Published in final edited form as:

Soc Work. 2008 July ; 53(3): 243–253.

Notation of Depression in Case Records of Older Adults in Community Long-Term Care

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Abstract

Although significant numbers of social service clients experience mental health problems, virtually no research has examined the responsiveness of social service agencies to mental disorder. This article examines the extent to which client depression is reflected in records of a public social service agency, community long-term care (CLTC). Researchers assessed new, consenting CLTC clients for depression using standardized research criteria in a telephone interview. Agency case records were abstracted to determine the extent to which client depression was noted. Sensitivity and specificity of depression notation were 25.21 percent and 92.80 percent, respectively, indicating that agency records reflected depression for about one in four clients meeting depression criteria. Factors associated with accurate depression notation included cognitive impairments, low social support, psychotropic medications, and mental health treatment. The depression notation rates found are comparable to those in medical settings. Structured screening and assessment might enhance detection of mental disorder for social service clients.

Keywords

agency records; assessment; depression; mental health; social service agencies

Recent federal policy reports call for early detection and response to mental disorder in social service settings as a means to improve the quality of the nation's mental health care, especially for vulnerable groups who experience disparities in care (President's New Freedom Commission on Mental Health, 2003; U.S. Department of Health and Human Services [HHS], 2001). Failure to detect and treat psychiatric disorders is a persistent problem (Joseph & Hermann, 1998). Although research has long addressed the responsiveness of primary medical care to patients' mental health needs, comparable questions about the responsiveness of social service agencies remain virtually unexplored. This article addresses the responsiveness of one public social service agency, community long-term care (CLTC) to client depression. Specifically, the study examines the extent to which agency records reflect notation of depression in clients with established depression.

MENTAL DISORDER AMONG SOCIAL SERVICE CLIENTS

As many as one-fourth to one-half of clients in social service settings experience significant mental disorder (Courtney, Piliavin, & Grogan-Taylor, 1996; Farmer et al., 2001;

Landsverk, Madsen, Litrownik, Ganger, & Newton, 1992; Stiffman, Chen, Elze, Doré, & Cheng, 1997). Clinical epidemiological studies document high rates of current and lifetime disorders for children in the child welfare system (Auslander et al., 2002; Landsverk et al., 1992; McMillen et al., 2005; Stiffman et al., 1997), adults who are homeless (Pollio, North, Eyrych, Foster, & Spitznagel, 2003), runaway youths (S. J. Thompson, Maguin, & Pollio, 2003), and clients served by home health agencies (Bruce et al., 2002; Harper, 1988).

DEPRESSION AND CLTC

Community long-term care (CLTC) is one of the most rapidly growing social service sectors because of population aging and the societal value of independent living. Every state provides publicly funded CLTC services. Part of the nation's health and social "safety net," CLTC services aim to help low-income people with chronic conditions to compensate for functional disabilities and to maintain community residence (U.S. General Accounting Office, 1995). CLTC case managers do this by first assessing a client's functional abilities and then accessing publicly funded services that are designed to compensate for impaired functioning.

Because clients qualify for CLTC through low income and functional impairment, this community is also at greater risk of depression. According to clinical epidemiological research, 19 percent of new clients entering CLTC exhibit depression symptoms, and an additional 6 percent meet criteria for major depressive disorder (MDD) (Morrow-Howell et al., 2008). These rates are similar to those for older adults in primary medical care settings (Alexopoulos, Katz, Reynolds, & Ross, 2001). Among elders in medical home health care, 20 percent evidence depression symptoms and another 14 percent have major depression (Bruce et al., 2002).

RESPONSIVENESS TO MENTAL DISORDER

Undetected mental disorder has been studied extensively in primary care, where Koenig (1999) estimated that 70 percent to 90 percent of late-life depression is undiagnosed. Although the responsiveness of social service agencies has not received comparable attention, some studies point to troubling gaps between the need for mental health care and the responsiveness of social service agencies (Krakow et al., 2000). Social service providers can serve a key role as the gateway to mental health services (Hurlburt et al., 2004; Stiffman et al., 2006), but few social service agencies use standardized tools to assess mental disorder. Thus, the extent to which social service agencies identify, record, and respond to clients' mental disorders remain important questions for pursuit.

