

AFFECTIVE STATES, NINR

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## BEHAVIORAL PROBLEMS/ AFFECTIVE STATES

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Concern for deficiencies in quality of care and quality of life in long-term care facilities has become a central feature of recent Federal legislative and regulatory actions. Declining quality and perverse fiscal incentives have been universally recognized, as has the absence of effective care provision models for meeting the needs of different types of facility residents. The legacy of mental facility deinstitutionalization, and a widespread belief that active treatment programs are unavailable following admission, have contributed to a refocused attention on the mental health needs of residents in long-term care facilities.

The deinstitutionalization of elderly mental residents resulted in the emergence of the long-term care facility as the "backbone" of mental health care for elders in the 1970's and early 1980's (Johnson & Grant, 1985; Gatz, Smyer, & Lawton, 1980). Its future role, however, is uncertain. The Congressionally mandated Pre-Admission Screening and Annual Review (PASARR) initiative for persons with mental disorders, with the accompanying Health Care Financing Administration (HCFA) Guidelines, specifies parameters under which active treatment programs are required. Assuming that PASARR is successful, the future role of these facilities is likely to focus even more than at present on the care of cognitively impaired elders with observable behavioral and mood status problems; for example, those who exhibit signs of sad mood, anxiety, anger, inappropriate social behavior, acute confusional states (i.e., delirium), or other signs of psychic stress. Such mental health problems are common in nursing homes, and serious questions exist concerning the capacity of these nursing facilities to devise effective treatment programs for such residents. The research agenda is relatively clear. Does PASARR result in an altered mix of residents in nursing facilities? Do elders who no longer enter nursing facilities receive active treatment elsewhere and is that care effective? Can nursing facilities effectively deal with the needs of those who have cognitive and behavioral problems, including those with and without severe functional co-morbidity? What is the appropriate role for special care units (SCU's) that are designed for the cognitively impaired? Are there effective strategies to deal with the interpersonal and less intensive mood problems of elders in the community? Although nursing facilities were traditionally intended for persons with chronic physical and cognitive ills, evidence of the prevalence of mental health problems in nursing facilities is unassailable. Overall, studies have suggested that as few as 30 percent of residents to as many as 85 percent of residents have mental health problems (Hing, 1987; Zimmer, Watson, & Treat, 1984; Cicchinelli, Bell, Ditmar et al., 1981; Sherwood & Mor, 1980; Whanger, 1980; Gottesman, 1977; Teeter, Garetz et al., 1976; Stotsky, 1970). Behavioral abnormalities and other entities or markers of mental illness occur frequently in the nursing facility population (Johnson & Grant, 1985; Sabin, Vitug & Mark, 1982). Estimates from secondary analyses of the 1977 National Nursing Home Survey (Government Accounting Office, 1982; Cicchinelli, Bell, Ditmar et al., 1981) indicate that about 30 percent of nursing facility residents have a "diagnosable mental disorder," and that over 60

percent have one or more "mental impairments or conditions." Based on a survey of residents in a selected sample of facilities, Zimmer found that almost 65 percent of residents have behavior problems (Zimmer, Watson, & Treat, 1984).

Research in nursing facilities has been hampered by the absence of common assessment systems with known reliabilities. This situation has changed. Congress, as one component of the Omnibus Budget Reconciliation Act of 1987 (OBRA 87), mandated that all nursing facilities participating in the Medicare and Medicaid Program, assess all residents using a common Minimum Data Set (MDS) for Care Screening (Morris, et al., 1991). The MDS contains a core of assessment items, with definitions, coding categories, and recommended data acquisition procedures. When appropriately applied, reliable information may be obtained. These comprehensive assessment items could be of considerable value in both resident care planning and research applications. All states now require use of the MDS. Some states started October - December, 1990, with the latest state-wide implementation occurring by May, 1991.

The research community is just beginning to make use of these data. Some have questioned the MDS, noting that it is unstandardized in several ways (Teresi & Holmes, 1991). As of this date, HCFA has not mandated the construction of a national data base for the MDS. However, HCFA does have state-wide data from several states, and these data can be obtained by the research community (with appropriate guarantees for confidentiality). Nursing facilities and nursing home chains have computerized this information, and some have indicated a willingness to share this information with the research community (i.e., National Health Corporation from Tennessee). HCFA has produced a comprehensive training manual for use with the MDS, and researchers contemplating using the MDS should secure a copy of this manual (Morris et al., 1991).

