Pain is a commonly occurring symptom among older adults, which is largely the result of functional age-related changes and the development of chronic conditions (American Geriatrics Society [AGS] Panel on the Pharmacological Management of Persistent Pain in Older Persons, 2009). Estimates of the prevalence of daily pain in community-dwelling older adults range from 32% to 56%, and estimates of pain in older adults living in nursing homes (NHs) range from 60% to 70% (Kruger & Stone, 2008; Takai, Yamamoto-Mitani, Okamoto, Koyama, & Honda, 2010). Untreated and undertreated pain in older adults has a serious negative impact on health, function-
ing, and quality of life, contributing to depression, social isolation, sleep disturbances, and functional and cognitive impairment (Gibson & Weiner, 2005; Herr & Garand, 2001). Older adults living in NHs are at high risk for experiencing poor pain management as a result of system-related barriers such as incomplete medical records and highly burdened staff with limited resources (Ferrell, 2000). This risk increases further for residents with dementia whose ability to reason and communicate their needs is often compromised, diminishing their ability to recognize and report pain (Bachino, Snow, Kunrk, Cody, & Wristers, 2001; Horgas & Elliot, 2004).

Research has consistently documented the high prevalence of underassessment and pharmacological undertreatment of pain in NH residents with dementia (Reynolds, Hanson, DeVellis, Henderson, & Steinhauer, 2008; Williams, Zimmerman, Sloane, & Reed, 2005; Wu, Miller, Lapane, Roy, & Mor, 2005). Misconceptions about pain and aging, stoical attitudes, inadequate training, and underuse of appropriate assessment tools present barriers to effective pain assessment and treatment in older adults with dementia (McAuliffe, Nay, O’Donnell, & Fetherstonhaugh, 2008). Collectively, this research has made a compelling case for the need to develop and implement more suitable pain assessment strategies for individuals with dementia. During the past decade, researchers have made significant advancements in this area through the development, evaluation, and dissemination of numerous assessment tools designed to recognize behavioral pain indicators in nonverbal older adults (Herr, Bjoro, & Decker, 2006; Herr, Bursch, & Black, 2008; Herr, Bursch, Ersek, Miller, & Swafford, 2010). Despite the availability of these tools and clear guidelines for their use, an alarming number of residents are still experiencing poor pain management (AGS Panel on the Pharmacological Management of Persistent Pain in Older Persons, 2009; American Medical Directors Association, 2009; Hadjistavropoulos et al., 2011).

Research suggests there is a discrepancy between nurses’ identification of pain indicators in people with dementia and their decisions to provide analgesic agents (Kaasalainen et al., 1998; McCaffery, Ferrell, & Pasero, 2000). Horgas and Tsai (1998) found that even when controlling for number of painful conditions, NH residents with cognitive impairment received significantly fewer analgesic agents than residents without cognitive impairment. Research has focused largely on the assessment of pain, but few empirical studies have examined reasons for the continued inadequacy of pharmacological treatment of pain for NH residents with dementia. One grounded theory study conducted by Kaasalainen et al. (2007) examined physicians’ and nurses’ attitudes and beliefs about prescribing and administering pain medication in long-term care. They identified several barriers to effective treatment including underrecognition of pain, uncertainty regarding pain assessment and diagnosis, and discomfort with opioid use (Kaasalainen et al., 2007). No study, however, has explored nurse decision making about providing analgesic agents to individuals with dementia. Identifying reasons for the inconsistency between nurses’ identification of pain indicators in residents with dementia and the actions they take related to treatment can inform interventions to improve pain management for this vulnerable population. Please note that throughout this article treatment refers to the provision of analgesic agents, while acknowledging that other treatment modalities are available.

The purpose of this study was to examine how nurses make decisions to pharmacologically treat pain in NH residents with dementia, as well as to identify the conditions that influence treatment decisions, and to develop a conceptual model that can guide future research and clinical practice.

