to show any cost offset. In a randomized trial of collaborative mental health care, involving the primary care physicians and a general patient population at Group Health Cooperative, no medical cost offset was observed (Von Korff et al. 1998). A United Kingdom review of counseling (brief, focused therapy) in the primary care setting also failed to find long-term term cost differences from usual GP care (NHS Center for Reviews and Dissemination 2001).

Do people with severe chronic mental illness incur fewer costs if their mental illness is treated adequately?

The relationship of medical costs to treatment of severe chronic mental illness, similar to that frequently observed in aged and disabled Medicaid clients, has been examined. The American Psychological Association's review of the literature concluded that people with serious mental illnesses consume fewer medical resources when they receive accurate and timely diagnosis and treatment for their mental illness than if diagnosis and treatment are not adequate (APA online 2002).

In Washington State, PACT (Program for Assertive Community Treatment) has been evaluated in Clark County. The program provides comprehensive, collaborative, and structured mental health services to clients who are high

utilizers of mental health services. The evaluation has compared 56 PACT consumers to 150 clients who were not in PACT. The results thus far include substantial reductions in both community hospital days (65%) and State Hospital days (44%) (WIMIRT 2002). The effect on medical service utilization has not been included in the evaluation, and the analysis of cost effects is still in process.

Some studies have shown, however, that people with severe mental illness may become more costly when they have more access to appropriate services (e.g., this conclusion was cited in a review of literature by Olfson et al. 1999). A cluster-randomized comparison of care for 108 schizophrenic patients in England also suggests that improvement in mental health care is not necessarily associated with a medical cost offset. The study found that closer coordination of mental health and primary care met more patient needs but failed to result in overall savings (Gater et al. 1997).

In addition, there is evidence that appropriate use of newer and more effective antipsychotic agents and other psychoactive medications may actually increase the risk of medical co-morbidity with respect to insulin intolerance, obesity, and abnormal blood lipids among people with chronic severe mental illness (Wirshing et al. 2002; Martin and L'Eguyer 2002; Meyer 2002). This means that adequate access to high quality mental health services may increase medical care costs, unless the patient is carefully monitored to avoid undesirable side effects.

Are there medical cost offsets associated with treating mental health problems in elderly patients with Alzheimer's or dementia?

There are no medical cost-offset studies, per se, which examine the offsets of treating patients with Alzheimer's or dementia for mental health problems. Available evidence however, suggests that elderly adults with Alzheimer's disease or mild cognitive deficits are frequently depressed, that their depression is under-diagnosed, and that treatment of their depression can improve their health and function.

Based on a preliminary review of the literature no studies were found about medical cost-offsets of providing mental health services to elderly adults with cognitive impairment and/or dementia. There are indications that depression is not well-diagnosed or treated in elderly and/or chronically ill people. Texas Medicaid has implemented a pilot project, STAR+PLUS, designed to integrate acute and long-term care services for SSI and SSI-related clients. As part of the program evaluation, a focused study was carried out on quality of care measures for 223 clients with depression, most of whom were more than 40 years of age. The study showed improvement over the course of a year in the documentation of the use of antidepressant medication, appropriate dose, and referral to a behavioral health provider. The use of depression screening,

however, was minimal, and there was no change in the documentation of many patient education measures (Texas Health and Human Services Commission 2001).

The prevalence of psychiatric disorder in this group has been well described. Lyketsos and his co-authors evaluated cognitive impairment among participants in the Cardiovascular Health Study (Lyketsos et al. 2002). Longitudinal evaluation of the random sample of 5,888 Medicare clients from four communities included a cross-sectional study of cognition and neuropsychiatric symptoms in participants, including Modified Mini-Mental State exam and neuropsychological testing of 2,116 participants. Of those who completed screening and were positive for cognitive impairment, 362 participants were classified as having dementia, while 320 were classified as having mild cognitive impairment (MCI) and 826 were classified as cognitively healthy.

Among participants with MCI, 43% had experienced neuropsychiatric symptoms in the previous month. Depression, apathy, and irritability were most common. For participants with dementia, 75% had similar symptoms, most frequently apathy, depression, and agitation.

Psychiatric disorder has also been linked with the behaviors that make it difficult to care for people with dementia based on a study of admissions to the Houston Veterans' Administration Geropsychiatry Unit from October 1993 to May 1995 (Kunik et al. 1999). The study found that both depression and psychotic symptoms correlated with different kinds of agitated behavior. Psychosis was associated with aggressive behavior while depression was associated with constant requests for help, complaining, and negativism.

It is also likely that the treatment of depression and psychosis helps people with dementia, although the overall study results are still preliminary. A treatment-oriented review of depression in Alzheimer's disease found that non-pharmacologic interventions can be efficacious and should be tried first for people with Alzheimer's disease complicated by mild depression (Lyketsos and Olin 2002). A randomized controlled trial of Olanzepine, conducted with 206 nursing home residents, indicated significant improvement with respect to neuropsychiatric symptoms when patients received low dose Olanzepine, a newer, 'atypical' antipsychotic with fewer side effects than older medications. A small randomized controlled trial of Sertraline also showed improved symptoms of depression in nine of twelve patients with Alzheimer's disease who received it, a significant difference from patients who received placebo (Lyketsos et al. 2000).