Within the MDS, many items specifically address mental health issues: cognition, diagnosis, communication, mood, behavior, restraint use, psychotropic use, etc. For example, data from a 10 facility sample suggest the types of problems that good care planning must address: 46 percent had sad mood; 55 percent were in restraints; on a daily basis, 26 percent wandered, 10 percent were physically abusive, and 30 percent were characterized as displaying inappropriate social behavior; 57 percent received an antidepressant, antipsychotic, and/or antianxiety medication; 46 percent had little ability to communicate; and 60 percent had short-term memory deficits.

Unfortunately, the mental health needs of populations receiving long-term care are frequently ignored (Sabin, Vitug, & Mark, 1982), inadequately understood (Barnes & Raskind, 1981), or viewed as disincentives for accepting elderly persons as residents of nursing facilities (Mor, Sherwood, & Gutkin, 1984; Brody, Lawton, & Liebowitz, 1984). Residents with such needs are consequently at risk for poor care (Quam, 1984; Zimmer, Watson, & Treat, 1984; GAO, 1982; Birren & Renner, 1980; NIA Consensus Task Force, 1980; Sherwood & Mor, 1980; Ernst, Badash, Beran et al., 1977). The substantial personal costs of such neglect is well documented (Zimmer, Watson, & Treat, 1984; Rovner & Rabins, 1985; Ernst, Badash, Beran et al., 1977; NIA Consensus Task Force, 1980; Shadish & Bootzin, 1984). Given the prevalence of mental health problems and the concomitant problems both of the afflicted individuals and the staff of the facilities in which they reside, the widespread absence of targeted service initiatives in the nursing facility environment is a major impediment to a comprehensive system of long-term care.

Emphasis on mental health care (or lack thereof) must be viewed also within the broader context of overall health care in the nursing facility (Vladeck & Firman, 1983). Two issues are critical in this area. Many nursing facility residents with behavioral problems also have functional and physical disabilities and illnesses, and attention to one problem or set of problems necessitates attention to others; or, it may be necessary to solve one problem before the resident's other problems can be addressed.

Specific treatment regimens vary widely in form and complexity. Psychotropic medications, for example, have been found to have a role in dealing with mental disorders in older persons and appear to have a well-established place in geriatric psychiatry (Jarvik, 1980). At the same time, overuse, misuse, and abuse is common in the long-term care setting. Therefore, it is particularly important to keep all aspects of the elder's medical regime in mind when assessing and prescribing medications. Appropriate care requires careful consideration of the potential pharmacokinetic interaction of a prescribed medication with a resident's other medications (Salzman, 1984, 1982; Greenblatt & Shader, 1978). We appear to have entered a period in which anti-psychotic and anti-depressant abuse is being recognized. The time is right for serious studies of the appropriate and inappropriate use of such medications in nursing facilities.

## **State of the Science**

### **Mood State/Depression**

There is a substantial body of research on the use of psychoactive medications and the problems they address. In a nursing home setting, distressed mood is a common problem that often can be addressed successfully through the use of antidepressants and anti-anxiety medications. For example, about 15 percent of the residents in an average nursing facility will have a major depression; about 30 percent will exhibit noticeable symptomatic signs of a mood state problem. Sad mood is often verbalized as emptiness, anxiety, or unease. It is also expressed by a wide range of bodily complaints and dysfunction; for example, loss of weight, tearfulness, agitation, and aches and pains. Sad or anxious mood may precede the discovery of underlying physical illness or the treatment of medical illness may provoke depression. The actual diagnosis of mood state problems can be complicated by physical health status, normal grieving over understandable losses, and dementia. The onset or identification of health problems can be associated with complex depressive symptomatology and involved etiologies. Normal grief reactions can last for up to 12 months, and can present with distressed mood, loss of interest, loss of pleasure, loss of appetite, and weight loss. Finally, a complex relationship can exist between dementia and depression; depression can mimic dementia, and the two can coexist. Without an adequate history, identification can be difficult. From a clinical perspective, the key is the recognition that sad or anxious mood is a treatable disorder. It is not an inevitable correlate of dementia or long-standing chronic disease, and major depression is, in fact, the most frequent reversible psychiatric illness observed in the nursing home setting.

Aggressive diagnostic and therapeutic strategies are the hallmark of good care. A multipronged approach is often indicated, involving medications and other therapeutic regimens. Available antidepressant medications tend to be effective and differential selection is based on the side effect profile that will be least dangerous or intolerable to the resident. Cyclic antidepressants are the most commonly prescribed. Among the most serious medication side effects to be considered are orthostatic hypertension, alterations in cardiac rhythm, and anticholinergic reactions (Burns & Kamerow, 1986; Goff & Jenike, 1986; Gurland & Meyers, 1988; Lehmann, 1987; Liptzin & Salzman, 1988; and Fogel, Murphy, Drugovich, & Mor, 1991).

