Patient Safety Incidents in Hospice Care: Observations from Interdisciplinary Case Conferences

Debra Parker Oliver, PhD, MSW,¹ George Demiris, PhD,² Elaine Wittenberg-Lyles, PhD,³
Ashley Gage, MSW,⁴ Mariah L. Dewsnap-Dreisinger,⁵ and Jamie Luetkemeyer, MD¹

Background: In the home hospice environment, issues arise every day presenting challenges to the safety, care, and quality of the dying experience. The literature pertaining to the safety challenges in this environment is limited.

Aim: The study explored two research questions; 1) What types of patient safety incidents occur in the home hospice setting? 2) How many of these incidents are recognized by the hospice staff and/or the patient or caregiver as a patient safety incident?

Design and Methods: Video-recordings of hospice interdisciplinary team case conferences were reviewed and coded for patient safety incidents. Patient safety incidents were defined as any event or circumstance that could have resulted or did result in unnecessary harm to the patient or caregiver, or that could have resulted or did result in a negative impact on the quality of the dying experience for the patient. Codes for categories of patient safety incidents were based on the International Classification for Patient Safety.

Setting/Participants: The setting for the study included two rural hospice programs in one Midwestern state in the United States. One hospice team had two separately functioning teams, the second hospice had three teams.

Results: 54 video-recordings were reviewed and coded. Patient safety incidents were identified that involved issues in clinical process, medications, falls, family or caregiving, procedural problems, documentation, psychosocial issues, administrative challenges and accidents.

Conclusion: This study distinguishes categories of patient safety events that occur in home hospice care. Although the scope and definition of potential patient safety incidents in hospice is unique, the events observed in this study are similar to those observed with in other settings. This study identifies an operating definition and a potential classification for further research on patient safety incidents in hospice. Further research and consensus building of the definition of patient safety incidents and patient safety incidents in this setting is recommended.

Introduction

MORE THAN 1.5 MILLION terminally ill individuals enrolled and received hospice care in private homes in the United States in 2011¹ Under the guidance of hospice staff, loving family members who are typically a spouse, adult child, or sibling provide the majority of day-to-day care. These untrained caregivers are responsible for managing complex pain and symptom management protocols for their loved ones without formal preparation for this role. In the home hospice environment, issues arise every day presenting challenges to the safety, care, and quality of the dying experience.

Although the hospice industry has published safety standards through its national organization,² the implementation of these standards is voluntary and as a result variable.³ In published literature, almost no effort, outside of those exploring the safety of various medications, has been documented aiming to understand or identify patient safety incidents in the home hospice setting.⁴

In a recent study sponsored by the Agency for Health Care Research and Quality (R03 HS018245), Smucker and colleagues interviewed 62 interdisciplinary home hospice team members from 13 hospice organizations to understand their views of patient safety in home hospice care.⁵ When recalling

¹Curtis W. and Ann H. Long Department of Family and Community Medicine, School of Medicine, University of Missouri, Columbia, Missouri.

²Biobehavioral Nursing and Health Systems, School of Nursing and Biomedical and Health Informatics, School of Medicine, University of Washington, Seattle, Washington.

³Markey Cancer Center and Department of Communication, University of Kentucky, Lexington, Kentucky.

⁴School of Social Work, University of Missouri, Columbia, Missouri.

⁵School of Medicine, University of Missouri, Columbia, Missouri.

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events from their experiences, the participants primarily described patient safety incidents related to the patient's home living situation, or family caregiver attitudes and practices. Compared with similar patient safety research in hospitals and other settings, the participants recalled relatively few patient safety incidents related to errors in evaluation, treatment, communication, or other functions of the health care team. In addition to the general definition of patient safety incidents as "events or circumstances that could have resulted or did result in unnecessary harm to a patient," Smucker's team concluded that hospice team members' views of patient safety incidents suggests an expanded definition that includes unnecessary harm to family caregivers, or unnecessary harm from disruption of a peaceful, comfortable dying process for hospice patients.⁵

