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Factors Influencing Patients' Sleep in the Intensive Care Unit: Patient and Clinical Staff Perceptions

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Abstract

Background—Multiple factors are believed to contribute to disruption of patients' sleep and negatively affect clinical outcomes in the intensive care unit. Achieving restorative sleep for critically ill patients remains a challenge.

Objectives—To explore the perceptions and beliefs of staff, patients, and surrogates regarding the environmental and nonenvironmental factors in the medical intensive care unit that affect patients' sleep.

Methods—This qualitative study included 24 medical intensive care unit staff (7 physicians, 5 respiratory therapists, 10 nurses, and 2 patient-care assistants), 8 patients, and 6 patient surrogates. Semistructured interviews were conducted, and qualitative analysis of content was used to code, categorize, and identify interview themes.

Results—Interview responses revealed 4 themes with related subthemes: (1) The overnight medical intensive care unit environment does affect sleep, (2) nonenvironmental factors such as difficult emotions and anxiety also affect sleep, (3) respondents' perceptions about sleep quality in the medical intensive care unit were highly variable, and (4) suggestions for sleep improvement included reassuring patients and care-clustering strategies.

Conclusions—Results of this study suggest that environment is not the only factor influencing patients' sleep. Decreases in environmental sources of disturbance are necessary but not sufficient for sleep improvement. Guideline-recommended clustered care is needed to provide adequate sleep opportunity, but patients' emotions and anxiety also must be addressed.

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Keywords

sleep; noise; critical care; anxiety

Introduction

Sleep disruption is identified as a major stressor in the intensive care unit (ICU) and is generally attributed to both environmental and patient factors such as disease acuity, stress, pain, anxiety, and pre-existing sleep disorders (1–4). Though there has been much focus on environmental sound as a source of sleep disruption (5, 6, 7), it is less clear to what degree other factors contribute to sleep disruption.

Critically ill patients are known to have disrupted sleep and circadian rhythms (5–8). Previous research has found that sleep in the ICU is characterized by short sleep time, poor quality sleep and increased daytime sleep (6, 9–12). Sleep that is sufficiently long, high quality, and timed to correspond with normal circadian rhythms is crucial to normal human physiology and is of particular importance for ICU patients who have increased anabolic requirements (13). Sleep disruption in ICU patients may contribute to adverse in-hospital and post-discharge outcomes, such as respiratory dysfunction, delirium, and post hospital syndrome (3, 14–18). Despite multidisciplinary efforts to improve the ICU environment and therefore provide adequate sleep opportunity, achieving restorative sleep remains a challenge (19). Prior studies have examined either patient's or clinical staff's perspectives on sleep in the ICU; few studies have used qualitative methods to compare environmental and non-environmental stressors as perceived by patients versus clinical staff. In addition, prior studies have not included members of the healthcare team such as respiratory therapists and patient care assistants who interact significantly with patients in the ICU (20).

We describe herein a qualitative study to address the following questions: (a) What are the perceptions and beliefs held by clinical staff, patients, and their surrogates about MICU environmental and non-environmental factors and the impacts on patients' sleep? (b) What are the strategies suggested by patients, surrogates, and clinical staff to modify these factors and to improve patients' sleep in the MICU? (c) Do differences exist among patients/surrogates and clinical staff with regard to their beliefs and perceptions of MICU stressors and the impacts on patients' sleep?

Methods

Study Procedures

The study protocol and consent process were reviewed and approved by the institutional review board for protection of human subjects. An exploratory qualitative study was conducted using semi-structured interviews. The study was performed in a 38 bed MICU of a 1,000 bed tertiary academic hospital in the United States from June 2013 to February 2014. Eligible clinical staff for the study were defined as physicians, registered nurses, patient care assistants, and respiratory therapists who had worked overnight in the MICU and provided direct care to patients. The unit is rectangular with private patient rooms on

four sides around a central core of workstations, supply closets, and conference rooms. Nurses work 12 hour shifts from 07:00–19:00 and 19:00–07:00. Daytime physician staffing utilizes several teams lead by an attending physician supported by trainees, advanced practice nurses and physician assistants. Overnight physician staff includes three intensivists and the on-call resident who work from 19:00–07:00. Visitors are allowed 24 hours a day. It is hospital policy that all patients receive a “quiet kit” which includes earplugs, an eye mask, and suggestions for being quiet after 21:00. Admissions occur around the clock.

