

# Characteristics and Care of U.S. Nursing Home Residents with a History of Chronic Mental Illness

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## RÉSUMÉ

Très peu de recherches ont été effectuées sur les pensionnaires des maisons de soins ayant manifestés des troubles mentaux chroniques sans démence avant leur entrée en institution. Les données du *Minimum Data Set for Nursing Home Resident Assessment and Care Screening* (MDS) de 1993 ont été utilisées pour analyser les différences dans les caractéristiques et les soins se rapportant à ce type de pensionnaires par rapport aux autres pensionnaires. Cette enquête portait sur 70 000 pensionnaires du Kansas, du Maine, du Mississippi et du Dakota du Sud. Les caractéristiques des pensionnaires qui éprouvaient ce type de troubles mentaux chroniques étaient plus fréquemment les suivantes: sexe masculin, 65 ans et plus, bénéficiaires de Medicaid, moins médicalement inaptes et niveau plus élevé de problèmes de comportements. Ces pensionnaires reçoivent aussi davantage de médicaments psychotropes et suivant une thérapie, la prévalence de la thérapie étant cependant moins élevée. Les informations recueillies pourraient laisser croire que les soins accordés à ces pensionnaires ne sont pas des plus appropriés.

## ABSTRACT

Little research has focussed on nursing home residents with a history including a non-dementia related chronic mental illness (HCMI) that manifested before placement in a nursing home. Data from the 1993 Minimum Data Set for Nursing

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Key Words: Mental Illness, Nursing Home Residents, MDS.

Mots clés: Troubles mentaux, pensionnaires des maisons de soins, MDS.

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Home Resident Assessment and Care Screening (MDS) on over 70,000 residents in Kansas, Maine, Mississippi, and South Dakota were used to investigate differences in characteristics and care between these residents and more traditional residents. HCMI residents were more likely to be under 65 years of age, male, Medicaid recipients, less functionally impaired, to exhibit higher levels of problem behaviours, and to receive psychoactive medications and psychological therapy, though therapy prevalence rates were low. These data may indicate that appropriate care for HCMI residents is a concern.

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Discussions of a specific long-term care setting and the public policies that support that setting often seem to incorporate some shared image of the clientele served in that setting. With regard to nursing homes, the description of an "average" nursing home resident typically brings to mind the picture of a widowed female in her mid to late 80s with a range of chronic physical health problems (Lair & Lefkowitz, 1990). This emphasis on purely physical health is somewhat misleading, since the prevalence of psychiatric disorders among nursing home residents has been estimated to be as high as 80 per cent (e.g., Rovner, Kafonek, Filipp, Lucas, & Folstein, 1986, 1990; Tariot, Podgorski, Blazinna, & Leibovici, 1993). However, even when researchers focus on psychiatric issues in nursing homes, they are likely to emphasize dementia, a condition that has a high prevalence in almost all long-term care settings (Strahan & Burns, 1991).

At the same time, there is growing evidence that a significant number of nursing home residents suffer from psychiatric problems unrelated to dementia. Goldman, Feder, and Scanlon (1986), using data from the National Nursing Home Survey (NNHS), estimated that 130,000 persons with mental disorders other than dementia resided in nursing homes in 1977. Strahan and Burns (1991), using data from the 1985 NNHS, estimated that 13.1 per cent of residents had schizophrenia or some other psychosis, yielding an estimate of approximately 128,000 residents suffering from these problems. Eichmann and her colleagues (Eichmann et al., 1992), also using the 1985 NNHS data, estimated that 8.3 per cent of residents (approximately 112,000 residents) were in need of active treatment for serious psychiatric disorders. In another analysis of the 1985 NNHS data, Burns and her colleagues (Burns et al., 1993) estimated that 15 per cent of residents had psychoses or other mental health problems without dementia. Lair and Lefkowitz (1990), using data from the 1987 National Medical Expenditures Survey – Institutional Population Component (NMES-IPC), estimated that 16 per cent of nursing home residents had a mental disorder without dementia. Shea and Smyer (1993) also analysed the 1987 NMES-IPC data, using a different definition, and estimated that 27.1 per cent (287,000) of nursing home residents had a primary diagnosis of mental illness with no primary diagnosis of dementia.

