Brief Report

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Underreporting of Behavioral Problems in Older Hospitalized Patients

Helen D. Davies, MS, APRN, BC,[1] Ruth O'Hara, PhD[1,2]
Martin S. Mumenthaler, PhD,[2] Erin L. Cassidy, PhD[1,2]
Martha Buffum, DNSc, APRN, BC, CS,[3] Janise M. Kim, BA,[1]
Claire E. Danielsen, BA,[2] Art Noda, MS,[1]
Helena C. Kraemer, PhD,[2] and Javaid 1. Sheikh, MD[1,2]

This descriptive study examined reports of behavioral problems among older patients hospitalized in acute care medical settings. Greater numbers of behavioral problems were reported by nursing staff on the Neuropsychiatric Inventory-Questionnaire than were documented in medical charts over the same time period. Such underreporting may have clinical and administrative implications.

Key Words: Acute care, Behavioral disturbance, Older adults

Admission of older patients to acute care units may increase their risk for behavioral problems (Hickey, Clinch, & Groarke, 1997; Miles & Meyers, 1994; Thomas & Brennan, 2000). According to Minnick, Mion, Leipzig, Lamb, and Palmer (1998), older patients are more likely to be physically restrained than those who are younger. Hospital admission for older adults encompasses additional stressors and increased stimuli compared to their home settings. In addition to being ill, fatigued, physically or mentally distressed, older hospitalized patients are displaced from their usual environments and daily routines. Given the added stressors, in combination with a changed environment, behavioral problems in older patients may be more likely to occur (Creditor, 1993; Inouye, Bogardus, Baker, Leo-Summers, & Cooney, 2000). Even patients who are typically cooperative and attentive at home may become combative toward hospital staff and family members (Palmer, Landefeld, Kresevic, & Kowal, 1994).

As the population of older adults continues to swell, the need to address the problems of an increasing number of hospitalized elderly will only become more important. Behavioral incidents have significant negative consequences for staff and patients. In a recent investigation on acute care units, clinical staff self-reported that behavioral problems were often encountered and were considered burdensome (Cassidy et al., 2001). However, data suggest that the actual incidence of agitation and other behavioral problems in these settings are underreported. A survey of nurses' reporting of problematic behaviors revealed that 36% of nurses held the belief that not all incidents needed to be reported (Elnitsky, Nichols, & Palmer, 1997). Traditionally, the literature has focused on the underreporting of the broader category of adverse events rather than specifically studying behavioral problems. Sutton, Standed, and Wallace (1994) found that

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Address correspondence to Helen D. Davies, Veterans Affairs Palo Alto Health Care System, 3801 Miranda Avenue, 116F, Palo Alto, CA 94304. E-mail: hddavies(aastanford.edu

[1]Veterans Affairs Palo Alto Health Care System, Palo Alto, CA.

[2]Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford University, Stanford, CA.

[3]Veterans Affairs Medical Center San Francisco, San Francisco, CA.

hospital staffs were prone to underreport accidents, and Stanhope, Crowley-Murphy, Vincent, O'Connor, and Taylor-Adams (1999) found that staff members did not report 55% of adverse incidents.

Accurate reporting of behavioral problems in hospitalized elders is important because, in addition to the burden these behaviors place on clinical staff, patients exhibiting such problems are likely to be at increased risk for incidents that include adverse events and accidents. Yet there are few investigations of the reporting of behavioral problems in older adults in acute care settings. We conducted a small, descriptive investigation to compare the incidence of behavioral problems reported by nursing staff on the Neuropsychiatric Inventory-Questionnaire (NPI-Q; Kaufer et al., 2000) with those reported in patients' medical charts during the same time period.

