

Early Intervention for Psychotic Disorders in a Community Mental Health Center

Vinod H. Srihari, M.D.

Nicholas J. K. Breitborde, Ph.D.

Jessica Pollard, Ph.D.

Cenk Tek, M.D.

Leslie Hyman, L.C.S.W.

Linda K. Frisman, Ph.D.

Thomas H. McGlashan, M.D.

Selby Jacobs, M.D.

Scott W. Woods, M.D.

Early intervention may improve long-term outcomes for psychotic illnesses. Early-intervention services in other countries have focused on reducing the duration of untreated illness and adapting interventions for younger patients. This column describes the process of building such a service, called specialized treatment early in psychosis (STEP), at the Connecticut Mental Health Center. This effort is rooted in a long-standing collaborative relationship between the Connecticut Department of Mental Health and Addiction Services and Yale. The authors describe the critical contribution of such partnerships in evaluating the cost-effectiveness of early intervention in a "real-world" U.S. setting. (*Psychiatric Services* 60:1426–1428, 2009)

Psychotic disorders rank among the top ten causes of global disability (1). Health care policy in Australia, the United Kingdom, and Scandinavia (2) has included systematic efforts to implement, study, and

refine early-intervention services. These are models of care that attempt to reduce the duration of untreated illness and provide care adapted to younger patients. Three randomized controlled trials of early-intervention programs have demonstrated modest reductions in symptom severity, relapse rates, and suicidality and improvements in social and vocational functioning and quality of life (3–5).

Early intervention for psychotic disorders: the U.S. paradox

There is a conspicuous absence of a comparable U.S. strategy for early intervention. Care for psychotic disorders must be seen against the backdrop of mental health care in the United States in general. Epidemiologic assessments have shown that less than half of the population with mental disorders receive treatment (6), with evidence of a worsening since 2000 in treatment rates for those with serious mental illnesses (7) and longer delays between illness onset and care (8). The fragmentation of payment for and delivery of mental health services makes a coherent approach to early intervention difficult to implement. According to studies conducted in countries with national health care systems (9,10), savings related to early intervention emerge over a longer period than the typical annual enrollment period. Savings are thus likely to be realized by public and not private payers. We describe the implementation of an early-intervention initiative in a U.S. community mental health center and its particular salience as a model of successful public-academic collaboration.

Early intervention in Connecticut via public-academic collaboration

In 2005, a workgroup of faculty members from the Yale Department of Psychiatry began meeting to address a problem long recognized by members of the Yale Prevention Through Risk Identification, Management & Education (PRIME) research clinic. This clinic has since 1998 pioneered the early identification and treatment of individuals at risk for psychotic disorders. When conversion to full-blown psychosis occurred, the PRIME staff experienced considerable difficulty finding providers to care for them, especially when family income or insurance made them ineligible for public-sector care. Evidence linking longer durations of untreated illness with poorer outcomes (11) added to the more acute concerns for these patients' unmet needs. The notion of creating a clinic for first-episode psychosis patients was raised.

Initially the group explored private-sector models for funding the service. The local teaching-hospital leadership felt that the proposed service was clinically important and would provide an attractive training site but were concerned about fiscal viability. The only models perceived to break even financially were time-limited partial-hospitalization or intensive outpatient programs that would require patients to participate daily for two to four hours. We expected that many individuals experiencing an initial psychotic episode would require lower-intensity, longer-term treatment that better fit active work or school schedules. Several other arrangements were similarly at-

With the exception of Dr. Frisman, who is affiliated with the Connecticut Department of Mental Health and Addiction Services, Hartford, the authors are affiliated with Connecticut Mental Health Center and Yale University School of Medicine, New Haven. Send correspondence to Dr. Srihari, Connecticut Mental Health Center, 34 Park St., 2nd Floor, New Haven, CT 06519 (e-mail: vinod.srihari@yale.edu). Lisa B. Dixon, M.D., M.P.H., and Brian Hepburn, M.D., are editors of this column.

tempted but failed because of the mismatch between ideal clinical care and available reimbursement structures. These included discussions with a successful local multispecialty private practice group and a large managed behavioral health care organization. The group also approached a local federally qualified community health center, but its behavioral health component was undergoing reorganization, and the timing was not right for creation of an innovative program.

We concluded that financial incentives within the local private sector were not favorable and thus refocused on public-sector options. As part of this planning process, the workgroup identified three relevant barriers to constructing an optimal early-intervention service in the Connecticut public sector. First, our state mental health centers are under no obligation to accept privately insured patients. Our clinical experience indicated that such individuals often lost employment-based coverage after a psychotic break or aged out of parental coverage and thus represented an important target group for any early-intervention program. Many of these patients were eventually treated in the state mental health system but often after a long period of poor access to treatment and after too much time had elapsed for early intervention to be clinically meaningful. Any early-intervention service that excluded these patients would thus miss an important opportunity for secondary prevention. Second, Connecticut cares for adolescents and young adults via separate agencies, thereby fragmenting potential interventions aimed at the peak ages of onset of psychotic illnesses. Third, the division of public mental health care services by geographic catchment areas would limit the collection of a critical mass of early-psychosis patients around which to organize care.

