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The effects of arts-in-medicine programming on the medical-surgical work environment

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Background: Arts in medicine programs have significant impacts on patients and staff in long-term care environments, but the literature lacks evidence of effectiveness on hospital units with shorter average lengths of stay. Methods: The qualitative study used individual structured interviews to assess the impacts of arts programming on job satisfaction, stress, unit culture, support, quality of care, and patient outcomes on a short-term medical-surgical unit, and used a qualitative cross comparison grounded theory methodology to analyze data. Results: The study confirmed that arts programming can positively affect unit culture, nursing practice, and quality of care on short-stay medical-surgical units. Significant insights related to nursing practice and the art program were found, including that music can cause negative distraction for staff. Conclusions: While positive impacts of arts programming on the medical-surgical environment are clear, potential negative effects also need to be considered in the development of practice protocols for artists.

Keywords: music; visual arts; nursing; distraction; unit culture; patient-centered care

Introduction

Nurses consistently report higher levels of job stress than any other healthcare profession (Roberts, Grubb, & Grosch, 2012). Nurses endure immense psychosocial stress on top of stressful work environment factors such as physical labor, long shifts, extended work hours, insufficient breaks, excessive workloads, increasing patient acuity, required use of sophisticated technologies, rapid admission-discharge cycles, and perpetual organizational changes (Joint Commission, 2012; Roberts et al., 2012).

Several studies reveal that, due to time constraints, nurses are often unable to tend to the emotional and spiritual needs of their patients (Hayes, Bonner, & Pryor, 2010; Kutney-Lee, Wu, Sloane, Aiken, & Fagin, 2013; Pesata, 2012). When nurses lack sufficient resources to provide high-quality, holistic patient care, moral distress and compassion fatigue ensue (Coetzee & Klopper, 2010). Workplace stress, moral distress, and compassion fatigue are significant factors that contribute to job dissatisfaction, burnout, and turnover (Joint Commission, 2012; Roberts et al., 2012).

Strategies that enable healthcare organizations to maintain their skilled labor force have measurable economic benefits and, increasingly, hospitals are developing and implementing strategies to retain the valuable nurses they hire (Christmas, 2008). The integration of arts programs into clinical environments has been shown to reduce nurse

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stress and to be a significant consideration for healthcare staff deciding whether to remain in their current position or where to seek employment (Repar & Patton, 2007; Staricoff, Duncan, Wright, Loppert, & Scott, 2001; Staricoff & Loppert, 2003).

Arts programming also has positive benefits to patient outcomes (Sonke, Rollins, Brandman, & Graham-Pole, 2009). Research indicates that the engagement in arts can assist in reducing pain medication utilization and average length of stays, and can increase compliance with recommended treatments (State of the Field Committee [SOFC], 2009). Arts programming in clinical environments offers patients enhanced sense of control, elevated self-awareness, reduced anxiety, diminished psychological and physical symptoms, and promotes social relationships (Perruzza & Kinsella, 2010; Stuckey & Nobel, 2010).

Arts programs in hospitals have been shown to benefit nurses by increasing engagement and well-being at work, reducing stress and enhancing nurse–patient communication and relationship building (Penn, 1994; Tuisku, Pulkki-Råback, Ahola, Hakanen, & Virtanen, 2012; Wikström, Westerlund, & Erkkilä, 2012). Mahoney et al. (2010), demonstrated that nurses on a medical-surgical unit recognized the benefit of the arts for their patients. Such recognition can assist nurses in feeling a sense of satisfaction with the care they provide, as arts in medicine complements the biomedical view, concentrating on the patient as a whole person rather than the mere illness and symptoms (Stuckey & Nobel, 2010).

Among arts disciplines, music and the visual arts are the most widely integrated in healthcare settings (SOFC, 2009), and music is by far the most widely investigated. The visual arts have been shown to positively impact healthcare environments in numerous ways, including offering opportunities for non-verbal communication (such as interactive art-making), and improving specific patient outcomes in oncology, cardiac, diagnostic, and long-term care settings (Christenson, 2011; Rollins, 2005; SOFC, 2009).