Literature on depression detection in medical settings suggests that depression notation is more likely when depression is more severe (Engberg et al., 2001; Garrard et al., 1998; O'Connor, Rosewarne, & Bruce, 2001), among women (Crawford, Prince, Menezes, & Mann, 1998; Garrard et al., 1998), those of younger age (Garrard et al., 1998), and those living with others (Brown, McAvay, Raue, Moses, & Bruce, 2003). This research yields mixed results regarding depression notation and co-occurring physical and functional limitations (Brown et al., 2003; Prince, Harwood, & Mann, 1998).

This study is based on an understanding that mental disorder often will not be the main focus of social service agencies. Although CLTC clients might have unaddressed mental disorder, the agency purpose is to address functional impairment. Mental health problems in CLTC frequently co-occur with other problems and, according to the theory of competing demands (Klinkman, 1997), must "compete" for attention with other pressing problems. The theory of competing demands suggests that depression will receive less attention from case managers when clients present co-occurring conditions, which for CLTC clients include

poverty, functional impairment, physical or sexual abuse, grief, economic hardship, and social isolation. Accordingly, this study examines the role of co-occurring conditions in depression notation.

RESEARCH QUESTIONS AND ANALYTIC MODEL

This study aims to add to the limited knowledge base about how social service agencies respond to their clients' mental disorder, by addressing two research questions and one hypothesis:

Research question 1: How accurate is notation of depression in agency records?

Research question 2: Among clients with established depression, what client, illness, and comorbidity characteristics are associated with accurate notation of client depression in agency records?

Hypothesis 1: Rates of depression notation will be significantly lower for clients with co-occurring functional, medical, psychosocial, and cognitive problems.

METHOD

Setting

Data were collected from clients age 60 and above entering public CLTC in a midwestern state between October 2000 and May 2003. The study was conducted in three regions of the state, which included 22 local office sites. CLTC serves low-income elders with physical disabilities and economic need by providing services for personal care, meal preparation, grooming, bathing, transfer, medically related household tasks, medication, and nursing services as needed. Workers conduct comprehensive assessments and refer clients to other community services as needed. Study protocols were approved by the Washington University Committee on Human Subjects and the CLTC agency's Institutional Review Board.

Study Participants

Agency clients were eligible for the study if they were 60 years of age or older, met agency criteria for CLTC home and community services, were their own guardian, spoke English sufficiently for interview participation, and were new CLTC clients, defined as having a new case record opened at the time of study referral.

Procedures

CLTC agency case managers approached new clients for assent for contact by the researchers when they assessed the client's service eligibility. Of the 2,736 eligible clients queried by their CLTC case managers, 65.35 percent ($N = 1,788$) agreed to contact by the researchers. Of these, 84.34 percent provided informed consent for study participation ($N = 1,508$), which involved a brief screening and, for selected individuals, a telephone interview and case record review. Full interviews were completed with all clients meeting depression criteria ($n = 299$) and a random sample of those who did not evidence depression ($n = 315$). About 10 percent of participants needed face-to-face interviews because of sensory impairment. Study participants were paid \$20 each for interview completion.

A unique feature of the study design is the availability of (a) an independent research assessment of client depression through the use of standard measures and (b) case managers' comprehensive client assessment and associated case record at client entry to CLTC. After the telephone interview, research staff mailed record release forms to study respondents, along with a self-addressed stamped envelope, and made follow-up calls as needed. This

method yielded an 86.81 percent consent rate for use of client case records. Research staff visited local offices in the regions participating in the study, with copies of client-signed record release forms, to photocopy relevant portions of case records.

Measures

Depression—Participants were classified as depressed if they scored nine or higher on the modified Center for Epidemiologic Studies Depression Scale (CES-D) (Blazer, Burchett, Service, & George, 1991) or met Diagnostic Interview Schedule (DIS) depression criteria (Robins, Helzer, Croughan, & Ratcliff, 1981) for the past month. Those with scores of four or less on the CES-D were eligible for random selection into the nondepressed group. For both groups, researchers repeated the CES-D at six and 12 months, administered through computer-assisted telephone interviews. This enabled assessment of depression stability over time, which was used as an independent variable in research question 2.