Methods

Participants

Forty-three patients from two Veteran's Affairs (VA) hospitals, the VA Palo Alto Health Care System hospital (n = 18) and the San Francisco VA Medical Center hospital (n=25), participated in this study. Patients had a broad range of medical conditions and were admitted to one of four standard acute care units at each site, with between 12 and 26 beds per unit. All patients aged 60 years and older who were admitted to these units during a 6-month period were approached, and 74% agreed to participate in the study. The only inclusion criterion was that participants be able to provide informed consent or have a surrogate who could provide consent. The patients, all males, had a mean age of 71.6 years (SD=6.7; range 61-85) and had an average of 13.6 (SD=3.1) years of education. Twenty-nine patients described their ethnicity as Caucasian, 9 as African-American, 4 as Hispanic, and one was undetermined.

Measures

Neuropsychiatric Inventory-Questionnaire (NPI Q). - This questionnaire, developed and cross-validated with the standard NPI (Cummings et al., 1994), provides a brief assessment of neuropsychiatric symptomatology and behavioral problems as well as ratings of staff distress (Kaufer et al., 2000). The NPI-Q measures 12 categories of behavioral disturbance: (a) delusions, (b) hallucinations, (c) anxiety, (d) depression and dysphoria, (e) agitation and aggression, (f) elation and euphoria, (g) disinhibition, (h) irritability and lability, (i) apathy and indifference, (j) motor disturbance, (k) nighttime behavior problems, and (1) problems with appetite and eating. A caregiver (in this study, a member of the nursing staff) reports whether the behavior was observed and ranks the severity of the behavior exhibited on a scale of 1 to 3, with 3 being the most severe. The caregiver also ranks the level of distress caused to them by the behavior, on a scale of 1 to 5, with 5 being the most severe. The NPI-Q takes approximately 10 minutes to administer. One of two trained research assistants, independent from those conducting chart reviews, verbally administered the NPI-Q. In the current study, the caregiver was a member of the nursing staff who attended to the patient during an 8-hr shift on each of his first two days of hospitalization.

Patients' Chart Reviews. -Three independent reviewers-a medical practitioner, a research psychologist, and a psychiatric clinical nurse specialist-reviewed the charts and recorded the number of behaviors observed. All notes by all staff were included in the patients' charts, and all notes were reviewed, independent of source reviewed. A consensus meeting was held to compare results, and discrepancies were resolved. The reviewers were blind to the NPI-Q data. All documented evidence of behavioral problems (e.g., delusions, hallucinations, sleeping problems, depression, anxiety, disinhibition, irritability, motor disturbance, and excessive elation or euphoria) was noted. Additionally, all reports of any physically and verbally aggressive behaviors and nonaggressive behaviors indicative of agitation and aggression were noted. Physically aggressive behaviors were defined to include hitting, scratching, grabbing, pushing, tearing, throwing objects, spitting, or kicking. Physically nonaggressive behaviors included wandering, pacing, attempting to exit facility, intruding into inappropriate places, inappropriate robing or disrobing, voiding in inappropriate places, and handling things inappropriately. Verbally aggressive behaviors were defined to include cursing, swearing, screaming, yelling, making odd noises, or temper outbursts. Finally, verbally nonaggressive behaviors included constant requests for attention, complaining, whining, negativism, repetition of sentences, and rambling disjointed sentences. We established the total number of behavioral problems documented across the first 2 days postadmission.

Procedures

The NPI-Q was administered 2 days postadmission to a member of the nursing staff (a licensed vocational nurse or an RN) who attended to the patient during an 8-hr shift on each of his first 2 days of hospitalization and who stated that he or she had significant contact with the patient. We chose to compare the NPI-Q and chart review across the first 2 days postadmission because a significant number of patients on these units are likely to be discharged or transferred at this point. Furthermore, after 2 days we were able to identify nursing staff who had similar levels of exposure to the patients in the study.