Music has been widely shown in various patient populations and procedures to positively affect pain control, pain tolerance and pain perception (Cepeda, Carr, Lau, & Alvarez, 2006; Good et al., 2001; Henry, 1995; Mitchell & MacDonald, 2006; Nilsson, Rawal, & Unosson, 2003; Sonke, 2011; Whipple & Glynn, 1992), as well as the need for anesthesia and sedation (Lee et al., 2002; Newman, Boyd, Meyers, Bonanno, 2010). Stress and anxiety also significantly affect the perception of pain, and music has been widely demonstrated to reduce both in medical settings (Dritsas, 2013; Holm & Fitzmaurice, 2008; Richards, Johnson, Sparks, & Emerson, 2007).

There is strong evidence that arts programming on units with long (more than five days) average lengths of stay (ALOS) is beneficial. However, there are gaps in research regarding the effectiveness of arts programming on units with shorter ALOS and in what ways registered nurses (RNs) perceive that the arts improve their work environment. It is possible that arts programming cultivates a less-stressful work environment for nurses by serving as a resource for providing holistic patient care and by meeting the psychosocial and spiritual needs of both patients and nurses.

Methods

The study's goal was to determine the effects of an arts-in-medicine program and the consistent presence of a resident artist on a medical-surgical unit's culture, quality of care, nursing stress and job satisfaction.

The specific aims of the project were to assess the nurse-reported impacts of an arts-in-medicine program on (1) job satisfaction, (2) stress, (3) unit culture, (4) support, (5) quality of care and (6) patient outcomes on a medical-surgical unit. The project included three

primary activities: (1) implementation of the arts-in-medicine program; (2) individual interviews with all RNs on the unit 18 months subsequent to program implementation and (3) cross-comparison grounded theory analysis of the interview data.

This study took place in an academic medical center hospital in the southeastern region of the USA. This organization has a strong arts-in-medicine program with over 25 years of service. The hospital had 832 beds at the time of the study. Patients originated from throughout the nation and more than a dozen countries.

The unit selected for the study was a 34-bed inpatient adult medical surgical unit. The unit comprised of 14 private rooms, including 2 private negative air-flow isolation rooms, and 10 semi-private rooms. This unit was chosen due to its unique situation. The unit was moved when a new hospital building opened, and a new group of staff came together to form the unit. The formation of the new unit gave investigators the opportunity to withhold arts-in-medicine services for an initial six-month period, giving the staff a fresh perspective on the impact of the program on the unit once it was implemented.

During the study, this unit provided care for patients with operative procedures for cancers and other diseases of the kidney, urology, vascular, ophthalmology and maxillofacial structure. The most common medical diagnoses included coronary artery disease, acute coronary syndrome, congestive heart failure, pneumonia, respiratory insufficiencies, renal failure, endocrine dysfunction including diabetes and thrombolytic drug therapy. This unit was also chosen because it had a consistent patient population, and average bed occupancy of 83%. With an average length of stay of 3.31 days, the unit was also ideal for testing the impact of an arts program on a short-stay unit.

The arts-in-medicine programming included placement of a dedicated artist in residence, skilled in the visual arts, craft-making and guided relaxation, on the unit. The artist, a paid contract employee of the arts-in-medicine program with 15 years of artist-in-residence experience, worked 20 hours per week on the unit, including weekdays and Sundays during daytime hours. She worked individually with patients in rooms facilitating voluntary participation in art activities such as painting, drawing and other art making. She also facilitated two weekly workshops for patients and their family members in a unit family room, and supervised volunteers who provided an additional 18–24 hours per week of arts services on the unit. One regular adult volunteer performed music in patient rooms and hallways on the unit an average of four hours per week, and local musicians were often contracted to perform concerts in the family room. Additionally, the artists created temporary and permanent visual art installations on the unit, including on bulletin boards and hallway walls. In this article, the term "art" in relation to the arts-in-medicine program will be inclusive of the visual arts and music.

A qualitative cross-comparison grounded theory research design was selected to investigate the perceptions of RNs regarding the impact of arts-in-medicine programming on unit culture, quality of patient care, and the nurses' job satisfaction. To insure ethical research standards, the project received approval from the Institutional Review Board and the organization's Nursing Research Council.