## References

- APA Online: "Defining Medical Cost Offset: Policy Implications." 2002.
- Dyck, D.G., E. Cook, B. Stegner, A. Strode, and M. Hendryx. 2002. "The Clark County program for assertive community treatment: Part 1–Fidelity, process and outcomes." Washington Institute for Mental Illness: Research and Training, Washington State University-Spokane
- Gater, R., D. Goldberg, G. Jackson, N. Jennett, K. Lowson, J. Ratcliffe, T. Saraf, and R. Warner. 1997. "The care of patients with chronic schizophrenia: a comparison between two services." Psychological Medicine 27 (6): 1325-1336.
- Lecrubier, Y. 2001. "The burden of depression and anxiety in general medicine." Journal of Clinical Psychiatry 62 (supplement 8): 4-9.
- Kunik M.E., A.L. Snow-Turek, N. Igbal, and V.A. Molinari, et al. 1999. "Contribution of psychosis and depression to behavioral disturbances in geropsychiatric inpatients with dementia." The Journals of Gerontology 54A (3): M157-61
- Lyketsos C.G., O. Lopez, B. Jones, and A.L. Fitzpatrick, et al. 2002. "Prevalance of neuropsychiatric symptoms in dementia and mild cognitive impairment: results from the cardiovascular health study." JAMA 288 (12): 1475-83
- Lyketsos C.G., and J. Olin. 2002. "Depression in Alzheimer's Disease: Overview and Treatment." Biological Psychiatry 52: 243-52
- Lyketsos, C.G., J-M.E. Sheppard, C.D. Steele, S. Kopunek, M. Steinberg, and A.S. Baker. 2000. "Randomized, Placebo-Controlled, Double-Blind Clinical Trial of Sertraline in the Treatment of Depression Complicating Alzheimer's Disease: Initial Results from the Depression in Alzheimer's Disease Study." American Journal of Psychiatry 157 (10): 1686-89
- Martin, A. and S. L'Eguyer. 2002. "Triglyceride, cholesterol and weight changes among resperidone-treated youths: A retrospective study." Eur Child Adolesc Psychiatry 11 (3):129-33
- Meyer J.M. 2002. "A retrospective comparison of weight, lipid, and glucose changes between resperidone- and olanzapine-treated inpatients: metabolic outcomes after 1 year." Journal of Clinical Psychiatry 63 (5): 425-33
- NHS Center for Reviews and Dissemination. 2001. "Counseling in Primary Care: Effectiveness Matters." The University of York 5 (2): 1-7.

- Olfson, M., M. Sing, and H. J. Schlesinger. 1999. "Mental health/medical care cost offsets: Opportunities for managed care." Health Affairs Mar/Apr 79-90
- Pallak, M.S., N.A. Cummings, H. Dörken, and C.J. Henke. 1994. "Medical costs, Medicaid, and managed mental health treatment: The Hawaii study." *Managed Care Q* 2 (2): 64-70
- Simon G., and D. Katzelnick. 1997. "Depression, use of medical services and cost-offset effects." Journal of Psychosomatic Research 42 (4): 333-344
- Stiles, P., K. Dailey, R. Larsen, and M. Lo. 2001. "Developmental Studies of Mental-Physical Health Co-morbidity and Cost-Offset." Submitted to the Florida Agency for Health Care Administration by the Louis de la Parte Florida Mental Health Institute, University of Florida.
- Sullivan M., G. Simon, J. Spertus, and J. Russo. 2002. "Depression-related costs in heart failure care." Archives of Internal Medicine 162 (16): 1860-66
- Texas Health and Human Services Commission: "STAR+PLUS Depression focused study final technical report." October 26, 2001
- Thompson D., T. Hylan, W. McMullen, and M. Romeis, et al. 1998. "Predictors of a medical-offset effect among patients receiving antidepressant therapy." American Journal of Psychiatry 155 (6): 824-827
- Von Korff M., W. Katon, T. Bush, and E. Lin, et al. 1998. "Treatment costs, cost offset and cost-effectiveness of collaborative management of depression." Psychosomatic Medicine Mar/Apr 60 (2): 143-49
- Wirshing D.S., J.A. Boyd, L.R. Meng, J.S. Ballon, R.S. Marder, and W.C. Wirshing. 2002. "The effects of novel antipsychotics on glucose and lipid levels." Journal of Clinical Psychiatry 63 (10): 856-65

For questions or comments on this report, contact:

Nancy Anderson, M.D., DSHS Research and Data Analysis at (360) 902-0706 or (360) 725-1567, e-mail: anderna@dshs.wa.gov or

Sharon Estee, Ph.D., DSHS Research and Data Analysis at (360) 902-7655, e-mail: esteesl@dshs.wa.gov

Prepared for the Department of Social and Health Services Mental Health Division

