

# A New Home-Based Mental Health Program for Older Adults: Description of the First 100 Cases

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**Background:** *The Geriatric Psychiatry Outreach (GO) Program began in 2005 and provides in-home psychiatric evaluation and treatment for older adults who have difficulty getting to an office-based setting. Method:* *An initial assessment was conducted on the first 100 patients seen by the program and follow-up treatment was provided as clinically indicated. Results:* *The mean age of patients seen was 79.7 (SD: 8.2), 74% were women, and the most common psychiatric diagnoses were depression (50%) and dementia (45%), with a mean of 1.4 (SD: 0.6) psychiatric diagnoses per patient. The patients had a mean of 4.8 (SD: 2.9) medical diagnoses and were on a mean of 6.8 (SD: 4.0) prescription and 2.2 (SD: 1.2) nonprescription medications. Patients received a mean of 4.2 (SD: 4.2) in-person visits and a mean of 30.2 (SD: 36.5) additional contacts related to their care, such as phone calls, e-mails, and faxes. Conclusions:* *Providing psychiatric services at home for older adults with mental illness is a much needed but rarely available service. Such patients typically have a complex combination of medical and psychiatric diagnoses and benefit from contacts in addition to the face-to-face visits.* (Am J Geriatr Psychiatry 2010; 18:1141–1145)

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Established in 2005, the Kate Mills Snider Geriatric Psychiatry Outreach Program (GO program) serves older adults with mental illness who live at home but are unable to get to an outpatient treatment facility. The GO program provides home-based di-

agnostic assessments, psychiatric treatment, and case management. This article will describe the first 100 patients served by this program and will discuss the significance of the Program for the field of home-based geriatric mental health services.

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## Home-Based Mental Health Program

The number of older adults with mental illness is expected to reach 15 million by 2030.<sup>1</sup> The prevalence of many psychiatric disorders in homebound older adults is more than twice that among their non-homebound peers.<sup>2</sup> However, their needs are not being met by traditional home health nursing agencies or home care agencies.<sup>3</sup>

Descriptions of in-home geriatric mental health services date back at least 25 years.<sup>4</sup> In a systematic review of the literature, Bruce et al.<sup>5</sup> identified 12 studies that “evaluated face-to-face psychiatric outreach and treatment services for older adults” in noninstitutional settings. The structure of programs that provide these services is highly variable and typically includes some combination of the following elements: individual case management, consultation to primary care physicians who provide in-home care, in-home treatment by a psychiatrist, and efforts to maximize community-based mental health resources. There is evidence that these services improve access to care, reduce psychiatric symptoms, and result in fewer days spent in the hospital.<sup>5-8</sup> However, their cost-effectiveness has not been clearly demonstrated.<sup>5,7</sup>

### Program Description

The GO program was created through an endowment established by the Snider family in recognition of the home-based care their mother received from one of the authors (DJ). The goal of the program is to provide mental health services to individuals living at home who would have difficulty getting to a psychiatrist’s office. The team consists of a geriatric psychiatrist who is also the program director (BR), a geriatric nurse practitioner (KB-B), and a program coordinator (MS). The program coordinator has a BA degree and had extensive previous experience working with individuals with dementia in clinical trials. Typically, the program coordinator receives the initial call and determines suitability for the program, which includes that the patient be homebound or that it takes a taxing effort to get to the clinician’s office. An initial visit is made by the coordinator and the geriatric nurse practitioner (GNP). The psychiatrist generally accompanies the GNP on the next visit, and a treatment plan is established. The GNP is the primary provider of follow-up care, involving the psychiatrist and program coordinator as needed. All active patients are discussed at a weekly conference,

and follow-up visits and ancillary contacts (mainly phone calls) are provided as clinically indicated. The program coordinator, in addition to coordinating the intake process described above, provides information to patients and families regarding community resources and oversees the data collection processes. The program coordinator and GNP frequently give educational presentations on the late-life mental illness and the activities of the GO Program, typically in response to a request from a community agency or civic organization. They made 12 such community presentations in 2008 and 13 in 2009 for a total of 25 over 2 years.

As is commonly the case with a mental health program for older adults, most cases involve considerable interaction with family members, community agencies, and other physicians. There is no minimum or maximum number of visits, and Medicare and private insurance are accepted. The program can be best thought of as bringing a geriatric psychiatry practice into the home. The program does not offer emergency services to individuals not already enrolled in the Program and does not provide care to residents of assisted living facilities or nursing homes.

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## RESULTS

Findings from the first 100 cases include demographic and descriptive information, results of the clinical assessment, and some follow-up information. The initial assessments on these patients took place during a 3-year period from early 2005 to early 2008. Table 1 gives patient characteristics including age distributions, demographic information, and information on the primary caregiver. As is typically the case with mental health services for the elderly, mean age was about 80 years (79.7 years, SD: 8.2 years, range: 59–95 years); the majority of patients were women; daughters and spouses were the most frequent primary caregivers; patients had multiple psychiatric problems and were often on multiple medications; and referral was typically because of problematic behaviors and/or to establish the diagnosis.