Other research dealing with psychoactive medication in the nursing home has raised the specter of inappropriate practices, including a failure to prescribe psychoactive medication when it is indicated, and unsuitable use of medication to control residents, compensating for an underfunded and understaffed care setting (Everitt, Fields, Soumerai, & Avorn, 1991). Some residents who use psychotropic medications have not been found to have mental disorders, and one can question staff motivations in continuing to administer such potent medications. Potential problems, therefore, include the use of such medication as "chemical restraints," as well as the traditional problems of over-medication, under-medication and inappropriate mix of medications. Each of these usage patterns has negative consequences and we are just beginning to address remedies to

these consequences in the nursing home. Negative outcomes can be serious, and even life-threatening, including increased confusion, falls, orthostatic hypotension, altered cardiac rate and rhythm, dry mouth, constipation, urinary retention, blurred vision, aggravation of narrow angle glaucoma, delirium, and daytime sedation. Congress and HCFA have taken steps to focus the use of these medications, including: 1) instituting a new mandatory resident assessment system that includes information on mood state, behavioral problems, diagnostic condition, and psychoactive medication use; 2) requiring that care plans be carefully considered both for residents receiving such medications as well as residents with mood state problems that might warrant their use; 3) instituting regulations that mandate a tighter linkage between use of psychoactive medications and diagnostic classification; 4) instituting published definitions for unnecessary or excessive drug use; 5) sponsoring trials to use facility-level data on drug use profiles to identify potentially problematic nursing homes that can be targeted in the survey process; and 6) passing the PASARR section of the Nursing Home Reform Act, which requires that residents with mental disorders be screened to determine if they require "active treatment" (Ancill, Embury, & MacEwan, 1988; Beers, Avorn, & Soumerai, 1988; Parmelee, Katz, & Lawson, 1989).

### **Behavioral Problems**

Behavioral problems are defined as patient responses which are considered noxious to staff, other patients, the patient himself, or family (Burgio, Jones, Butler, & Engel, 1988). Behavioral problems have a profound impact on quality of care, staff, morale and the day-to-day operation of the long-term care institution (Mentes & Ferrario, 1989). Zimmer, Watson, & Treat (1984) suggest several reasons for the increased prominence of behavioral problems in nursing homes in recent years. For example, demographic trends show an increase in the very old and frail segment of our population; these individuals are more likely to display both physical and mental infirmities. Second, the deinstitutionalization movement has resulted in a marked reduction in the number of people cared for in public mental health facilities. As these individuals age, and particularly if they develop physical infirmities, they are likely to be institutionalized in long-term care facilities. The nursing home population increased dramatically (about 48%) between 1966 and 1976; approximately 900,000 of these residents had a primary diagnosis of psychosis or mental retardation, with all of the accompanying behavioral problems (Department of Health, Education and Welfare, 1979).

**Prevalence.** There is a paucity of data concerning the prevalence of behavioral problems in nursing homes. Much of the available data have been collected primarily from incident reports and chart audits. Mentes & Ferrario (1989) provided a brief overview of incident reports and chart audits of aggressive behavior in long-term care facilities, including the Lanza (1982) report of 91 cases of patient assault on staff during a one-year period in a Veterans Administration Hospital. Zimmer, Watson and Treat, (1984) documented an 8 percent rate of physical aggression among 1,139 nursing home patients using an audit of randomly selected charts.

Among overall behavioral problems, Zimmer et al. (1984) found that 64 percent of 1,139 nursing homes patients were reported to have moderate to severe behavioral problems. In a survey of five long-term care facilities, the frequency of occurrence of behavioral problems was assessed and ranked by both registered nurses (RN) and licensed practical nurses (LPN) (Burgio, Butler, & Engel, 1988). The findings indicate that 20 of the 22 behavioral problems occurred at least occasionally in the nursing homes surveyed. Six problems, 1) incontinence, 2) feeding, 3) wandering, 4) dressing, 5) aberrantly low activity level, and 6) verbal abuse, occurred frequently to all-the-time. Nine problems were reported to occur at the high end of occasionally to frequently (1.5-2.0); these included: 7) non-compliance, 8) disruption, 9) physical aggression, 10) spitting, 11) bedtime problems, 12) fecal smearing, 13) aberrantly high activity level, 14) language problems, and 15) self-talk. LPNs rated 17 of 22 (77%) behavior problems as occurring more frequently than the RNs, indicating that the vantage point of the informant and the nature of

the person's ongoing resident contacts must be considered.