Studies utilizing direct professional assessment of residents (e.g., evaluation by a psychiatric team using DSM-III-R criteria) rather than analysis

of survey data have also found a high prevalence of mental disorders. Chandler & Chandler (1988), in a study looking at 65 nursing home residents found neuropsychiatric disorders, including dementia, present in 94 per cent of the sample (72% had dementia syndrome). Class, Unverzagt, Gao, Baiyewa, and Hendrie (1996) found that 90 per cent of 106 African American nursing home residents had at least one primary psychiatric diagnosis. Newman, Griffin, Black, and Page (1989), in a stratified random sample of 828 residents in 25 facilities serving Medicaid recipients, found that 79.6 per cent also had moderate to intense needs for mental health care. Podgorski, Tariot, Blazina, Cox, and Leibovici (1996) compared three disciplines' (psychiatrists, primary care physicians, and nurses) perceptions and assessments of mental disorders in a random sample of residents, stratified by ward, in a long-term care facility ( $n = 80$ ). Prevalence rates for mental disorders ranged from 60 to 91 per cent across these three disciplines. Rovner et al. (1990) looked at the prevalence of specific psychiatric disorders in 454 consecutive new nursing home admissions. Eighty per cent had a psychiatric disorder, the commonest of which were dementia syndromes (67.4%). Tariot et al. (1993) found that of 80 randomly selected residents, 91 per cent had at least one psychiatric diagnosis and at least one behavioural problem. Twenty-nine per cent had received psychiatric care before admission.

While these analyses used different databases and different definitions of various problems, they consistently found a sizable proportion of nursing home residents with mental health problems, excluding dementia. What is often unclear, however, is the degree to which residents' reported mental health problems are of recent onset or the degree to which they reflect the presence of individuals in nursing homes who have a history of chronic or persistent mental illness prior to their nursing home placement. Piecing together evidence from studies that use different definitions and have different foci, one can develop a few, at least tentative, insights concerning those residents who enter the nursing home with a history of chronic mental health problems. These individuals are probably younger than the average nursing home resident, more likely to be male, probably less physically impaired, and less likely to have come to the facility from an acute care hospital (Eichmann et al., 1992; Strahan & Burns, 1991).

There is also some indication that the number of nursing home residents with a history of persistent or chronic mental illness (HCMI) will increase. This increase is in part the result of a trend in which the population of state mental institutions has decreased (Kramer, 1986). In fact, some U.S. states have tested methods of creating incentives for nursing homes to admit persons with HCMI from state psychiatric hospitals (Burns et al., 1991). But, these individuals may be entering an environment that cannot offer them the care and services that they need. In a survey of long-term care administrators in Massachusetts, Mosher-Ashley, Turner, and O'Neill (1991) found that two-thirds of administrators had admitted de-institu-

tionalized persons in the past, although three-fourths of these administrators reported they did not have the support services needed by these older adults.

The aim of this research is to provide information on the degree to which the U.S. nursing home population includes individuals with evidence of a chronic or persistent mental illness prior to their entry into the nursing home. As noted earlier, this population is of particular interest because its members may differ significantly from our traditional picture of a nursing home resident. To the degree that HCMI residents differ from the "average" resident, their uniqueness may place them at risk of poor care. These residents, their problems, and their needs may not be clearly understood or even recognizable to clinicians or policy makers more accustomed to dealing with the "traditional" nursing home resident. Such issues become especially pressing should the forecast of ever-larger populations of such individuals in nursing homes come to pass.