METHOD

Research Design

This study used a qualitative design—Grounded Dimensional Analysis—to explore the understandings nurses have about pain in individuals with dementia, the actions they take in relation to those understandings, and how the two are related (Caron & Bowers, 2000). Another major goal of this research was to identify conditions that influence nurses’ actions related to pain management. These aims are well suited for Grounded Dimensional Analysis (Caron & Bowers, 2000; Schatzman, 1991), a qualitative methodology developed as an alternative to grounded theory. It is similar in that it shares a symbolic interactionist foundation and is designed specifically to generate theory about how social understandings guide actions and to identify consequences associated with various actions. The end product of Grounded Dimensional Analysis is a conceptual model that explains the phenomenon of interest (Bowers & Schatzman, 2008).

Sample and Setting

The only eligibility criterion for nurse participants was that they be licensed nurses (licensed practical nurses [LPNs] or RNs) with experience caring for NH residents with dementia. Both LPNs and RNs were included because LPNs compose approximately half of the licensed nurse workforce in NHs (Rantz et al., 2004), and despite clear
differences in scope of practice, in NHs, LPNs often function in a capacity similar to RNs (Corazzini et al., 2010). The study was determined to be exempt from review by the University Institutional Review Board as no identifiable patient or nurse information was collected. As a result, no demographic information was collected from participants outside of what was needed to ascertain eligibility. Researchers worked in collaboration with directors of nursing to recruit participants.

Interviews were conducted with participants in a private room at their place of work at a time convenient for them. Participants were asked to participate in one to two interviews and received a $15 honorarium per interview. Interviews were audiorecorded and transcribed verbatim. Two participants were interviewed twice; these follow-up interviews were used to engage in verification strategies, such as member checking, to ensure fit with the developing conceptual model, and to pursue new questions that arose during analysis.

Both convenience and theoretical sampling were used throughout the study. Participants were recruited by convenience sampling through e-mails from their director of nursing, flyers posted in designated workspaces, and an announcement about the study at one staff meeting. Theoretical sampling involves the pursuit of data that will provide opportunities for constant comparative analysis—a process fundamental to grounded theory analysis (Strauss, 1987). Constant comparative analysis involves the pursuit of variability and complexities inherent in the phenomenon being studied (Strauss, 1987). Theoretical sampling can be achieved through identification of participants with relevant experience or through modifying interview questions to maximize comparisons, sampling for variations in experiences or events with a single participant. In this study, theoretical sampling was pursued primarily by modifying interview questions. For example, if a participant recounted a treatment decision involving a resident with very severe dementia who recently underwent surgery, the investigator would explore how that differed from a resident with no dementia or mild dementia post surgery. Thus, asking a single participant to provide details of the two separate situations and to explain and compare how each was approached provides a comparative sample. The researchers relied primarily on theoretical saturation of the core category to determine the appropriate sample size but also considered other important data elements, including the quality of the data (which was rich and descriptive), the scope of the core category of interest (which was specific and not too broad), the use of shadowed data (which was fairly common), and the complex nature of the topic (which is complex) (Morse, 2000).

Data Collection and Analysis

In conducting Grounded Dimensional Analysis, data collection and analysis occur simultaneously and cyclically (Schatzman, 1991; Strauss, 1987). That is, data are analyzed following each interview, allowing the researcher to pursue questions in subsequent interviews that are informed by the development of the conceptual model. Analysis progressed through several nonlinear phases: open, axial, and selective coding. Open coding focused on the discovery and description of categories and their characteristics (dimensions). Axial coding involved the exploration of conditions that influence the social process (pain management) and consequences related to different conditions and decisions. The primary goal of axial coding was to explore the interactions between different dimensions, conditions, and decisions in a variety of social situations that influenced these relationships. After conducting several very open interviews using these analytic procedures, selective coding became the focus of analysis. During selective coding, identifying a central social process or core category became the primary goal of analysis.