Patients admitted to the MICU who stayed at least one night were invited to participate in the study after they were medically appropriate for transfer to the general medical floor. Patients were excluded from the study if they were: (a) less than 21 years old, (b) unable to speak English, (c) had neurological deficits (including delirium) preventing accurate verbal communication, (d) agitated or violent. The presence of delirium was identified via the confusion assessment method for the intensive care unit (CAM-ICU) (21). Surrogates of excluded patients were also invited to participate in the interview if they were able to speak English and had been present in the MICU during the patient’s admission. Sample size depended on the analysis of themes from clinical staff or the patient/surrogate categories. When no new relevant information was obtained during subsequent participant interviews (data saturation), enrollment was stopped for a given respondent category (22).

Patients were classified by gender, decade of life, race/ethnicity, length of ICU stay, and mechanical ventilation status; the collection of protected health information (PHI) was avoided. Clinical staff were classified by occupation, total years of experience, and years of ICU experience. Trained research assistants conducted the semi-structured interviews. Consistency of the topics covered was promoted by using an interview guide with questions that had been previously piloted (appendices A and B). Interviews were conducted in a private room.

Data Analysis

Interview data were transcribed and then managed via ATLAS-ti qualitative software Version 7 (www.atlasti.com, Corvallis, OR). Finalized, de-identified transcripts were analyzed using the thematic analysis method described by Braun and Clarke (23). Investigators read all the transcripts separately to preliminarily code and identify possible themes. Codes were reviewed and consolidated if overlap existed. Coding differences were discussed until consensus was reached and an original codebook was developed. Following the development of the codebook, the research team grouped the codes into themes and subthemes and produced a qualitative report. Statistical analysis of quantitative data were carried out using SAS 9.2 (SAS Institute, Cary, NC).

Results

Survey Respondent Characteristics

Eight patients, six surrogates, and twenty-four clinical staff participated in this study. Respondent characteristics are shown in Tables 1. The mean length of MICU stay for patients was 4.1 days (SD 5.2). The MICU staff represented four health profession groups:

physicians (n=8; 32%), nurses (n=10; 40%), respiratory therapists (n=5; 20%), and patient care assistants (n=2; 8%). The MICU staff had an average of 4.8 years (SD=4.9) clinical experience in their reported role.

Themes and Subthemes

Four main themes regarding overnight sleep emerged following data analysis: (1) effect of environmental factors; (2) effect of non-environmental factors; (3) perceptions of sleep quality; and (4) strategies to improve sleep. Within each main theme, a number of subthemes emerged and are reported below, along with exemplary statements from participants.

Verbatim quotes from the study participants are labelled with subject role (staff, patient or surrogate) and subject identification code.

Theme 1: The MICU environment affects overnight sleep

Subtheme 1.1: The MICU environment at night is noisy with a high-level of in-room interruptions and excessive light exposure—The primary perception of the MICU environment held by staff is that the MICU is noisy; this was less pronounced in the patient/surrogate group. Among the participants in our study, 21% of patient/surrogate group and 100% of clinical staff members identified noise as the major environmental stressor that affected patient's nighttime sleep. All respondents (100%, 38/38) noted that in-room disruptions were frequent at night. Table 2a presents the sources of noise identified by our respondents. Table 2b and c lists sources of nocturnal in-room disruptions identified by our respondents; these included routine procedures (62% of listed activities) and time-sensitive care (38% of listed activities).

Subtheme 1.2: Unpredictable work flow causes overnight environmental disturbance which disturbs sleep—Participants (n=12, 48%) from the clinical staff group perceived environment disturbance caused by unpredictable work flow as contributing to sleep disturbance. Staff also indicated that work flow maybe a non-modifiable stressor on sleep and a trigger for multiple other environmental stressors such as noise, light and in-room interruptions (Table 5).