Chart Notation of Depression—Case records were retrieved and reviewed to determine evidence that case managers had recorded or noted client depression. The agency record provided two places for recording mental disorder: In one area of the record, workers were to record “medical needs/supports/monitoring” and complete a checklist of physical health problems, including “other”; some workers listed mental health problems here. Names of doctors, clinics, home health agency, or other health care providers and associated conditions were also listed here. Another area of the record provided for recording “behavior/mental conditions.” The worker was to circle problem areas on a list that included “diagnosed or treatment history for mental illness.” Workers were instructed to write an explanation as appropriate. Using 40 randomly selected records, researchers tested the coding reliability for depression notation, obtaining a kappa of .80.

Agency records did not provide specific questions to guide case managers’ assessment and notation of depression. Because the records provided case managers more than one way and place to note clients’ mental health needs, we used two criteria—stringent and lenient—for the dependent variable of interest, chart notation of depression. To meet the stringent criteria of chart notation of depression, the word *depression* needed to be listed in one of the two areas of the record described above. To meet the lenient criteria of depression notation, the words *sad*, *cry*, or *blue* could be recorded in either of the two areas. Notation rates are reported for both the stringent and lenient criteria, consistent with the exploratory purpose of this article and to enable comparison of obtained rates by the two definitions. Only the stringent definition was used in multivariate analysis of factors associated with notation of depression.

Factors Associated with Depression Notation

The following variables were assessed from either self-report or provider case records, notes, or both and tested in relation to the dependent variable, depression notation.

Demographic Variable—Information about age, gender, race, education, and marital status was collected in telephone interviews; income was abstracted from participants’ case records, and urban residence was determined from zip code.

Depression Status—Depression severity was measured through DIS criteria for MDD (yes/no). Depression stability was classified from CES-D scores on subsequent waves of data collection. Those depressed at wave 1 were classified as still depressed at waves 2 and 3 if their CES-D scores were nine or higher and their CES-D change scores were greater than or equal to two as recommended by De Beurs, Beekman, Deeg, Dyck, and Van Tilburg, 2000. Total CES-D score was not an independent variable because it was a depression criterion.

Co-occurring Conditions: Medical Illnesses—Participants' medical conditions were measured through the research interviews by the number of chronic health conditions (for example, asthma, diabetes, heart trouble, hypertension, arthritis, stroke, cancer, and ulcer), according to the Duke Depression Evaluation Schedule (DDES) medical conditions scale (Krishnan, Hays, Tupler, George, & Blazer, 1995); physical functioning, through number of impairments in activities of daily living (ADLs) and instrumental activities of daily living (IADLs) (for example, taking medications, transferring, walking, toileting, bathing, housekeeping, and so forth), according to the DDES physical functioning scale (Krishnan et al., 1995); and from the self-rated health (1 = excellent and 5 = very poor) item in the SF-8 (Turner-Bowker, Bayliss, Ware, & Kosinski, 2003). Agency records provided two other measures of health problems recorded by case managers and abstracted for the study from records: total number of physical health problems (range: 0 to 5) from a checklist (for example, bowel/bladder, edema, osteoporosis, hearing, and skin problems), and level of care needs (range: 0 to 12) in such areas as monitoring, medication, treatments, restorative, and rehabilitative; grooming/bathing, toileting, personal care, dietary, mobility, housekeeping, and shopping/transportation.

Co-occurring Conditions: Psychiatric Illness—Suicidal ideation (yes/no) and suicide attempts (yes/no) were assessed among those with the CES-D score of nine or greater. From agency records, we measured cognitive impairments (yes/no) from a checklist including orientation, wandering, and memory problems and from a check (yes/no) as to whether a client had dementia (yes/no).

Co-occurring Conditions: Psychosocial—The research interview captured participants' social resources with the 11-item Duke Social Support Index (DSSI) (Koenig et al., 1993), number of life events with the Duke Life Event Scale (Blazer, Hughes, & George, 1987; Hughes, Blazer, & George, 1988), and perceived stress during the past six months with the DDES (Krishnan et al., 1995). Respondents reported whether they had problems affording food (yes/no) on the Nutritional Checklist, Bureau of Aging and Long-Term Care Resources. From agency case records, problems with living arrangements (yes/no) were tallied from case managers' checks for any of nine problems, such as stable living conditions and safety.