Toward the beginning of the study, line-by-line open coding techniques were used to analyze the data to ensure the products of analysis were consistent with the data (Strauss, 1987). The first of several interviews opened by asking participants broad, nondirective questions such as: “Tell me about your experience working as a nurse.” Most participants began by describing positions they have held and different nursing duties such as assessment and treatment. Other initial categories that resulted from open coding were supervising, becoming aware of problems, and identifying different sources of information through which nurses’ became aware of issues such as pain. As interviews progressed and analysis shifted toward axial coding, more direct questions were asked about nursing duties surrounding pain management, which highlighted nurses’ categorizing of residents (i.e., dementia/no dementia, drug seeking/not drug seeking, short-term stay/long-term stay) and pain (visible/obvious or nonvisible/not obvious). Participants also described inability to communicate due to other conditions, such as aphasia or trauma, as challenging for pain management; however, this study focused only on communication difficulties due to dementia.

These categories informed subsequent theoretical sampling decisions, interview questions, and selection of the core category: responding to pain that manifests as a change in behavior. Data collection and analysis contin-
FINDINGS
Summary of Findings

Fifteen in-depth interviews were conducted with 13 nurses from four skilled nursing facilities in Wisconsin. Three were LPNs and 10 were RNs. Across findings, there were no notable differences in responses from LPN versus RN participants. All participants worked in facilities that were part of a larger continuing care retirement community. Interviews ranged from 40 to 96 minutes in length.

A conceptual model (Figure) was developed to illustrate the process nurses engage in while identifying and deciding whether or not to treat pain in NH residents with dementia. The model describes how nurses’ perceived level of certainty regarding suspected pain influences treatment decisions. Nurses perceived level of certainty about the presence of pain was the most significant factor in determining whether and how quickly a resident’s pain would be treated pharmacologically. Resident characteristics, as well as presence or absence of an obvious reason for pain, influenced nurses’ levels of certainty regarding pain. Visible/obvious reasons for pain were considered to exist when a resident had a condition or experience for which pain is widely known to be an expected outcome, such as recent surgery. Major concepts of the conceptual model are defined with examples in Table 1.

Figure. Conceptual model illustrating the process nurses engage in while identifying and deciding whether or not to treat pain in nursing home residents with dementia.

1 In situations with high initial certainty, information discovered during assessment (e.g., history of drug seeking) may compromise certainty, shifting a resident to the Responding to Uncertainty trajectory.

2 Residents without dementia are much more likely to receive eventual treatment due to their ability to advocate for themselves, whereas residents with dementia who have complaints of pain but no behavior change may receive no treatment at all.
The most salient resident characteristics were whether a resident: (a) was a long- or short-term stay resident, (b) had dementia, (c) had a history of drug seeking, and (d) was actively dying (Table 2). Nurses described engaging in different assessment and treatment procedures in response to whether they had generally high or low levels of certainty regarding the presence of pain, leading to two distinct treatment trajectories: Responding to Uncertainty and Responding to Certainty (Figure). The Responding to Uncertainty trajectory led to treatment delays and generally occurred with patients who were long-term stay and/or had dementia and/or had a history of drug seeking and/or had no visible or obvious reason for pain. Responding to Certainty led to prompt treatment and usually occurred with residents who were short-term stay and/or did not have dementia and/or were actively dying and/or had a visible or obvious reason for pain.

Nurses’ identification of pain in residents with dementia relied heavily on the display of three types of pain indicators: (a) behaviors suggestive of pain, (b) behaviors highly suggestive of pain, and (c) general behavior changes (Table 1). Nurses described general behavior changes as indicative of possible pain but also potentially related to other causes. Examples of general behavior changes in-
cluded withdrawal, restless behaviors, and negative vocalizations. Nurses described these different types of pain indicators when directly asked how they perceive signs of pain in people with dementia. Without guidance from the interviewer, however, nurses conceptualized any type of pain indicator exhibited by a person with dementia as a behavior change. Even in situations when residents with dementia self-reported pain, nurses still conceptualized their pain and these reports as representing a change in normal behavior. Nurses felt uncertain about the reliability of physical symptom complaints from those with dementia and about whether pain was the cause of behavior changes. As a result, even though they identify pain indicators in residents with dementia, nurses generally had very low levels of certainty regarding suspected pain for these residents. The presence of pain indicators was not routinely sufficient to trigger pharmacological intervention. In response to suspected pain, nurses attempted various, non-sequenced interventions to try to relieve behavior changes, which did not always include analgesic agents. As a result of this “trial-and-error” process, analgesic agents provided to residents with dementia would often be delayed.