Results

We compared the incidence of all types of behavioral problems reported in patient charts during the first 2 days of hospitalization with the scores obtained from staff on the NPI-Q 2 days after admission. According to staff NPI-Q ratings, 22 of the 43 patients (51%) exhibited at least one behavioral problem. Overall, these 22 patients exhibited a total of 48 behavioral

Table 1. Behavioral Problems Exhibited by Each Patient

	Neuropsychiatric Inventory-Questionnaire												
Patient	Delusions	Hallucination	Agitation and Aggression	Depression	Anxiety	Elation and Euphoria	Apathy and Indifference	Disinhibition	Irritability	Motor Disturbance	Night Behavior	Appetite	Behavioral Problem Noted in Medical Chart
1	X	X	X		X					X	X		X
2			X		X		X		X		X		
3				X	X		X		X			X	
4				X					X		X		
5					X		X					X	
6					X		X		X				
7			X		X				X				
8			X	X			X						
9			X								X		
10			X					X					
11				X	X								
12					X				X				
13				X	X								X
14										X			
15					X								
16				X									
17									X				
18				X									
19												X	
20											X		
21												X	
22												X	
23										X			
24													X

problems (mean level of severity of the behavior = *3.86 [SD = 4.0];* mean level of distress to the nursing staff = *2.77 [SD = 6.52])*. In contrast, the medical charts revealed that only *3* of the *43* patients had documented occurrence of behavioral problems during the same time period. Of these *3* patients, *2* were also identified on the NPI-Q by staff as having behavioral problems. The other patient had a documented episode in his medical chart but staff reported no behavioral problem on the NPI-Q. Table 1 presents the types of behavioral problems exhibited by the *23* patients who had staff ratings of behavioral problems on the NPI-Q. Additionally, it indicates which of these patients also had behavioral problems documented in their medical charts during the same time period. Although dementia is often associated with increased behavioral episodes, only *4* of the *43* patients had a diagnosis of dementia and only 1 of these patients exhibited behavioral problems. Seven patients were identified on the NPI-Q as exhibiting problems that caused the highest levels of distress to staff, yet only 1 of these patients had documentation of behavioral problems reported in his medical chart.

Discussion

In the current study, we found that a far greater number of behavioral problems were reported by staff when objectively assessed with the NPI-Q than were reported in the patient charts. These results suggest that there is substantial underreporting of behavioral problems in acute care settings and that these behaviors are moderately distressing to staff. Anxiety, depression, agitation and aggression, and irritability were the most commonly observed behaviors as assessed by the NPI-Q. Hallucinations and delusions were associated with the highest level of severity and highest level of distress; however, they occurred in only 1 patient. This patient was documented in both his medical chart and on the NPI-Q as having a high number of behavioral problems.

While the occurrence of one behavioral problem may not appear to be a significant burden, the cumulative impact of numerous problem behaviors over a short time span may be disruptive to staff. Indeed, in a previous investigation we found that nursing staff, similar to those in the current study, reported significant burden from dealing with behavioral problems among older hospitalized patients (Cassidy et al., 2001). The reasons ' ·)r underreporting are unclear. In the Cassidy and coi.eagues study, staff indicated that contending with behavioral disruptions is "part of their job" and "they happen all the time." Reporting may also add the burden of time to already busy shifts, and staff may need support for recognizing the behavior problems that require documentation. Administration needs documentation of patient acuity, as this helps describe workload and promote the rationale for more resources. Future work should determine which behavior problems have the greatest risk for further escalation, thereby assisting staff in recognizing when documentation is essential.

Documentation alone is only the first step in dealing with such behavioral problems. Staff in acute settings may be less familiar with conditions of the older patient that may lead to behavioral problems. As the nature of the patient population shifts, training in the care of the older patient is quickly becoming a necessity in all settings. Further work also is required to determine appropriate interventions for controlling these problems and to identify the effectiveness of such interventions for both staff and patient.

Finally, the current study has several significant limitations. The small sample size and male-only patient settings limit the generalizability of the findings. Furthermore, documentation strategies may be institution specific. Additionally, patients were followed for only the first 2 days of hospitalization, and documentation strategies, or concern about behavioral problems, may increase with greater length of stay. Indeed, the discrepancies between the NPI-Q and chart ratings of behavioral problems observed during the short duration of the current study may provide a conservative estimate of the actual degree of underreporting of these problems. Replication of this study with a larger, mixed-gender sample, across the full duration of hospitalization will help to shed light on the prevalence of behavioral problems among older adults in acute care settings, the extent of underreporting of these problems, and the impact they have on both staff and patients.

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