Does Physician Education on Depression Management Improve Treatment in Primary Care?

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OBJECTIVE: To assess the effect of physician training on management of depression.

DESIGN: Primary care physicians were randomly assigned to a depression management intervention that included an educational program. A before-and-after design evaluated physician practices for patients not enrolled in the intervention trial.

SETTING: One hundred nine primary care physicians in 2 health maintenance organizations located in the Midwest and Northwest regions of the United States.

PATIENTS/PARTICIPANTS: Computerized pharmacy and visit data from a group of 124,893 patients who received visits or prescriptions from intervention and usual care physicians.

INTERVENTIONS: Primary care physicians received education on diagnosis and optimal management of depression over a 3-month training period. Methods of education included small group interactive discussions, expert demonstrations, role-play, and academic detailing of pharmacotherapy, criteria for urgent psychiatric referrals, and case reviews with psychiatric consultants.

MEASUREMENTS AND MAIN RESULTS: Pharmacy and visit data provided indicators of physician management of depression: rate of newly diagnosed depression, new prescription of antidepressant medication, and duration of pharmacotherapy. One year after the training period, intervention and usual care physicians did not differ significantly in the rate of new depression diagnosis ($P = .95$) or new prescription of antidepressant medicines ($P = .10$). Meanwhile, patients of intervention physicians did not differ from patients of usual care physicians in adequacy of pharmacotherapy ($P = .53$) as measured by 12 weeks of continuous antidepressant treatment.

CONCLUSIONS: After education on optimal management of depression, intervention physicians did not differ from their usual care colleagues in depression diagnosis or pharmacotherapy.

KEY WORDS: physician education; primary care; depression.


At no time in the history of medicine has the growth in knowledge and technologies been so profound. However, this proliferation of new knowledge would not result in better individual or public health outcomes if primary care physicians (PCPs) do not integrate key advances into daily practice. Depression is a major public health concern because of its high prevalence, associated disability, and increased cost for the affected persons and society at large. There is abundant scientific data demonstrating the efficacy of pharmacotherapy and psychotherapy in treating persons with major depression. However, routine medical services do not reflect optimal management of depression. Because PCPs care for the majority of depressed persons who seek medical service, enhancing these providers for better management depression could significantly better individual and public health.

Physician education is popularly accepted as the method for translating research findings into daily patient care. There is an abundance of continuing medical education courses aimed at educating graduate physicians on current medical advances and clinical guidelines. These courses are offered with the expectation that increasing physician knowledge would improve patient care and enhance clinical outcomes. However, systematic reviews of randomized controlled trials revealed that most traditional continuing education programs (didactics) are not effective in changing physician practices. Recently, 60 English PCPs were randomized to attend seminars, small group discussions, videotape demonstrations, and role-played guideline management of depression. This educational program was well received by the physicians but failed to change their recognition of depression or patient outcome.

Results from research evaluating a variety of physician education methods have been more encouraging. For example, individualized face-to-face suggestions by academic detailing for a preferred drug or computerized reminders at time of the encounter have been effective in changing a specific physician practice. Some randomized and sequential (before-after) comparisons of comprehensive physician training to better address patients' emotional distress such as using video demonstrations, interactive feedback, or role playing have shown beneficial changes in physician practices and even patient outcomes. A recent review of experimental and quasi-experimental studies on interventions to improve diagnosis and treatment of mental disorders in primary care showed that 78% demonstrated improved diagnosis, 70% resulted in improved treatment, and 50% or less found enhanced clinical outcomes. These prior reports suggested that in general, it is easier to change a specific behavior, such as diagnosis or prescription of a specific medication,
but the more comprehensive the approach, such as diagnosis, treatment, and monitoring of depression treatment response, the more difficult it is to attain clinical improvement.\textsuperscript{7-16} In an earlier publication, we reported results from a large clinical trial of a systematic depression management program for frequent users of medical services with major depression.\textsuperscript{17} That intervention included a physician education program on the diagnosis and management of depression with an emphasis on initiating and sustaining appropriate pharmacologic therapy. Results from that randomized depression trial for frequent users of medical services showed that intervention patients received more adequate pharmacotherapy and had better clinical and functional outcomes than patients continuing in usual care.