The goals of assessment and treatment also varied in response to whether or not a resident had dementia. In the absence of dementia for both characteristics associated with certainty and uncertainty, the purpose of assessment and treatment activities was to confirm certainty regarding pain and/or verify effectiveness of treatment. In the presence of dementia, however, the goal of assessment and treatment shifted toward returning the resident to baseline functioning by reducing or eliminating behavioral symptoms. Interestingly, although nurses felt very uncertain about their ability to confirm suspected pain in residents with dementia, they did not pursue certainty or routinely document effectiveness of interventions for residents with dementia. Nurses expressed feeling that it was nearly impossible to establish certainty regarding the underlying causes of pain indicators in residents with dementia. In situations when residents displayed pain indicators highly suggestive of pain, nurses suspected pain more strongly and were more likely to provide prompt treatment, although the focus of treatment remained returning the resident to baseline.

### Responding to Uncertainty
Consistently, residents (a) with dementia or (b) who were perceived by nurses to be drug seeking or (c) or were long-term stay residents, or (d) had no obvious or visible reason for pain fell into the Responding to Uncertainty trajectory. This trajectory produced further, more compre-

### TABLE 2
Resident and Pain Characteristics that Influence Nurses’ Certainty Regarding the Presence of Pain

<table>
<thead>
<tr>
<th>Resident Characteristics</th>
<th>Influence on Certainty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term stay resident</td>
<td>Less certain because pain is not anticipated and rarely visible; more thorough assessment undertaken.</td>
</tr>
<tr>
<td>Short-term stay resident</td>
<td>More certain because resident is more likely to have an obvious reason for pain, less likely to have dementia, more likely to need regular pain treatment and to have pain medication ordered.</td>
</tr>
<tr>
<td>Dying resident</td>
<td>Very certain, leading to prompt treatment.</td>
</tr>
<tr>
<td>Drug-seeking resident</td>
<td>Less certain, undergo additional assessment to increase certainty, likely to experience treatment delays.</td>
</tr>
<tr>
<td>Presence of dementia</td>
<td>Highly uncertain, considered to be a situation wherein certainty is impossible; more complicated assessment takes place in addition to a process of trial and error with multiple interventions if pain manifests as a behavior change.</td>
</tr>
</tbody>
</table>

#### Pain Characteristics

| Presence of dementia             | Highly uncertain, considered to be a situation wherein certainty is impossible; more complicated assessment takes place in addition to a process of trial and error with multiple interventions if pain manifests as a behavior change. |

- These conditions appear to be dominant and their corresponding influence on certainty and assessment are likely to superimpose other comorbid conditions. |
hensive assessments, and delayed or no treatment. While treatment delays were not explicitly measured in this study, they were spontaneously reported to occur by most participants. The extent of treatment delays was elicited by examining additional processes nurses described engaging in when responding to uncertainty, which invariably took additional time to complete.

Long-term stay residents were understood to have conditions that might contribute to the experience of persistent pain. However, because pain generally was not anticipated in long-term stay residents and usually was not obvious or visible, nurses considered its occurrence to be abnormal and necessitate more extensive assessment:

Most of our patients here are rehab...they've had new hips, knees, they've had strokes. They're tiny little frail bodies, I mean they have to have pain.... Just plain long-term folks those are people that are there to live...they may have arthritis, Parkinson's...and many of those diseases result in pain...but it takes a good body assessment to figure out why someone [who is] long term and [who is] not supposed to be in pain, why are they in pain?

Nurses considered pain to be easier to assess and treat in residents with visible or obvious reasons for pain and in residents who can accurately report the effectiveness of treatment. Nurses described feeling highly uncertain regarding pain in people with dementia due to a perceived inability to accurately interpret and answer assessment questions, and they believed it was impossible to ever achieve certainty in the absence of a more obvious reason for pain:

And we do have a lot of people with chronic pain too like arthritis, neuropathies, old fractures...scheduled pain meds are for people with the more severe pain...some of the long-term people can't speak anymore then you're relying more on whether they grimace or whether they moan, look comfortable...it's harder to judge their pain. They can't tell you so even if you think they're in pain—you don't know. Easy is when they can tell you and they're showing the signs and symptoms. They have the evidence, they have had surgery, they've got a gaping wound, they're telling you it's a 10 or an 8 and when you see results—you give them the pain pill, you go back and they say "Well now it's a 2"...those are the easy ones.