## Methods

### *Study Population and Instrumentation*

The data used in these analyses were collected as part of the Health Care Financing Administration's (HCFA) Nursing Home Case-Mix and Quality Demonstration. The database includes all resident assessments conducted in 1993 in the approximately 850 Medicare- and Medicaid-certified nursing facilities in four states: Kansas, Maine, Mississippi, and South Dakota. The assessment tool used (MDS+) was a variant of the Minimum Data Set for Nursing Home Resident Assessment and Care Screening (MDS) (Hawes et al., 1995). The MDS+ contains all the items on the MDS plus additional items. Participation in the HCFA Demonstration provided extensive training to facility staff in the use of the MDS+ and demanded that states develop a statewide database containing all MDS+ assessments.

The MDS is a multidimensional, functionally based assessment tool. It, along with 18 problem-focussed Resident Assessment Protocols (RAPS), forms the Resident Assessment Instrument (RAI), an assessment system developed for the Health Care Financing Administration to meet a legislative mandate for a uniform, multidimensional nursing home resident assessment system in U.S. nursing homes (Morris et al., 1990). For all nursing home residents, a full MDS assessment must be completed on admission, annually thereafter, and at the occurrence of any significant change in status. A partial assessment is completed on a quarterly basis. The MDS is completed by facility staff who are familiar with the resident and draws on a wide range of sources of information, including discussions with other staff, record review, observations of care, and discussions with the resident.

The potential validity and reliability of data collected from the MDS were criticized when the MDS first began to be used (e.g., Teresi & Homes,

1992), and there are always concerns about data quality when data are collected from charts and records and by facility staff. These initial concerns have been addressed by the developers of the MDS (Hawes et al., 1992), and the MDS protocol requires that staff identify the most knowledgeable sources of data for each item and that these sources be used in answering the items. A single source of information is insufficient, given the realities of care in nursing facilities (Hawes et al., 1992).

Data from the MDS are highly reliable in research data collections, with intraclass correlations of .7 or higher in key areas of functional status (e.g., cognition, ADLs, and diagnosis) and with 63 per cent of items achieving reliability coefficients of .6 or higher (Morris et al., 1990; Hawes et al., 1995). Based on established criteria for research reliabilities (Fleiss, 1986), 88 per cent of the MDS items achieved adequate reliability or higher (Hawes, Morris, Phillips, Fries, & Mor, 1991). Equally good reliability has been found in the data in the administrative data systems used in this research (Phillips & Morris, 1997). Subsequent research has also shown that the MDS data correlate well with more traditional scales (e.g., Snowden et al., 1999).

For this study, data from only one assessment per resident was used. The full annual or admission assessment was used for approximately 80 per cent of the residents. These assessments were the first choice because they contained the most complete information on the resident. For the remaining approximately 20 per cent, state-specific quarterly assessments or readmission assessments were used. Thus, these data did not represent the nursing home population in the study states at a single point in time. Instead, the data reflected the characteristics of the nursing home population in the states over the course of the year 1993, with data taken on each resident in the system when the richest source of data (e.g., an annual MDS+) was available. This strategy maximized data availability, but sacrificed the availability of true point prevalence data. The complete study population includes 72,000 residents in the four states.

#### *Measurement/Definition of HCMI*

This study analysed data derived from the HCFA MDS+ database mentioned above. A primary aim was to use direct access to resident records to determine the existence of mental illness prior to nursing home placement. The definition of a history of chronic mental illness (HCMI) used was presence of an MDS+ response indicating a diagnosis of schizophrenia or bipolar disease, admission to the nursing home from a mental health facility, and/or medical records with an indication of mental health history. A nursing home resident was categorized as having a history of chronic mental illness if one of the following conditions was met, based on the MDS+ assessment data:

- a primary or secondary diagnosis of bipolar disease ( $N = 427$ ),
- primary or secondary diagnosis of schizophrenia ( $N = 1,545$ ),

- admission to the nursing home from a mental health facility ( $N = 1,718$ ),
- or
- resident's record at admission indicated a history of mental health problems ( $N = 4,582$ ).