The design of our earlier study, specifically, randomization of education at the physician level, allowed us to examine whether the training program improved the depression care these physicians provided for their non-study patients. This report examines the effect of physician education on more than 90% of their patients. Patients in this report were not frequent users of medical services and thus not eligible for the earlier randomized controlled trial.

**METHODS**

The earlier publication that described the main results of the randomized depression trial for frequent users of services also reported in detail the design, sampling method, and interventions at the level of patients and the organizational system.\textsuperscript{17}

**Study Setting**

Our study was conducted in 15 primary clinics (5 at Group Health Cooperative [GHC], Seattle, Washington and 10 at Dean Health Plan [Dean], Madison, Wisconsin), 2 large HMOs. Participating physicians were in group-model clinics at Dean and staff-model clinics at GHC. Dean is a for-profit HMO serving 175,000 rural and suburban members, and GHC is a not-for-profit HMO serving 450,000 urban and suburban members.

**Sample Selection**

All PCPs from the selected clinics were invited to participate. One hundred nine physicians (78.4\% of those invited, $N = 139$) were included in these analyses. Physicians who refused participation or who were retiring shortly were excluded (25 at Dean and 5 at GHC). For patient level analyses, we excluded depressed patients who were frequent users of services and eligible for the previously described randomized intervention trial. Computerized databases from participating physician practices in the 2 HMOs were used to identify health plan members between the ages of 18 years and 64 whose ambulatory visits were below the top 15th percentile for the prior 2 consecutive years. Patients were assigned intervention and usual care status accordingly to the randomization group of their PCPs. For each patient, we examined only the first visit to a study physician during the study period (i.e., each patient contributed only 1 visit to the sample).

**Randomization and Design**

As described in our earlier publication of the randomized trial of depression management program for frequent users of medical services, PCPs were randomized in blocks within their clinic according to their full-time or part-time status. For the pre and post comparisons we report here, the training period began when the intervention PCPs attended a small group educational session and lasted for the 3 months following the initial training session. The “pre” period consisted of the 12 months before training and the “post” period began after the 3-month training period and also lasted 12 months.

**Physician Education on Depression Management**

The educational format of the depression management program was designed to meet the needs of busy primary care providers. It used many of the efficacious methods described earlier such as small group interactive discussion, role-play, academic detailing, feedback, and review of patient progress with a psychiatric consultant. We began by conducting a small group session at each participating clinic. Study psychiatrists (GS and DK) and a PCP (EHBL) provided a standardized 2-hour training program for intervention physicians. Contents included: 1) detailed demonstration of structured diagnostic assessment of major depression using Diagnostic and Statistical Manual-IV criteria\textsuperscript{18}; 2) criteria for urgent specialty referrals; 3) indications and cautions for pharmacotherapy; 4) algorithm for antidepressant pharmacotherapy; 5) patient education to increase adherence; 6) demonstration of brief strategies for patient activation; and 7) importance of regular follow-up to assess patient response and progress. During the last half hour of this training session, study physicians role-played the initial study visit. They practiced making a diagnosis of major depression, prescribed antidepressant medicines, and activated patients by helping them schedule pleasant activities. For physicians who could not attend the small group sessions, the study psychiatrist met them individually, and used academic detailing to convey the essential information for depression management.

Although we included a specific pharmacotherapy algorithm, PCPs could use their clinical judgment to adjust treatment according to individual patient needs. For patients who were successfully treated previously with an antidepressant medicine that was well tolerated, the algorithm recommended using the same medication again. All others were to be started with sertraline hydrochloride at a recommended starting dose of 50 mg per day. For a detailed description of our pharmacotherapy algorithm,