Whether a resident is considered to be drug seeking appeared to have more direct implications for the time to treatment. Residents with a history of drug seeking or who display drug-seeking behaviors (e.g., routinely asking for as-needed pain medication in more frequent intervals than ordered while not appearing to have substantial pain) were described as experiencing additional assessments and delays in treatment: “I’m not gonna run down there and give them that pain pill, they can wait…. [I] may be a little slower.”

Resident and pain characteristics associated with uncertainty had an additive effect on the extent of treatment delays. Behaviors highly suggestive of pain generally resulted in more prompt analgesia; however, when added to a patient’s dementia, no obvious reason for pain, or history of drug seeking, nurses experienced increased uncertainty, which produced greater treatment delays. Of the four characteristics associated with uncertainty, dementia was described as being the greatest deterrence to prompt pain treatment. Residents with no obvious reason for pain, those with a history of drug seeking, or long-term stay residents without dementia were described as receiving eventual but less automatic treatment, which may even have taken the form of deliberately delayed treatment. Comparatively, residents with dementia were described as very likely to receive delayed treatment and in some instances unlikely to receive any treatment.

Nurses’ Understanding of Pain and Decisions to Treat Pain in Residents with Dementia

Nurses often learned about suspected pain in residents with dementia as the result of a behavior change or because of a resident complaint. Regardless of variation in the symptoms or complaints of suspected pain in residents with dementia, it was almost exclusively discussed and responded to as representing a change in behavior. Only one deviation to this response was described, which involved residents who both had dementia and were actively dying—a characteristic that led to the Responding to Certainty trajectory. Nurses described feeling very uncertain regarding their ability to confirm the presence of pain and its etiology for residents with dementia. Nurses’ strategies for assessing pain in residents with dementia varied, and in some instances, they did not attempt to gather any verbal information:

It’s a lot easier when they’re [cognitively] intact to just explain to them on a scale..... I don't even ask the question of someone who's demented because they wouldn't understand it anyway...so I look at their body language, their facial expressions, how they're responding to you, to your touch, to your trying to care for them.

Changes in behavior were consistently considered to be indications of some underlying discomfort, psychosocial unrest (e.g., alteration with another resident), or pathophysiological change. Nurses considered pain to be only one of a number of potential causes for behavioral changes.
and explained it is likely that a combination of these factors contributed to behavior changes. In response to suspect-
ed pain in residents with dementia, nurses embarked on a trial-and-error approach that involved trialing different combinations of pharmacological and nonpharmacological interventions to relieve the underlying discomfort. The interventions they described included toileting, adjusting the room to suit resident preferences, offering a low dose of acetaminophen, repositioning, adjusting temperature and thermal comfort, increasing or decreasing stimulation, taking the resident outdoors or changing the environment, offering food, and checking for signs of acute illness (e.g., pneumonia, urinary tract infection [UTI]) if behaviors deviated from baseline. Interestingly, although nurses did not think it was possible to pinpoint the exact causes of the behavior change, they considered a return to baseline to indicate that some combination of interventions performed during the trial-and-error process had relieved the causes of behavior. The following quotation elucidates this process:

Well with the demented resident, I think you have to nar-
row it down. You have to toilet them. You have to bring them food. You have to offer a back rub. Some of them a pain pill isn’t going to help if they still have to go to the toilet, if they’re still hungry. You turn on the light, I might get ice cream. I might turn on the television, along with that I would give them a pain pill…if they’re restless or have a temp, maybe they’re having discomfort from a UTI. So it’s a matter of elimi-
nation…. It is kind of a hit and miss.