Mental Health Service Use, Past Six Months—Both the telephone interview and the case record reflected service use. The telephone survey captured (yes/no) use of psychiatric medication, mental health specialists, religious leader for a problem in life, and hospital/nursing home overnight stay for the past six-month period. From agency records, we assessed (yes/no) whether prescriptions included psychotropic medicine, as determined from the drug list of the Centers for Medicare and Medicaid Services (CMS) (CMS, 2005).

Statistical Analyses

To assess the extent to which agency records reflected depression, sensitivity, specificity (C. Thompson, Ostler, Peveler, Baker, & Kinmonth, 2001), and kappa (O'Connor et al., 2001) values were calculated for depressed and nondepressed participants ($N = 505$). To identify factors related to depression notation, analyses focused only on participants with depression ($n = 241$) and excluded nondepressed study participants who would be true negative and false positive cases. This approach is consistent with the study purpose, which was to understand case managers' responses to people with established depression. False negative cases have more severe clinical consequences than do false positive cases, considering the importance of detection and treatment of geriatric depression.

Using the stringent criteria of notation, bivariate tests identified factors associated with accurate notation of depressed study participants ($n = 241$). We chose an alpha level of .10 to determine factors for variable inclusion and exclusion in subsequent multivariate analysis, an approach that reduces the possibility of excluding potentially significant variables. Logistic regression procedure, with backward elimination ($p < .10$), was used to identify factors associated with accurate notation of depression and to test the hypothesis. Two separate multivariate models were built: one model used worker-assessed variables, and the other used variables assessed through client self-report.

Consent to access agency records was provided by 87 percent of study participants. However, records of 28 participants could not be located. A logistic regression analysis compared participants with records with those whose records were missing. They differed only by race ($p = .027$), with African Americans underrepresented in these analyses (odds ratio [OR] = 1.74).

RESULTS

Sample Description

Given CLTC criteria, all study participants were Medicaid-eligible, and 90 percent also had Medicare. Participants had a mean age of 70.57, a mean education level of nine years, and a mean monthly income of \$742. Nearly 80 percent were female, 75 percent were white, and 80 percent were unmarried.

Sensitivity, Specificity, and Kappa of Depression Notation

According to stringent criteria, depression was noted in 63 records out of 241 for depressed group participants, reflecting a 26.14 percent sensitivity (see Table 1). Of the 82 clients whose agency records reflected a notation of depression, 63 or 76.83 percent met criteria for depression in the research protocol. Out of 264 nondepressed participants, 19 or 7.20 percent were noted as depressed in records, reflecting a 92.80 percent specificity. The kappa value of .1950 ($p < .0001$) was less than the commonly applied criteria of .70, thus indicating unsatisfactory agreement between the research-assessed and record-noted depression. According to lenient criteria of notation of depression, the sensitivity and specificity were 43.57 percent and 78.41 percent, respectively, with $\kappa = .2230$ ($p < .0001$).

Factors Associated with Accurate Depression Notation

Descriptive data and bivariate comparisons on demographic, self-reported, and worker-assessed characteristics for clients with and without record notation of depression are presented in Table 2.

In the multivariate model with significant, bivariate independent variables obtained through participant self-report in the research interview, use of psychiatric drugs and services from a mental health specialist were significantly related to record notation of depression. Depressed respondents who used psychiatric drugs were 2.46 times more likely to be noted as depressed than were nonusers in terms of odds ($p = .02$). Depressed respondents who received mental health services were about 170 percent more likely to be noted as depressed in terms of odds ($p = .02$). In the multivariate model with worker-assessed characteristics, depressed participants who used prescription psychotropic medications (OR = 2.86, $p = .002$) and had cognitive impairments (OR = 2.02, $p = .03$) were more likely to be noted as depressed by CLTC workers. Results did not support the hypothesis that competing demands (comorbidity) would reduce depression detection.

