Timing in the Communication of Pain Among Nursing Home Residents, Nursing Staff, and Clinicians

Grace Y. Jenq, MD; Zhenchao Guo, MD, PhD; Margaret Drickamer, MD; Richard A. Marottoli, MD, MPH; M. Carrington Reid, MD, PhD

Background: The management of nursing home (NH) residents’ pain requires adequate nursing assessment and clinician knowledge of pain therapies. However, the timely communication of pain from residents to nurses and from nurses to clinicians is equally necessary. Using a 4-step model (nursing assessment of pain, notification of clinicians regarding pain assessment, clinicians’ assessment of pain and intervention), and nursing reassessment following an intervention, we describe the timing with which each of these steps occur.

Methods: In a telephone survey of directors of nursing from 63 of the 68 nursing homes in New Haven County, Connecticut, we determined (1) how often nurses assess pain in residents, (2) when nurses notify clinicians about residents’ pain, (3) how often clinicians assess pain, and (4) when nurses reassess pain after a clinician’s intervention.

Results: Whereas in 76% of NHs nurses assessed pain in residents without pain at least “quarterly,” only in 46% of NHs was pain assessed in residents with pain at least “every shift.” In 42% of NHs nurses notified clinicians at least when the regimen was “ineffective.” Only 55% of directors of nursing reported that clinicians assessed pain at least every 30 to 60 days. Finally, in 73% of NHs nursing reassessment occurred at least 1 hour after intervention.

Conclusions: There is considerable variability in how frequently nurses and clinicians assess pain, when clinicians are notified about pain, and how frequently nurses reassess pain. Studies are needed to determine optimal timing in the communication process of pain to allow better pain management outcomes and quality of care for NH residents.

Arch Intern Med. 2004;164:1508-1512

Pain is a common problem among nursing home (NH) residents, and often stems from degenerative joint disease, neuropathy, or compression fractures. In the landmark study by Ferrell et al,1 more than 70% of residents reported pain. In addition, the study showed that pain was frequently undertreated, as only 15% of NH residents with documented pain received pain medications over a 24-hour period. Failure to treat pain adequately can lead to morbidity, including declines in socialization, depression, sleep disturbances, and decreased functional status.1,3

Over the last 10 years, several studies4-6 have focused on barriers at the individual resident, nursing staff, and clinician (physician, physician-assistant, and nurse practitioner) levels that contribute to poor pain management. For example, residents often fear that they may be labeled problematic if they complain of pain, and they commonly believe that pain is a normal part of aging.4 Nursing staff often fail to evaluate pain accurately in cognitively impaired residents because of a lack of suitable pain assessment tools.2 Lastly, clinicians often hesitate to prescribe narcotics because they fear regulations and/or have a poor knowledge of pain therapies.6 These barriers are currently addressed, with improved resident education regarding the right of patients to have their pain treated,7 with research and the development of nursing tools and methods for assessing pain in all residents,8-10 and with initiatives to improve clinician knowledge of pain treatments.11,12

Another potential (and as yet unstudied) barrier involves the relay of information regarding NH residents’ pain among NH residents, nursing staff, and clinicians. Even if nurses sufficiently assess for pain and clinicians become more skilled in their ability to prescribe analgesics, without adequate communication between the involved parties, pain cannot be adequately treated. The timely and effective flow of information about a resident’s pain is crucial in the management of that person’s pain.
Our goal is to better understand the communication process or flow of information regarding pain management in the NH setting. We propose that 4 key steps in this process include (1) nursing assessment of pain, (2) notification of clinicians regarding a resident’s pain, (3) clinician assessment and intervention, and (4) nursing reassessment following an intervention.

In this article, we report on the timing of communication regarding pain among NH residents, nurses, and clinicians. We surveyed a diverse group of directors of nursing (DONs) to determine (1) the frequency with which pain assessments are performed by nursing staff, (2) the timing of clinician notification of residents’ pain, (3) the frequency with which pain assessment are performed by clinicians and (4) the timing of nursing reassessment of residents’ pain following an intervention. (DONs understood an intervention to mean the administration of a new medication.)

By first understanding when information regarding pain is communicated among NH residents, nursing staff, and clinicians, we will ultimately determine whether the current communication processes are adequate for managing pain in NH residents.