Nurses continued the trial-and-error process until the resident’s behaviors resolved. Most nurses stated that there is no specific order to these interventions, but some discussed adopting an individualized approach, wherein they would first try interventions known to be successful for a particular resident in the past. If significant time passed without resolution of the behaviors, nurses would contact a supervisor or a nurse practitioner/physician. Some nurses provided estimates of this delay as commonly being two to three 8-hour shifts. Nurses did not consider the use of analgesic agents harmful in the event that pain cannot be established as the cause for behavior change: “There is no order, you have to deal with what’s pertinent at hand…. I may give them the pain pill…. I don’t think we’re hurting anybody by giving them a pain pill if they don’t have pain.”

Residents who displayed general behavior changes that were vague in nature (e.g., being withdrawn or disengaged) were described as being least likely to receive analgesic agents or as experiencing the longest delays in time to treat. Hypoactive behavioral changes were also less likely to sug-
gest the need for pain treatment, and nurses highlighted the importance of developing relationships with residents to facilitate recognition of these more silent presentations of behavior change:

I think that the demented resident who cannot complain sometimes is forgotten…especially the ones that are quiet. I think the ones that strike out and are combative, any nurse can [figure out] maybe the pain is causing this behavior…. There are so many things we can look at with dementia. Do they need to go to the toilet? Are they hungry? Is there some-
thing wrong with the room that they’re afraid of? Building a trustful relationship with the staff is very important for [pain] management.

The consequences of the Responding to Uncertainty trajectory for a resident with dementia may include under-
recognition and undertreatment of pain, as well as treat-
ment delays. Because many interventions occur simultane-
ously and little effort is made to evaluate the effectiveness of individual interventions, it is unclear whether nurses are able to establish patterns in individual residents’ behaviors that would facilitate the development of more individual-
ized responses. Only when behavior changes remain unre-
solved and pain is the suspected cause did nurses describe documentation of treatment and outcomes over a period of time. Nurses said it would often take 1 to 2 days for a pattern to be established that would merit implementing new pain medication orders.

Responding to Certainty

Nurses described a process of prompt treatment for residents without dementia and/or those who are short-
term stay and/or those who are actively dying and/or residents considered to have visible or obvious reasons for pain. Nurses described responding to obvious reasons for pain with high levels of certainty, consequently expediting treatment. Although nurses recognized that not all short-
term stay residents are cognitively intact with obvious rea-
sons for pain, they consistently dichotomized long- and short-term stay residents into different treatment trajec-
tories. Suspected pain that occurs in the context of resi-
dent and pain characteristics associated with certainty was responded to by conducting a brief assessment (generally by using a 0-to-10 pain rating scale), offering prompt treat-
ment, and following up to confirm certainty and/or verify effectiveness (Figure).

The absence of dementia produces a strong influence on decisions to treat because of the ability of resident with-
out dementia to communicate. Even if a visible/obvious reason for pain was not apparent and nurses had a low lev-
el of certainty regarding suspected pain, residents without dementia were reported to receive prompt treatment for two reasons: (a) because they could reason and communicate clearly and (b) because they were able to advocate for themselves.

**Visible/Obvious Pain: A Dominant Condition**

The presence of a visible and obvious reason for pain was a dominant condition that could shift residents who would generally be prone to the Responding to Uncertainty trajectory into the Responding to Certainty trajectory. For example, a resident with severe dementia with a recent surgically repaired hip fracture or who is actively dying would be considered to have obvious and visible pain and, therefore, would be more likely to receive prompt analgesic treatment. However, nurses commented that, overall, residents with obvious reasons for pain and dementia may receive somewhat less treatment for other reasons, including limited or absent ability to verbalize pain or request treatment, only being formally assessed by a nurse once per shift, and hypactive or vague presentation of pain.

**DISCUSSION**

Findings from this study provide important insights into how nurses conceptualize pain in NH residents with dementia and their decisions to provide pharmacological treatment in several skilled nursing facilities in Wisconsin. The findings also highlight reasons for continued inadequate pain treatment for NH residents without dementia with various chronic diseases that were perceived by nurses in this study to have few obvious reasons for pain. Nurses interviewed in this study were most uncertain about the likelihood of pain in residents with dementia, who were also at greatest risk for experiencing underassessment, undertreatment, and delayed treatment for pain.