In general, both RNs and LPNs were in strong agreement that behavior problems are clinically significant in their elderly patients. They responded that they were not sure that their nursing school coursework had provided them with sufficient skills to manage behavior problems. Burgio, Jones, Butler, and Engel (1988) reported that mobility, incontinence, dressing, and language were among the top five most frequently occurring behavior problems in one nursing home survey.

Despite the prevalence of behavioral problems for residents of nursing facilities, direct involvement of physicians in assessment and care is not evident. Data from the 1984 National Nursing Home Survey revealed that 20 percent of residents with orders for psychotropic medications, used frequently in the treatment of behavior problems, did not have a documented mental disorder. In another survey, although psychoactive drugs were ordered regularly for 58 percent of subjects in 42 nursing facilities, only 15 percent had been seen by a psychiatrist.

### **Approaches to Behavioral Problems**

Residents with behavioral problems have been shown to require a disproportionate amount of skilled and direct care time, often overshadowing the attention required for cognitive and functional decline as management problems. The negative impact of behavioral problems is felt by residents who exhibit them; by other residents for whom they may be dangerous, distressing, or disruptive; by nursing staff who experience frustration and burnout in managing them; and, by family members who experience stress and guilt as they try to come to terms with the apparently inexplicable behavior of their loved ones.

The number of distinct disturbed behaviors appears to be almost limitless; in both clinical and research settings, as many as 57 have been listed. To characterize these behaviors more clearly for sound assessment, care planning, and treatment, and to study the relation of these problems to other factors, particularly cognitive impairment, they are frequently grouped or categorized. Examples of study categories, together with the most prevalent behaviors found, indicate a wide range of conceptualizations as well as foci for establishing prevalence. Nurses and physicians lack a common, universally agreed upon language for classifying distressing behaviors of residents; clearly, this deficit must be remedied. Although problem behaviors are frequently associated with cognitive impairment, not all such problems are indicative of dementia, nor are all residents with dementia behaviorally disturbed. Just as differentiating diagnostically between depression and dementia is necessary to rule out the former masking the latter, assessment that differentiates behavior problems associated with dementia from physiological, emotional, environmental, and psychosocial factors, other illness, or drug side effects (all of which can be sources of disturbed behavior) is crucial for sound assessment, diagnosis, care planning, treatment, and prevention of inappropriate medication with attendant complications.

Problem behaviors may arise from several sources. Many problematic behavioral symptoms associated with dementia are seen in acute confusional states (delirium); unlike dementia, however, delirium is reversible if diagnosed and treated appropriately. Combative, disoriented, wandering, and confused behavior may arise from organic conditions such as dehydration, fever, surgical anesthesia, hypothyroidism, or vitamin deficiency. Behavior disturbances may also be a resident's way of gaining attention to rectify psychosocial or environmental conditions; for example, nonaggressive repetitious, negative, and complaining behaviors may signify uncomfortable prostheses, lack of or insufficient involvement with activities, or loneliness and disorientation upon recent arrival in the facility. Close examination of the context of problematic behavior, the frequency and intensity with which it occurs, and its interaction with medical, psychosocial, and environmental conditions is thus critical for sound assessment, diagnosis, and

care.

Accurate characterization of each type of behavior problem is of particular clinical importance for behaviors that may be associated with medications. New research efforts are required to define patient behavioral standards in nursing facilities. Psychomotor agitation is a case in point because it can signal diverse primary illnesses: 1) major depression unassociated with dementia; 2) the late stages of dementia; and 3) coexisting dementia and depression, in which the latter may occur during the early stages of the illness or throughout the illness. In all instances, observable symptoms of the agitation may be similar, for example, hand wringing, relentless pacing, pulling at hair and clothing, and endless complaining. Care planning and treatment, however, may be quite different in each circumstance, depending on evaluation of other factors, such as disturbances in appetite, weight, and sleep patterns. In some circumstances, depressive and agitated symptoms occur together and may be severe enough to exhaust a resident. In others, agitation and withdrawal may occur alternately, requiring still further evaluation for treatment.

### **Behavioral Assessment**

Behavioral assessment technology has not advanced as rapidly as behavioral therapy, with practitioners relying instead on traditional assessment procedures, such as Rorschach, Thematic Apperception Test (TAT), and Minnesota Multiphasic Personality Inventory (MMPI) (Ciminero, 1986). In recent years, behavioral assessment issues have received increasing recognition and attention. The behavioral approach to assessment places emphasis on what a person does in situations rather than on inferences about what global characteristics the person possesses. Hence, this approach tends to examine the relationship between behavior and environmental factors. In addition, the behavioral approach to assessment is instrumental in the selection of the appropriate target behaviors, the treatment strategies, and the subsequent evaluation of the treatment; traditional methods of assessment may not adequately predict the appropriate treatment modalities (Ciminero, 1986).