Similarly, in a recent paper by Casarett and colleagues, the challenges of using traditional definitions and principles regarding patient safety in the hospice environment were illustrated.³ They identified three unique characteristics to examining safety issues in the hospice setting, which justify consideration of hospice safety in a unique manner. The first consideration is that usual safety measures to reduce morbidity and mortality can be irrelevant in a hospice setting focused on comfort rather than death. Secondly, usual measures are designed for patients without years of life expectancy and hospice prognosis is often days, weeks, or months. Finally, the standard safety practices hold a provider accountable for patient safety incidents, when in the case of hospice, it is often family who are providing the majority of care.³

Finally, in a pilot study on errors in palliative care, Dietz and colleagues found errors in communication are especially common in German palliative care practice. In fact, palliative care professionals identified more errors in communication than with symptom management. They concluded that palliative care professionals need specific training on patient safety.⁶

While there is a body of literature exploring patient satisfaction with hospice and palliative care,^{7,8} and some literature on inpatient hospice care and the safety of various drugs in the terminally ill, there is a lack of published research that describes overall patient safety incidents in home hospice care.⁴ A search of the published peer reviewed literature using the key words *patient safety incidents* or *patient safety* and *hospice* yielded 122 results through Medline. However, restricting the search to nonpharmacological, original research studies in the United States (to account for the restrictive U.S. definition of hospice as primarily home-based service with required life expectancy of six months or less) did not yield any relevant results. Further, adding the words *patient safety* and *palliative care* produced 727 publications in Medline. Again, no results were found after applying the aforementioned limits.

However, there are numerous studies of patient safety incidents in various institutional settings. In these settings, patient safety incidents have been directly impacted by collaboration within health care teams.⁹ Interdisciplinary team (IDT) collaboration is not only relevant but also the cornerstone of hospice care, comprised of team members from medicine, nursing, social work, and chaplaincy. The inability of hospice interdisciplinary team members to collaborate on patient care plans can impact safety incidents.

Casarett and colleagues propose three principles to guide measurement of safety in hospice. First they propose that

safety measures incorporate patient goals and preferences. Second, they propose that imminently dying patients be excluded from some safety measures that would extend life. Finally, they suggest that hospice accountability reflects the degree to which the program can control processes of care.³ These principles, aligned with Smucker's proposed scope of patient safety incidents and potential harms in home hospice care, creates a framework for reviewing and categorizing patient safety incidents in a hospice setting.

While the Smucker study⁵ focused on interviews with staff and developed a definition for hospice patient safety, the goal of this study was to observe hospice staff interactions using Smucker's definition and attempt to operationalize Smucker's definition. The purpose of this study was to observe hospice interdisciplinary team meetings to identify and understand the types of patient safety incidents that occur within the home hospice setting. The study explored two research questions: (1) What types of patient safety incidents occur in the home hospice setting? and (2) How many of these incidents are recognized by the hospice staff and/or the patient or caregiver as a safety incident?

Methods

This study used qualitative data collected from a larger ongoing randomized clinical trial, which is sponsored by the National Institute of Nursing Research (1R01NR011472). Home hospice caregivers were enrolled from two participating home hospice agencies in the midwestern United States. One hospice was a part of a national for-profit program and the second, a private not-for-profit hospital-based program. Both programs served approximately the same number of patients each year (500 admissions). The for-profit hospice had slightly more enrollees in this sample because it had been participating for an additional 30 days. The data consists of observations on hospice interdisciplinary team meetings whose purpose is to discuss patients' plans of care.

The Medicare conditions of participation require hospice teams in the United States to meet at least every two weeks to discuss patients' plans of care.¹⁰ These meetings require at least a nurse, social worker, physician, and counselor. Most meetings last two to three hours, as all patients are discussed for an average of six minutes.¹¹

The larger intervention trial connects caregivers to their hospice agency's team meeting using telephone conferencing or videoconferencing and is described in detail elsewhere.¹² Videoconferencing was coordinated through a vendor providing an Internet-based platform for encrypted communication. Caregivers were randomly assigned to either an intervention or standard care group. Intervention participants were provided with web cameras, headphones, and training at the time of consent at no cost to the caregivers. Videoconferencing allows the caregiver and team members to see and hear one another; the image is projected for the team to view.¹² A research staff person facilitated the videoconferencing and responded to technological issues, as needed. A graduate research assistant (GRA) videorecorded and edited a random sample of both intervention and control conferences for analysis.