Also, approximately 5,000 residents in the database (7%) had conflicting or missing data on the items used for classification. It was impossible to identify the specific reasons for this, but conflicting and missing data are not unusual in clinical/administrative databases. Due to the conflicting or missing data, these residents could not be classified and were therefore excluded from analysis. Additionally, these residents could have no indication of MR/DD in their medical record or assessment. This resulted in the exclusion of 4,063 residents. Since many residents met two or more of the definitional criteria, the final HCMI group was comprised of 5,321 residents. Leaving over 62,000 "traditional" residents with evidence of neither HCMI or MR/DD.

Alzheimer's Disease and other dementias that usually have a later onset in life were not included in our definition of persistent or chronic mental illness. An individual with Alzheimer's Disease who had none of the criteria specified in the HCMI category would not be classified as having HCMI. However, in this dataset, 38.1 per cent of residents in our HCMI category had some form of dementia, while 36.9 per cent of residents with no HCMI or MR/DD had Alzheimer's Disease or other dementia.

It was impossible, with the available data, to judge the validity of the classification scheme used to categorize residents. However, this categorization strategy should have better specificity than sensitivity. The classification rules were unlikely to incorrectly identify individuals as having a prior history of persistent mental illness when they had no such history. The strategy, though, could miss some individuals who had some form of HCMI. For example, the appropriate diagnosis may not have been made or recorded, or the resident's medical and psychiatric history may not have been complete. If this occurred, the "traditional resident" category would contain some individuals with a history of persistent mental illness. This would tend to minimize any true differences between the groups, creating a greater likelihood of Type II error, in which true differences are missed. This would also mean that any differences observed between the two groups of residents would be likely to reflect real differences rather than measurement error associated with the categorization schema.

### *Hypotheses*

Based on the relatively minimal information available on this population, 11 descriptive hypotheses were developed, based on indications from previous research (Eichmann et al., 1992; Strahan & Burns, 1991). Three hypotheses focussed on demographic differences. We hypothesized that residents with HCMI would be younger, would be more likely to be male, and would be more likely to be supported by public funds than residents

with no HCMI or MR/DD. Two hypotheses focussed on functional status. We hypothesized that HCMI residents would be less ADL-impaired and would be less cognitively impaired than traditional (i.e. "No HCMI or MR/DD") residents. Four hypotheses focussed on problem behaviours. We hypothesized that HCMI residents would exhibit higher frequencies of wandering, verbal abuse, physical abuse, and inappropriate behaviour than traditional residents. These four behaviours have relatively high prevalence among nursing home residents, and they were included in the MDS because of the degree of disruption that they create in a nursing home setting. Lastly, two hypotheses focussed on care and treatments received. We hypothesized that residents with HCMI would be more likely to receive psychological therapy and more likely to receive psychoactive medications than traditional residents.

### *Analysis Strategy*

Even though the database consisted of over 70,000 individuals, the entire population of nursing home residents in the four states mentioned above, inferential statistics were still used. These data were subject to random measurement error, and they could be considered a sample from a super-population of nursing home residents. Because residents were clustered in nursing homes, all analyses were done using SUDAAN, a software package that provides appropriate variance estimates for clustered data (Shah, Barnwell, & Bieler, 1996). In SUDAAN, the number of denominator degrees of freedom for hypothesis testing is determined largely by the number of first-stage sampling units, nursing homes in this study. Hypothesis tests were therefore based on approximately 850 degrees of freedom. Results are displayed for the entire population and for each of four age categories (i.e. under 65, 65–74, 75–84, 85 and older).

