Mental health treatment and services of Ohio nursing home residents

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The past decade has seen increasing public activity related to the mental health needs of nursing home residents and individuals at risk of nursing home placement. Related national policy reforms are an outgrowth of information about the prevalence of mental disorders in nursing homes and concern about the adequacy of nursing homes to meet mental health needs. The Nursing Home Reform Act of 1987 (amended in 1990) not only established screening criteria for appropriate nursing home placement of the mentally ill, but also established standards for treatment and services to meet mental health needs in nursing home care. This study examined factors related to the mental health treatment and services provided those severely mentally disabled individuals in nursing homes.

The following questions were explored:

1. How are mental health needs being addressed (What types of services/treatment are received?) for nursing home residents with major mental illness?

    a. How do nursing facilities function to address mental health needs of such nursing facility residents?

    b. How does the mental health system function to address mental health needs of such nursing facility residents?

2. What are the factors affecting the receipt of mental health services? (How can we predict who will receive which types of services?)

    Treatment and services were broadly defined to include interventions outside the

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parameters of nursing home daily program (e.g. socialization groups) and directed toward specific mental health objectives identified in residents' care plans.

Background

The 1985 National Nursing Home Survey (NNHS) found that of the total U.S. population of 1,491,400 nursing home residents, 65.3 % had at least one mental disorder, including organic brain syndrome, psychiatric illnesses, substance abuse related disorders, and mental retardation. (Hing et al, 1989) Other studies have found prevalence rates as high as 91 and 94%. (Chandler and Chandler, 1988; Parmalee et al, 1989) According to the National Center for Health Statistics (Strahan, 1991), using the 65.3% prevalence rate of the NNHS, more than seventy percent of this figure had organic brain syndrome (OBS), or nearly half of the total nursing home population. Thirteen percent of the total nursing home population had schizophrenia or other psychoses, and eleven percent had depressive or anxiety disorders. Many studies report the underdiagnosis of depression in nursing homes, perhaps occurring in 40% of nursing home residents. (Grossberg et al, 1990; Hyder and Blazer, 1983, p. 268; Parmalee et al, 1989) As a matter of fact, German et al (1986) and Sabin et al (1982) report that improper or underdiagnosis may occur in as many as two-thirds of nursing home residents with mental illnesses.

There appears to be a strong association between deinstitutionalization as a movement and the rise in prevalence rates in nursing homes. Goplerud (1979) drew three related conclusions: "The connection between the decline of elderly state-hospital residents and the increase in mentally disturbed nursing homes is direct....; nursing homes have become the largest single focus of care for the mentally ill in America....; the passage of Medicare and

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Medicaid create tremendous financial incentives to transfer patients, especially elderly mental patients, to private nursing homes in which states receive federal reimbursement for between 50% and 80% of the cost of treatment and maintenance."(p.316) Indeed, the 1987 federal Committee on the Budget, citing a General Accounting Office report, argued this association as it instituted a number of nursing home reform measures in the Nursing Home Reform Act of 1987, part of the Omnibus Budget Reconciliation Act (OBRA '87).[1] (Committee on the Budget, 1987).

The Nursing Home Reform Act

The Nursing Home Reform Act was developed from a number of recommendations made by the Institute of Medicine (National Academy of Sciences) and addresses a broad array of nursing home issues. Among the provisions of the Act specific to the needs of the mentally disabled is the requirement that all candidates for admission to Medicaid-certified nursing facilities be screened and assessed for mental illness and mental retardation prior to admission. The Preadmission Screening and Annual Resident Review (PASARR) reform is a product of nationwide concern about the prevalence of mentally disabled residents in nursing facilities and the capacity of nursing facilities to meet the mental health needs of severely disabled persons.[2]

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[1] Subsequently amended in OBRA '90 (Omnibus Budget Reconciliation Act of 1990, Pub.L.No.101-964, Title IV, Subtitle B, Part 5, Section 4801 Congressional Record 12485-12487 (Oct. 26, 1990)

[2] Hearings before the Subcommittee on Health and Environment of the Committee on Energy and Commerce, House of Representatives, One Hundredth Congress, April 24 and May 12, 1987: Serial No. 100-73. Institute of Medicine (National Academy of Sciences), "Improving the Quality of Care in Nursing Homes", March, 1986. National Senior Citizens Law Center, Washington, D.C. "Nursing Home Reform: The Omnibus Budget Reconciliation Act of 1987", March, 1988.

Preadmission screening and annual resident review is intended to prevent the inappropriate placement, or "trans-institutionalization" (Lamb, 1979), of individuals requiring "specialized services for mental illness or mental retardation".

For reasons that are part political[3], part theoretical, and part methodological, policy and program divisions have been made between individuals with organic brain syndrome, mental retardation, and mental illness, and these divisions are maintained in the PASARR reform. Individuals with primary diagnoses of organic brain syndrome are exempt from pre-admission screening and annual resident review under the reform, and in Ohio the mental illness and mental retardation screenings are processed through separate state authorities: Ohio Department of Mental Health and Ohio Department of Mental Retardation and Developmental Disabilities.

This study has as its focus the Mental Illness population. The population studied is the population of individuals identified in the Annual Resident Review (ARR of PASARR) process as having major mental illness without primary dementia, and who have been maintained in nursing home placement.

Ohio Pre-Admission Screening

In a two-year period, from its implementation January 1, 1989, through December 31,

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[3] Advocates for patients with Alzheimer's disease, for example, in an effort to destigmatize Alzheimer's disease, have actively resisted associations with "mental illness" and have lobbied to separate services and reimbursements for the two populations. (Fogel, 1989)

1990, the ODMH PASARR-MI Screening Unit processed 1861 cases (Level II) through screening following a preliminary (Level I) indication of mental illness in each case. From a universe of 6,665 Level I screens in this two-year period, approximately 1% of the clients were denied nursing facility admission at the NF recommendation level, and another 2% were denied following the Level II assessment. From a Level II population of 1861 (those receiving NF recommendation but requiring a Level II assessment), there were a total of 125 or 7% (9% in 1989 and 5% in 1990) adverse determinations, or denials. Therefore, of this Level II population, assessed due to their diagnosis of a major mental illness, a recent (within -two-year) history of mental illness, having a prescription for a major psychotropic drug, and/or presenting evidence of a major mental illness, fully 93% were approved for nursing facility placement.

