Antidepressant Prescribing Patterns in the Nursing Home: Second-Generation Issues Revisited

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Abstract

Introduction—The object of this study[1] was to provide an updated evaluation of the quality of antidepressant management and prescribing patterns in nursing homes in the context of organizational and resident factors.

Design—Pearson correlation and chi-square analyses were conducted using information gathered from random nursing home charts.

Setting—Nursing home facilities in and around the Louisville, KY metropolitan area (N = 10).

Participants—Chart reviews were randomly chosen for 20% of long-term care resident records in participating homes (N = 209).

Measurements—Demographic information, documentation of depression diagnoses and antidepressant prescribing patterns were evaluated using the Quality of Depression Management and Antidepressant Prescribing rating (QDMAP) scale and information found the Minimum Data Set 2.0.

Results—59.8% of the sample was prescribed antidepressants at the time of the chart review. 205 chart reviews indicated the absence or presence of a depression diagnosis, For those with documented depression diagnoses (n=126), nearly one quarter were not prescribed antidepressants. Out of 79 chart reviews indicating no depression diagnosis, nearly a third were receiving an antidepressant. Documentation related to changes in dosing, the presence or absence of side effects, or reasons for continuation were suboptimal.

Conclusion—Discrepancy between antidepressant prescribing and the presence/absence of depression diagnoses continue to exist for nursing home residents. The quality of antidepressant

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CONFLICT OF INTEREST STATEMENT

The authors had no conflicts of interest related to data collection or results of this study.

documentation in nursing home charts continues to be inadequate. Future research should aim to explore possible solutions to these discrepancies and deficiencies in documentation.

Keywords

antidepressants; nursing homes; prescribing patterns; medical chart documentation

INTRODUCTION

Nearly one in five nursing home residents meets diagnostic criteria for depression,[1] a rate that is three to five times that found in community-dwelling older adults.[2] The number of depression diagnoses for nursing home residents has substantially increased from 33.8% to 51.8% between 1999 and 2007,[3] a trend expected to continue as the baby boomer generation enters older adulthood.[4] Subsequent to recognition of "first-generation" issues of under-diagnosis and under-treatment of depression,[5,6] and implementation of the nursing home reform amendments of the Omnibus Reconciliation Act (OBRA) of 1987,[7] detection and treatment of depression in nursing home residents have received increased attention. OBRA requires nursing home staff to provide detailed records and regular assessments regarding the use of psychoactive drugs, including documentation of reasons for drug use and periodic attempts at dose reduction. Several studies have indicated a gradual increase of antidepressant use since the early 1990s as a result of better depression screening procedures and acceptance of a wider range of antidepressant classes used in the elderly.[8–10] Research has shown that antidepressants are now one of the most frequently prescribed psychotropic drugs in nursing homes.[11] Estimated prevalence rates of antidepressant use in nursing home residents have ranged from 35% to 60%[12,13] and slightly over half of those with diagnosed depression receive antidepressant treatment.[5]

Despite these improvements in the detection and treatment of depression, a gap between clinical research and public policy has given rise to "second-generation" problems that affect the quality of antidepressant treatment in the nursing home.[13,14] Datto and her colleagues[13] found that 15% of their nursing home sample scored at clinically significant levels on the Geriatric Depression Scale (GDS)[15] yet were not receiving treatment, 20% had elevated levels of depression and were prescribed antidepressants, and 25% received antidepressant treatment without endorsing clinical levels of depression. Gaboda et al. (2011)[3] found a similar discrepancy between antidepressant use and depression diagnoses. These findings suggest that despite improvement in their attempts to detect and initiate treatment of depression, nursing home staff may still have ineffective symptom monitoring and dose modification practices.

Previous research has also examined how organizational features and nursing home resident characteristics relate to antidepressant use. Nursing home organizational traits related to increased antidepressant use include higher proportions of residents on non-federal pay sources, fewer beds, and staffing that included mental health professionals.[16] Nursing home resident characteristics related to increased antidepressant use included being female and Caucasian, and having lower levels of cognitive impairment, moderate physical impairment, [5,11] and mood and behavior indicators from the Minimum Data Set (MDS). [17] These studies suggest that both organizational and resident characteristics need to be considered when evaluating second-generation issues in nursing home antidepressant prescribing patterns. However, the most recent and comprehensive study examining these factors in relation to antidepressant usage and documentation was conducted over 10 years ago.[10] In that study, for the 41% of residents receiving antidepressants, 70% were being followed by psychiatrists, whose prescribing practices were different than those of geriatricians. Antidepressant titrations were ordered more frequently by psychiatrists, but

geriatricians ordered dose reductions more often. Reasons for prescribing were documented in 95% of cases, but documentation of outcome and presence of adverse drug reactions was less common (25% and 20% of the cases, respectively).