## **Results**

The four-state population was broken down into the resident groups defined above. Eighty-seven per cent or 62,616 residents had no evidence of persistent/chronic mental illness history (HCMI) or of mental retardation or developmental disabilities. A history of persistent/chronic mental illness history was found in 7.4 per cent or 5,321 of the residents. Data for another 5.6 per cent or 4,063 residents showed evidence of developmental disabilities or some combination of developmental disabilities and persistent/chronic mental illness history. As indicated earlier, these approximately 4,000 individuals were not included in further analyses.

*Demographic Characteristics.* Residents with HCMI were over four times more likely to be under 65 than were "traditional" residents. As Table 1 indicates, less than a quarter of those with HCMI were 85 or older, while over half of the "traditional" residents were among the oldest old. Residents with persistent/chronic mental illness history (HCMI) were, across all age

**Table 1**  
History of chronic mental illness and resident characteristics (1993 MDS+ Data)

<i>Resident Characteristics</i>	<i>Resident Group</i>	
<i>Age Category</i>	<i>"Traditional" Residents</i>	<i>History of Chronic Mental Illness</i>
<65	4.4%	19.0%***
65-74	10.5%	23.1%***
75-84	33.9%	34.6%
85+	51.2%	23.3%***
<b>Medicaid as Payor</b>		
<65	5.7%	19.4%***
65-74	10.6%	23.7%***
75-84	32.7%	34.5%
85+	50.9%	22.3%***
<b>Gender (male)</b>		
<65	8.3%	30.3%***
65-74	15.0%	25.0%***
75-84	38.1%	28.7%***
85+	38.6%	15.9%***
<b>Resident Admitted From</b>		
Private Residence	34.6%	19.8%***
Other Nursing Home	13.7%	19.5%***
Hospital	46.0%	44.1%
Other	5.6%	16.6%***

\*\*\*  $p < .001$

n.b. columns may not equal 100% due to rounding.

categories, more likely to have Medicaid pay for their nursing care. The likelihood that residents with HCMI were male was higher in the younger age groups, while among traditional residents the likelihood of being male increased with age.

A third (34.6%) of the "traditional" resident group entered the nursing home from private residences, 46 per cent came from hospital, 14 per cent came from other nursing homes, and only 6 per cent came from "other" settings. HCMI residents were admitted from hospitals at close to the same rate as "traditional" residents, but were much less likely to be admitted from private residences. They were more likely to come from another nursing home and were roughly three times more likely than traditional residents to be admitted from an "other" setting (e.g., board and care facility, psychiatric facility, group home, even possibly the street).

The admission pattern differed somewhat when viewed across different age categories. For those under 65, HCMI residents were four times more likely than "traditional" residents to be admitted from "other" settings and equally likely to come from nursing homes. The admission pattern for HCMI residents 65 years or older was very close to that for the older traditional residents.



**Table 2**  
Resident groups and independence in decision-making (1993 MDS+ Data)

Resident Group	Decision-Making Performance			
	Independent	Problems in New Situations	Moderately Impaired	Rarely Makes Decisions
Total Population				
"Traditional"	23.2%	23.9%	30.0%	22.9%
HCMI	17.2%***	26.9%**	36.3%***	19.7%***
<65				
"Traditional"	34.0%	23.0%	24.2%	18.7%
HCMI	24.1%**	28.9%*	38.0%***	9.1%***
65-74				
"Traditional"	0.7%	25.3%	24.4%	19.6%
HCMI	20.1%***	30.1%**	34.9%***	15.0%***
75-84				
"Traditional"	24.4%	23.7%	29.3%	22.6%
HCMI	14.9%***	26.3%*	36.8%***	22.1%
85+				
"Traditional"	20.0%	23.7%	32.0%	24.2%
HCMI	11.9%***	23.0%	35.8%*	29.3%***

\*  $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

*Decision Making Ability.* Overall, as Table 2 indicates, HCMI residents were more likely to be moderately impaired in decision-making, or have more difficulty in new situations. They were less likely than "traditional" residents to be independent in decision-making, as well as less likely to be totally dependent in decision-making.