Ohio Annual Resident Review

Federal law mandated through OBRA that as of April, 1990, all nursing facility residents admitted before 1989 must have been screened for mental illness and appropriateness of placement. Residents who met criteria for serious mental illness were thereafter subject to annual reviews to reassess needs and appropriateness of placement. Also subject to annual review are residents with serious mental illness identified pre-admission through PAS. Although not required by federal law, Ohio also requires that individuals not identified through either of these mechanisms but who develop symptoms of serious mental illness be identified through notification made to the state by the nursing home in which the individual resides.

Annual Resident Reviews in Ohio are conducted state-wide as part of an Integrated

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Field Review combining three federally mandated surveys: the Annual Resident Review of all Medicaid and pending Medicaid recipients; the Continued Stay Review (to determine continued Level of Care for Medicaid residents); and the review for Institutions for Mental Diseases (to identify facilities with an inordinate focus on mental health care, a designation which disqualifies residents from Medicaid reimbursement.)

To this point, there has been no means of assessing the impact of the dispositions on the mental health needs of the individuals screened and reviewed. That is, we do not know how the mental health needs of the 93% admitted to and maintained in nursing facility care are met in the course of their nursing facility placement.

It was never anticipated that pre-admission screening would overturn the practice of caring for mentally ill individuals in nursing facilities. For that matter, it is important to acknowledge that, as Shadish and Bootzin (1984) conclude, "many chronically ill psychiatric patients may have real, long-term custodial care needs, which few settings other than nursing homes seem to have the capacity to meet on a large scale." (p.1207) Indeed, many patients have dual diagnoses: chronic mental illness and chronic physical illness, which may be equally disabling and mutually complicating.

At best, pre-admission screening and annual resident review function to protect the most severely disabled from inappropriate placement while allowing the vast majority of those screened to proceed to, or remain in, nursing facility care. To enhance the appropriateness of that care, the Nursing Home Reform Act also instituted measures related to treatment of all nursing home residents, with significant implications for residents with mental illness. These measures are: minimum training requirements for nursing facility staff, strict requirements

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regarding the use of both chemical and physical restraints, and "quality of life"[4] language

requiring that nursing facilities provide the necessary care and services for residents to "attain

or maintain the highest possible mental and physical functional status" and "the highest

practicable physical, mental, and psychosocial well-being."[5]

A study by JM Richter (1989) identified a number of services to the mentally ill

provided by nursing home staff in a sample of 58 nursing homes. Aside from psychotropic

medications, treatment and services included standard nursing home "therapies" such as

activity therapy, reminiscence therapy, and reality orientation groups, as well as

psychotherapy and counseling, behavior modification, social rehabilitation programs, and

mental health support groups. Richter found a low level of services provided to nursing homes

by mental health centers, as well as minimal use of consulting mental health professionals,

including psychiatrists, psychologists, psychiatric nurses (In Richter's sample, none were

used), and psychiatric social workers.

The law requiring that nursing facilities provide the necessary care and services for

residents to "attain or maintain the highest possible mental and physical functional status" and

"the highest practicable physical, mental, and psychosocial well-being" is subsumed under the

heading "quality of life". The language of this requirement has been the subject of much

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[4] The law requires each nursing facility to "care for its residents in such a manner and in such an environment as will promote the maintenance or enhancement of the quality of life of each resident."(Sections 1819 and 1919 (b)(1)(A) of the Act.)

[5] Sections 1819 and 1919 (B)(2)(A)-(C) of the Act.

attention as different interest groups have struggled with its interpretation.[6] In the September 26, 1991 publication of the Federal Register, it is stated that "the appropriate means to assure that residents with mental illness or other illnesses receive the treatment they need is through enforcement of the requirements related to properly assessing care given and comparing the provision of services actually furnished to those required to meet the resident's identified needs."[7] It is now clear that as state surveyors evaluate each facility with a focus on resident "outcomes", it will be they, in the act of enforcement, who operationally define "necessary care and services", "highest possible mental status" and "highest practicable mental and psychosocial well-being", as well as "appropriate treatment and services".

Theoretical Framework

In practice, the central indicator of outcome may be the behavior (which broadly includes affective responses, social adjustment, morale, and performance of activities of daily living) of individuals receiving services. Using an ecological model, this study examined the relationshipof cognitive and health (competence) to resources and services (environment) to behavior. M.Powell Lawton (1979; 1980;1982), in his environmental studies on aging and adaptation, uses the equation $B = f(P, E \text{ and } P \times E)$, that is, behavior is a function or outcome of person (competence), environment, and the relationship between person and environment. This study will extend that equation to a more transactional and reciprocal model which

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[6] Mental Health Law Project, Mental Disability Law and the Elderly, Issue Paper #1: "Changes in the Nursing Home Preadmission Screening and Annual Resident Review Process for Older People with Mental Disabilities", Washington D.C., January, 1991.

[7] HCFA, September 26 FR Preamble, pp.48825-48880, 1991.