METHODS

STUDY POPULATION

The study population included the DONs of all 68 nursing homes in New Haven County, Connecticut. We chose to interview these individuals because of their presumed knowledge regarding their respective institution’s pain management procedures. We sent prospective participants a letter informing them of the study and phoned them 1 week later to determine their willingness to participate in the study. All 68 DONs were contacted and 63 (91%) agreed to participate. The 5 DONs who refused to participate cited “no time” as the reason for refusal. The study was approved by the Human Investigation Committee at the Yale University School of Medicine.

DATA COLLECTION

Participants were asked to provide facility-specific data including number of beds, proprietary status, and accreditation status with the Joint Commission on Accreditation of Healthcare Organizations. The standard measure of total number of nursing staff hours (registered nurses, licensed practical nurses, and certified nursing assistants) per resident per day was obtained from the Web site www.medicare.gov/NHCompare/Search/AboutStaff.asp, which provides the public with information on the past performance and staffing ratios of all Medicare- and Medicaid-certified NHs in the United States. We collected these data from the Web site rather than the DONs, because the information provided was standardized and came from unbiased surveyors.

STUDY OUTCOMES

The survey used questions developed in a pilot study of 5 DONs. Because of the varied responses obtained from the pilot group, we retained the following open-ended questions in the current study: “How often is pain assessed (by nursing staff) in residents who do not complain of pain?”; “How often is pain assessed (by nursing staff) in residents who do complain of pain?”; “When are clinicians notified of pain assessments?”; and “How often is pain assessed by clinicians?”

Unlike the previous questions, the next item regarding reassessment of pain following an intervention was not opened because our pilot study showed a limited number of responses to this question. We asked the following: “When is pain reassessed (by nursing staff) after a clinician’s intervention?” Response categories included “1 hour after an intervention has been made,” “1 shift after an intervention has been made,” “1 quarter (3 months) after an intervention has been made,” “other,” and “not done.”

All surveys were conducted by a single interviewer (G.Y.J.), who transcribed participants’ responses in their entirety. To standardize the data-collection process, the interviewer read the open-ended questions verbatim. If a participant had difficulty understanding one of the questions, the interviewer reread the question.

ANALYSES

Two investigators (G.Y.J. and M.C.R.) independently reviewed the transcribed responses to the open-ended questions to identify all distinctive responses. The investigators then coded all the responses and any disagreements were resolved by consensus.

Many respondents provided complex responses to each question. For example, when asked “How often is pain assessed in residents who do not complain of pain?” one DON replied “on admission, quarterly, and as needed.” This response was coded differently from answers such as “quarterly” or “as needed” because it was more comprehensive.

To compare the pain management strategies of NHs, we assigned the most commonly occurring response to each question as the criterion standard. Nursing homes met the standard if the DON reported that their facility performed the step at least as frequently as the most common response. For example, the most common response to the question, “How often do nurses assess residents who do not complain of pain?” was “quarterly”; NHs that assessed for pain “daily,” “weekly,” or “quarterly” were classified as having met the standard, whereas the NHs that assessed for pain “as needed,” “on admission,” or “never” did not.

Descriptive statistics were calculated for participants’ responses to all survey items. Statistical software SAS version 8 (SAS Institute Inc, Cary, NC) was used for all analyses.

The mean (SD) number of beds of the NHs surveyed was 115 (61.9); 78% of the NHs were for-profit, and 63% were accredited by the Joint Commission on Accreditation of Healthcare Organizations. The mean (SD) number of nursing staff hours per resident per day was 3.4 (1.2).

The Table presents information regarding the timing of the 4 steps in the communication process of pain management. The 3 most frequently cited responses (with corresponding percentages), as well as the total number of different responses, are reported for each of the key survey questions. For example, the most common response to the question “How often is pain assessed by clinicians was “Every 30 to 60 days” and was reported by 22% of the respondents. A total of 31 different responses were recorded for this survey item, including “every 30 to 60 days,” “upon nurses’ requests,” and “seldom.”