The Connecticut Mental Health Center (CMHC), where many of the workgroup members have clinical appointments, presented an excellent location to pilot an early-intervention service. CMHC is state owned and administered under the Connecticut Department of Mental Health and Addiction Services (DMHAS). DMHAS staffs the center through a profession-

al contract with the Yale Department of Psychiatry, which provides the leadership and the medical and psychology staff for the center. DMHAS hires state employees who serve as primary clinicians for the patients. The center has a long history of supporting clinical research programs (12), including PRIME. CMHC serves a population of about 200,000 persons eligible for public-sector care from the Greater New Haven area, with an average daily census of 2,500 active outpatients with a variety of serious mental illnesses, personality disorders, and substance use disorders.

Given our interest in developing a nationally relevant model of care, we saw that CMHC offered three distinct advantages. First, it is owned by DMHAS, which is one of 50 nationwide single state agencies (SSAs) for mental health that together constitute a de facto national mental health system. Although the degree of state funding and the role of the SSAs in mental health care vary across states, these agencies provide a link to administrative structures and personnel who are experienced in treating serious mental illnesses. These resources could serve as a platform for national implementation of early intervention. Second, the SSAs bear the brunt of the financial burden and thus have the greatest incentive to reduce disability from psychotic illnesses. Third, through Medicaid, each of the SSAs already participates in cost-sharing arrangements with the federal government that could be adapted to an early-intervention initiative.

The workgroup initiated discussions with the director of the CMHC, who consulted with the senior leadership of DMHAS. The director agreed to support a pilot project by accepting a limited number of patients who were early in their illness course and for whom the center had no statutory obligation to provide care (that is, individuals who were privately insured or living outside the catchment area or under age 18). This decision removed the three barriers identified by the workgroup. After signing informed consent, these patients would be randomly assigned to either receive care at the new early-intervention service in CMHC or to referral, as per usual

practice, to community providers. A randomized controlled design with six monthly outcome assessments would be used to collect data for cost-effectiveness analysis. Patients early in the course of a psychotic illness who also were ordinarily eligible for CMHC care would be offered the early-intervention service (without going through the randomization process). This followed the workgroup's interest in improving care to patients who were already in the public system while also gaining experience in implementing an innovative service model. The new early-intervention service was approved in April 2006 and named STEP (for specialized treatment early in psychosis). What follows is a description of how the service was created within this public-academic collaboration.

STEP: designing a specialized community mental health service

The broad goals of the project were to improve the quality of care to an underserved and vulnerable population while also generating rigorous outcomes data that could be meaningfully interpreted in a U.S. public-sector context. This led to the choice of using a pragmatic randomized controlled design with three relevant features (13).

First, we decided to be broadly inclusive, or take a "real-world" approach, in admitting to the trial all individuals who were early in the course of a psychotic illness, regardless of any comorbid illness. The only exception here was an already existing connection to the services of the state Department of Disability Services for a diagnosis of intellectual disability. We used a simple operationalization of "early" as less than eight weeks of lifetime exposure to antipsychotic medication.

Second, we designed the treatment package with a view toward what would be viable within the resources of a community mental health center. In addition to antipsychotic prescription, we focused on psychosocial interventions known to reduce relapse in chronic schizophrenia and for which we had local expertise. A psychologist trainee helped adapt a widely used manual for multifamily group psychoeducation for use with our population. A research psychologist developed a manual for group psychoeduca-

tion based on principles of cognitive-behavioral therapy (CBT). CMHC social work and nursing clinicians were included as coleaders in both interventions, and a train-the-trainer approach envisioned sustainability within the usual clinical resources of the center. Additional services delivered would include case management with a particular focus on the educational and vocational needs of younger clients, including the use of vocational assistance staff who would implement the individual placement and support model.

Third, in addition to using traditional clinical measures of symptom severity and hospitalization, we decided to collect long-term outcomes along domains that would be of interest to patients, families, and policy makers—that is, vocational and educational functioning, quality of life, and utilization of forensic services, supported housing, and other services.

Following the usual CMHC model of care, with STEP each patient would be assigned a primary clinician (either from social work or nursing disciplines). Other than the PRIME psychologist, all the staff persons in the new STEP service were drawn from the existing outpatient psychosis program. This initially included the part-time services of a psychiatrist, psychology trainee, social worker, and nurse. Two additional part-time social work clinicians joined the clinic as the size of the population grew.