This project relied on videorecordings of hospice team meetings made in the first six months of the clinical trial. The videos include informal discussions between team members

TABLE 1. DEFINITIONS AND CODING FRAME

<i>Patient Safety Incident Codes</i>	<i>Definition</i>
Administration	An incident that is facilitated by a concern with administration of the hospice agency—for example, staffing, regulations, licensing, credentialing
Clinical process	An incident that is facilitated by a problem with a clinical process, such as coordination, physician ordering, pain management
Procedural	An incident that is facilitated by procedural issues, such as time delays in receiving the physician order or delivery of medications or equipment
Documentation	An incident that is facilitated by a lack of appropriate documentation
Medication	An event that impacts medication or the administration of medication
Psychosocial or environmental	An incident that is facilitated by a psychosocial or environmental problem such as inadequate resources, abuse, unsafe housing
Family or caregiving	An incident that is facilitated by a problem with family or caregiving resources such as the lack of caregiving, a caregiving error, a family disruption
Spiritual	An incident that is facilitated by an individual's spiritual belief which is either a barrier or perhaps influences a less than adequate outcome, such as the spiritual belief in suffering
Accident	An incident that is unavoidable and accidental
Infrastructure	An incident that is facilitated by a lack of infrastructure such as a lack of agency protocol for a problem
Fall	An incident that results in a person coming to rest unintentionally on the ground or lower level, not as a result of a major intrinsic event (such as a stroke)
<i>Team Action Codes</i>	
Not recognized	There are no members of the hospice team who labeled the incident as having a negative impact on the quality of dying, as a safety concern, as inappropriate, harmful or potentially harmful event
Recognized	There was at least one member of the hospice team who labeled the incident as having a negative impact on the quality of dying, as a safety concern, as inappropriate, harmful or potentially harmful event

that were not patient related, as well as formal patient-related discussions with consenting caregivers. Team meeting discussions for patients who did not consent to the study were not recorded. The study was approved by the University of Missouri Health Sciences institutional review board.

Data analysis

Videorecorded discussions between caregivers and interdisciplinary team members were reviewed for any potential patient safety incidents, coded for safety incident type, and then identified as recognized or not recognized. To identify patient safety incidents, the definition of patient safety incidents based on the International Classification for Patient Safety (ICPS) and the conclusions of Smucker and colleagues was used: *Any event or circumstance that could have resulted or did result in unnecessary harm to a patient or family caregiver, or had a negative impact to the quality of the dying experience for the patient.*⁵ An utterance was deemed a potential safety incident if there was discussion of instances having a negative impact on the quality of dying, as inappropriate, harmful, or a potentially harmful event. Coded utterances varied in composition from a single statement from a single speaker to a set of statements between several team members. To code for safety incident type, an initial set of codes were modified from the ICPS.¹³ A “fall” safety incident code was added in order to differentiate between an event that was specific to a patient

fall and a more general accident. Due to the intersectionality of events, codes were not mutually exclusive, so more than one code was often assigned to a single event.

The coded event types are defined in Table 1. If the event was a symptom of the natural dying process, it was not identified as a safety incident. Raters distinguished events as part of the natural dying process if there was no available treatment or if treatment would not solve the concern. For example, the decline in hospice patients' appetites was not identified as a safety incident. However, if caregivers or patients reported a pain score greater than two and did not indicate that they had chosen to accept some level of pain, these incidences were identified as patient safety incidents concern, given the impact of pain on quality of life.

Finally, identified patient safety incidents were coded as either recognized or not recognized. Recognized incidents were those where at least one member of the hospice team discussed a negative impact on the quality of dying, as a safety concern, as inappropriate, harmful, or potentially harmful. An incident was defined as unrecognized if there were no members of the hospice team or a caregiver who labeled the incident as having a negative impact on the quality of dying, as an adverse event, as inappropriate, harmful, or potentially harmful.