Using the most common response to each question as criterion standard, we found that in 76% of NHs nurses
Timing in the Communication Process of Pain Management

<table>
<thead>
<tr>
<th>Questions</th>
<th>3 Most Common Responses</th>
<th>No. of Different Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often is pain assessed by nursing staff in residents who do not complain of pain?</td>
<td>Quarterly (29%)</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Every shift (19%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On admission and quarterly (8%)</td>
<td></td>
</tr>
<tr>
<td>How often is pain assessed by nursing staff in residents who do complain of pain?</td>
<td>Every shift (19%)</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Every shift and as needed (8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>As needed (11%)</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When are clinicians notified of pain assessments?</td>
<td>When treatment is ineffective (11%)</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>With change in pain intensity (11%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immediately, if resident has pain (6%)</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often is pain assessed by a clinician?</td>
<td>Routine (every 30-60 days) (22%)</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Upon nurse request (13%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seldom (8%)</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When is pain reassessed by nursing staff after a clinician’s intervention?</td>
<td>1 Hour after intervention (65%)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>1 Shift after intervention (16%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Hours after intervention (3%)</td>
<td></td>
</tr>
</tbody>
</table>

assessed pain in residents without known pain at least quarterly. According to the DONs’ reports nurses conducted pain assessments in residents with known pain at least every shift in 46% of NHs, and clinicians were notified about pain assessments at least when a given treatment was ineffective in 42% of NHs. Finally, a majority of the DONs (55%) thought that clinicians assessed for pain at least on a routine basis (every 30-60 days), and in 73% of NHs, nursing reassessment of pain occurred at least 1 hour after intervention.

Building upon previous studies of pain management in the NH setting,1-5 our study looks at the process or flow of information regarding pain among residents, nursing staff, and clinicians. The findings indicate significant variation in how frequently nurses assess pain, when they notify clinicians, when clinicians assess pain, and how frequently nurses reassess pain following an intervention.

The wide range of responses in our study is likely due to the complicated nature of pain assessment and the varying degrees of assessment performed at different time points. For example, some NH policies may require nursing staff to perform full assessments quarterly but verbal assessments more frequently, eg, at every shift. The variation may stem from the fact that no gold standards are in place for the communication process; thus, individual institutions have devised their own plans.

There are currently several guidelines and mandates addressing pain management from various organizations.7-13 In a recent review, Chodosh et al13 stress the importance of screening, management, and follow-up of chronic painful conditions. The authors propose that pain should be assessed in all new patients. They further propose that chronic pain should be regularly assessed at least every 2 years, and follow-up should occur at least every 6 months. While these recommendations may be appropriate for community-dwelling older persons, they may not be appropriate for NH residents. More frequent assessment and communication of pain should be considered because this population is a particularly vulnerable group, with a higher prevalence of pain and impaired cognition.

Guidelines more specific to managing pain in the NH setting have not focused on the overall communication process regarding pain experienced by residents, but have addressed individual steps. For example, the 1999 American Medical Directors Association guidelines recommended that nursing staff assess pain on admission, quarterly, with any change in condition, and with any suspected new pain; all of which applies to step 1 of our model, ie, nursing assessment of pain.12 However, this schedule may be too infrequent for residents with severe pain. In addition, very little mention is made regarding the degree of assessment (which can range from a simple verbal numeric report to a full nursing comprehensive assessment) that should be performed.

Some guidance is provided regarding when nursing staff should reassess pain after an intervention. Contributors to the LTC Exchange, a pain management newsletter, suggest that pain should be reassessed 1 to 2 hours after an analgesic has been initiated.14 This probably reflects an extension of policy that effectiveness should be determined after any “as needed” medication is administered. This reassessment schedule does not take into account that some sustained-release narcotics require longer than 1 to 2 hours before effectiveness can be suitably measured.

Other than the above-mentioned recommendations for when nursing assessment of pain and nursing
reassessment should occur, there are no published guidelines that recommend when clinicians should be notified regarding a resident's pain status or when they should assess and intervene on a resident's pain. Nursing notification of the clinician about a resident's pain is an important part of the process of pain management because it allows continued communication from the resident to the clinician. Because clinicians are frequently not present when residents report pain, nursing notification is crucial to making the clinician aware of the problem. Clinician assessment is also critical in the process of pain management; however, the frequency with which these assessments should be performed remains inadequately defined. Some might argue that because nurses are the primary assessors, clinicians should be able to make interventions based solely on nursing assessment data. In contrast, others might argue that clinicians should assess residents before every new intervention. The correct answer probably lies somewhere between these 2 extremes.