A structured interview script was developed by the investigators (see Figure 1). Three interviewers were trained to conduct the individual interviews. Subjects were invited to participate in the study through email and in-person invitations. Thirty-one RNs – 100% of the unit's registered nursing staff – voluntarily participated in the interviews, which took place in a private room on the unit 18 months following implementation of the art program. Of the 31 nurses, 18 worked in the day shift, and 13 worked in the night shift or limited weekend hours. A waiver of documentation of informed consent was obtained, given that no personal or identifying information was collected. A team of two data

Interview Script

1. What is your overall opinion of the Arts in Medicine program?
2. What, if any, changes have you noticed on the unit that could be attributed to the Arts in Medicine program? Can you give an example?
3. What, if any, affect has the Arts in Medicine program had on the culture of the unit?
4. What, if any, impact has the Arts in Medicine program had on the level of support you feel in your job?
5. What, if any, effect has the Arts in Medicine program had on the level of stress you feel personally? Explain any changes.
6. What, if any, impact has the Arts in Medicine program had on your level of job satisfaction?
7. What changes, if any, has the Arts in Medicine program had on the quality of patient care on the unit?
8. Have you noticed any differences in patient outcomes since the implementation of the Arts in Medicine program?

Figure 1. Interview script.

collectors conducted the interviews, with one conducting the interview while the other took notes. All interviews were digitally recorded and transcribed. Fifty-one percent of the nurses reported significant exposure to the arts-in-medicine program, while 49% reported little or no exposure due to their night or weekend shift assignments. The artist in residence kept a journal of personal perceptions of the program's impact and the unit's culture on a week-to-week basis. The journal data were used for triangulation, but not included directly in the primary analysis presented in the text.

The investigators used a cross-comparison/grounded theory methodology to analyze the data. An interdisciplinary team of researchers and student assistants conducted an inductive analysis employing a constant comparison method (Dye, Schatz, Rosenberg, & Coleman, 2000). A rich qualitative analysis from practical and theoretical perspectives from several disciplines evolved due to the involvement of the interdisciplinary research team representing clinical nursing, nursing administration, and arts-in-medicine students and administrators.

Results

Several coding processes were used in the data analysis, resulting in the formation of a set of categories representing the data. The process of coding and categorizing the data included several stages: (1) initial coding (line by line); (2) focused coding (comparing data to determine codes); (3) axial coding (creating sub-categories) and (4) theoretical coding (discovering how multiple codes relate to each other and result in a hypothesis for forming a theory). During the coding process, four primary comparisons were undertaken, considering: (1) responses within each interview; (2) responses within the day-shift group; (3) responses within the night-shift group and (4) responses between the day- and night-shift groups.

The coding and analysis processes yielded the development of four primary categories: (1) the art program; (2) unit culture; (3) nursing practice and (4) quality of care. The analysis illuminated relationships between these categories, in that the art program had a discernable impact on each of the other three categories (see Figure 2).

However, we also discovered a linear influential relationship between all four categories, in that the art program affects unit culture, which in turn affects nursing practice, which in turn affects quality of care. Figure 3 presents these relationships, and our

Figure 2. Data categories.

resulting grounded theory that an art program on a medical-surgical unit can influence and positively affect unit culture, nursing practice and quality of care. While we observed a linear influential relationship between each of the categories, the art program could also be seen to have a direct relationship on all of the themes that fall under the categories of unit culture, nursing practice and quality of care.

The coding process also yielded the identification of 21 themes in the data, which were related to each of the primary categories, as represented in Figure 3.