suggests that behavior, person, and environment are mutually influencing. (See Figure 1)
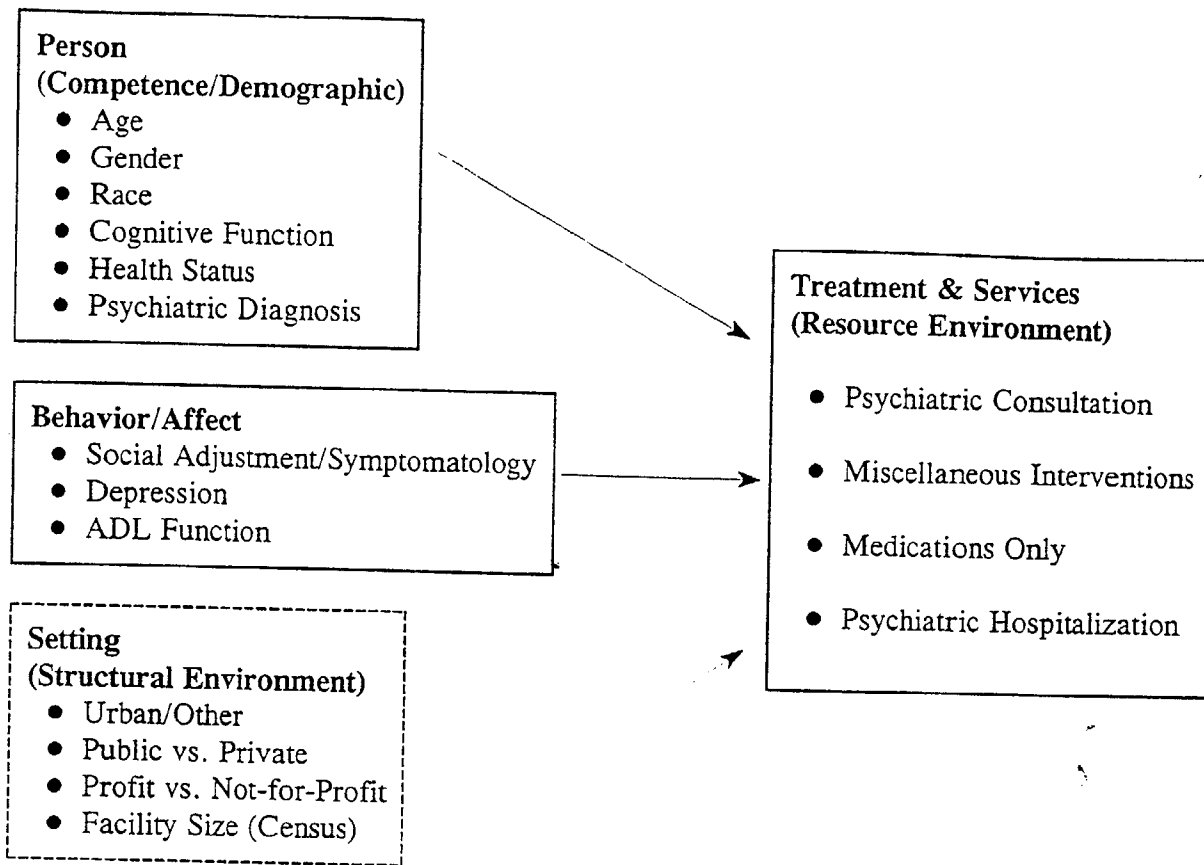
Figure 1
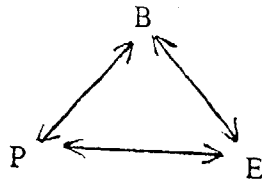
Whereas the dependent variable in Lawton's model is behavior, it is proposed here that behavior may also be an independent variable, and that person and environment each may be both dependent and independent variables as well. This argument is supported by Willems (1977) who writes that persons, environments and behaviors are "interdependent" and "mutual" in relationship, and Scheidt and Windley (1985), who write that "individuals and environments are mutually capable of eliciting responses from one another". (p.246) Relying on the reciprocal model, this study treats environment as the dependent variable and person and behavior as independent variables while using Lawton's conceptualization, enhanced by the work of Scheidt and Windley, of each variable: person, environment and behavior. Competence is a "profile of a person's capacities" (Scheidt and Windley, 1985) and includes physical functioning (biological health, sensory and perceptual capacities, and motor skills), cognitive capacity, and ego strength. Adaptive behavior, according to Lawton, may be "outwardly observable motoric behavior" or an "inner affective response", including morale. (Lawson, 1982, p.43)

Environment as resources: treatment and services

According to Lawton "the most salient single aspect of the older person's living environment aside from...personal habitat is the resources available".(Lawton, 1980, p.277)

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Person
(Competence/Demographic)
- Age
- Gender
- Race
- Cognitive Function
- Health Status
- Psychiatric Diagnosis

Behavior/Affect
- Social Adjustment/Symptomatology
- Depression
- ADL Function

Setting
(Structural Environment)
- Urban/Other
- Public vs. Private
- Profit vs. Not-for-Profit
- Facility Size (Census)

Treatment & Services
(Resource Environment)

- Psychiatric Consultation
- Miscellaneous Interventions
- Medications Only
- Psychiatric Hospitalization

Conceptual Model of Treatment and Services Receipt

Figure 2

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Definition of Latent Variables

Independent variables: competence and behavior

Competencve and behavior are examined in this study as independent variables. variables. Together, they produce a profile of the individual subject to the receipt of treatment and services (dependent variable). Lawton writes that competence is "intrinsically diffIcult to measure and operationally impossible to distinguish from behavior in an evaluative context". (1982, p.38)

Competence/Demographic

In this study, competence variables include: physical health status; cognitive functioning; psychiatric diagnosis (schizophrenia, bipolar disorder, and major depression and schizoaffective disorder); gender, age, and race. Applications of the ecological model have used as competence variables chronological age (Lawson, 1975), socioeconomic status (Mangum, 1971), diagnoses (Goldfarb et al, 1972) and general health (Lawson and Simon, 1968; Rosow, 1967). Lawton (1982) suggests gender (as a social status variable) may be used as a measure of competence. Although subsumed under competence in this study, gender, age, and race are best considered demographic variables; no assumptions are made about gender, age, and race effects on individual adaptive capacity.

Behavior

Behavior has been broadly defined, both by Lawton and in this study as not only "motoric" behaviors, but social behaviors, affective response, morale, and performance (e.g. self-care). Behavior or adaptiveness variables used in this study are: mood, social adjustment (including both motoric and social behaviors as well as affective responses) and performance

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of activities of daily living (ADL), or self-care.

Independent variable: setting (structural environment)

Characteristics of the communities (urban, suburban, rural) and nursing facilities were gathered for descriptive purposes. These factors were treated as characteristics of the individual residents and tested as independent variables to determine their effect in predicting treatment and services. Nursing facility characteristics include: size (census); facility type (public vs. private, for-profit vs. not-for-profit); percent MI population (excluding primary dementia) and percent Medicaid residents in facility.

Dependent variable: Environment as treatment and services

Treatment and services in this study include: mental health evaluation; case management; day treatment; sheltered workshop; mental health services (designated as in or out of nursing facility), e.g. care by psychiatrist; care by other mental health professionals; group therapies; indigenous nursing facility services beyond the conventional activities interventions and directed toward mental health problems identified in the plan of care; and restraint interventions, both chemical (medications) and physical restraints. Other treatment and services include acute psychiatric hospitalization and emergency room visits.

Sample

Multi-stage cluster sampling of nursing homes in a fifteen county area was used to obtain a sample of 127 residents from 61 nursing facilities. The sample was identified through the Annual Resident Review records for the counties included in the study (Adams, Brown, Butler, Champaign, Clark, Clermont, Clinton, Darke, Fayette, Greene. Hamilton, Highland, Jackson, Montgomery, and Warren). This composition of counties includes a range of urban to

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rural communities generally representative of the entire state. Selection criteria for individual participants included diagnosis of at least one of four mental illnesses, without a primary dementia: schizophrenia, schizoaffective disorder, bipolar disorder, and/or major depression, as identified on the Annual Resident Review.