Coding was led by the first author who has 15 years of hospice management experience and 12 years of experience as a hospice researcher. The coders (a first-year medical student,

a doctoral social work student, and a first-year family medicine resident) were trained by the first author and were experienced with the intervention in the hospice setting, having observed hospice team members and team meetings for six months. The coders worked with the first author and reviewed five videos together, discussing and agreeing on utterance meanings, working together in the application of the coding frames and the documentation of codes. Once agreement was established and the frame and definitions finalized, two raters coded each video using the coding frames. Initial coding was conducted by the graduate student and a medical student individually, and was then followed by discussion and consensus on the final codes. Next, 10% of the coded recordings were reviewed by a third coder (family medicine resident). The coding frame was modified as the analysis progressed. Finally, all coded utterances were reviewed by the first author and then discussed in peer debriefing with the research team.

Results

The retrospective analysis of videos included 54 videos, 28 with caregiver participation and 26 without caregiver participation, collected during the first six months of the larger trial. The average length of time for a discussion when the caregiver participated was seven minutes and for those where the caregiver did not participate it, three minutes. Patient safety incidents were identified in all but two anticipated categories in the model. No patient safety incidents issues were identified in the structure or spiritual categories. Most of the events (91.2%) were recognized by caregivers or the hospice staff as safety issues. The most prevalent event types were those related to clinical process (32.5%). Below are results and examples of each type of patient safety incident observed.

Clinical process

Incidents related to the care process such as coordination, physician ordering, or pain management were defined as clinical process issues. One example was a discussion between a hospice nurse and the medical director (MD) regarding a problem obtaining the correct dose of methadone in a rural area on a Friday afternoon. The incident resulted in the patient receiving twice the ordered dose.

RN: We decided to go with methadone....We started at 5 mg once a day. Dr. H had written ½ tab, which would be 2.5 q 8 hours....I guess the medicine was sent in 5 mg and the staff couldn't cut it in half.

MD: There's a liquid you can use.

RN: Well, they had 5 mg on hand, [city name] didn't have any, so we had to bring it from [another city name], and so what we got from them was the 5 mg. And so, therefore on a Friday we had 5 mg. (01-0105)

This issue is an example of a breakdown in the clinical process of pain management resulting in a dosing error. Because there was no pharmacy nearby with the correct dosage or liquid and the nurses could not cut the pill, they administered twice the amount ordered. Although no harm came from the increased amount, it was nonetheless a violation of orders and could have been potentially harmful. This example, like many others, demonstrated the interconnectedness of the patient safety incidents categories. In addition to a clinical process event this example also was coded as a medication event.

Medication

The second most common incident involved issues related to medication. These medication events were not identified as events because they did not evaluate the safety of a particular drug in this population, but rather a problem with the use, administration, or dosing of a particular medication. One example involved the daughter of a patient reporting problems with her mother's pain in her knee. As is sometimes the case, the mother's home was in a nursing home. Medicare considers the nursing facility a home for those residents who live there, and thus hospice has "home" patients whose care is delivered in this residential setting.¹⁴ The daughter asked the hospice team a question about pain medication and noted the frustration with having it administered when needed in this setting.

Well, my question was this: She was in pain in her knee, she was in bed and had not been gotten out of bed Saturday at all by noon and she complained of pain and asked if she could have some pain pills. Tylenol I think is what they give her. And nothing was forthcoming. It went longer and I asked someone else and she never did get it the whole time I was there. (01-0144)

In this example the need to administer pain medication was coded as a safety incident as well as a clinical process concern. The caregiver had not reported this concern prior to the team meeting, and did not contact the on-call hospice nurse to resolve the issue. This safety incident also illustrates one of many documented challenges for hospice programs when the home setting is in a nursing facility as they are dependent upon nursing facility staff to implement the plan of care.¹⁵

Falls

Incidents that resulted in a person coming to rest unintentionally on the ground, but not as a result of a major intrinsic event (such as a stroke) were classified as falls. Falls made up 8.9% of the identified events. One such example was observed as the nurse gave her report:

[Patient name] had multiple falls; March 14, March 20, May 8, May 9, May 21, May 23, and May 24. He has increased weakness and lethargy, no longer able to safely ambulate. (01-0140)

These falls were coded as patient safety incidents because they had the potential for harm and impacted the quality of life; the patient was no longer able to move around without concern of additional falls.