Subtheme 1.3: Patients and their surrogates thought that noise and in-room interruptions are expected and reassuring—Participants from the patient and surrogate group identified noise and in-room interruptions as factors that influence overnight sleep in the MICU, but they considered these factors to be expected in the hospital (Table 3, 4). Most patients/surrogates (88%) were satisfied with the current MICU environment and 50% of patients/surrogates considered in-room interruptions necessary at night. They indicated that being monitored closely by the providers was appropriate and reassuring.

Theme 2: Non-environmental stressors affect overnight sleep

Subtheme 2.1. Psychological factors affected sleep more than environmental factors—Informants from both the patient/surrogate group and the staff group reported that non-environmental stressors interfered with the patients' ability to achieve high quality sleep in the MICU. More than half of the participants (54% from the patient/surrogate group) indicated that psychological factors, especially emotional factors and cognitive factors,

affect sleep more than the MICU environment. Patients expressed that uncertainty and worry about their health condition affected their sleep negatively: “I didn’t get as much sleep as I wanted... but I had a lot of things on mind... I had some bad-pretty bad news (patient, 6013).”

Subtheme 2.2. Chronic sleep loss contributed to sleep disruption—Participants from the patient group experienced sleep disturbance that was associated with pre-existing sleep disorders. Three out of fourteen (21%) patients noted that much of their sleep issues were chronic: “that’s the way I always sleep....I don’t ever sleep well at night (patient, 6005).”

Subtheme 2.3 Acute illness affected sleep—Twelve out of twenty-four (50%) staff in the MICU noted that other factors such as illness and physical discomfort (for example pain) also contributed to sleep abnormalities in patients: “If I were a patient and I had an ET [endotracheal] tube and a Foley and lines and everything, I don’t think I’d be able to sleep very comfortably (staff, 7014).”

Theme 3: Perceptions of sleep quality and how it was achieved in the MICU were variable

Theme 3.1. Opinions about MICU patient sleep quality were mixed—Sleep quality in the MICU was described as poor by 29% of the patient/surrogate group and 63% of the clinical staff. Surprisingly, 57% of patients/surrogates indicated that they achieved good quality sleep. Both sets of respondents agreed that sleep is important to MICU patients’ recovery; yet only 8% of clinical staff reported prioritizing sleep into their routine patient care. In response to questions addressing the amount of sleep that patients were achieving, 57% of patients responded “sufficient” versus 36% who said “not enough.” About one-half of staff (54%) provided estimates that patients slept between 2 and 4 hours per night.

Theme 3.2. The amount and quality of sleep was caused by or related to sedating medications—57% of the patient/surrogate group and 21% of clinical staff assumed that the amount and quality of sleep was related to sedating medications. “He [the patient] was sleeping fine because he had medication to calm him down...he was sleeping most of the time, even during the day (surrogate, 6002).”

Theme 4: Participants offered varied strategies to improve sleep in the MICU

Subtheme 4.1. Cluster and reschedule MICU care at night—The most commonly suggested sleep promoting interventions from the staff were clustering of care (83%) and rescheduling aspects of care (96%) (Table 6). Other staff reported sleep promoting interventions including reducing noise (58%), keeping patients awake during the day so they can sleep at night (38%), promoting patient comfort, (29%) drawing the curtain to block out light or closing the sliding door to reduce noise (17%).

Subtheme 4.2: Staff thought that sleep related education would improve MICU sleep—Over 40% staff considered staff education on topics related to sleep and sleep improvement in MICU as a means to promote sleep in MICU (Table 6). Most of the staff

who participated in this study said they were aware of the hospital's effort to reduce environment stressors and promote sleep, but some of them expressed their interest in learning about the evidence to support sleep management practices in MICU.