All participants were Medicaid recipients. The sample represents a wide range of age, mental status, physical health and personal care functioning. The mean age of the sample was 68, and mean educational level was tenth grade. Twenty percent of the sample were African-American (n=25). Seventy-three percent were female. The sample had a thirty-year average chronicity of mental illness. Nearly half of the sample (47%) had a history of state hospitalization. Fifty-two percent of the sample had a primary diagnosis of schizophrenia, while 48% had one of three affective disorders: major depression (21%), bipolar disorder (19%) and schizoaffective disorder (8%). For more than half of the sample (54%), the psychiatric diagnosis was primary, that is, it superseded any medical illness diagnosis as recorded by the physician. The mean length of stay in the nursing facilities was 65 months (median = 42 months).(See Study Sample Profiles, Tables 1 and 2)

Table 1

Study Sample Profile			State Nursing Facility Profile	National Nursing Facility Profile
	Mean	Median		
Age	68	69/70	75-84 (Median)	79 (Mean)
Education	10	9/10		
Mental Illness Chronicity	30 years	28/30 years		
Length of stay	65 months	3.5 years		1.7 years
Percentages				
Female	73%		71%	75-80%
White	79%		91%	93%
Psychiatric Diagnosis is Primary	54%			
History of State Hospitalization	47%			

Table 2

Study Sample Profile Primary Psychiatric Diagnosis	
Schizophrenia	52%
Major Depression	21%
Bipolar Disorder	19%
Schizoaffective Disorder	8%

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Table 3

Study Sample Admission Source	
Admitted From:	
Medical Hospitalization	36%
Home	18%
Another Nursing Facility	16%
State Hospital	13%
Private Psychiatric Hospitalization	11%
Other (Group home, foster family home, etc.)	6%

The sample was represented by a variety of sources of admission to the nursing facility. Over one-third (36%) were admitted from a medical hospitalization, 16% from another nursing facility, 13% from a state hospital, 11% from a private psychiatric hospitalization, 18% from home, and 6% from another source, such as a group home or a foster family home. (See Table 3)

Data collection

All data were gathered on-site by either the Principal Investigator or one of two research assistants and included both a records audit and the face-to-face administration of research instruments with each client and indicated staff member, family member, or case manager, depending on appropriateness and availability. By law, nursing facilities are required

to document assessments and care in detailed and relatively standardized form, facilitating an organized data collection process. Data were collected from the PASARR summaries (in all charts), Minimum Data Sets or other assessment instruments, care plans, progress notes (all disciplines), physicians' orders (including medication orders), History and Physicals, discharge plans and summaries, and transfer orders and summaries.

Data were obtained from multiple sources identified below. Competence data, as stated earlier, include age, gender, race, psychiatric diagnoses, chronicity, cognitive functioning, and physical health. Behavior data include a measure of social adjustment (behaviors, affective symptoms, and general psychopathology), a measure of ADL performance, a depression inventory, and a measure of morale. Treatment and services received within a one-year period were counted in the study. Treatment/services data included type and amount of services, including therapies, psychiatric consultations, in-facility vs. out-of-facility services, and medications.

It is important to note that an effort was made to identify instruments sensitive to the range of ages in this population. Some of the instruments selected were designed for the elderly, i.e. the OARS and the Philadelphia Geriatric Center Morale Scale, but can be used with younger adults.

Measures of competence variables included: Physical Health, OARS (Older Americans Research and Service Center Instrument) (Duke University, 1978); ADL function/performance, OARS; Cognitive Function, Modified Mini-Mental State Exam (3MS) (Teng and Chui, 1987) Measures of behavior/mood variables included: Social adjustment and behaviors, Katz Adjustment Scale (Katz et al, 1963); Mood, Geriatric Depression Scale

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(Brink, et al, 1982); Morale, Philadelphia Geriatric Center Morale Scale (Lawson, 1975).

The Katz scale classified into three dimensions of symptoms and behaviors as follows:

I) Social Obstreperousness, "ranging from manifest belligerence and boisterousness through negativism and covert hostility";

II) Acute Psychoticism, involving "bizarre delusional behavior, panic apprehensive reactions, and periodic agitation";

III) Withdrawn Depression, including "helpless, dependent behavior with retardation and withdrawal."(Katz and Lyerly, p. 531) .

Data Analysis

This research tested the proposition that differences in competence and behaviors would explain variations in the type and level of treatment and services. We also tested the proposition that differences in nursing facility characteristics would explain variations in the type and level of treatment and services provided. Descriptive and bivariate analyses and inferential analyses, including logistic regression, were conducted. A summary "profile" of the sample was generated from standard descriptive data (distributions, means, measures of variation) on competence, behavior, and treatment/service variables, as well as setting characteristics.

Correlations were calculated among the behavior, competence, structural environment and treatment/service variables that were dichotomous, interval-level, or quasi-interval. These correlations were also used to avoid problems of multicollinearity in the multivariate analyses, discussed below.

Inferential analyses were used to answer the following: What competence, behavior,

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and structural environment variables predict the type and level of treatment and services for the nursing facility sample? The dependent variables were coded dichotomously, with 1 indicating receipt and 0 indicating non-receipt of treatment/services. We used a series of multiple regression (and logistic regression in the case of dichotomous dependent variables) models. First, each treatment and service variable was regressed on all of the competence variables (minus those eliminated in the case of high multicollinearity). The most powerful competence predictors of each type of treatment and service were identified. These steps were repeated for the behavior variables, and for the setting variables. Ultimately, the strongest predictors from the competence and behavior categories were entered together into a single model. For each treatment and service variable, we identified a set of the strongest predictors, thus learning something about who receives which treatments and services. While this approach is arguably data-driven and somewhat cumbersome, it yielded valuable information.

Findings

Competence

Demographic characteristics of the sample were provided earlier. In the competence dimension, approximately thirty-five percent (35.2%) of the sample scored cognitively impaired using the Modified Mini-Mental Status Exam (3MS). Only four percent of the sample enjoyed excellent to good physical health, while the vast majority (71%) were rated mildly to moderately physically impaired, and 25% were rated severely to totally physically impaired.