The art program

Quality

Within the art program category, the primary emergent themes were quality and engagement. It was evident that the perceived program quality, or the level of esthetic or other value nurses attributed to the program, was correlated with positive effects on unit culture, nursing practice and quality of care. Nurses who had an overall positive opinion of the art program, using words like "good," "great" and "love it" in describing their overall opinion, also consistently noted positive impacts and outcomes of the program, such as reduced patient and staff stress, reduced need for pain medications, a more positive overall environment and happier patients and staff. The few nurses who described the program with terms such as "fine," noted more moderate impacts, and those who noted little

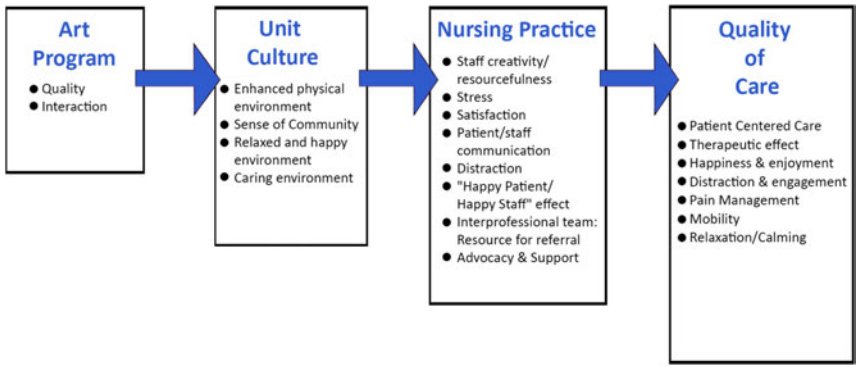

Figure 3. Grounded theory: relationships and themes.

experience with the program either described no positive effects or recognized the positive effects even though the intervention was not taking place during their shifts. In the comparison between day and night shift nurses, it was evident that night shift nurses generally had little or no direct experience with the program, but often recognized it as positive based on residual effects they saw in their patients and on the physical environment. Night shift nurses consistently expressed the need for art programming at night as a result of this recognition.

Engagement

Engagement was described in regard to: (1) patient participation in structured bedside and group art activities facilitated by the artists in residence or volunteers; (2) interaction between artists and patients; (3) art activities facilitated by nurses for patients; (4) art activities patients engaged in individually and (5) engagement by staff and patients with art exhibited in the physical environment. As noted above, day-shift nurses noted a high level of engagement in the program overall, whereas a lower level was described by night-shift nurses.

Unit culture

Outcomes of engagement in the program described by the nurses included a sense of community, an enhanced physical environment, a more relaxed and happier environment and a more caring environment – the four themes that make up the unit culture category – as well as numerous therapeutic effects and impacts on practice as described in the themes of nursing practice and quality of care.

> [I get] a lot of, like I said, positive feedback from the patients. That they felt that it brought kind of a community sense to the hospital. They kind of felt that it made them feel more at home. They didn't feel cooped up in the room as much.

All of the nurses who had significant exposure to the program – 100% of 18 day-shift nurses – described some sort of impact of the program on the unit's culture. In addition, 6 of 13 night-shift nurses noted impacts on the unit's culture even though they have limited or no direct exposure to the programs artists or activities. Overall, the data described very notable impacts on the unit's culture, and a significant level of gratitude for these impacts was expressed. The warmer, happier environment described by nurses clearly contributed to greater job satisfaction and satisfaction with caring among numerous of the unit's nurses.

Nursing practice

Within the nursing practice category emerged the themes of creativity and resourcefulness, distraction and stress, satisfaction, communication, interprofessionalism and a theme we call the "happy patient/happy staff effect." Effects of the program on nursing practice could be seen to result from both the program itself as well as from the program's impact on the unit culture. One of the most significant discoveries within the study came within this category and related to distraction and stress – mostly positive, and some negative.

Distraction and stress

Overall, the art program was described as positively impacting stress among nurses. There was a very high level of commentary related to the positive impacts of the art program on

both patient and staff stress. Also, 93% of coded responses related to staff distraction were positive, and 61% of coded responses related to staff stress were positive.

However, we also discovered a layer of negative impacts of the program related to staff distraction and stress, and potentially to patient care, which had not previously been uncovered by routine program evaluation or by direct communication between nurses and artists within the study period. Within the interviews, 2 of 31 nurses (6%) described music as a negative distraction, with one noting interruptions to work and a concern that the distraction could lead to patient care errors.

> The people that come by with the wind instruments are very distracting for me. Because I'm trying to talk on the phone, pay attention to what I'm doing, doing medical calculations, and it's extremely disruptive to my thought process. That might just be me.