Evolution of STEP: the special role of public-academic collaboration

The clinic began accepting referrals in April 2006. Despite very limited recruitment efforts, the STEP clinic was receiving referrals at the rate of about two per week within the first few months, with many more inquiries by phone and e-mail from area clinicians, families, and patients. Given this evidence of high clinical need, the work-group members and the CMHC director made a formal presentation to the commissioner and other senior leadership of DMHAS, which provided an opportunity for the leadership to revisit the rationale for an early-intervention service in the state and generated broad support to continue the project. Discussions were also initiated by the commissioner on how to provide addi-

tional clinical and evaluation resources should the size of the patient population grow beyond current capacity.

Meanwhile, preliminary data from the first six months of operation were used to win competitive grant support from the Donaghue Foundation. This has made possible the recruitment of a full-time postdoctoral-level clinical psychologist to administer outcome assessments for a three-year study to determine cost-effectiveness. This position has also allowed us to improve recruitment, with presentations at local hospitals, emergency rooms, and consumer organizations. All clinical services within STEP continue to be provided by staff drawn part-time from the outpatient psychosis program. The two psychologists who initially spearheaded the multifamily group psychoeducation and CBT interventions have begun to take on an increasingly supervisory role in allowing the CMHC primary clinicians to administer these interventions.

While we await a larger sample to quantify definitive outcomes, there is much we can conclude from the first two years of implementation of this project. There is a clear interest in and need for an early-intervention service, as shown by more than 200 referrals to the program over the first 24 months of operation. The relatively small fraction of initial referrals that have resulted in entry into the clinic (62 of 205, or 30%) confirms the well-known challenges of engaging this population into treatment. For patients and caregivers who enter STEP care, the interventions have been well accepted. The STEP project has demonstrated the feasibility of providing, within a busy community mental health center outpatient clinic, high-quality care that is sensitive to the needs of early-psychosis patients and their families.

We believe that the public-academic collaboration exemplified here serves a crucial role. State DMHAS support was critical in allowing us to set up a service upon which to collect research-funded assessments. Such data will contribute to an evaluation of the cost-effectiveness of early intervention in a “real-world” U.S. setting. The final outcomes, as well as the implementation experience, from demonstrations such as these can provide a reasoned basis

from which the various payers in our health care system can determine the allocation of scarce health care dollars.

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References

1. Lopez AD: A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020; in *The Global Burden of Disease*. Edited by Murray CJL, Lopez AD. Boston, Harvard University Press, 1996
2. Edwards J, McGorry PD: Multi-component early intervention: models of good practice; in *Implementing Early Intervention in Psychosis*. Edited by Edwards J, McGorry PD. London, Martin Dunitz, 2002
3. Petersen L, Jeppesen P, Thorup A, et al: A randomised multicentre trial of integrated versus standard treatment for patients with a first episode of psychotic illness. *British Medical Journal* 331:602, 2005
4. Craig TK, Garety P, Power P, et al: The Lambeth early onset (LEO) team: randomised controlled trial of the effectiveness of specialised care for early psychosis. *British Medical Journal* 329:1067, 2004
5. Larsen TK, Melle I, Auestad B, et al: Early detection of first-episode psychosis: the effect on 1-year outcome. *Schizophrenia Bulletin* 32:758–764, 2006
6. Wang PS, Lane M, Olfson M, et al: Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62:629–640, 2005
7. Glied SA, Frank RG: Better but not best: recent trends in the well-being of the mentally ill. *Health Affairs* 28:637–648, 2009
8. Wang PS, Berglund P, Olfson M, et al: Failure and delay in initial treatment contact after first onset of mental disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62:603–613, 2005
9. Mihalopoulos C, McGorry PD, Carter RC: Is phase-specific, community-oriented treatment of early psychosis an economically viable method of improving outcome? *Acta Psychiatrica Scandinavica* 100:47–55, 1999
10. Cullberg J, Mattsson M, Levander S, et al: Treatment costs and clinical outcome for first episode schizophrenia patients: a 3-year follow-up of the Swedish “parachute project” and two comparison groups. *Acta Psychiatrica Scandinavica* 114:274–281, 2006
11. Marshall M, Lewis S, Lockwood A, et al: Association between duration of untreated psychosis and outcome in cohorts of first-episode patients: a systematic review. *Archives of General Psychiatry* 62:975–983, 2005
12. Jacobs S, Griffith EEH: 40 Years of Academic Public Psychiatry. Hoboken, NJ, Wiley, 2007
13. Hotopf M, Churchill R, Lewis G: Pragmatic randomised controlled trials in psychiatry. *British Journal of Psychiatry* 175:217–223, 1999