Behavior/mood

Activity of Daily Living (ADL) function assessment identified 19.7% of the sample not impaired, 53.5% moderately impaired, and 26.8% severely to totally impaired. High ratings

of social obstreperousness were assigned to 36.3% of the sample; 34.5% had high ratings of acute psychoticism; and 40.8% of the sample were rated high in withdrawn depression. Ratings in these areas were not mutually exclusive.

Regarding mood, measures of depression and morale were extremely highly correlated (.80, $p < .001$), and morale was excluded as an independent variable upon this finding. As noted earlier, much is made in recent literature of the special problem of identifying and treating depression in the nursing home population, and an examination of depression findings deserves special mention here. Twenty-one percent of this sample had a diagnosis of major depression. Forty-two percent of the sample measured depressed on the Geriatric Depression Scale using a conservative cutoff score (11). There was some, but not complete, overlap in these two groups. Thirty percent of those who scored depressed had a primary diagnosis of major depression, while fifteen percent of those who did not score depressed had a primary diagnosis of major depression. Said another way, seventy percent of those who scored depressed did not have a primary diagnosis (but may have had a secondary diagnosis) of major depression, and some people with a diagnosis did not have measurable symptoms (perhaps due to related treatment). As will be revealed below, neither a diagnosis of depression nor the condition of depression was a significant factor in the receipt of any form of treatment or services in this study.

Setting

Slightly more than forty (40.2) percent of the sample resided in facilities in urban settings. Because the distinction between suburban and rural settings was sometimes ambiguous, these were combined into one category (not urban) where the remaining 59.8% of

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the sample resided.

The vast majority of the sample (85.8%) lived in private (vs. public) facilities; the vast majority (78.0%) lived in for-profit facilities. Distribution of the sample among facility sizes was fairly even: 29.9% of the sample lived in small (<50 census) facilities, 35.4% in mediumsized facilities (50-99), and 34.6% in large facilities (100+). Two descriptive characteristics of facilities, percent Medicaid residents and percent residents with a major mental illness, were so unevenly distributed that they had to be discarded as independent variables. Only 7.1% of the sample resided in facilities with fewer than 50% Medicaid residents; 86.6% of the sample resided in facilities with fewer than 25% residents with major mental illness.

Treatment and Services

It must be stated at the outset that while treatment and services data were gathered to facilitate detailed accounts of frequency, recency, types, and sources (e.g. community vs. facility-based) of interventions in all areas of treatment and services, it became necessary for purposes of analysis to collapse treatment and services into the four simple categories profiled below. Simply put, specific kinds of interventions were received by so few people or were received so infrequently that multiple classifications of type and level of treatment/services were not meaningful. Out-of-facility services were very rare, with the obvious exception of hospitalization. The four categories of treatment and services are: psychiatric consultation, miscellaneous treatment/services, psychiatric hospitalization. and medications only. (See Figure 3)

FIGURE 3
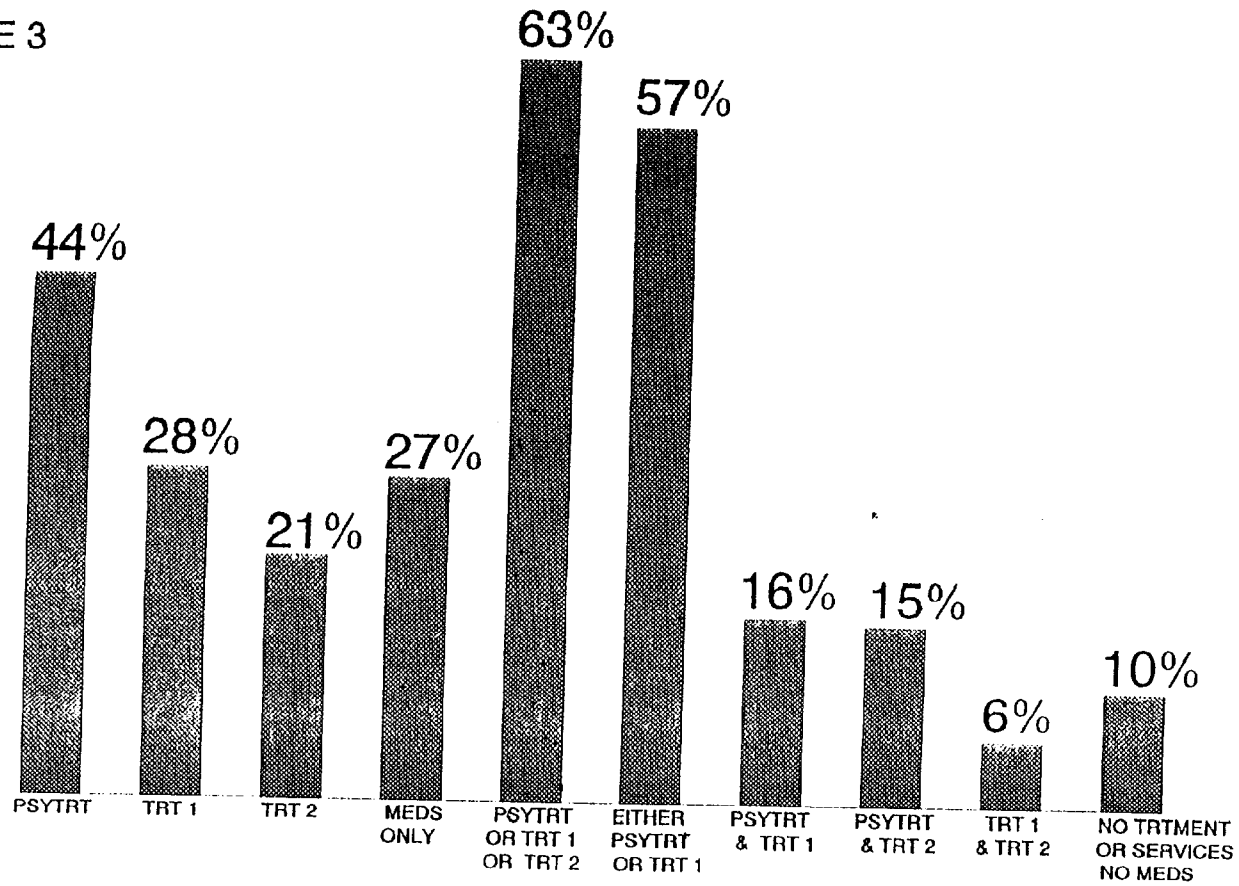
PSYTRT — Psychiatric Consultation
TRT 1 — Miscellaneous Treatment / Services
TRT 2 — Psychiatric Hospitalization / Acute
MEDS ONLY — Psychotropic Medications But No Other Treatment Or Services

Receipt of psychiatric consultation

The most frequent form of treatment and services identified was consultation with a psychiatrist at least one time over a one-year period. Forty-four percent (44.1%) of the sample had received consultation with a psychiatrist (overwhelmingly provided in-house), and not including hospitalization. The length and/or nature of these consultations was usually not identifiable through resident records. Consultation with any other type of mental health professional (e.g. psychologist, clinical social worker, etc.) occurred so infrequently as to be negligible.