When age breakdowns were examined, this pattern changed for those HCMI residents who were 75 years or older. Among all age groups, individuals with HCMI were less likely to be independent in decision-making. But, among the older age groups, differences between traditional and HCMI residents in the prevalence of moderate impairment and severe impairment grow smaller. Finally, among those 85 years and older, individuals in the HCMI group were significantly more likely to be severely impaired than "traditional" residents.

*ADL Impairment.* The MDS+ assesses eight ADLs: grooming, dressing, bathing, toileting, transfer, locomotion, eating, and bed mobility. Bathing was not used in this analysis because it tended to be more influenced by facility policy than individual characteristics, and bed mobility was not used due to a disproportionate amount of missing data. For this analysis,

**Table 3**  
History of chronic mental illness and ADL impairment (1993 MDS+ Data)

Resident Group	Number of ADLs in which Resident Receives Physical Assistance		
	Zero or One	Two to Four	Five or Six
Total Population			
"Traditional"	23.5%	25.1%	51.4%
HCMI	42.8%***	22.6%**	34.6%***
<65			
"Traditional"	20.2%	26.4%	53.5%
HCMI	70.7%***	13.4%**	15.9%***
65-74			
"Traditional"	24.0%	26.4%	49.6%
HCMI	49.7%***	23.3%*	27.0%***
75-84			
"Traditional"	24.4%	25.8%	49.7%
HCMI	35.4%***	24.9%	40.0%***
85+			
"Traditional"	23.1%	24.2%	52.7%
HCMI	24.3%	26.1%	49.6%
Total N	16,976	16,885	33,956*

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

each resident's score was the number of ADLs (zero to six) for which they regularly required at least limited physical assistance.

As Table 3 indicates, HCMI residents appeared less functionally impaired than "traditional" residents. More of the HCMI residents received physical assistance in none or only one of their ADLs. Significantly fewer HCMI residents received physical assistance in five to six ADLs. However, the size of these differences decreased with age, until for those 85 or over, there were no significant differences in ADL needs. In the 85 years and older group, HCMI and "traditional" residents were essentially equally impaired.

*Prevalence of Behavioural Problems.* Four problematic behaviours were considered in our investigation: wandering, verbally abusive behaviour, physically abusive behaviour, and socially inappropriate behaviour. The MDS assesses these behaviours because of their prevalence in nursing facilities, and they are frequently of concern to nursing home staff. Across the general population and within all four age groups, HCMI residents had higher rates of verbally abusive and socially inappropriate behaviour, but

**Table 4**  
History of chronic mental illness and the prevalence of behavioural problems (1993 MDS+ Data)

Resident Group	Behavioural Problems			
	Wander	Verbally Abusive	Physically Abusive	Inappropriate Behaviour
Total Population				
"Traditional"	9.3%	11.3%	8.2%	13.0%
HCMI	10.3%	16.8%***	9.1%	19.8%***
<65				
"Traditional"	5.0%	12.1%	6.0%	14.2%
HCMI	7.5%*	18.4%***	6.9%	21.8%***
65-74				
"Traditional"	9.2%	11.2%	6.7%	11.5%
HCMI	9.7%	16.2%***	7.1%	19.0%***
75-84				
"Traditional"	11.0%	11.6%	8.5%	12.7%
HCMI	12.1%	17.6%***	9.9%	19.7%***
85+				
"Traditional"	8.6%	11.0%	8.6%	13.3%
HCMI	10.5%*	14.8%**	11.6%**	19.1%****

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ 

they did not differ significantly from traditional residents in the prevalence of wandering and physically abusive behaviour.