Of great importance is the selection of a proper conceptual framework or conceptual model for behavioral assessment (Ciminero, 1986; Graneck, 1983). This allows for organization and understanding of the data, thereby assisting in distinguishing between such conditions as age-related and non-age-related behavior; healthy and pathologic functioning; and, normal and unusual expectations (Graneck, 1983). However, it is important to realize that behavioral assessment is only one aspect of the comprehensive geriatric assessment; the individual's overall mental capacity or cognitive level and functional level must be assessed as well. A number of models for behavioral assessment are available for use, such as the Stimulus-Organism-Response-Contingency-Consequences (SORK-C) model (Kanfer & Phillips, 1970) and the Stimulus-Organism-Response-Contingency (SORK) model (Goldfried & Sprafkin, 1974). Both the SORK-C and SORK models are useful in providing a description of the problem behavior that can occur in any of three response channels. These three channels of behavioral activity include overt-motor behavior, physiological-emotional responses, and verbal-cognitive behavior. Treatment interventions usually focus on the particular aspect of behavior requiring change with measurements rarely involving more than one channel (Ciminero et al., 1986). The nursing process is recognized as another method of implementing the conceptual framework for behavioral assessment (Kalcaba & Miller, 1989). Nurses in long-term care institutions possess a high level of autonomy and engage in continuous independent assessment of patient needs, develop and implement care plans, and evaluate treatment outcomes. This level of autonomy is particularly evident in making decisions regarding the administration of discretionary (PRN) medications (Kolcaba & Miller, 1989; Robbins & Butler, 1986). In nursing homes, frequently behavioral rather than medical problems are the focus of interventions. The judgement of the nurse becomes critical in discerning the need for medication when the patient becomes agitated, disruptive, or has problems with sleeping. Hence, the nurse must possess knowledge of

behavioral assessment and interventions necessary to care for patients in long-term care settings (Butler, Burgio, & Engel, 1987; Kolcaba & Miller, 1989). With the advent of HCFA's MDS in these settings, nurse assessment of behavioral problems may become more standardized and the average skill level of nurse assessors should increase.

***Relationship of Behavioral Problems in Long-Term Care to Dementia and Cognitive Dysfunction.*** Gerontological literature indicates a high prevalence of behavioral problems, considered to be particularly devastating to the patients, their families and their caregivers, in patients with Dementia of the Alzheimer's Type (DAT). In spite of the extremely important nature of this subject, little empirical data exist that clarify the relationship of behavioral problems to the cognitive and functional decline characteristic of DAT. The state of knowledge concerning behavioral problems in DAT patients is based upon clinical observations. Teri, Lawson, and Reifher (1988) investigated 56 community-dwelling DAT patients in the domains of function, behavior, cognition, and activities of daily living. The most frequently reported problems were those concerning cognitive functioning, including loss of memory, confusion, and disorientation. Additional problems reported by caregivers included underactivity, loss of interest in activities, tension, depression, and apathy. Analysis of the data showed that the Dementia Rating Scale total score or subscores were not significantly related to any index of behavioral problems. However, one subscale, conceptualization, showed a trend in relation to the number of problems reported and the persistence of those problems. For example, patients with greater impairment in conceptual skills had more behavioral problems that persisted longer. Also, overall level of cognitive impairment was significantly associated with increased problems with activities of daily living, supporting the results of a preliminary study by Teri et al. (1988). In general, no relationship existed among age, gender, duration, or age at onset of cognitive impairment, and particular behavioral problems or number of problems.

Some researchers employ the term "agitation" to encompass the most disruptive behavioral symptoms in the demented elderly (Wragg and Jeste, 1988). Cohen-Mansfield (1986) investigated agitation and related behaviors in six nursing homes residents aged 59 to 96 years. Agitation was defined as "inappropriate verbal, vocal, or motor activity that is not explained by apparent needs, or confusion per se." Included were behaviors such as aimless wandering, pacing, cursing, screaming, biting, and fighting. The most frequent behaviors reported by nurses were general restlessness, constant unwarranted requests for attention, complaining, negativism, and pacing or wandering. Most other agitated behaviors were demonstrated several times daily by some subjects. However, it was found that agitated, cognitively impaired subjects did not differ from nonagitated, cognitively impaired subjects in age, cognitive level, and waking up at night (Cohen-Mansfield, 1986).