The goal of the present study was to provide an updated evaluation of the quality of antidepressant management in nursing homes in the context of organizational and resident factors. We examined differences among facilities in prescribing practices, monitoring, and documentation, and prescribers' responses to Gradual Dose Reduction (GDR). We used this information to determine whether the gap between clinical research and public policy has narrowed since Weintraub and his colleagues (2002)[14] identified second-generation issues of antidepressant management nursing homes, as well as to shed light on the possible factors that impede or facilitate effective antidepressant prescribing practices.

METHODS

Data for this study came from nursing homes participating in a larger intervention study. To form a "treatment as usual" comparison database, we conducted chart reviews on a randomly chosen 20% of long-term care resident records in participating homes. The present analysis used 209 patient records from 10 facilities in the Louisville, Kentucky and southern Indiana area. Separate IRB approval was obtained for the chart review portion of the study.

Measures

Doctoral students in clinical psychology conducted the chart reviews, which were then reviewed by the study psychiatrist. The primary data for this study came from an instrument developed by combining two previously-used scales, the Quality of Depression Management Scale[18] and the Quality of Antidepressant Management assessment.[19] The new scale, the Quality of Depression Management and Antidepressant Prescribing rating (QDMAP), is a guided assessment of the quality of documentation in nursing home charts, focusing on the following indicators related to antidepressant use: diagnostic documentation of depression, monitoring of depressive symptoms, evaluation of side effects and residual depressive symptoms associated with changes in dosing or the initiation of a new antidepressant, and documentation regarding the reason(s) for initiation, continuation, dosage increase/decrease, or discontinuation.

We also collected resident data from the Minimum Data Set 2.0 (MDS 2.0), the federally required, standardized assessment completed by nursing home staff, regarding residents' demographic characteristics, physical health status, clinical diagnoses, mood and behavior indicators, psychosocial well-being, and pharmacological treatments and/or other therapeutic treatments received in the last seven days. The MDS 2.0 was completed within 14 days of admission to a nursing home facility and was updated on a quarterly basis, or when the resident had a significant change in his/her physical or mental status, or upon readmission to the facility. The full MDS is required to be repeated annually. For the purpose of this study, the most recent full and/or most recent quarterly update were used to extract resident demographics, mood and behavior indicators, medical diagnoses, and number of medications taken in the last seven days.

Other demographic data collected included residents' age, sex, months living in the facility, highest level of education, and source of payment. Supporting documents found in resident medical charts related to depression diagnoses, depressive symptoms, and antidepressant use were copied, de-identified and attached to complete QDMAPs. These data, along with residents' MDS, were reviewed by a consulting psychiatrist not affiliated with any of the nursing homes participating in this study. During his review, the psychiatrist assessed for

accuracy in the random chart reviewer's notes, responses on the QDMAPs, appropriateness of antidepressant prescribed, and quality of supporting documents provided by the reviewer.

Nursing home characteristics were obtained from the Centers for Medicare and Medicaid Services (CMS) Nursing Home Compare website,[20] which is a comprehensive Medicare website provided by the United States Department of Health and Human Services. We included the following characteristics: number of beds, number of residents, payer type, ownership type, licensed nursing staff:resident ratios, and certified nursing assistant (CNA):resident ratios.

Nursing Homes and Residents

Characteristics of the ten facilities are included in Table 1. They averaged 153.32 (SD=53.79) beds and housed 142.89 (SD=49.77) residents. Mean minutes per day of licensed nursing staff time per resident was 82.00 (SD = 11.65). Mean minutes per day of certified nursing assistant time per resident was 143.05 (SD = 27.97. Residents whose charts were reviewed ranged in age from 24 to 101, with a mean age of 80.51 years (SD = 12.61). The sample was mostly European American (84.7%), 14.4% African American, and 1% Hispanic or of another race; 78.9% were female. They had completed, on average, 10.87 years of education (SD = 3.40). Source of pay included Medicaid (65.6%), private insurance (13.4%), and self pay or other pay types (20.6%). The average length of stay was 43.15 (SD = 66.88) months. They were on a mean number of 11.86 (SD = 5.14) medications, and had an average of 8.17 (SD = 3.67) non-mental health diagnoses.