*Psychological Counselling.* To help understand the level of services received by residents with HCMI, we looked at rates of psychological therapy provided to them by licensed professionals. There were significant differences between the rates of psychological therapy for HCMI residents and for traditional residents. Residents with a history of chronic mental illness were almost 12 times more likely to receive psychological therapy than were individuals without this history. However, the rate at which therapy was provided was quite low. Only 3.5 per cent of the HCMI residents in the population received therapy in the week prior to their assessment. The residents most likely to receive this therapy were HCMI individuals under the age of 65, with 11 per cent of these residents receiving therapy. The therapy rates dropped off dramatically for those residents over 65. Rates of psychological counselling dropped from 11 to 2 per cent and lower for HCMI residents aged 65 and older. For those residents 85 and over, only 1.1 per cent received therapy in the week prior to their assessment. There

**Table 5**  
History of chronic mental illness and prevalence of psychological counseling (1993 MDS+ Data)

	<i>Population Group</i>	<i>Prevalence of Psychological Therapy</i>
Total Population	"Traditional"	0.3 %
	HCMI	3.5 %**
<65	"Traditional"	1.4 %
	HCMI	11.4 %**
65-74	"Traditional"	0.4 %
	HCMI	2.7 %**
75-84	"Traditional"	0.3 %
	HCMI	1.3 %**
85+	"Traditional"	0.2 %
	HCMI	1.1 %**

\* $p < .05$ ; \*\*  $p < .01$

was also a drop in rates of psychological counselling for "traditional" residents aged 65 and older.

*Use of Physical Restraints and Psychoactive Medications.* In the four-state population as a whole, HCMI residents were somewhat less likely to be physically restrained. When looked at by age group, only HCMI residents under the age of 75 were less likely to be physically restrained. The two resident groups were equally likely to be physically restrained when 75 years or older.

Overall, HCMI residents were much more likely to have received antipsychotics, anxiolytics, or antidepressants, and they had higher rates of psychoactive medication use at all ages. Use of antipsychotics decreased steadily with age in the HCMI group, from 75 per cent for those under 65 to 31 per cent for those 85 years old or older. For all other drugs and other age groups, we observed a curvilinear relationship between age and the receipt of psychoactive medications. The use of antidepressants and anxiolytics for HCMI residents peaked among residents who ranged in age from 65 to 84. Usage rates were lower for those under 65 and for those over 85. The lowest usage rates for all medications, among traditional and HCMI residents, were observed among those residents over 84 years of age.

**Table 6**

History of chronic mental illness and the prevalence of physical restraints and psychoactive medications (1993 MDS+ Data)

Population Group	Restrains and Medications			
	Physical Restraints	Anti- psychotics	Anx- iolytics	Anti- depressants
Total Population				
"Traditional"	18.9%	11.3%	16.6%	13.1
HCMI	15.2%***	50.7%***	25.9%***	29.0%***
<65				
"Traditional"	20.3%	13.6%	20.5%	16.7%
HCMI	7.5%***	74.7%***	24.7%	26.7%***
65-74				
"Traditional"	17.5%	14.2%	21.2%	18.0%
HCMI	11.6%***	60.6%***	30.1%***	31.3%***
75-84				
"Traditional"	18.8%	13.0%	18.5%	18.0%
HCMI	18.0%	43.8%***	27.1%***	31.3%***
85+				
"Traditional"	19.2%	9.5%	14.1%	10.6%
HCMI	20.8%	30.8%***	20.8%***	25.6%***

\*\*\*  $p < .001$ 

## Discussion

Seven and one-half per cent of nursing home residents represented in these data, one out of every 13, were classified as having a history of persistent or chronic mental illness prior to admission to the nursing home. If the four study states are representative of the national nursing home population, this could mean as many as 130,000 residents across the United States fall into this category. This study assessed 70,000 nursing home residents by analysing data derived directly from their records, and the definition used to classify residents was based on assessment data from the MDS+. MDS+ data from these States have been shown to provide reliable data (Phillips & Morris, 1997), but the limitations of clinical/administrative and chart/record data do apply and need to be considered. In addition, the states included in this analysis may not be representative of the nation as a whole. HCMI residents in other states may go into nursing homes under different circumstances and have different characteristics.