Approximately 60 percent of the residents in nursing facilities suffer from signs and symptoms signaling a decline in intellectual functioning. Initial presentation usually involves the loss of short-term memory. As decline progresses, deficits in other cognitive areas appear, and often involve secondary behavioral manifestations, including irritability, anxiety, depression, paranoia, loss of inhibition, loss of initiative, apathy, withdrawal, wandering, and other problematic behaviors. Care planning rests on the need to devise continued care strategies that focus on function and behavior rather than on an attempt to reverse the dementing process (e.g., trying to improve memory and reasoning ability). Such a program does not burden the resident with overdemanding tasks and concomitant stresses, but provides positive experiences. It establishes reasonable expectations of staff, serves to support staff needs as they carry out their supportive roles, and lays the foundation for realistic staff and family expectations. Clinical experience suggests that facilities that have made program changes to support direct care staff in instituting such approaches to care have found that benefits accrue to some, but not all, residents with dementia. These programs anticipate problem behaviors, and seek to lessen the probability of their occurrence. To design such a plan of care, facilities must support and educate staff as they

seek to understand the resident's experience of cognitive loss. Such a process requires empathic observation of and response to the feelings associated with losing one's habitual, instinctive ways of attending to basic needs, as well as one's mental roadmaps and problem-solving ability (Beck & Heacock, 1988; Buckwalter, Abraham, & Neundorfer, 1988; Edelson & Lyons, 1985; Glickstein, 1988; Gwyther, 1985; Calkins, 1988; Maas, 1988; Mace, 1987; 1989a; 1989b; Williams, 1986).

In recent years, this type of programmatic feature often has been incorporated into newly emerging special care units (SCUs) (Joint Commission on Accreditation of Health Care Organizations, 1987). While varying in many ways, SCUs represent a distinct response of the nursing home industry to meeting the needs of the demented resident. There is much to learn about and from such innovative approaches to care.

Symptoms of cognitive loss can profoundly affect the way a resident perceives the environment. It is not surprising, therefore, that resident behavioral outbursts can follow relatively routine or trivial incidents, such as not being able to find something. Although the precipitant of such outbursts may seem trivial or routine, it is important to remember that few activities in the life of a resident living with cognitive losses are "routine." Recognizing a resident's communications as an attempt to "connect" can provide a means of interpreting actions as well as a starting place for treatment and behavioral improvement. Such an approach can lead to care strategies that enhance quality of life and reduce the sense of frustration and failure experienced by residents, staff, and families. Individual variation, retained abilities and strengths, and the context and precipitants of problems are focal points of care. The necessary prosthetic environment is one in which changes are made in the environment itself; support, rather than a cure, is provided and the altered environment remains in place. When behavioral problems are present, their resolution is a first priority. For some problems, altering behavior is the service approach of choice; in other situations, staff must be prepared to live with the behavioral manifestation.

### **Approaches to Intervention**

***Neuroleptics and Other Chemical Treatments.*** In view of the increasing numbers of demented elderly patients in nursing homes, effective control of behavioral and psychotic symptoms is critical (Wragg & Jeste, 1988). Rabens et al. (1982) reported psychotic symptoms, such as hallucinations and delusions, in approximately 50 percent of patients, and disruptive behaviors, such as violence and wandering, in up to 70 percent of patients. Neuroleptics are the most frequently prescribed class of drugs for these behavioral problems. However, older persons are especially vulnerable to the side effects of neuroleptics, because of age-related changes in absorption, distribution, metabolism, and elimination of these drugs. In addition, a considerable number of medical conditions contraindicate their use. For example, anticholinergic effects exacerbate chronic obstructive pulmonary disease, urinary retention, narrow-angle glaucoma, and constipation; Parkinson's disease may be exacerbated by all neuroleptics; and, weight gain may worsen obesity and complicate successful management of other medical disorders.

The most frequent type of intervention used to treat behavioral problems appears to be a trial of neuroleptic medication, usually thioridazine or haloperidol (Cohen-Mansfield, 1986). In spite of the widespread use of neuroleptics to control behavioral problems in nursing home patients, the research basis for such use has been limited (Helms, 1985; Butler, 1987). The need for effective treatment methodologies is clear; however, there are no well defined intervention strategies to determine these methodologies. The rationale for treatment of any condition normally is based on a clear understanding of the pathophysiology of the condition and the influences of contributing variables. However, in the case of behavioral problems coupled with psychotic symptoms in the demented elderly, there is a lack of understanding both of the underlying neurobiology and its interaction with contributing social and environmental factors (Wragg & Jester, 1988).