RESULTS

Out of 209 residents' charts reviewed, 125 (59.8%) indicated antidepressant use at the time the chart review was conducted. Within the 6-month review period, 45.0% of the residents were prescribed one antidepressant, 7.7% were prescribed two antidepressants, and 1.9% were prescribed three antidepressants. The most commonly prescribed antidepressant was mirtazapine (n = 40), followed by citalopram (n = 24), trazodone (n = 13) and sertraline (n = 12). Out of the residents taking two antidepressants concurrently, mirtazapine was also the most frequently co-prescribed antidepressant, in combination with citalopram (n = 4), buproprion (n = 4), trazodone (n = 2), sertraline (n = 1), venlafaxine (n = 1) and fluoxetine (n = 1). Mean duration of the prescriptions was 35.94 weeks (SD = 60.52).

We examined the correspondence between documented depression and antidepressant prescribing in two different ways. First, we looked at the association between the MDS indicator of number of days on an antidepressant in the 7 days preceding the MDS assessment, and the QDMAP coding of whether there were any chart indicators to suggest depressed mood (e.g., MDS-D Mood Scale Indicators greater than 1, or the presence of commonly co-occurring illnesses such as stroke, anxiety disorder, myocardial infarction). This association was significant, $r_b = .249$, p<.001, but certainly not high enough to suggest that antidepressant prescribing was primarily being influenced by depression indicators. Second, we looked at the association between an MDS-documented depression diagnosis and whether or not the resident was on an antidepressant, using the Chi-Square statistic. Approximately the same proportion of residents had a depression diagnosis in their medical charts (60.3%) as were on antidepressants. However, out of 126 residents with an MDS depression diagnosis, 24.60% (n = 31) were not taking antidepressants. Of 79[i] residents with no documentation of depression, 32.91% (n = 26) were receiving antidepressant treatment.

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[i]Note: data regarding whether depression diagnosis was present or absent were missing in 4 charts, thus numbers in this section add to 205 rather than 209.

Of 121 residents prescribed antidepressant therapy, 26 (21.49%) did not have a depression diagnosis. Thus, although the association was significant, χ^2 (1, N = 205) = 36.24, p <.001, there were sizeable groups of residents who were either not receiving medication but did have diagnoses, or who were receiving medication but did not have diagnoses. One possible explanation for residents on antidepressants without a depression diagnosis is that antidepressants were being prescribed for other problems. Out of the 26 residents prescribed antidepressants without a depression diagnosis, there were 11 instances in which antidepressants were prescribed to treat other problems, such as anxiety (n = 1), agitation (n = 3), appetite (n = 5), behavior (n = 1), and dementia with behavioral change (n = 1). Some residents with a depression diagnosis who were not prescribed antidepressants may have received non-pharmacological interventions such as group or individual therapy. Examining this possibility, we found that 3 of the 31 residents without antidepressants received psychotherapy or counseling, and 8 residents were receiving both psychotherapy and antidepressant treatment. Nine of out the 11 residents receiving psychotherapy had documented depression diagnoses.

We were interested in how antidepressant prescriptions were documented, monitored, and altered during the 6-month review period of this study. Out of 125 charts indicating current antidepressant use, only 25 charts included notes from a depression assessment. Similarly, out of 88 charts indicating MDS documentation of depression, only 24 included notes and/or results from a formal depression assessment. Seventy-nine (64.8%) of the residents' charts indicated that they were being followed by a psychiatrist, most of whom were psychiatric consultants to the nursing homes. Slightly over half (50.8%) of the medical charts indicating antidepressant use provided written documentation as to why the antidepressant was prescribed. The majority of individuals taking antidepressants (68.9%) were already taking at least one at the beginning of the review period. Twenty-eight residents had at least one antidepressant added during the period of review. Dosage changes documented during the review period included 21 residents whose antidepressant was discontinued, 27 residents with a dosage increase, and 23 residents with dosage decreases. There was a significant relationship between the presence or absence of documented depression diagnoses and frequency of antidepressant dose increase [χ^2(1, N = 169) = 4.37, p <.05], and dose decrease [χ^2(1, N = 166) = 4.38, p <.05), suggesting that residents whose charts documented a depression diagnosis were more likely to have dose increases or decreases compared to those without a documented diagnosis. Four charts indicating a dose increase and 3 charts indicating dose decreases did not have concurrent documented depression diagnoses. For residents whose antidepressants were changed in any way during the review period, documentation for the reason of change in prescription was present in 37.6% of the charts. Notes regarding the reason(s) to continue current therapy were present in only 20.63% of the medical charts that indicated no changes in antidepressant prescribing. In the charts indicating antidepressant use, documentation of the presence or absence of side effects was found in 45.50% (n = 55). Evidence of a quarterly assessment of depressive symptoms was present in 21.5% of the charts (n = 26) with continuing medications. Similarly, reasons for continuation of treatment were documented in a chart note in 20.0% (n = 25) of the charts, and symptoms of depression were addressed in the documentation in only 15.2% of cases.