Differences were revealed in the characteristics of those individuals receiving psychiatric consultation. The more interesting differences were in age, in cognitive and ADL function, behavior, and in race. Only fourteen percent of the old-old (85+) in the sample saw a psychiatrist, while 55.8% of residents under 65 did.

Fifty-two percent (51.9%) of residents who were not cognitively impaired saw a psychiatrist, while only 31.8% of the cognitively impaired residents received psychiatric consultation, a statistically significant difference ($p < .05$). Sixty-eight percent of the residents not impaired in ADL function saw a psychiatrist, compared to 32.4% of residents with severe to total ADL impairment ($p < .05$). Sixty percent of residents with a high level of social obstreperousness and 59.1% of residents rated high in acute psychoticism saw a psychiatrist ($p < .01$).

Race differences in the receipt of psychiatric consultation were also statistically significant. Fifty-one percent of white residents saw a psychiatrist, compared to only 16.0% of

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African-Americans (p<.01). Even more revealing were race differences in the follow-up of psychotropic medication prescriptions by a psychiatrist. While psychotropic medications were initially prescribed by a psychiatrist (perhaps outside the one-year period, and perhaps in psychiatric hospitalization) for 71% of whites and 60% of African-Americans, the rate of psychotropic medications continued by a psychiatrist at some time in the one-year period of nursing home care was 38.5% for whites and only 4.2% for African-Americans (p < .01). (See Tables 4, 5, and 6)

Miscellaneous treatment/services

Twenty-eight percent (28.3%) of the sample received at least one intervention of a wide variety of treatment and services (not including medications or hospitalization). These included a highly inclusive range of services, combined for analysis because of the large number of services and the small number of subjects receiving each one. Services in this category excluded psychiatric consultation, psychotropic medications, and psychiatric hospitalization; any other form of mental health intervention was liberally included in this category, from day treatment, to group psychotherapy, to rehabilitation workshops, to individual psychotherapy with a mental health professional other than a psychiatrist, to case management visits.

No factors emerged as significantly associated with receipt of treatment/services in this category, with the exception of age. Residents under age 65 and residents 75 or over received services at a lower rate than residents age 65-74. (<65=27.9%, 65-74=42.5 %, 75 + = 15.9%; p < .05). (See Tables 4, 5, and 6)

Table 4

Percent Receiving Treatment/Services
Competence/Demographic Variables

	n=	Psychiatric Consultation	Miscellaneous Services	Psychiatric Hospitalization	Medications Only
Total Sample	127	44.1%	28.3%	21.3%	26.8%
Gender					
Female	93	45.2%	30.1%	17.2%	29.4%
Male	34	41.2%	23.5%	32.4%	25.8%
Age					
<65	43	55.8%	27.9% *	32.6%	18.6%
65-74	40	40.0%	42.5% *	15.0%	32.5%
75+	44	36.4%	15.9% *	15.9%	29.5%
Race					
Black	27	16.0% **	26.5%	8.0%	24.0%
Other	100	51.0% **	36.0%	24.5%	27.5%
Cog. Imp.					
Impaired	44	31.8% *	31.8%	13.6%	27.3%
Not Impaired	81	51.9% *	25.9%	25.9%	25.9%
Health Status					
Exc.	5	40.0%	40.0%	0.0%	26.0%
Mod.	96	43.8%	31.3%	20.8%	25.0%
Sev.	26	40.2%	15.4%	26.9%	34.6%
Psych. Diagnosis					
Schizophrenia	66	37.9%	27.3%	13.6% *	28.8%
Affective Disorder	61	50.8%	29.5%	29.5%	24.6%

*p<.05   **p<.01

Table 5

Percent Receiving Treatment/Services
Behavior/Mood Variables

	n=	Psychiatric Consultation	Miscellaneous Services	Psychiatric Hospitalization	Medications Only
Total Sample	127	44.1%	28.3%	21.3%	26.8%
Symptomatology					
Social Obstreperousness	45	60.0% **	33.3%	22.2%	17.8%
Acute Psychoticism	44	59.1% **	29.5%	25.0%	20.5%
Withdrawn Depression	47	53.2%	34.0%	21.3%	21.3%
ADL Impairment					
Not Impaired	25	68.0% *	28.0%	32.0%	12.0%
Low/Mod. Imp.	68	41.2% *	27.9%	16.2%	30.9%
High/Total Imp.	34	32.4% *	29.4%	23.5%	29.4%
Depression (by score)					
Depressed	50	31.6%	26.3%	21.1%	24.1%
Not Dep.	68	46.3%	28.7%	21.3%	42.1%

*p<.05   **p<.01

Table 6

Percent Receiving Treatment/Services
Setting Variables

	n=	Psychiatric Consultation	Miscellaneous Services	Psychiatric Hospitalization	Medications Only
Total Sample	127	44.1%	28.3%	21.3%	26.8%
Facility					
Public	18	33.3%	11.1%	5.6%	50.0% *
Private	109	45.9%	31.2%	23.9%	23.9% *
Profit	99	44.4%	24.2%	22.2%	24.2%
Not-For-Profit	28	42.9%	42.9%	17.9%	35.7%
Urban	51	37.3%	37.3%	13.7%	27.5%
Not Urban	76	48.7%	22.4%	26.3%	26.3%
Census					
<50	38	34.4%	37.5%	21.9%	28.1%
51-99	45	55.0%	25.0%	22.5%	22.5%
100+	44	41.8%	25.5%	20.0%	29.1%