Because the neuroleptics offer a readily available means of treatment, often with positive effects, the frequency of use in nursing homes is believed to be quite high (Butler, Burgio & Engel, 1987). Barnes, Veith, Okimoti, Raskind, and Gumbreck, (1982) indicated that demented nursing home patients with the most severe behavioral problems are most likely to benefit from antipsychotic drug use. However, neuroleptics must be used judiciously in controlling behavioral problems in the demented elderly, particularly because low potency neuroleptics carry the risk of creating extrapyramidal side effects such as tardive dyskinesia and akathisia (Wragg & Jeste, 1988; Cohen & Eisdorfer, 1985). In the Butler survey, nursing staff reported that in spite of receiving clinically significant doses of neuroleptic medications, patients still displayed significantly more behavior problems than those not receiving neuroleptic medications. Although neuroleptics have a clear, albeit circumscribed, role in the management of behavioral and psychotic symptoms, treatment should be focused and time limited, using the smallest effective dose possible (Wragg & Jeste, 1988). Some alternatives to neuroleptic treatment include the benzodiazepines, beta-blockers, calcium-channel blockers, carbamazepines, lithium, and trazodone. Their usefulness has not been well documented in the management of behavioral problems.

***Behavioral Therapies.*** Gerontologists and caregivers have demonstrated increasing interest in the use of behavioral intervention as an alternative to pharmacotherapy in the management of behavioral problems in long-term care and other settings (Burgio & Sinnott, 1989; Burgio, Butler, & Engel, 1988; Butler, et al 1987). Studies that have compared the effects of drug therapy and behavioral therapy found behavioral therapy to be superior without suppression of adaptive functioning (Burgio, Whitehead, & Engel, 1985). Individualized care plans based on principles of heightened resident-staff interaction and creative activities, particularly exercise and music programs, have been shown to reduce greatly the incidence of behavioral problems and their negative impact on both residents and staff.

Although the knowledge base for behavioral gerontology is sparse, the field is rapidly developing. Burgio and Burgio (1986, p. 321) define behavioral gerontology as the study of "how antecedent and consequent environmental events interact with the aging organism to produce behavior." Because of deficits in aging persons, the range of discriminative stimuli that control behavior in ordinary environments is limited. Also, the contingencies of reinforcement can be conducive to ineffective behavior in older persons (Lindsley, 1964; Skinner, 1983; and Burgio & Burgio, 1986).

Many of the behavioral self-management procedures effectively used to treat behavioral problems in other populations (Kanfer & Karoly, 1982) appear applicable to elderly populations in nursing homes and are being recognized as viable treatment alternatives. In behavioral self-management, the emphasis is on reciprocal determinism, that is, the environment affects the individual, and the individual also shapes and influences his or her own environment (Bandura, 1978). Self-reinforcement is a mainstay of behavioral self-management. Butler (1987) demonstrated the efficacy of using behavioral self-management techniques in a well, non-institutionalized elderly population under the aegis of a nurse managed wellness clinic. Burgio, Whitehead, and Engel (1985) used a treatment package that included self-monitoring, self-directed scheduled toileting, pelvic floor exercises, and biofeedback in the control of urinary incontinence in elderly clinic patients. Thirty-nine patients showed an 85 percent reduction of incontinence.

At the same time, for many programs, effective quality control procedures are required to ensure staff compliance with effective treatment programs. For many residents, including many of the cognitively impaired, nursing staff who are astute and well informed is a crucial factor in program continuity over time.

As a result of a study by Baltes and Barton (1977) , it was recommended that institutional staff

reinforce independent patient behavior rather than dependent behavior to increase the occurrence of independent behaviors. However, caregivers must consider the special needs of older persons when applying behavioral procedures; for example, allowing for age-related differences in learning and responses is useful in adapting behavioral procedures and developing training procedures.

There is considerable interest in legislative and patient advocacy circles in supporting initiatives that seek to further resident choices and dignity; studies in the drug and wider therapeutic areas that address this objective need to be considered. We must become accustomed to viewing the resident as a person, and must evaluate whether residents benefit and how they benefit as facilities begin to base programming decisions on this new view. The process of "taking the role of the other," of becoming sensitive to and facilitating resident choices, can accomplish two important care goals. It provides the caregiver with a glimpse of coherence, desperately needed by resident and caregiver alike, that can be imparted to the resident; and, it acknowledges the resident's troubled reaction, affirming his dignity. For example, behavioral problems arising from dementia may be seen as the consequences of an individual's attempt to deal with a world that has become unrecognizable in crucial ways.

The behavioral self-management approach differs from the traditional behavioral approaches to treatment of older persons, which largely emphasize operant programs (Haley, 1983). The underlying philosophy of operant programs emphasizes environmental determinism, or, behavior that is determined by external cues and reinforcements with restructuring to the environment. Traditional approaches to developing and maintaining a therapeutic environment have focused on prosthetic designs that facilitate motor skills and social interaction. Gerontologists are now expanding that concept to include the design of health care facilities that are genuinely therapeutic in nature. There is a re-emphasis on designs that will generate and maintain social and motor skills and also will retard the degenerative processes associated with aging (Patterson & Jackson, 1989).