Within these data, residents with HCMI differed in a number of important ways from "traditional" nursing home residents who did not have a history of mental illness. They were, in general:

- more likely to be under 65,

- more likely to be male,
- more likely to be Medicaid recipients,
- more likely to be less functionally impaired (i.e. fewer ADL needs),
- more likely to be moderately impaired in decision-making, rather than independent or severely impaired,
- less likely to be admitted from a private residence and more likely to be admitted from a nursing home or "other" setting,
- more likely to exhibit verbal abusiveness or socially inappropriate behaviours,
- more likely to receive psychological therapy,
- more likely to receive psychotropic medications, especially antipsychotics.

These results may have important implications for national policy. First, they may demonstrate that residents with a history of persistent or chronic mental illness prior to entering a nursing home are a nontrivial proportion of the nursing home population. Second, HCMI residents have different characteristics than the "traditional" resident. These differences are likely to affect their strengths, preferences, and care needs and to have implications for the kinds of settings and services that are appropriate. Third, these results may raise potentially troubling questions about the quality of care received by HCMI residents in nursing homes.

A good example of a care pattern for HCMI residents that may not be promoting their maximum practicable well-being, as required by U.S. Federal law, is found in the case of psychological treatment. We also highlight this to underscore the lack of attention typically given to the mental health of traditional nursing home residents. It may be an example of how current policies do not allow nursing homes to fully meet the needs of this sub-population.

Although HCMI residents were much more likely to receive psychological therapy than "traditional" residents, only 3.5 per cent of HCMI residents received therapy during the seven days prior to their MDS+ assessment. Rates of closer to 25 per cent would be expected if once-a-month therapy sessions were considered a necessary minimum level of treatment. Even assuming that half of mental health care is provided by non-specialists (Burns et al., 1993) and therefore not captured by the MDS+ psychological therapy item, the figures are low. Rates for HCMI residents under 65 (11% received treatment) might, with this assumption, approximate the once-a-month rate, but they are the only sub-group to approach this level of service. HCMI residents across all ages exhibited higher than average rates of behavioural problems and had high rates for receiving all types of psychoactive medications. However, they rarely received psychological treatment by licensed professionals. This suggests a possible preference in the service delivery system to use medication rather than explore other avenues to address mental health issues in the nursing home population.

These data raise several important related issues concerning the processes and outcomes of care for HCMI residents. For example:

- Do the health and functional outcomes of individuals with HCMI differ from those of similar residents without HCMI?
- Does the cost of care for individuals with HCMI differ from that for other individuals?
- How do we develop reimbursement systems that allow or create an incentive for facilities to provide necessary treatment to HCMI residents?
- How do we integrate concerns about the care of HCMI residents into quality assurance activities?
- Are differences in care strategies associated with age (e.g., provision of psychological therapy primarily to the under 65 group) based on sound clinical principles or some misunderstanding concerning the usefulness of these services when provided to older residents?
- What proportion of those with HCMI currently not receiving psychological therapy could benefit from its provision?
- How much of the use of psychoactive medications with this population is justified?
- How much of the variation in rates of psychological care is driven by facility and area characteristics, rather than individual characteristics?

Current reimbursement strategies of public and private payors seem to discourage, rather than encourage, treatment for mental health problems within the nursing home (Lombardo et al., 1996). The current nursing home survey process does not identify this population as a specific population whose care must be evaluated. Nor do many of the proposed quality assurance tools, such as HCFA's quality indicator system, focus specifically on the care provided to this population (Zimmerman et al., 1995).

To the degree that we lack research addressing these questions concerning the care of nursing home residents with a history of persistent or chronic mental illness prior to admission, we will be unable to determine whether care of appropriate quality is provided to this population. Moreover, to the degree that we lack payment and quality assurance systems and incentive structures that adequately recognize and address the needs of this population, nursing homes may fail to fulfill the requirement that all nursing home residents receive care that allows them to function at their maximum capacity.

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