Table 2 gives scores on rating scales that were administered to many patients, including the Mini-Mental State Examination (MMSE), the 15-item Geriatric Depression Scale (GDS-15), and the Katz Activities of Daily Living scale. On the MMSE, a lower score

**TABLE 1. Patient Characteristics (N = 100)**

	(N = 100)
Age (year)	
<69	16
70-79	27
80-89	44
>90	13
Race	
White or caucasian	78
Black or African American	22
Living situation	
Alone	34
With someone	66
Gender	
Male	26
Female	74
Education	
<High school	18
High school graduate/GED	22
Some college	16
College graduate	15
Unknown	29
Marital status	
Widowed	46
Married/cohabiting	28
Separated/divorced	19
Single	4
Unknown	3
Primary caregiver	
Daughter	46
Spouse	17
Son	11
Other	26

For age, mean: 79.7 years, SD: 8.2 years, range: 59-95 years.

**TABLE 2. Rating Scales Result**

Scale	N	Mean (SD)/Patient	Range
MMSE	81	23.5 (5.2)	7-30
GDS15	66	5.8 (4.0)	0-14
Katz ADL	37	4.2 (1.6)	0-6

Notes: ADL: activity of daily living.

indicates greater cognitive impairment; on the GDS-15, a higher score indicates greater depressive symptoms; and on the Katz Activities of Daily Living scale, a lower score indicates greater impairment. Collection of some measures was added later than others, thus, not all patients received all three of the measures. Once a measure was added, it was administered to all patients with the exception of not giving the GDS-15 when the patient's cognitive impairment was too severe to be able to answer the questions. We believe the scores we have reported are reflective of the entire sample.

**TABLE 3. Diagnostic Information**

	Mean (SD)/Patient		Range		
Axis I (No. diagnoses)	1.4 (0.6)		1-3		
Axis III (No. diagnoses)	4.84 (2.85)		0-15		
Axis IV (No. diagnoses)	2.1 (1.0)		1-5		
Axis V (score)	49.3 (16.3)		20-90		
Top 5 Axis I	N	Top 5 Axis III	N	Top 5 Axis IV	N
Depression	50	Cardiovascular	84	Limited social support/lives alone	37
Alzheimer disease	27	Musculoskeletal/orthopedic	48	Unable to drive	34
Anxiety	16	Endocrine	39	Family or caregiver issues	27
Other dementia	9	Neurologic	37	Medical/healthcare	22
Vascular dementia	9	Gastrointestinal	21	Decreased mobility/functioning	18

Table 3 gives diagnostic information on DSM-IV Axes I, III, IV, and V (Axis II diagnoses were made too infrequently to include).<sup>9</sup> Axis I (psychiatric) diagnoses were made according to DSM-IV criteria as part of a clinical assessment by the psychiatrist. No attempt was made to standardize the diagnostic interview, and no interrater reliability training was done. Of the 81 patients who were administered the MMSE, 34 were diagnosed with Alzheimer disease or another dementia and had a mean score of 19.9 (SD: 5.2), while the remaining 47 had a mean score of 26.2 (SD: 3.3). Of the 66 who received the GDS 15, 38 were diagnosed as depressed and had a mean score of 7.8 (SD: 3.2), while the remaining 28 had a mean score of 3.2 (SD: 3.4). Thus, the diagnoses we made are consistent with those scores we have available on the MMSE and GDS-15. Axis III (medical) diagnoses were established through examination of the medical record and by information provided by the patient or caregiver. Axis IV (psychosocial and environmental problems) diagnoses were made by either the nurse practitioner or the psychiatrist based on the findings of the assessment. Poor social supports were the most common Axis IV problem (37%). Inability to drive was the next most common Axis IV problem at 34%, followed by caregiver issues (typically caregiver stress) at 27%, poor health (typically, the burden of multiple complex medical problems) at 22%, and decreased physical mobility at 18%.

**TABLE 4. Medication Usage at Time of Initial Assessment**

Medication Type	Patients Using (N)	Mean (SD)/ Patient	Range
Psychotropics	80	2.3 (1.5)	1-11
Other prescription drugs	94	5.1 (3.3)	0-18
Nonprescription drugs	69	2.2 (1.2)	1-6

**TABLE 5. Referral Characteristics**

Referral Source	N = 100
Doctor	30
Relative	25
Community agency	19
Health agency	11
Other	6
Friend	4
Inpatient unit	3
Home health	1
Self	1
Reason for Referral	N = 191
Diagnosis related	85
Symptom related	67
Other	39

Table 4 presents information on medication usage at the time of initial assessment. As is typically the case in older adults with complex psychiatric and medical conditions patients were on a large number of medications, with a mean total of 6.8 (SD: 4.0) prescription and 2.2 (SD: 1.2) nonprescription medications.