Family or caregiving

Incidents that involved events facilitated by a problem with family or caregiving resources, such as the lack of caregiving, a caregiving error, or a family disruption were also observed. One such event was reported by the nurse:

I have some concerns about her being alone in the home. She has fallen twice, almost fell another time if a staff member hadn't been there. I mean, the staff [hired caregivers] have been coming in and encouraging her to use the walker and showing her but she's got such memory problems, she won't be consistent especially if nobody is there. The two times she was found on the floor the staff [hired caregivers] were not there and she was found when they came back for their shift. (01-0014)

In this example, the risks of falling are further complicated when there is no caregiver with the patient. Thus, in addition to coding this example as a fall, it was coded as a caregiving concern.

Procedural problem

Almost 7% of patient safety incidents were facilitated by procedural issues, such as time delays in receiving the physician order or delivery of medications or equipment. Below, a caregiver describes such an event while discussing insurance coverage and an event with in the availability of medication.

I got a letter from her prescription drug plan that said they are only going to supply her with, um, it's not on their formulary, the Torsemide, so they are only going to supply her with a 30-day supply. So we are working that out, it will be supplied by hospice. That's a hospice project responsibility so sorry about that, you guys will take care of that. (01-0014)

This example shows the impact of an insurance formulary on potential problems with access to medication that enhances the quality of life for a patient. Interruptions in access to medication due to issues of payment or insurance coverage may prevent a patient from getting a needed medication, thus having a potential impact on difficult symptoms in the final weeks and months of life.

Documentation

Incidents related to inappropriate or inaccurate documentation were also observed. One such incident is illustrated in an interaction between the patient, medical director, and nurse as they discussed pain medication.

Patient: Mike [RN], I take that hydrocodone.
RN: Hydrocodone that's fine, you got that too.
MD: It's not on here (pointing to the chart).
RN: The hydrocodone?
MD: I don't see it anywhere. (01-0194)

In this example the medical director is unaware of the medications ordered because the documentation is not accurate. This event has the potential to impact the patient's quality of life as the MD and other hospice staff make decisions regarding their care based on the documentation.

Psychosocial issues

Events were coded as psychosocial when they were caused by a psychosocial or environmental problem such as inadequate resources, abuse, unsafe housing. One example observed was a medication problem related to inadequate caregiving.

But last week with all this family dynamic stuff going on, it was crazy, they were not checking on her and she didn't take about 3 days, 4 days, of that medication and was up 10 pounds yesterday. (02-0043)

In this example it is evident that family problems had a negative impact on the patient as the family did not check on her and her medications were not given, resulting in an increase in fluid retention. While also a medication concern (and coded as such), it is the family not administering the correct medication due to conflict that created this negative outcome.

Administrative challenges

Administrative incidents were those defined as an event related to administration of the hospice agency, for example, staffing, regulations, licensing, or credentialing. One such incident, recognized by the caregiver, involved the transportation of a patient to an inpatient setting.

The number-one question is, Is it safe to transport her in my car or do I need some sort of other form of transportation to get her out of there? My question is, however, a tactical one, right? What if she starts screaming and beating her hands on the chair and refusing to go? I personally am incapable of getting her out of the chair and dragging her to the car. So, do I have a couple of big goons that I can call on to tie her down or give her some medication? How do we get her out of there, if she's resistant, which she has a history of being? The last hospital visit it was me, three fireman, two EMTs, and the police.¹⁻¹⁴ (01-0014)

In this example, the hospice staff advised the caregiver to take the patient to the hospital, but their policy prevented staff from directly transporting the patient. As the caregiver identifies very significant challenges with transportation, the hospice's policy restricts certain options for safe transportation of the patient. Potential harms include physical injury to the patient, as well as potential emotional distress for the family caregiver.

Accident

Events that were unintended or unexpected were defined as accidents. These accidents were identified in the context of Caserett's principle that patient and family goals and preferences must be taken into consideration in addressing patient safety incidents.³ The below example was a discussion of an admission of a new hospice dementia patient. The hospice team has to wrestle balancing the potential harm of aspiration pneumonia with what is likely a loving, caring desire of the family to assure their loved one is fed.