Subtheme 4.3. Difficult feelings worsen sleep and reassurances from staff

could assist sleep—Related to subtheme 2.1 above, participants stressed the importance of managing emotions as a strategy to improve sleep in MICU. Half of the patient/surrogate group (50%) suggested that staying in close contact with clinical staff for reassurance would improve patients' sleep.

Subtheme 4.4 Participants recommend sedating medications for sleep

improvement—Related to the perception that sedating medication promote sleep, 43% of the patient/surrogate group recommended that clinicians could prescribe sleep aids to help patients' sleep better in MICU: "I don't think you can help patients sleep better except for giving them a strong sleeping pill (surrogate, 6012)." Staff (21%) also thought that sedating medications helped patients to sleep.

Discussion

We investigated the perceptions of clinical staff, patients, and surrogates regarding the impact of MICU environmental on patient's sleep, explored alternative factors contributing to poor sleep, and obtained novel suggestions on interventions for sleep improvement in the MICU. Our data showed contrasting beliefs between staff and patients and revealed that anxiety and emotion may have far higher impact on patient sleep than noise or light. Examining these qualitative data extends our understanding of patients' sleeping experiences in the ICU.

Our study findings mimic the findings of other investigators in identifying noise and in-room disturbance as environmental factors interfering with patient sleep. Previous studies reported environmental stressors, especially noise, as the most disruptive factor contributing to poor sleep in the ICU (24, 25). However, polysomnography studies show that a minority (10%–30%) of overnight arousals occurred due to noise (7, 26, 27). Providers and patients did not reflect a belief that underlying illness can contribute to poor sleep indicating a possible knowledge gap (28). Some patient respondents did note that pre-existing sleep problems influenced their sleep during hospitalization. Importantly, we found that patients and surrogates (versus clinical staff) appeared to be more concerned with emotional and cognitive stressors. This highlights a possible misdirection in the field of ICU sleep research which has been overwhelmingly focused on environmental modification.

The findings on subjective perceptions of sleep quality are incongruent with many studies exploring quantity and quality of a patient's sleep within the ICU. The majority of the staff in our study recognized that an ICU patient's sleep is shortened and fragmented. In contrast, many participants in the patient/surrogate group stated that they had sufficient sleep during their MICU stay and rated their sleep quality as good. Patients did modify their responses with descriptors such as "considering it was in a hospital." Patient responses may have been

driven by low expectations and/or inability to perceive poor sleep in the context of critical illness.

Many ICU patients, including our study subjects, believe that sedatives facilitate sleep (29). However, evidence from studies exploring the effects of sedation on ICU patients' sleep suggest that sedative medication contributes to sleep disruption (30, 31). Though benzodiazepines and opioids do increase total perceived sleep time, REM and slow wave sleep are decreased (23, 31). Therefore, patients who receive pharmacological sedation for sleep may not receive the physiologic and immunologic benefits of sleep (29). These responses indicate that there is a lack of understanding of the relationship between sleep and sedation among health care providers, surrogates and patients, and highlights an opportunity for provider training and patient education.

A wide variety of different ICU sleep improvement interventions were suggested by participants in the study. Staff focused primarily on modifying the environment, particularly noise reduction and nighttime patient-care work-flow. Current guidelines on improving sleep for hospitalized patients emphasize a multidisciplinary, integrated strategy for clustering care and reducing environmental disturbance as a means of ICU sleep promotion (32–34). This strategy will provide sleep opportunity for the patient but is likely only a first step. Participants reported a high frequency of overnight in-room patient care activity, however this study extends previous work (30, 35, 36) by documenting that frequent patient care activities signal close monitoring by staff and may therefore decrease patient anxiety. ICU studies investigating the effects of sedation on sleep quality, anxiety and depression, demonstrated that one-half of ICU patients experienced severe anxiety and depression (37, 38). As noted by our respondents, high levels of emotional and psychological distress are likely contributing to disturbed sleep patterns, and, therefore, the emotional needs of patients should be considered in developing sleep promotion protocols.