*p<.05   **p<.01

Psychiatric hospitalization

Twenty-one percent (21.3%) of the sample were discharged from the nursing facility to acute psychiatric hospitalization at least one time over a one-year period. (There were no discharges to state hospitals in the sample.) The only factor significantly associated with psychiatric hospitalization was psychiatric diagnosis. Residents with schizophrenia were hospitalized at a lower rate (13.6%) ($p < .05$) than residents with affective disorders (29.5%). Of the residents with affective disorders, those with bipolar disorder were hospitalized at a higher rate (37.5%) than residents with major depression (25.9%) and residents with schizoaffective disorder (20.0 %). (See Tables 4, 5, & 6)

Medications only

Twenty-seven percent (26. 8%) of the sample received psychotropic medications only; that is, the residents were currently taking prescribed medications but had not seen a psychiatrist, had not received other mental health interventions, and had not been hospitalized at any time over a one-year period. While no competence or behavior factors were associated with receipt of medications only, 50.0% of residents of public facilities received medications only, as compared to 22.9% of residents of private facilities ($p < .05$).(See Tables 4, 5, and 6)

No treatment or services

Finally, ten percent of the sample received no form of treatment or services over a one-year period; that is, they received no psychiatric consultation, no other mental health interventions, no hospitalization, and no psychotropic medication. With the exception of these last two categories, categorizations profiled above are not mutually exclusive. (Figure 3)

What factors predict receipt of treatment and services?

Psychiatric consultation

Using logistic regression with the three categories of independent variables (competence/demographic, behavior/affect, and setting) we were able to identify predictors of the receipt of treatment and services. Odds ratios were calculated to estimate the probability of a resident's receipt of each category of treatment/services. (See Table 7) Odds ratios are calculated from a base of 1.0. An odds ratio of 2.31 for no cognitive impairment (independent variable) means, using these data, that someone who is not cognitively impaired is 2.31 times more likely to see a psychiatrist (dependent variable) than someone who is cognitively impaired. An odds ratio under 1.0, for example, .30, is subtracted from the base of 1.0 to indicate a 70% less likelihood of receiving treatment/services.

In the competence/demographic category, the single significant predictor of receipt of psychiatric consultation was the absence of cognitive impairment. Residents who were not cognitively impaired were 2.31 times more likely than cognitively impaired residents to receive at least one psychiatric consultation in a one-year period.

Two factors in the behavior/affect category predict psychiatric consultation: a high rating on the Social Obstreperousness sub-dimension of the Katz scale and the absence of ADL impairment. Residents rated high in socially obstreperous behaviors were 2.9 times more likely to see a psychiatrist than not. Residents with mild to moderate ADL impairment were 70% less likely to see a psychiatrist, and with severe to total ADL impairment 78% less likely, than residents with high ADL function.

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Table 7

<div style="text-align:center">

Receipt of Psychiatric Consultation
Odds Ratios

</div>

(Competence/Demographic variables entered: gender, age, race, cognitive function, health staus, psychiatric diagnosis)

	Unstandardized Logit Coeffecients	Odds Ratio	Wald Chi Square
Not Cognitively Impaired	(.39)	2.31 *	4.53

(Behavior/Affect variables entered: high in social obstreperousness, acute psychoticism, and withdrawn depression; depression; ADL function)

	Unstandardized Logit Coeffecients	Odds Ratio	Wald Chi Square
High in Soc. Obs.	(.40)	2.91 **	7.10
ADL Function			
Not impaired		*	7.38
Low/moderate	(.51)	.30 *	5.56
Sev/total	(.59)	.22 *	6.51

Note: No Setting variables had statistically significant odds ratios.

<div style="text-align:center">

Receipt of Psychiatric Consultation
Final Logistic Regression Model
Odds Ratios

</div>

(Variables entered: Cognitive function, high in social obstreperousness, ADL function)

	Unstandardized Logit Coeffecient	Odds Ratio	Wald Chi Square
Not Cognitively Impaired	(.43)	2.91 *	6.29
High in Soc. Obs.	(.41)	3.27 **	8.56

* $p<.05$ ** $p<.01$

No setting factors emerged as predictive of receipt of psychiatric consultation. When predictive competence and behavior factors were entered in a final logistic regression model, social obstreperousness emerged as the most powerful predictor of receipt of psychiatric consultation (3.3 times more likely), and the absence of cognitive impairment the second most powerful (2.9 times more likely). ADL function was no longer predictive using this model.

Miscellaneous treatment/services

The only factor predicting the receipt of at least one intervention in this category was age. The relationship of this category to age is curvilinear. That is, residents age 65-74 were nearly two times *more* likely and residents age 75 and over were 59% *less* likely to receive at least one of these services than residents under age 65. As with psychiatric consultation, no setting factor was predictive of receipt of miscellaneous services.(See Table 8)

Psychiatric hospitalization

Younger age and affective disorder predicted psychiatric hospitalization. Residents age 65-74 were 69% less likely and those age 75 and over were 71% less likely to be hospitalized than residents under age 65. Residents with a primary diagnosis of schizophrenia were 68% less likely than residents with affective disorders to be hospitalized. Once again, no setting factors were predictive of psychiatric hospitalization. (See Table 9)

Medications only

While no setting variables were significantly predictive of any of the above categories of treatment/services, one setting variable, public vs. private facility, did significantly predict the receipt of psychotropic medications only. Residents of private facilities were 70% less

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Table 8

Receipt of Miscellaneous Treatment/Services
Odds Ratios

(Competence/Demographic variables entered: gender, age, race, cognitive function, health status, psychiatric diagnosis)

	Unstandardized Logit Coefficient	Odds Ratio	Wald Chi Square
Age:			
<65		*	7.81
65-74	(.47)	1.85	1.72
75+	(.56)	.41	2.62

* p<.05   ** p<.01

Note: No Behavior/Affect variables had statistically significant odds ratios.

Note: No Setting variables had statistically significant odds ratios.

Table 9

Receipt of Psychiatric Hospitalization
Odds Ratios

(Competence/Demographic variables entered: gender, age, race, cognitive function, health status, psychiatric diagnosis)

	Unstandardized Logit Coefficient	Odds Ratio	Wald Chi Square
Age:			
<65		*	6.43
65-74	(.57)	.31 *	4.12
75+	(.56)	.29 *	4.84
Schizophrenia	(.48)	.32 *	5.65

* p<.05   ** p<.01

Note: No Behavior/Affect variables had statistically significant odds ratios.