MD: She had a recent hospitalization in January...back-to-back pneumonias.
RN: Yes.
MD: So I'll say patient has advanced dementia but...more concerning is back-to-back aspiration pneumonia....Family prefers a palliative feeding approach to help with more...risk avoidance. The sort of key issue would be recognizing aspiration. Are antibiotics off the table? Or would they use antibiotics?

TABLE 2. FREQUENCY OF CATEGORIES OF PATIENT SAFETY INCIDENTS

<i>Patient Safety Incident Codes</i>	<i>Not recognized</i>	<i>Recognized</i>	<i>Total (%)</i>
Clinical process	3	37	40 (32.5%)
Medication	1	29	30 (24.3%)
Fall	1	10	11 (8.9%)
Family or caregiving	1	8	9 (7%)
Procedural	0	9	9 (7%)
Documentation	1	6	7 (5.6%)
Psychosocial or environmental	0	3	3 (2.4%)
Administration	1	3	4 (3%)
Accident	0	1	1 (1%)
Infrastructure	0	0	0
Spiritual	0	0	0
Safety incident total	10 (8.1%)	113 (91.9%)	123

RN: I don't know, uh, but we didn't actually bring that up. I met the daughter last week and we didn't talk about that. But she is willing to sign another waiver if she needs to go to all liquids for her quality of life. (01-0104)

This example demonstrated a potential (aspiration pneumonia) accident when the MD noted that feeding has the potential for an unexpected negative outcome.

Hospice staff/caregiver recognition of patient safety incidents

In addition to documenting the type of patient safety incident in hospice, we were also interested in whether these incidents were recognized by hospice staff and/or family caregivers. As illustrated in Table 2, the majority of the observed incidents (91.1%) were recognized by either a member of the hospice team or the caregiver. An example of a recognized incident was a nurse reporting something she acknowledged as a problem.

RN: Sounds like his blood sugars are working good, but I think he plays with the insulin. So I don't know if we have a good picture of that. (02-0132)

Likewise, an unrecognized incident was observed when a caregiver asked questions about her visits for the week and the hospice staff were unaware of the week's visit schedule. The hospice staff did not acknowledge the schedule confusion as an adverse event that may have impacted the quality of the dying experience for the patient or family.

CG: The nurse isn't coming out this week. I talked to her earlier this week. She is on vacation.

RN: Oh, that's right. You are right.

CG: You knew that, didn't you?

RN: I did know that now that you said that. We will have another nurse to come down and see her.

CG: I think she is coming on Wednesday.

RN: Yeah, I think you are right.

CG: And....is coming next week on time.

RN: I'm glad you all have it figured out. (01-0135)

Discussion

Little research has been done related to the types and frequency of patient safety incidents in the hospice setting. This study observed numerous types of patient safety incidents, the majority (92%) of which were recognized by either the caregiver or hospice staff. This overwhelming recognition of events suggests that while the specific hospice classification and definition of incidents is not prevalent in the literature, both hospice staff and caregivers recognize when events occur that have a negative impact on the quality of the dying experience. This overwhelming recognition supports Smucker's findings.⁵

These cases demonstrate that while the definition of potential types of harms from patient safety incidents in this setting may be unique,⁵ and the principles for accountability and reporting need to be modified,³ there are indeed categories of patient safety incidents that can be created from the current classification system.¹³ Unique to the hospice setting is the consideration of patient safety incidents that impact patient and family goals for the dying process, and the inclusion of psychosocial events that can impact or disrupt those goals.