## **Research Needs and Opportunities**

Behavioral problems have been shown to be effectively decreased by: 1) increased physical and emotional well-being of cognitively impaired residents; 2) active caregiver-resident interaction that builds trust by imparting security, respect, and affection; 3) an environment that invites engagement and connection but does not lead to overstimulation; and 4) staff who have been appropriately prepared to deal with residents. Although the potential for orienting a confused resident with behavior problems is not high, creating a calmer, more content environment through diminution of behavior problems can increase a resident's quality of life. A diverse research agenda is required to meet the needs of residents with behavioral problems. Further research on proper diagnosis, behavioral self-management approaches, nursing care models, neuroleptic treatment, and education of caregivers in treatment approaches, particularly, patient behavioral self-management, is necessary to improve the care of nursing home patients.

For example, to facilitate recognition of the source of behavioral problems, usable sets of markers and schema should be determined that can differentiate between dementia and reversible conditions such as acute confusional states, emotional disturbance, psychosocial deficits, environmental irritants, or drug side effects. In addition, models to specify and manage medical, functional, and cognitive conditions that are manifested by disturbed behavior must be developed.

The simple strategies employed by facility staff to reduce daily anxieties in the lives of behaviorally disturbed residents should be identified; for example, strategies that increase residents' choices and give residents some control over and meaning to their daily lives. Also, it is

important to determine strategies that protect the resident from physical injury while maximizing comfort and function. The use of alternatives to restraints in nursing homes should continue to be investigated. Research must be conducted that can provide answers to questions concerning the factors that trigger particular behaviors, the diversions that are most effective in influencing residents' behaviors, and aspects of the environment that can be modified to decrease problems for behaviorally-disturbed residents. Also, studies should be carried out to determine the importance of renewal and maintenance of cognitive and communicative skills in an overall program of behavioral control.

Because of the age-related deficits, complexity of symptoms, and special problems of older persons, approaches to various avenues of treatment must be given careful consideration. Researchers need to determine whether there are general treatment approaches for residents who exhibit similar problem profiles. An assessment should be made as to whether resident outcomes are maximized by programs that group residents into special treatment and residential units, addressing, for example, whether residents should be brought together in special units within homogeneous groups based on cognitive and behavioral status. In addition, studies should be designed that assess the specifics of a problem so that an effective program of care can be developed. For example, the activity called wandering can be broken into distinct subcategories, and a research study could determine whether effective treatment requires distinctly different approaches for "exit seekers" who are trying to leave the facility as opposed to residents who can be described as restless, aimless movers. It is particularly important to conduct randomized controlled trials of alternative treatment programs, including drug trials, that seek to diminish behavioral problems.

Training staff to effectively deal with behaviorally-disturbed residents and their problems is critical; successful strategies to conduct this training must be developed. Gerontological nurses are displaying increasing interest in behavioral interventions (Baltes & Lascomb, 1977; Davis, 1983; Matheson, Mian, MacPherson, & Anthony, 1976; Burgio, Butler, & Engel, 1988; Guy & Morice, 1985). It is expected that this interest will expand as the number of nursing home patients with cognitive impairment increases. Burgio, Butler, and Engel (1988) reported on nurses' attitudes and needs regarding geriatric behavior problems in long-term care settings. Nurses felt they had insufficient or no formal education in the management of geriatric behavioral problems and indicated a strong interest in learning more about behavioral-management procedures.

## **Recommendations**

Based on the foregoing assessment of research needs and opportunities in "Behavioral Problems/Affective States," the Panel has made the following recommendations for research.

- Examine strategies that will maximize treatment programs by making optimum use of resources, facilities, and staff to achieve greater outcomes.
- Further evaluate and determine the effectiveness of known behavioral procedures used with elderly populations, including behavioral reversal, thought-stopping, reciprocal inhibition, relaxation, systematic desensitization, covert sensitization, covert re-inforcement and extinction, and prosthetic environments (Mosher-Ashley, 1987).
- Develop and evaluate innovative nursing practice models to assess and manage behavioral problems through use of effective behavioral management techniques.
- Evaluate the effectiveness of behavioral strategies in decreasing induced dependency.
- Examine strategies for effective, collaborative decisionmaking regarding use of neuroleptic medications, especially the administration of PRN medications.
- Develop and test intervention strategies for behavioral excesses, behavioral deficits, disabilities, and adaptive behaviors of older persons (Butler et al., 1987).

- Develop and/or refine instruments to assess and evaluate problematic behaviors of older persons.

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