The same nurse also noted a positive relationship between the music and stress in low-pressure moments, and brought light to how an art program can add to the complexity of the healthcare environment:

> Other times if I'm in between doing things, I think, oh, isn't that nice, but I notice if I'm overly stressed, it's like one more irritant and I think, would you please go stand at the other end of the hall. I actually like those people, when I'm not trying to do things.

While the prevalence of negative comments was low, the investigators felt that any negative impacts of the program, particularly those related to patient safety, must be carefully considered. As a result of the study, and this particular feedback, the practice protocols for musicians in the arts-in-medicine program were changed significantly (see Section on Discussion, conclusions, and implications).

Creativity and resourcefulness

Creativity and resourcefulness in practice were described as significant impacts on nursing practice, again resulting from direct engagement with the program and the overall impact on unit culture. Nurses described how the program not only provided them with another discipline to engage in their care practices, but that it also reminded them that they could approach caregiving with more creativity. One nurse noted that "[the program] makes you more aware of other ways you can be more creative in how you're impacting the care that you're giving the patient."

Job satisfaction

Job satisfaction was positively affected by the program in 32% of nurses on the unit. Ten of 31 nurses noted that the art program had a positive effect on their job satisfaction, while 13 (42%) reported no change in satisfaction, and eight (26% – all night shift nurses) reported too little direct experience with the program for their satisfaction to be impacted. In the majority of positive comments related to job satisfaction, the nurses noted greater enjoyment and fulfillment in their work, that the program helped make their job easier and felt that they are part of a more comprehensive care team. Comments included, "It increases my job satisfaction – yes! It definitely does. I would love my job much more if I saw them every day!" and "it makes me love being here and working with my patients. It really does. It has a big impact."

Communication

The communication theme emerged from comments related to how the art program improved communication between staff and patients. Nurses described how the program

afforded opportunities for them to address a broader array of patient needs, including emotional needs, and how patients "cheered up" and communicated more openly after participating in the program. It was noted that "the artist assists in patient and staff communication." This theme related to the theme of the interprofessional team, which was widely noted as enhanced by the art program.

The interprofessional team

An important finding in this study was that the arts-in-medicine program was seen as an additional discipline on the unit, which positively affected both unit culture and patient care. Nurses noted that doctors and nurses use the program as a resource and that staff like to make referrals to the program. The nurses noted that the program provides a "different therapeutic outlet." The AIM practitioner, as a representative of another discipline, was noted by several nurses as an "additional patient advocate."

The nurses described the art program as integrated into nursing practice on the unit and noted that "staff use the program as a resource for enhanced care." The nurses view it as an alternative form of care and a support to nurses.

> It's another set of hands, it's another voice, it's another intervention with that patient ... It's a nice weave that we're all working together for that patient.

The happy patient/happy staff effect

A significant outcome of the study was identification of what we have termed the "happy patient/happy staff effect." Eight nurses described in specific terms how the art program increases the happiness of patients (largely through activities that provide distraction, engagement and enjoyment). This, in turn, increases nurse happiness by making work easier, enhancing nurse/patient communication, and increasing fulfillment as they see the patient having a more positive overall experience in their hospital stay.

> It's more enjoyable to come to work when you know your patients are going to be happy and they have something to do. When they're enjoying their hospital stay, it makes your job easier so that's always a plus. It makes your job nice.

Other comments included, "As long as we have happy patients, the staff will be happy," "If I see my patient relaxed and not stressed, it makes me happy and relaxed," and "It makes my job a easier if they're less cranky."

> If I have happy patients and they're not stressed out for the whole day, then it makes me happy; [its] a kind of fulfillment for the whole 12 hour shift, because you know that's a long shift. So if you see your patient happy and they're satisfied with what you're giving them plus arts in medicine helping us, it's a great feeling.

Quality of care

The study found that quality of care was positively impacted by the art program by: (1) helping the care team to provide more patient-centered care; (2) providing specific therapeutic effects for patients; (3) enhancing patient happiness, enjoyment, distraction and engagement; (4) contributing to pain management and mobility and (5) providing relaxation and calming. These effects can be attributed to the patients' direct engagement with the program, but also to the enhancements in unit culture and nursing practice, as represented in Figure 2.