We were particularly interested in discontinuations and dose reductions given the recent changes in regulations requiring attempts at gradual dose reduction (GDR) for antidepressants in addition to antipsychotics and hypnotic medications. There were 18 discontinuations for which a reason was provided (85.7%), and of these, the modal reason given was GDR, which was explicitly given in 5 cases, or roughly a quarter of discontinuations. Other reasons included lack of efficacy (1), side effects (3), intercurrent illness (2), planned discontinuation (1), family request (1), or some other reason (5). Generally, little explicit information was provided regarding the reasoning behind treatment

changes of this nature. In no case was there a note indicating severity of side effects or depressive symptoms in relation to the discontinuation, for example, but 2 cases provided a rationale for not giving maintenance treatment.

Results comparing nursing homes on depression diagnosis, antidepressant prescribing, and dosage changes are summarized in Tables 1 and 2. The facilities were remarkably similar with regard to frequencies of residents taking antidepressants, duration of use, dosage amounts, and changes in dosing. Percentage of charts indicating documented depression diagnoses were similar despite differences in licensed nursing staff to resident ratios, suggesting that nursing homes whose licensed staff worked more hours per resident did not document more depression diagnoses than nursing homes with low or average licensed staff to resident ratios. Nursing homes varied significantly in how often antidepressant dosage was lowered, $\chi^2(9, N = 168) = 19.24$, p <.05. In addition, differences in the antidepressant chosen varied significantly among nursing homes, $\chi^2 (81, N = 114) = 144.40$, p <.001, suggesting that certain prescribers have drug preferences, primarily with regard to differential preference for citalopram versus mirtazapine.

We also compared nursing homes on the quality of documentation of antidepressant prescribing (see Table 3). We did not find facility differences in the documentation of reasons for dose changes or quarterly assessments. There were facility differences regarding whether the reason for adding an antidepressant was documented, $\chi^2(9, N = 105) = 45.83$, p <.001. There were also facility differences in documenting side effects, $\chi^2(9, N = 123) = 43.85$, p <.001, and reasons to continue antidepressants, $\chi^2(9, N = 51) = 20.83$, p <.05. Facilities differed with regard to whether the presence or absence of depressive symptoms was charted in relation to continuing treatment, $\chi^2(9, N = 41) = 24.28$, p = .004. If antidepressant prescriptions were unchanged over the review period, nursing homes with low licensed nursing staff:resident ratios (e.g. Nursing Home 4) were less likely to document the presence or absence of depressive symptoms compared to those higher staff:resident ratios (e.g Nursing Home 3), suggesting that more licensed nursing staff time may facilitate better detection and documentation of depressive symptoms. In summary, nursing homes in this sample were consistent with regard to proportions of residents taking antidepressants and frequencies of dosage changes, but different with regard to which antidepressants were prescribed and documentation for side effects, depressive symptoms, and reasons for continuation.

DISCUSSION

The results of this study suggest that "second-generation" issues of antidepressant prescribing in the nursing home setting, first raised by Weintraub, Datto and colleagues[14] nearly a decade ago, are still of significant concern. In our sample of 10 nursing facilities, we found antidepressant prescribing to be common, but that management and documentation may be suboptimal. Compared to a previously cited study of the epidemiology of depression and antidepressant use in the nursing home,[10] the sample used in this study had higher rates of depression and more frequent use of antidepressant therapy. Citalopram and mirtazapine were the most frequently prescribed antidepressants, a finding consistent with a recent study examining the prevalence of antidepressants in long-term care[21]. Combination antidepressant therapy was prescribed in 7.7% of our sample. Although increased detection of depression may explain higher antidepressant use, our findings suggest that there continues to be a sizeable group whose depression appears to be untreated, and others who may be inadequately or over-treated. Research evaluating the clinical effectiveness of citalopram, mirtazapine, and sertraline suggests these drugs may be beneficial in treating geriatric depression due to fewer adverse drug reactions and higher rates of tolerability.[22–24] However, it has been shown that antidepressant drug treatment is

less effective[25,26] and less well tolerated[27,28] in cognitively impaired older adults, which may partly explain the presence of depressive symptoms despite the use of antidepressants in some of the nursing home residents in our sample. Furthermore, research specifically evaluating the efficacy and safety of these drugs in elderly nursing home patients is lacking,[24,29] and this may have serious and potentially dangerous implications for the well-being of nursing home residents, especially in the context of polypharmacy, combination antidepressant therapy, and cognitive co-morbidity.