The study is limited by a sample of only 2 hospices and 54 case conferences, and thus cannot be generalized to all hospice cases. Likewise the team meeting discussions did not contain detailed clinical information, including the patient/family goals for care. The limitation is because patient and family goals are not regularly articulated in the team meeting, requiring our research team to define quality in a standard way, for example that pain would be considered out of control above the level of 2. An additional limitation of note is the average time of the case discussions. These data represent only the incidents that arose in relatively short discussions between team members, and thus incidents that were not discussed were not observed. Likewise, it should be noted that the amount of time for discussions of a case nearly doubled when the case involved caregiver participation, thus the increased frequency of patient safety incidents in those cases may be a result of the amount of time spent discussing a case. However, this does speak to the utility of including family members in the discussions. Additionally, our data did not allow us to determine if hospice staff followed recognition of events with a formal report of any type. Finally, our study did not assess the severity or outcome of incidents, if they were harmful or "near misses" and harm was avoided. Team meeting observations (once every two weeks) proved inadequate as data sources to identify severity of events or outcomes to determine harm, and thus consensus occurred between coders and peer debriefing that these codes could not be validated with these data.

In spite of these limitations, this study is an initial insight into patient safety incidents in the hospice setting and establishes an initial definition and framework for discussion, classification, and potential measurement of patient safety incidents. The findings suggest that although the definition of patient safety incidents in hospice may be unique in terms of what defines an ultimate negative outcome, the classification of incidents is quite similar to what was proposed by the ICPS.¹³ The exception was the lack of identified incidents involving infrastructure or spiritual issues; however, this can most likely be attributed to the limited sample.

These observations indicate that application of the definitions and issues facing hospice patients is different from other settings and the indicate the need for further study. These data support two of Cassertt's principles for patient safety in hospice: safety measures should incorporate the patient goals and preferences (such as pain levels), and hospice accountability reflects the degree to which the program can control processes of care.³ While hospices cannot be held accountable to definitions of quality of death that are not defined by them (such as acceptable pain levels) or held accountable for control of processes that may not directly be in their control (such as pain medication administration), they can be held accountable to know what the patients' goals and preferences are, to communicate those regularly, and to consider them in developing plans of care. Hospices can also assume responsibility to educate and support patients and family members on how to best meet the stated goals. This proposed definition would suggest that hospice teams should reference patient goals and preferences in team meetings as plans of care are developed. For example, if a pain level of four is the patient-defined acceptable pain level and the caregiver chooses not to administer pain medication to maintain this level, the team's discussion when developing a pain management plan should

reflect the patients goal and assure the caregiver is informed and supported to administer the pain medication so the goal can be met.

The majority of the incidents observed involved challenges in clinical process and medications. This is an important finding and points to performance improvement opportunities for these hospice programs. Given the complexities of clinical care and the complex medication regimens with this population, as well as the importance of the issues to a patient's quality of life, further investigation of the severity of these incidents as well as the development of more specific categories for clinical process incidents should be researched in depth. Additionally, of specific interest given the hospice philosophy and commitment to pain management, the medication incidents impact pain and symptom management goals, and adequate research should be targeted to these incidents. This study not only identifies the types of hospice patient safety incidents but points to the potential serious nature of these incidents and the impact for the quality of life.

Several opportunities for performance improvement were found in these data. Study findings highlight the need for the concept of patient safety incidents to be formally recognized in the context of hospice and for provider teams to receive training to be able to communicate, deploy, and address patient safety incidents monitoring and assessment procedures. Although hospice programs may not be responsible for all the day-to-day care and therefore cannot be directly accountable, they can still be accountable to assess these care issues and assist responsible caregivers with developing plans to prevent these patient safety incidents. This proactive approach to safety and involvement of informal caregivers is in line with hospice philosophy and practice.

Future research is needed to further interpret and gain the consensus of the scientific community on the categorization of these and additional examples of patient safety incidents. A Delphi study of hospice experts is suggested as the next step in exploring and operationalizing these definitions and categories.

Interventions to address patient safety incidents in hospice care, as well as their evaluation, will be critical to improvement in this setting. Hospice team members need to be trained to recognize patient safety incidents, and the effectiveness of training should be evaluated. As teams become better trained at the identification and prevention of patient safety incidents, recognized incidents will rise as unrecognized events fall. While there will always be the potential for patient safety incidents, improved interventions and understanding are possible and will improve the quality of the dying experience for patients and their family.

Author Disclosure Statement

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Address correspondence to:
Debra Parker Oliver, PhD, MSW
Curtis W. and Ann H. Department of Family
and Community Medicine
University of Missouri
Medical Annex 306G
Columbia, MO 65212

E-mail: oliverdr@missouri.edu