Table 5 gives the primary referral source and the general reasons for referral. More than one-half (64) of the referrals came from a physician or agency, and one-quarter (25) were from a family member. As is usually the case in late-life mental illness, self-referrals were rare, and in this series, only one individual was self-referred. Most referrals were related to diagnosis or problem behaviors (symptom related). Diagnostic issues were typically to assess whether the patient needed treatment for depression and, in patients with memory loss, whether the patient was demented and, if so, what was the etiology. Problem behaviors were diverse and included agitation, belligerence, wandering, delusions or hallucinations, disinhibition, and apathy.

Team members made an average of 4.2 in-home visits to each patient (SD: 4.2, range: 1-22), and the mean number of additional contacts (primarily phone calls, e-mails, and faxes) for each patient was 30 (SD: 37, range: 1-213). The number of contacts was

based on two main factors: the clinical needs of the patient as determined by the team and the number of questions and concerns brought up by the patient and family. Younger age was associated with a higher number of contacts ( $p = 0.04$ ) as was a greater number of Axis I diagnoses ( $p = 0.04$ ). No other variables, including living alone ( $p = 0.15$ ), gender ( $p = 0.40$ ), and total medications ( $p = 0.49$ ), were related to number of contacts. Patients seen by the GO program were using a mean of 2.2 community services (SD: 2.3, range: 0-9) when first seen, with some of the most common ones being in-home assistance through a community agency, Meals-on-Wheels, and Hospice.

At the time of this data analysis, 20 of the 100 patients remained active cases, and 80 had been discharged. Length of time in the program was a mean of 0.88 years (SD: 0.93 with a range of a single visit to 3.55 years). The most common reason for discharge was referral back to the primary care physician (or other medical provider) or to the referring community agency (30), typically because the diagnosis had been clarified and the family felt they now knew the nature of the problem and had the information and community resources they needed or because the problematic behaviors (see above) were sufficiently improved that the caregivers felt they could manage. The decision to refer back was generally through consensus among the GO team, the patient and/or caregiver, and the provider. The next most common reasons for discharge were death (16), a lack of interest in further service (12), or a move to assisted living or a nursing home (10). We did not systematically record our recommendations or whether they were performed but plan to add this to our database in the future.

## DISCUSSION

Our results are consistent with previous reports on home-based mental health services in many respects.<sup>3,5</sup> Depression and dementia were the most common diagnoses. Patients needing assistance lived in many different settings, and referrals came from a wide range of sources but rarely from the patient. Not surprisingly, our patients typically had multiple medical diagnoses with an average of five and were on many medications, averaging seven prescription and two nonprescription drugs.

One area that has not seen much attention in previous reports on home-based mental health services for the elderly is quantifying the considerable work that takes place besides face-to-face visits. As noted in the results, although each patient was seen an average of four times in person, there was an average of 30 additional contacts per patient. These included, for example, phone contacts with the patient, caregiver, or other providers, faxing of prescriptions or medical records, and e-mail exchanges with caregivers. The contacts with patients and caregivers ranged from straightforward questions about medications to complex issues regarding management of behavioral problems. Although a larger sample size would be useful in determining which patients receive more contacts, we speculate that the relationship between more contacts and younger age is because of the added concern brought about with cognitive or behavioral symptoms in a person where it is less likely to be thought of as normative and that the number of Axis I diagnoses is probably related to more contacts because of the complexity and challenge these patients present both to caregivers and to other providers. Although it is an uncompensated effort (i.e., not reimbursed by third party payers), we believe that our availability to patients and caregivers by phone is a valuable element of the service, and we received many comments of appreciation for being accessible.

The novel feature of the GO Program is that it is supported through income generated by an endowment and, thus, is not dependent on unpredictable and potentially unreliable sources of funding. Because its existence is, therefore, as secure as one could reasonably expect, we anticipate that, over

time, it will be a source of additional information on topics such as cost and effectiveness of services, outcomes, and comparing effectiveness of different interventions. The purpose of this report is to provide introductory information on the GO Program that will serve as a platform for these efforts to come.

A program funded through an endowment is not easily generalized to other communities. Our donor recognizes this, and it is his intention that the GO Program serve as a resource by providing information and guidance to assist others wishing to establish mental health outreach programs for older adults in their communities. In support of that objective, the donor has established the Deirdre Johnston Award, which is given at the American Association of Geriatric Psychiatry's annual meeting. This Award is for excellence and/or innovation in home-based geriatric mental health services and will serve to identify and encourage development of programs that are not endowment dependent and are more easily transportable to other communities. There were 17 applications submitted for the 2009 award and 31 for the 2010 award, thus, we are optimistic that generalizable models can be identified and information about them disseminated in future reports.

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