Note: No Setting variables had statistically significant odds ratios.

likely to receive medications only than residents of public facilities. No competence or behavior variables were significantly associated with the receipt of medications only. (See Table 10)

Table 10

Receipt of Medications Only
Odds Ratios

(Setting variables entered: public v. private, profit v. not-for-profit, urban/not, census)

	Unstandardized Logit Coefficient	Odds Ratio	Wald Chi Square
Private Facility	(.52)	.30 *	5.36

* $p<.05$ ** $p<.01$

Note: No Competence/Demographic variables had statistically significant odds ratios.

Note: No Behavior/Affect variables had statistically significant odds ratios.

Summary, Conclusions, and Policy Implications

This study has contributed to a first step in exploring the competence and behaviors of mentally ill nursing home residents, their facility settings, and the relationship of these factors to receipt of treatment and services. It provides a rough profile of the types and level of treatment and services received and begins to identify risk factors for undertreatment.

The study did not measure treatment availability, appropriateness, or outcome. Notions of undertreatment can only be inferred from the data, because a reliable measure of need for treatment was not applied and therefore could not be tested against treatment received. We can only assume that individuals with a major mental illness (with an average chronicity of thirty years) would benefit at the very least from regular evaluation and follow-up, but would likely require or benefit from more sustained treatment/services. The data appear to indicate, at least supeficially, that for a substantial portion of the sample, psychiatric illness was the significant factor contributing to dependency on nursing facility care. This discussion is founded on the conclusion, therefore, that given the assumed need and the identified type and level of treatment and services received, the study sample, representative of similar nursing home residents in Southwest and Southcentral Ohio, was undertreated.

Because setting variables were insignificant both in their relationship to other independent variables and to all of the dependent variables except one, we can point with confidence to the relative importance of individual factors in predicting treatment and services, regardless of setting. This merits further exploration, however. This study primarily examined differences between individuals, not between nursing facilities.

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What are the individual factors that appear to predict treatment/services or indicate risk of undertreatment?

Cognitive function

The consideration of good cognitive function as a predictor, and cognitive impairment as a risk factor, for receipt of psychiatric consultation raises important issues that are beyond the scope of this report. While it may be argued that residents with intact cognitive skills are more amenable to talk therapy than their cognitively impaired counterparts, it is difficult to identify any other service provided by a psychiatrist from which a person with dementia could not benefit. Given issues of comorbidity with depression, comorbidity with physical illness, reversible impairments, polypharmacy, etc., talk therapy may be the least of the needs for psychiatric consultation in residents with dementia.

As most psychiatric referrals are made by the nursing facility staff, it is also important to examine the knowledge and beliefs of the staff regarding the place of psychiatry in treating dementia and its complications. As importantly, the knowledge and beliefs of psychiatrists themselves regarding their roles and capacities in the treatement of dementia should be examined.

Beyond these considerations, however lies the larger issue of public policies that function to segregate our thinking about and responses to mental disorders such as Alzheimer's Disease and schizophrenia. The Nursing Home Reform Act itself contributes to this segregation by excluding individuals with a primary dementia from the screening and review mandated for other mental disorders. The findings of this study suggest a need for further exploration in this area on both micro and macro levels.

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"Squeaky-wheel" behaviors

Findings from this study point to what is best described as a "squeaky wheel" phenomenon of treatment provision. Social obstreperousness, the most powerful predictor of receipt of psychiatric consultation, is characterized by belligerent, boisterous, negative, and/or hostile behaviors. When coupled with high ADL function, which includes freedom of mobility, the socially obstreperous resident is likely to engage in what are commonly called "disruptive behaviors", leading to psychiatric consultation. This phenomenon also merits further exploration.

Withdrawn behaviors

Residents exhibiting a high level of withdrawn depression ("helpless, dependent behavior with retardation and withdrawal") receive psychiatric consultation at a sign)ficantly lower rate (37.3%) than their socially obstreperous counterparts (65.9%). Because this variable was not significantly correlated with depression, it should not be confused as such. Its distinguishing features and the implications they have for reduced psychiatric consultation should be further examined.

Race

Preliminary analysis of the data seemed to indicate that race (being black) is a risk factor for undertreatment; however, when old age, cognitive impairment and ADL impairment (areas of disproportionate representation for blacks) are factored in, the sign)ficance of race is diminished. Even given this, and given the small sample size, the differences between blacks and whites particularly in receipt of psychiatric consultation and follow-up, merit notice and further exploration.

Gender and age

Findings suggest consistently unremarkable gender differences across all variables, both independent and dependent, which may itself be noteworthy. Findings related to age, particularly the curvilinear relationship to receipt of miscellaneous interventions also merit further analysis. As with gender, the absence of significant differences in association of age with other variables is noteworthy.

Policy, Research and Practice implications

At both State of Ohio and national levels, considerable resources have been invested in implementing the screening and review requirements of the 1987/90 nursing home reforms. The picture of nursing-facility-based treatment and service provision drawn from this study, and particularly its suggestion that treatment and services are minimally provided this population, should inform discussions of priorities in budget and programming for long-term health and mental health care.

Nursing facility administrators and staff need to become educated and sensitized to service patterns and biases. Training and education efforts for all related professionals should address the apparent biases identified in this study. Continued attention should be paid in policy, practice and research to the needs of the "quiet" (particularly the quietly depressed and withdrawn) nursing facility resident. The risk of under-identification and under-treatment of these residents has been identified in a wide array of literature and appears supported in this study.

Hospitalization rates of nursing home residents with mental illness suggest a need for further study and analysis. Given the relative expense of acute care hospitalization, and given

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the objective of stability and continuity of care in nursing homes, all measures should be taken to avoid unnecessary hospitalization. A study to examine the impact of increased and improved treatment and services in nursing facilities on the rate of hospitalization is warranted.

A sustained discussion of the shared role of both the nursing facility industry and the state and community mental health systems in meeting the long-term-care needs of residents with dementia, with another mental disorder, or with a combination of disorders is called for. It is clear from this study that, with the exception of screening and review, the state and community mental health systems remain minor players in responding to the mental health needs of nursing facility residents with mental illnesses, although exceptions exist from county to county and from facility to facility. Discussions clarifying the related roles and boundaries of nursing facilities and mental health systems are also called for.

Shadish et al (1981) write, "When a setting houses as many former mental patients as do nursing homes, it deserves particular attention. Increased research concerning the role of nursing homes...can provide an important source of data for our policy towards chronic mental patients and our theories of community care...." (p.618) This study represents a fundamental step in that direction.

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