Participants’ uncertainty regarding the accuracy of self-report in residents with dementia was exacerbated by a general inability to differentiate between behavioral presentations that merited analgesic interventions and those that did not. Nurses in this study described the reality of pain management from their perspective. This conceptualization of pain sheds some light on potential reasons for continued disproportionately low levels of analgesic treatment for NH residents with dementia. Under the condition of dementia, nurses encountered pain in the context of behavior change. The actions they undertake, specifically the process of trial and error to relieve behaviors, are likely responsive to the irregularity, vague ness, and complexity of the behaviors exhibited.

Practice recommendations highlight the use of nonpharmacological interventions as first-line therapy for behavioral symptoms of dementia, as the antipsychotic agents often used to address these symptoms are not effective in improving functioning, decreasing care needs, or improving quality of life, and are associated with numerous adverse side effects (Salzman et al., 2008). There is growing recognition, however, that other pharmacological interventions, particularly analgesic agents, are both necessary and appropriate, as research suggests that acute physical problems such as pain are a common cause of behavioral symptoms (Kovach et al., 2006; Kovach, Logan, Simpson, & Reynolds, 2010). Nurses in this study did not prioritize assessment and treatment of physical problems but did consider numerous nonphysical etiologies for behavioral changes, such as psychosocial or environmental imbalance. This approach may be reflective of care foci in the NH environment, where the basis for many care interactions is a relationship between staff and the resident, rather than the intersection of illness and treatment more commonly seen in acute care settings. To that point, it is important to add that all nurses in this study described dedicated and thorough attempts to maintain residents’ well-being by meeting what they considered to be a variety of unmet needs. This suggests important implications for future intervention work: acknowledging and appreciating nurses’ genuine concern regarding residents’ needs is likely central to achieving the buy-in necessary to effect change in nurses’ pain management practices. More empirical examination of how nurses in this environment encounter and respond to pain indicators and dementia-related behavioral symptoms is needed to ensure that interventions to improve pain and symptom management are responsive to the real-world needs of the NH work environment.

Nurses in this study did not have clear procedures for assessing pain, responding to pain indicators and behavior changes, or prioritizing interventions. It is also clear that a large degree of inconsistency abounds regarding the provision of different interventions in response to pain indicators and behavioral symptoms, which suggests that nurses might benefit from easily-accessible decision-support algorithms that integrate guidelines for both pain and behavioral symptom management. Algorithms could help nurses decide when to implement which types of interventions (i.e., pharmacological and nonpharmacological) and in what order. An example of a decision-support intervention that follows an algorithmic model is the Serial Trial Intervention, a clinical protocol for assessing and treating...
unmet needs symptoms in people with severe dementia (Kovach et al., 2006, 2012).

Findings from this study suggest that uncertainty about the likelihood of pain and accuracy of self-report in people with dementia present major barriers to prompt treatment. Similar to findings from other studies, uncertainty played a significant role in staff members’ perception of pain (M.E. Clark, 2004; Kaasalainen et al., 2007). Findings from the current study expand this knowledge by providing information about how uncertainty influences treatment: In uncertain situations, nurses in this study described deliberately delaying treatment decisions or negating treatment in particular situations, such as with residents exhibiting drug-seeking behaviors. This finding suggests that certain attitudes or beliefs toward drug-seeking behaviors are a clear barrier to proper pain management. Although people with mild to moderate cognitive impairment are able to provide reliable pain reports over time (Weiner, Peterson, Logue, & Keefe, 1998), some nurses in this study felt so uncertain about the reliability of self-report in residents with dementia that they reported regularly failing to ask any direct questions about pain.

Nurses in this study felt little to no need to validate the effectiveness of treatment but rather focused their efforts on returning the resident to baseline. This practice limits the degree to which future interventions can be individualized. Consistent with findings from other qualitative studies (L. Clark, Jones, & Pennington, 2004; Kovach, Griffie, Muchka, Noonan, & Weissman, 2000; Parke, 1998), personal knowledge and the use of an individualized approach for addressing behavioral changes was identified by some nurses as particularly important for identifying and responding to hypoactive behavioral changes. Decision-support systems capable of accommodating and even recommending individualized assessment and treatment approaches may be particularly useful, as these nurses described very little documentation of results from any approaches.