Nearly 33% of residents in our sample with no documentation of depression or depression diagnoses were receiving antidepressant treatment. This finding was only partially explained by the use of antidepressants to treat other problems, such as sleep disturbance, anxiety, pain, and diminished appetite. Research evaluating the efficacy of treating sleep and appetite problems with antidepressants in elderly patients has shown mixed results,[30,31] and research examining the efficacy of using antidepressants for treatment of agitation in patients with dementia is limited[32], so it would be hard to argue that this is an evidence-based use of antidepressant therapy. Absence of a depression diagnosis could also be evidence of insufficient documentation. Across the 10 nursing homes included in the study, almost 49% of the medical charts lacked documentation detailing why an antidepressant was prescribed, and the frequency with which this problem occurred varied significantly between nursing homes. Aside from the fact that nursing homes are required by regulation to provide documentation for all prescription medicines, a lack of proper prescription documentation could increase the risk for polypharmacy and negative side effects, especially if several medical providers are involved in a resident's care. We found that when there was a clear diagnosis documented, there were more dosage changes, which suggests closer monitoring of prescriptions, symptoms, and side effects.

The nursing home charts also lacked documentation of the reasons for change in antidepressant prescribing, reasons to continue antidepressant therapy if no change occurred, and the presence or absence of side effects and residual depressive symptoms in conjunction with use of antidepressants. Most resident charts lacked documentation pertaining to antidepressant side effects, as well as written reasons why a resident should continue his/her current antidepressant regimen. Although 65% of the medical charts reviewed indicated that residents were being followed by a psychiatrist, resident quarterly reviews typically did not include documentation of depressive symptom monitoring. Facilities were quite similar in the proportions of residents prescribed antidepressants, and in the number and types of dosage changes over time. However, significant differences in prescribing preferences were found, mostly between prescribing citalopram and mirtazapine. The facilities also varied on how well they documented their antidepressant management. Insufficient documentation of side effects and reason(s) for prescription changes may reflect the lack of assessment or lack of knowledge concerning the importance of side effects and symptom monitoring. Absence of this sort of documentation makes transition of care from one provider to another, or continuity of care from one provider with only quarterly visits, difficult.

The inadequacies found in this study call into question the effectiveness of OBRA requirements for documentation of antidepressant prescribing and monitoring of adverse drug reactions. Clearly, as suggested by Weintraub et al.[14], recognition and treatment of depression is no longer the central public policy issue. Rather, public policy, in the form of regulation and education, should focus on quality of treatment and treatment monitoring and documentation.

The data presented here were collected from a single geographic region, and thus our conclusions may not be generalizable to other regions of the U.S. The majority of the nursing homes included in this study were also privately owned. Lastly, although the period

of review was set to capture the most recent six months of the resident's stay, availability of archived chart data was inconsistent both within and across nursing homes. This was especially difficult if the antidepressant treatment was initiated more than a year prior to the initial date of the chart review, or if the resident was diagnosed and taking antidepressants prior to admission. Thus, this missing information may have influenced the results.

CONCLUSION

Despite the aforementioned limitations, the results of the study have emphasized the lack of sufficient documentation of the prescribing practices and monitoring of antidepressants in the nursing home. Because the majority of nursing home residents are administered several medications, and antidepressants are known for drug-drug interactions, clear documentation of their use is vital for physicians, mental health consultants, and nursing staff to remain aware of potential adverse side effects and exacerbation of other problems. Moreover, clear and comprehensive documentation can inform mental health professionals of the effectiveness of treatment in order to make dose adjustments and/or explore other treatment options if necessary. Therefore, future research should aim to explore possible solutions to these continuing second-generation problems, such as creating standardized documentation procedures that delineate reasons for current antidepressant use and any changes made to the treatment. A brief assessment of side effects, as well as residual depressive symptoms, could be included. More research is required to explore the links between depression care documentation and actual patient outcomes. Administration of screening tools is not enough to be considered quality depression monitoring; scores must be documented and high scores must be discussed with relevant staff in order to help improve depression care.[33] The availability of an evidence-based depression screening instrument in the recently adopted MDS-3.0[34] may greatly improve detection of depression symptoms, but future research will be necessary to determine whether the implementation of the MDS-3.0 in fact improves depression care.