Patient-centered care

Regulatory bodies, such as The Joint Commission and Centers for Medicare & Medicaid Services, require evidence of patient-centered care in services and protocols at accredited healthcare organizations (Centers for Medicare & Medicaid Services [CMS], 2009; The Joint Commission, 2010). Arts programs, by addressing the emotional, social and spiritual needs of patients and family members, and by assisting the care team with interdisciplinary solutions, add to an institution's ability to provide patient-centered care.

Patient-centered care was represented in the data in comments that demonstrated the art program's function in addressing the emotional, social and spiritual needs of patients and family members.

> It reminds me that we are not just here to take care of the patients physical needs. They also have emotional needs. It reminds me that these patients need a little bit of that too.

Nurses described that the art program "fills a gap in patient care" and that the program is "integrated into how I work." Several nurses described how the program conveys a sense of broader organizational caring as well.

> [The art program] lets the patients know that we care for them.

Nurses expressed appreciation for being able to address a broader array of patients needs and for having a broader disciplinary care team on the unit.

Therapeutic effects

Comments related to therapeutic effects were grouped into three categories: distraction and engagement, pain management, and relaxation and calming. The patient outcomes identified by the nurses were that distraction "prevents negative activity" and "is better than restraining patients." Engagement in the AIM program also resulted in increased mobility as stated "alternative activities motive patients to walk" and that the program gets patients out of their rooms.

Four nurses discussed the program's therapeutic effect on pain control, noting that they either receive fewer requests for pain medications or have to administer less pain medication when patients are engaging in the art program.

> Well it helped me because if [the artists] come in there, especially if my patients are in pain … it's something to do to divert their pain. It helps me. And you know, you don't have to give them pain medication. It is a diversion.

> Yeah, it seems like a lot of them when they are focused on other things they're not needing as much pain medicine and they're using relaxation techniques instead.

> If they have something to keep their minds off of being in that room 24/7 it brings their spirits up and they have better pain control.

Happiness, enjoyment, distraction and engagement

Significant findings of the study focused on how the art program enhanced happiness among both patients and staff, provided enjoyment for both patients and staff, provided positive distraction for patients and staff and provided positive engagement for patients, which resulted in therapeutic effects. Each of these factors contributed positively to the overall culture of the unit, as well as to the nurses' perception of the quality of the care they could provide to patients.

> You feel that you have a resource here when you feel like the patient needs a different therapeutic outlet that you have something that you can turn to.

Nurses consistently recognized the importance of happiness, enjoyment and distraction in patient care.

> Overall if a patient is happy, they're going to heal faster.

> Patients that participate [in the program] are happier in their stay.

Pain management and mobility

Several nurses also noted their perception of the program's effect on recovery with statements such as, "their recovery is faster compared to those that don't have the arts."

Another significantly observed therapeutic effect was related to mobility:

> I can get them to get up and walk [to] go there and listen to the music.

> Some patients will walk more or sooner than they may have because they'll go to the arts in medicine to do arts and crafts and stuff. Helps get them out of their room and ambulate like they're supposed to be doing.

Relaxation and calming

Relaxation was the most widely noted effect of the program, as an effect on both patients and staff. The majority of nurses, both day and night shift, recognized that the art program provided relaxation and distraction for their patients, which they also recognized as contributing positively to quality of care.

> I think it's a better quality of care because like I said the patients are more relaxed.

> It helps them to relax and get distracted once in a while from their stress being in the hospital. Because I know being in the hospital is going to be a lot of stress on them. And if you're stressed out it affects your system ... So I believe it works for better recovery.

Discussion

Results of the study confirmed that an art program can have an effect on a medical-surgical unit with a short (less than five days) length of stay. The study's findings provided significant insights related to both nursing practice and the art program itself. In addition to the positive perceptions of the program that we anticipated finding, we also found a small, but relevant, set of more negative perceptions, which spurred significant changes in the arts-in-medicine program's policies and protocols. We discovered that an art program could cause negative distraction and stress for staff, and potentially threaten patient safety by causing medical errors. As a result, we were reminded of the importance of conducting formal research in addition to evaluating programs.