Strengths and Limitations of Study

There were several strengths of this study. This study included a diverse sample of key MICU stakeholders including patients, surrogates, physicians, nurses, respiratory therapists, and patient-care assistants. Further, the majority of studies of ICU sleep have focused primarily on investigating environmental influences on sleep, this study explored non-environmental factors that affect sleep in ICU. Finally, the use of semi-structured interviews in this study allowed more in-depth information surrounding the issue of stressors and sleep in the ICU.

Limitations of this study included the unequal proportion of patient/surrogate and clinical staff and the small number of patients and surrogates enrolled in the study. We did follow the principle of data saturation to ensure that most important perceptions were uncovered. Many of the surrogates approached did not stay the whole night in the MICU and could not provide responses. In addition, many patients were delirious at the time of MICU discharge and were unable to answer the open-ended questions. Conducting the study in only one MICU is a limitation to the generalizability of the study findings to other MICUs or non-medical ICUs. It is also possible that patients and surrogates were reluctant to make

comments that might be construed as critical of their care, although they were encouraged to speak freely. Another limitation related to this study is the potential for bias in staff's responses regarding the importance of sleep in the ICU as many of these staff were aware of the study investigators' interest in ICU sleep promotion.

Implications for Research and Practice

Further research could employ both subjective and objective sleep measures, and compare the sleep quality of ICU patients who report psychological stress. Although it seems clear that unnecessary, disruptive care such as routine wound checks or bathing should not occur overnight, bedside activities which have a dual role of providing reassurance should not be necessarily eliminated. It may also be important to explore sleep promoting interventions that more directly address the cognitive and emotional needs of patients in the ICU. Interventions could include a more reliable evaluation of patients' psychological stress as well as their perceptions on what they believed would be helpful to reduce anxiety and improve sleep. Relaxation skills and evidence-based stress reduction intervention can be offered. Frequent communication between staff and patient regarding change of their status and reassurance should be encouraged. Future research can be design to the test the feasibility and effect of such a holistic care intervention.

Conclusions

This exploratory qualitative study examined perceptions and beliefs about ICU stressors and how such stressors impact patient sleep. The findings demonstrate that psychological factors play an important role in ICU sleep disturbance, and may outweigh environmental factors in contributing to poor sleep. Researchers, hospital administrators, and clinicians striving to improve sleep in the ICU can design and test sleep-promoting interventions that combine cognitive-behavioral approaches with environmental modifications (Figure 1). Given the knowledge gap in understanding sleep, its impact on health outcomes, and the relationship between sleep and sedation, there is a need to promote sleep related training among ICU staff and to raise the awareness of sleep among patients and the public.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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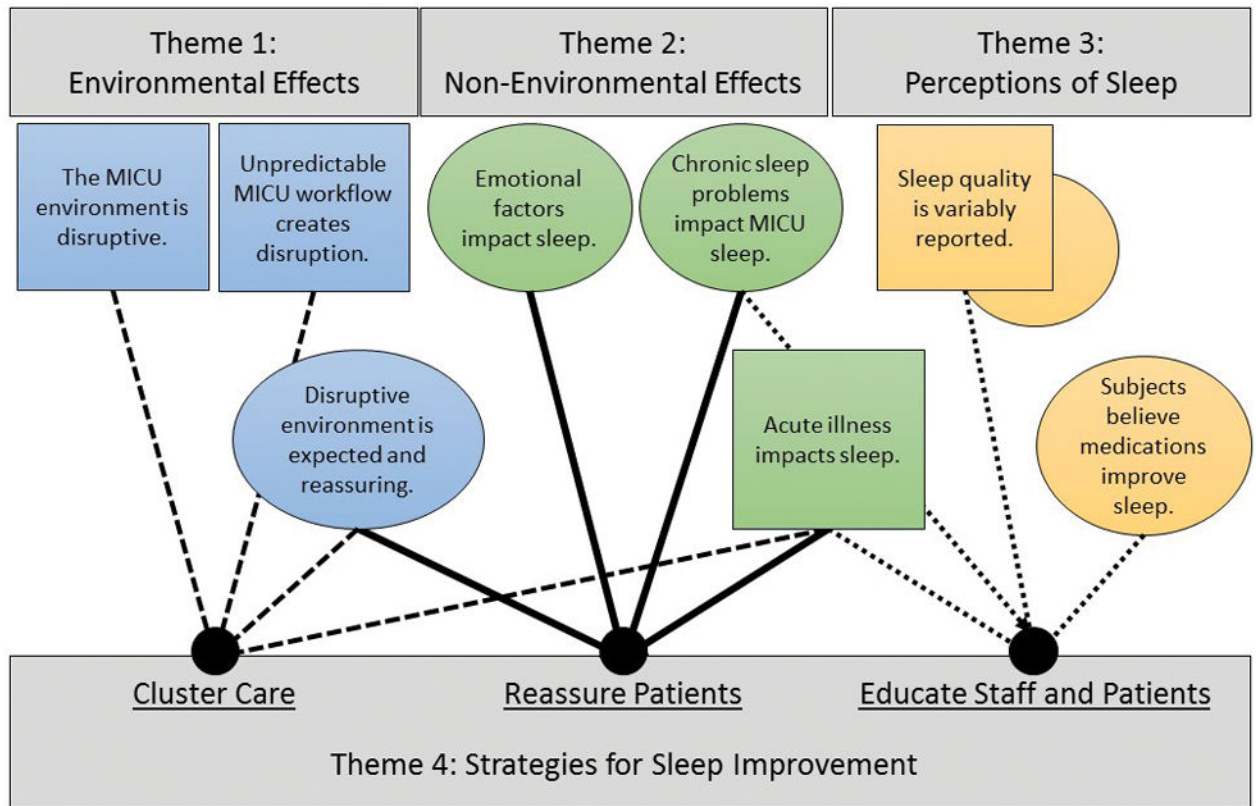