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Table 1

Nursing Home Characteristics

Nursing Home (N=10)	Random Chart Reviews	Bed Capacity	Number of Residents	Organization Type	Licensed Nursing Staff: Resident[*]	CNA: Resident[*]
1	n = 26	128	115	For Profit	69	129
2	n = 21	118	118	Non-Profit	108	121
3	n = 18	128	126	For Profit	102	168
4	n = 20	154	130	For Profit	77	125
5	n = 45	252	236	For-Profit	86	182
6	n = 11	92	91	For-Profit	89	111
7	n = 21	135	121	For-Profit	135	121
8	n = 15	110	103	For-Profit	97	128
9	n = 20	115	113	For-Profit	82	115
10	n = 12	139	130	Non-Profit	102	187
Total	N=209	153.32 (53.79)	142.89 (49.77)	--	88.20 (11.65)	143.05 (27.97)

[*] Licensed Nursing Staff: Resident ratios and CNA: Resident ratios are based the average number of hours worked by staff each day for 2 weeks and divided by the number of residents in the facility.

Table 2

Comparison of Antidepressant Prescribing Practices across Ten Nursing Home

Nursing Home	n	Residents on Antidepressants (%)	Residents with depression diagnoses (%)*	Modal Antidepressant	Mean Duration (weeks)	Discontinuation (n)	Dose Increase (n)	Dose Decrease (n)
1	26	53.8	76.9	citalopram (n = 7)	27.55 (36.39)	5	2	7
2	21	61.9	83.3	citalopram (n = 5)	38.54 (68.74)	2	1	1
3	18	55.6	100	sertraline (n = 3)	18.70 (25.62)	2	2	1
4	20	55.0	63.6	citalopram (n = 6)	35.79 (44.61)	2	3	1
5	45	73.3	81.8	mirtazapine (n = 15)	29.83 (33.15)	4	7	6
6	11	63.6	83.3	paroxetine & bupropion (n = 2)	46.43 (44.65)	1	1	0
7	21	76.2	60.0	escitalopram (n = 7)	14.15 (16.71)	1	6	6
8	15	26.7	100	citalopram, sertraline & mirtazapine (n = 1)	39.75 (36.65)	0	1	1
9	20	55.0	72.7	mirtazapine (n = 4)	104.38 (172.35)	2	2	0
10	12	50.0	83.3	trazodone (n = 2)	33.17 (30.04)	2	2	0
Total	209	57.14	60.3	mirtazapine (n=47)	35.94 (60.52)	21	27	24

*
Percentages of residents with depression diagnoses are based on the number of residents who were prescribed an antidepressant at the time of the initial date of chart review, relative to each nursing home facility.

Table 3

Comparison of Quality of Antidepressant Management across Six Nursing Homes

Nursing Home	Number of residents on antidepressants	Type of Documentation					
		Reason for Antidepressant Prescription (%) *	Reason for Antidepressant Dosage Change (%) *	Reason to Continue Antidepressant therapy (%) *	Quarterly Assessment (%) *	Presence/Absence of Side Effects (%) *	Presence/Absence of Depressive Symptoms (%) *
1	14	53.8	83.3	8.3	n/a	n/a	n/a
2	13	33.3	16.7	41.7	41.7	41.7	41.7
3	10	100.0	40.0	10.0	20.0	40.0	11.1
4	11	72.7	36.4	27.3	18.2	36.4	18.2
5	33	58.1	33.3	15.2	15.2	45.5	15.2
6	7	14.3	14.4	14.3	42.9	28.6	14.3
7	16	13.3	60.0	6.7	6.7	80.0	6.7
8	4	100.0	n/a	50.0	75.0	75.0	25.0
9	11	9.1	18.2	27.3	27.3	63.6	27.3
10	6	100.0	16.7	50.0	33.3	50.0	50.0
Total	125	50.83	36.4	20.7	21.5	45.5	15.8

*
The percentages above are based on the number of residents who were prescribed an antidepressant at the initial date of chart review, relative to each nursing home facility.