Overall, we found four topics worthy of discussion: staff distraction and stress, nurse perceptions of the therapeutic effects on patients and patient care, the impact of the artist in residence on the interdisciplinary team and the issue of artistic quality in the clinical setting.

Staff distraction and stress

The finding that 6% of the staff found the program's live music to be a negative distraction at times was a concern to the investigators. Two of 31 nurses experienced the music as a negative distraction, describing a reduced ability to perform effectively while music was being played, with one expressing a clear concern for patient safety.

> I actually have to slow down or stop to block out the music so that I can function. I don't know if there's any correlation to medical administration errors with that. I suppose if they stood there long enough, I would just have to go somewhere else.

This finding is consistent with recent literature, which identifies distractions as a factor in medication errors (American Society of Health-System Pharmacists [ASHP], 1993; Sears, Scobie, & MacKinnon, 2012; Tang et al., 2007). Interventions to assist nurses in avoiding distraction have included establishing a "no interruption zone" around the medication administration device or cabinet and having nurses wear vests which indicate that they are administering medication (Relihan, O'Brien, O'Hara, & Silke, 2010; Tang et al., 2007). Environmental noise and other sounds are identified as a factor in distraction in these studies. Within the study period, the study unit implemented such an intervention, establishing "no interruptions zones," including use of the vests, on the unit. However, art program leaders and artists were not notified of the new policy and, as a result, were not able to insure that music did not provide additional distraction to these staff members or in these physical areas. Analysis of study data created awareness of the need for the art program and unit artists to be kept apprised of all new unit policies and care procedures.

It is noted in recent literature that medication errors can occur due to the complexity of the unit work environment. Through the study, we became aware that arts-in-medicine programs may inadvertently contribute to that complexity by adding additional distraction, and that music, in particular, may cause a negative distraction during procedures for the staff involved in performing the procedures. This finding is supported by Preti and Welch (2012), who described that 5 of 20 (25%) staff they interviewed found music to be a negative element, with one physician stating that it disturbed concentration. This was described by nurses in our study also, with comments coded as "music is disruptive to staff," "music annoys staff" and "music slows delivery of care."

Medication and other medical errors have a profound effect on patient safety. It is estimated that in the USA medical mishaps result in 1,000,000 patient deaths a year (Tang et al., 2007). Due to the high stakes involved, distractions that may cause errors must be evaluated and eliminated. After learning of this outcome in our study, the investigative team made dramatic changes to our AIM policies and procedures. These new guidelines were shaped additionally by comments such as the following.

> It's increased my stress level to some point. They seem to come by at the worst possible moments. I think it's right at the turn when we're doing meds. Maybe it's because I smile at them, but they stop right in front of me and I think, please don't stop here, keep walking.

> When I hear that flute playing, I just stop and listen. I really do! It's like a time out; it's great! … some people it aggravates, but those of us that like it, it has a calming effect, over the whole unit.

These comments heightened our awareness that people can be reticent to express negative concerns related to an art program because it is seen as a service, and because they like the people delivering it and see its value for patients. For example, the nurse who expressed concern for patient safety above also expressed recognition that the program provided positive benefits for patients.

Prior to the study, musicians in the arts-in-medicine program sometimes played live music in hallways or at nursing stations when staff members requested it. The musicians were trained to always get consent from anyone who would be exposed to the music. However, true consent is difficult to gain from groups. This is exemplified in the common case of a group of staff members working at a nurse's station. It often happens that a clerk or nurse calls out to a passing musician requesting a song. The majority of staff members

present may enthusiastically concur, but there can be one or more others who may smile and nod when asked if they would like to hear a song, going along with it because their coworkers want it, but for whom the music may cause stress, cease critical work or even cause errors in administrative work or patient care.

Within the new practice protocols, arts-in-medicine musicians must obtain consent from anyone who could be exposed to music on an individual basis in a location in which they can give an honest reply. Music is no longer played in patient care unit hallways, only in patient rooms with doors closed to protect others from exposure. Concerts are performed on units, but only in rooms where, by entering willingly, individuals give their consent to be exposed to music. Staff members are still provided with many arts activities designed to promote their relaxation and well-being, but music and other performing arts protocols have been revised to prevent negative distraction, work stoppage and potential errors.