DISCUSSION

Two study limitations are acknowledged: (1) the dependent variable, depression notation, may underrepresent or insufficiently represent case managers' actual depression assessment or recognition (Badger et al., 1999); (2) the analysis focused only on client factors associated with depression notation. Because case managers were not deemed study participants, relationships between depression notation and provider demographic or professional factors, such as training or mental health knowledge, could not be tested.

Similar to findings from research on depression detection in health care (Barkow et al., 2004; Preville, Cote, Boyer, & Hebert, 2004; Smith et al., 2004), depression was not documented in these social service agency records for most clients with established depression. Case records contained a notation of depression for about one in four elderly clients with established depression, a rate remarkably similar to that found by physicians. For clients whose depression was noted in the agency record, case managers were highly accurate; false positives, or noting depression in clients who did not meet depression criteria, occurred in only 3 percent of cases. Thus the notation problem evident here was one of omission—failing to record depression when it existed—rather than inaccuracy.

According to a lenient definition, rates of depression notation increased marginally, but nearly 60 percent of cases with depression were still missed. Moreover, use of the lenient definition substantially increased the problem of false negatives to nearly 25 percent. That is, in almost one in four of the cases in which worker' notations of depression met lenient criteria, the client did not actually meet research criteria for depression or high depressive symptoms. The sensitivity and specificity trade-off is important. Although a lenient definition improves sensitivity and results in fewer people with depression being missed, the reduction in specificity produces additional complications. In a setting such as CLTC where depression is highly prevalent among new clients, the time and cost required to further screen and eliminate false positives may be prohibitive.

These low rates of depression notation should be interpreted in light of the acknowledged complexity of assessing late-life depression. Symptoms that are prominent in depression among younger individuals are not necessarily present in depression among older adults (Piven, 2001), and medical and neurological comorbidities (Alexopoulos, Schultz, & Lebowitz, 2005) further complicate diagnosis. The structure of agency records is another important consideration. As described earlier, the record provided two sections for recording mental health problems, one of which is labeled *behavioral/mental conditions* and includes mental health diagnoses and services in a checklist. However, the agency's assessment form focuses on physical health, but does not structure attention to depression, and case managers are neither provided with a standardized depression screen or an assessment tool nor instructed to query clients about specific symptoms. Reliance on provider judgment to identify depression reduces detection rates (Preville et al., 2004).

As co-occurring conditions did not reduce depression notation, these findings did not support the hypothesis that tested the theory of competing demands. We found no evidence that co-occurring conditions may have diverted provider attention from depression. Professionals in social service agencies may be less susceptible to competing demands than those in medical settings, where competition demands have been studied in relation to depression detection (Klinkman, 1997). Social service clients, especially those served in "safety net" agencies such as CLTC, typically experience multiple, serious problems. Indeed, much of social work practice is conducted in the face of competing demands. In the case of CLTC, case managers may be accustomed to conducting assessment in the context of comorbidity and seldom lose sight of depression in the face of competing demands.

Although case managers were no more likely to record depression among clients with MDD, several factors associated with depression severity did affect notation rates. Clients who were taking psychotropic medications were significantly more likely to have their depression noted, as were those who received care from mental health specialists. Learning that the client is taking such medication and receiving mental health care may heighten case manager attention in sensitivity to depression. Cognitive impairment, which case managers routinely assess and note in agency records, was also associated with depression notation. Case managers may be aware of the well-established comorbidity of cognitive impairment and late-life depression (Alexopoulos, 2004; Sachs-Ericsson, Joiner, Plant, & Blazer, 2005) and thus be more alert to depression among clients with cognitive impairment. All three factors associated with case managers' depression notation—taking psychotropic drugs, receiving mental health services, and cognitive impairment—are client behaviors or conditions that are to be addressed and recorded as part of the case manager's routine assessment. It is important to note that these findings suggest that the detection of depression may be facilitated when agency records require assessment of medication and service use. Thus the very structure of agency records may serve a decision support function in the notation of depression.

IMPLICATIONS

The demands and constraints of public social services should be kept in mind when interpreting these findings. CLTC is not a mental health agency; its purpose is to assess a comprehensive array of needs and to arrange services to meet those needs. Moreover, though professional social workers often serve as CLTC administrators and supervisors, case managers have widely varying educational background and degrees but carry large caseloads. These factors may contribute to the low rates of depression notation in clients' records.