One question that this study brings to light is whether standards for the steps in the process of pain management are necessary. Establishing standards would make the process more structured and uniform so that all involved parties would be familiar with the protocol. This could lead to better recognition of pain in all residents and decrease the chance that decisions are made from subjective biases. Alternatively, standards may not help because the process of managing pain in the NH setting is complex. Pain management may not fit into a set clinical pathway, but instead may need to be individualized. Lastly, one more guideline may create additional burden on an already overworked staff.

When we used the most common response to each of the key survey questions as a criterion standard, we found that in most NHs, nursing assessment of pain in residents not complaining of pain occurred at least quarterly, but that in less than half of the NHs, pain assessment in residents with known pain occurred at least every shift. In addition, fewer than half of the DONs reported that clinicians were notified about pain assessments at least when a given treatment was reported to be “ineffective,” and only half of the DONs thought that clinicians assessed pain at least on routine visits (every 30-60 days). Because we did not survey the clinicians, this finding may not accurately reflect what actually occurred. Lastly, in most NHs, nursing reassessment of pain took place at least 1 hour after a clinician's intervention. (DONs understood an intervention to mean the administration of a new medication.)

Could the most common responses for the timing of the 4 steps be thought of as “standards” to be implemented? Before considering these responses as standards, further refinement of the terms is needed. For example, with regard to clinician notification, what does “ineffective” mean? Does it mean that the pain did not completely resolve, or does it mean that the level of pain did not change following an intervention? Furthermore, we have found possible time points for assessment, but more thought needs to be devoted to defining which assessment methods to use at the different time points. For example, should pain be fully assessed quarterly and verbally assessed at every shift? We hope that this study will lead to further research on the process of pain management and the development of reasonable criteria that may be used as guidelines.

This small study of only 63 NHs from a narrow geographical area may not be representative of NHs in general. However, characteristics of NHs suggest that this sample is similar to other samples of NHs in Connecticut and in the United States. Second, our 4-step model of the communication process of pain management may be overly simplistic. Some might argue that the model is too limited and ignores the many other disciplines involved, eg, physical therapists, psychologists, and social workers may also be involved the management of residents' pain. However, we focused on the nursing staff and the clinicians because these individuals have primary responsibility for administering and prescribing analgesic treatments. Given our study design, we could not determine whether the DONs' reports reflected NH policies or actual practices. Chart reviews will have to be performed to more accurately evaluate pain management practices.

Another important step will be to determine whether delay in the assessment or communication of residents' pain represents another barrier to pain management.

In conclusion, our study explores how information regarding pain is communicated among NH residents, nursing staff, and clinicians. By breaking down the process of pain management into 4 basic steps: nursing assessment of pain, notification of clinician about pain assessment, clinician assessment and intervention, and nursing reassessment of pain, we describe the wide range of timing in which each of the above steps occur. We hope that this study will promote discussion on how to create better processes of care that optimize the flow of pain information in the NH setting, with the ultimate goal of reducing pain in NH residents.

Accepted for publication September 30, 2003.

Dr Jenq's work was supported by a Hartford/American Federation for Aging Research (AFAR) Geriatrics Fellowship, and Research Training in Epidemiology of Aging Grant T-32 AG19134. Dr Reid's work was supported by an Advanced Career Development Award from the Department of Veterans Affairs Health Services Research and Development Service at the time of this study. Dr Reid's work is currently supported by a Paul Beeson Physician Faculty Scholar in Aging Research and a Robert Wood Johnson Foundation Generalist Physician Faculty Scholar Award.

We thank Lynne Iannone, Virginia Towle, and the Yale Program on Aging for their contribution to the project and Cathy Shufro and Daniel Goldstein for their help with manuscript preparation.

Correspondence: Grace Y. Jenq, MD, Yale University School of Medicine, 20 York St, Tompkins Bsmt 15, New Haven, CT 06504 (jenqgy@ynnh.org).

Alternate corresponding author: M. Carrington Reid, MD, PhD, Division of Geriatrics and Gerontology, Weill Medical College, Cornell University, 525 E 68th St, Box 39, New York, NY 10021.
REFERENCES