Nurses' perception of positive therapeutic effects on patients

Nurses perceived that the AIM program had many positive effects on patients. Overwhelmingly, they perceived that patients enjoy the program and that the program reduces stress. The nurses also perceived that the art program effected a reduction in the need for pain medications. It is critical to note that all of the therapeutic effects discussed are the perceptions of nurses. No qualitative data were gathered on medication usage in the study.

In regard to pain management, several nurses stated the patients involved in AIM program activity had better pain control and a reduction in pain medication requests and administration. One nurse estimated that a 50–75% reduction in pain medication during the day shift, which is attributed to the program. Others stated that the staff utilize the program to reduce pain in their patients. Several nurses identified relaxation and a calming effect of the program on the patients. Noted outcomes included, "patients are quieter when music is played."

Further study is needed to assess the effects of arts-in-medicine programs on pain management.

AIM as an additional discipline on the interdisciplinary team

Interprofessional care has been found to create higher patient satisfaction and quality (The Cochrane Collaboration, 2009). The value of disparate views and heuristics brings a more innovative approach to patient care delivery. Arts program practitioners are valuable team members and bring a new aspect to patient care, which is often overlooked.

> It makes you more aware of other ways you can be more creative in how you're impacting the care that you are giving the patient.

According to the Planetree Model, patient-centered care has 10 components: human interactions, family, friends and social support, access to information, healing environments through architectural design, food and nutrition, arts and entertainment, spirituality, human touch, complementary therapies and healthy communities (Frampton, 2009). The program contributed significantly to these components of patient-centered care by instilling arts and entertainment, spirituality, human interactions, human touch and complementary therapies in the care of patients on the unit. These are areas that the busy staff often cannot attend to during their shift.

Artistic quality

Although nurses were not asked specifically to rate the quality of the AIM program, it was evident that the level of esthetic quality or other value that nurses attributed to the program was correlated with their perspective of the positive effects of the program. This correlation, along with the experience of negative distraction uncovered in the study, spurred investigators to consider the question of artistic quality and to address program protocols in this regard. In addition to the practice protocol changes mentioned earlier, the arts-in-medicine program changed its protocols to include more rigorous live auditions for all participating musicians (staff and volunteer). Additionally, performers are now prohibited from improvising, and must thoroughly rehearse any repertoire that will be played in either public or clinical environments. Musicians who perform in public areas must demonstrate proficiency with a repertoire appropriate to the general healthcare environment, and bedside performers must demonstrate proficiency with a broad repertoire of musical styles in order to respond capably to patient requests. Experienced musicians in residence may improvise at the bedside, per their discretion.

Conclusion

Positive impacts of arts programming on the medical-surgical environment are clear. The study confirmed that arts programming can positively affect unit culture, nursing practice, and quality of care on short-stay medical-surgical units. The study also found that arts programs contribute to the complexity of the healthcare environment and can potentially have inadvertent effects, such as causing negative distraction for staff, which need to be considered in the development of practice protocols for artists.

Limitations and suggestions for further study

A limitation of this study is that, as it was conducted on only one medical surgical unit in an academic medical center in the southeastern USA, generalization to other areas may be limited. During the study, there was significant turnover to the nursing leadership with three different nurse managers. This change may have affected nurse turnover, exposure to the art program, satisfaction and other perceptions.

Results of this study encourage further inquiry related to arts programming on short-stay units, the importance of artistic quality in an arts-in-medicine program and the affects of arts-in-medicine programs on pain management, patient mobility, interprofessionalism and distraction for both patients and staff. Specifically, investigation comparing patient pain perception and utilization of narcotics on units with and without arts-in-medicine programs would be useful.

The overarching strengths of this study are that we uncovered issues that had not have been discovered during routine program evaluation or daily practice. Additionally, the study, while it illuminated significant program benefits, yielded results that informed policy changes which address patient safety and acknowledges that the arts add to the complexity of the clinical environment.

Note

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