Yet the burden of depression underscores the importance of its assessment and treatment. The leading cause of disability worldwide, depression diminishes quality of life, exacerbates physical and functional dependency (Alexopoulos et al., 1996; Bruce, Seeman, Merrill, & Blazer, 1994; Borson, Claypoole, & McDonald, 1998; Murray & Lopez, 1996), and increases medical costs (Bruce, 2001; HHS, 1999). Depression is common, costly, but "eminently treatable" (Wells, 1997). The failure of most people with depression to receive treatment (McQuaid, Stein, Laffaye, & McCahill, 1999) prolongs their suffering and disability. This risk is not limited to those who meet criteria for MDD: Those who fall below diagnostic threshold yet have high symptoms may experience adverse health consequences (Hybels, Blazer, & Pieper, 2001) and may later evidence MDD (Chopra et al., 2005).

Social service settings such as CLTC have great promise for identifying people with mental disorder, consistent with recommendations of the President's New Freedom Commission on Mental Health (2003) and the Surgeon General's report (HHS, 2001). CLTC agencies fit the Institute of Medicine's definition of primary care: Their providers give first-contact care, conduct comprehensive assessments tapping the family and community context, and act as "gatekeepers" for the health, mental health, and psychosocial needs of frail elders who coordinate referrals to specialty care (Branger, Duisterhout, Pop, & Rollema, 1997; Grumbach et al., 1999; Starfield, 1992; Stiffman, Elze, Hadley-Ives, & Johnson, 1999). Universal screening through the use of short portable forms could systematically identify high-risk clients who could then be assessed for depression severity by clinical or mental health specialists. The study findings suggest that depression notation might be enhanced in CLTC through greater structuring of agency assessment records and questions.

Screening can improve outcomes only if accompanied by additional enhancements to care, such as linking with, or providing, effective depression treatment (Coyne, Thompson, Klinkman, & Nease, 2002). Some argue that, in the face of limited specialty mental health providers and reimbursement, particularly for clients with high symptoms but who do not meet criteria for major depression, agencies should not screen if they cannot respond to identified depression. Yet social service agencies could and should take advantage of efficacious treatments for depression in later life (Black, Rabins, German, McGuire, & Roca, 1997; Gatz, 1998; Mossey, Knott, Higgins, & Talerico, 1996) that serve to link clients with primary medical, a widely available source of first-line depression care. Cost-effective models of collaborative care (Unutzer et al., 2002) should be incorporated into social service agencies by adding a mental health specialist, who can serve as a resource to case managers, and facilitating accurate assessment and referral to primary care or specialty mental health. Agencies that cannot fund such a position could provide training from a mental health social worker to enable their case managers to better recognize depression symptoms, perform structured assessments, and refer clients who screen positive to primary medical care or mental health specialists. Finally, in the case of CLTC, home care aides, who are typically less equipped than are case managers to deal with depression, should also be trained by professional social workers to support their clients' participation in depression care. Schools of social work can lead such efforts, all of which have potential to improve the quality of depression care and, consistent with social work's mission, help reduce racial and economic disparities in care for those whose mental health needs are currently untreated or undertreated.

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Table 1
Sensitivity and Specificity of Stringent Criteria and Lenient Criteria in Depression Notation

Group	Stringent				Lenient			
	Depression Noted	Depression Not Noted	n	%	Depression Noted	Depression Not Noted	n	%
Depressed (<i>n</i> = 241)	63	26.14 ^a	178	73.86	105	43.57 ^a	136	74.79
Nondepressed (<i>n</i> = 264)	19	7.20	245	92.80 ^b	57	21.59	207	78.41 ^b
Total (<i>N</i> = 505)	82			423	162			343

^aSensitivity.

^bSpecificity.