Findings from this study highlight an urgent need to improve long-term care nurses’ understanding of evidence-based pain management guidelines in older adults, particularly for those with dementia and chronic pain. Nurses in this study held numerous misconceptions regarding pain in older adults, which presented barriers to adequate pain management. Participants understood that many residents had comorbid chronic conditions but did not consistently associate older age and chronicity with increased risk for persistent pain. The underrecognition of pain in long-term care residents likely to experience persistent pain by nurses in this study represents an alarming gap between current evidence and practice (AGS Panel on the Pharmacological Management of Persistent Pain in Older Persons, 2009).

The progression of assessment techniques nurses used rarely followed evidence-based recommendations. The Hierarchy of Pain Assessment Techniques outlines these steps: (a) attempt some form of self-report, (b) search for potential causes, (c) observe patient behavior, (d) obtain proxy reports if available, and (e) attempt an analgesic trial (Hadjistavropoulos et al., 2007; Herr, Coyne, McCaffery, Manworren, & Merkel, 2011). Some nurses made no attempts to obtain self-report from residents with dementia, and most began assessment efforts by initiating interventions to relieve behaviors devoid of any analgesic trial. Guidelines further recommend regular reassessment and documentation (Herr et al., 2011), which were rarely described by nurses in this study.

The only pain assessment tools nurses described were the 0-to-10 Numeric Pain Intensity Scale (McCaffery & Pasero, 1999) and the Faces Pain Scale (Hicks, von Baeyer, Spafford, van Korlaar, & Goodenough, 2001). No mention was made of other validated, nonverbal pain tools for use in advanced dementia, such as the Pain Assessment in Advanced Dementia Scale (Warden, Hurley, & Volicer, 2003), the Non-Communicative Patient’s Pain Assessment Instrument (Snow et al., 2004), or the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (Fuchs-Lacelle & Hadjistavropoulos, 2004). Many of these evidence-based tools and instructions for their use are available free on the GeriatricPain.org website (http://www.geriatricpain.org), but when asked, no participant was able to name any other pain assessment tool used in their facility. Exploring in a larger sample the extent of long-term care nurses’ knowledge of nonverbal pain tools and reasons for the underapplication of evidence-based pain assessment practices in NHs can help identify areas of need for translational research.

NHs receiving reimbursements from the Centers for Medicare & Medicaid Services must demonstrate that all residents with pain symptoms or who have the potential for pain (a) have their pain recognized and anticipated, (b) have existing pain and its causes evaluated, and (c) manage or prevent pain consistent with clinical standards of practice and the residents’ preferences (McSpadden, 2010). Faced with the complexity of dementia and dementia-related behaviors, however, nurses in this study did not have a strong enough understanding of pain and behavioral symptom management to meet these goals. Overwhelmingly, nurses expressed strong feelings about
the importance of providing comprehensive pain treatment, which strongly suggests that unwillingness to treat is not the root cause of this problem. Interventions geared toward improving decision making and decision support among nurses need to go beyond providing education and address the need for additional system supports and facility-level integration of appropriate pain management practices.

LIMITATIONS

The findings of this study must be interpreted in light of its limitations. This study included a small sample of licensed nurses who all worked in a geographically similar area. No demographic information was collected and no participant observation took place. As a result, the researchers are unable to establish, with certainty, consistency between nurses’ reported treatment patterns and their actions.

CONCLUSIONS AND FUTURE DIRECTIONS

Findings from this qualitative study provide an understanding of treatment decisions regarding pain from nurses at four skilled nursing facilities in Wisconsin. This study provides further evidence of low levels of adherence to evidence-based pain management practices in NHs and expands the understanding of possible reasons for continued undertreatment of pain in residents with dementia, according to the nurses’ perspective. This study also expands the understanding of the interrelationships among resident, pain, and provider characteristics related to pain treatment decisions. Examining nurses’ pain treatment decision making practices with a larger sample and an expanded care area is suggested.

REFERENCES