Table 2

Descriptive Data and Bivariate Comparisons of Client Characteristics

Variable	Depressed (<i>n</i> = 241)			Depression Noted (<i>n</i> = 63)			Depression Not Noted (<i>n</i> = 178)			<i>p</i>
	<i>n</i>	<i>M</i>	<i>SE</i>	<i>n</i>	<i>M</i>	<i>SE</i>	<i>n</i>	<i>M</i>	<i>SE</i>	
Demographics										
Age		70.75	7.87		68.52	6.50		71.54	8.18	<i>t</i> (136) = 2.95 .0038
Female	79.25			80.95			78.65			χ^2 = 0.15 .6987
Caucasian	75.42			80.95			73.45			χ^2 = 1.41 .2347
Education		9.07	2.99		9.48	3.14		8.92	2.94	<i>t</i> (239) = −1.27 .2068
Married	21.99			19.05			23.03			χ^2 = 0.43 .5115
Urban residence	39.00			47.62			35.96			χ^2 = 2.66 .1028
Income		742.27	339.9		716.00	221.5		751.18	371.67	<i>t</i> (173) = 0.88 .3801
Medicare	91.70			90.48			92.13			χ^2 = 0.17 .6817
Self-Report Variables										
Depression status										
Major depressive disorder	25.73			31.75			23.60			χ^2 = 1.62 .2034
Depression stable	46.06			50.79			44.38			χ^2 = 0.77 .3802
Co-occurring medical conditions										
Chronic medical conditions		4.98	1.98		4.78	2.14		5.04	1.92	<i>t</i> (239) = 0.92 .3582
Functional impairments		9.80	3.16		9.92	2.91		9.75	3.25	<i>t</i> (239) = 0.05 .9576
Self-rated health		3.26	1.02		3.35	0.96		3.23	1.04	<i>t</i> (236) = −0.73 .4641
Co-occurring psychiatric conditions										
Lifetime suicidal ideation ^a	23.66			34.78			20.00			χ^2 = 4.19 .0407
Lifetime suicide attempts ^a	8.60			15.22			6.43			Fisher's exact test .0751
Co-occurring psychosocial conditions										
Duke Social Support Index		24.87	4.00		23.69	4.78		25.28	3.62	<i>t</i> (86.6) = 2.38 .0195
Number of life events		3.22	1.73		3.17	1.71		3.24	1.74	<i>t</i> (239) = 0.24 .8090
Perceived stress (past six months)		6.30	2.92		7.10	3.01		6.02	2.85	<i>t</i> (234) = −2.50 .0133
Trouble affording food	47.72			58.73			43.82			χ^2 = 4.15 .0417

Variable	Depressed (<i>n</i> = 241)			Depression Noted (<i>n</i> = 63)			Depression Not Noted (<i>n</i> = 178)			<i>p</i>
	<i>n</i>	<i>M</i>	<i>SE</i>	<i>n</i>	<i>M</i>	<i>SE</i>	<i>n</i>	<i>M</i>	<i>SE</i>	
Service use (past six months)										
Taking psychiatric medication	58.58			75.81			52.54			$\chi^2 = 10.24$.0014
Mental health specialists or psychiatrist	12.86			26.98			7.87			$\chi^2 = 15.17$ <.0001
Religious leader about a problem in life	22.82			17.46			24.72			$\chi^2 = 1.39$.2381
Hospital/nursing home stay	53.11			55.56			52.25			$\chi^2 = 0.20$.6511
Co-occurring medical conditions				Worker-Assessed Variables						
Worker-rated health		1.48	1.20		1.49	1.18		1.47	1.22	<i>t</i> (239) = -0.11 .9094
Worker-rated care needs		8.53	1.29		8.57	1.47		8.52	1.23	<i>t</i> (239) = -0.29 .7737
Co-occurring psychiatric conditions										
Worker-assessed cognitive impairments	56.02			65.08			52.81			$\chi^2 = 2.84$.0917
Worker-assessed dementia	3.32			1.59			3.93			Fisher's exact test .6843
Co-occurring psychosocial conditions										
Worker-rated problems with living arrangement	27.39			33.33			25.28			$\chi^2 = 1.52$.218
Service use (past six months)										
Worker-assessed prescription psychotropic medications	57.68			76.19			51.12			$\chi^2 = 11.98$.0005

^a *n* = 186. This question was asked to a subset of respondents who were assessed as having a high risk of suicide. Because of small sample size, these variables were not included in the final multivariate logistic regression model.