Figure 1. Summary of themes, subthemes and consequent design of sleep intervention. This figure shows clustering of care for sleep opportunity is important but also important is patient reassurance and staff and patient education.

Table 1

Participant characteristics, Patients (n=14) and Clinical Staff (n=24)

Age of patients (years)	21–40 Years:	n = 1
	41–60 Years:	n = 7
	> 60 Years:	n = 6
Patient gender	Female	n = 5 (36%)
Patient race	Nonwhite	n = 4 (29%)
Mechanical Ventilation during MICU Admission (yes / no)	Yes	n = 7 (50%)
Self-identified poor sleepers		n = 3 (21%)
Surrogate (n=6) relation to patient	Spouse:	n = 3
	Child:	n = 2
	Sibling:	n = 1
Clinical Staff Roll	Nurse	n = 10
	Physician	n = 7
	Respiratory Therapist	n = 5
	Patient Care Assistant	n = 2
Staff Gender	Female	n = 16 (67%)
Staff Race	Nonwhite	N = 6 (25%)
Staff Length MICU Experience (years), mean ± standard deviation		4.8 ± 4.9
Staff in training: residency, fellowship or orientation (yes / no)		8% (yes)

Table 2

Sources of disturbance

	% of staff (N=24) reporting n (%)	% of patients/surrogates (N=14) reporting n (%)
a. Sources of noise		
Alarms (IV pump, monitors, pagers, overhead paging)	16 (67%)	3 (21%)
Talking (providers, visitors and patients)	3 (13%)	1 (7%)
Noise from other rooms or nurse workstation including TV, phone, computer	9 (38%)	2 (14%)
Floor cleaners/moving equipment	2 (8%)	
b. Disturbance from routine patient care		
Blood drawn (including checking blood sugar)	13 (54%)	8 (57%)
Medication administration	11 (46%)	7 (50%)
Bathing, Skin Check, Weighing patient	12 (50%)	1 (7%)
Respiratory care/treatment	5 (21%)	3 (21%)
X-ray, CT scan, MRI	3 (13%)	
Visitors	5 (21%)	
c. Disturbance from time sensitive care		
Emergency	7 (29%)	
Patient admission or discharge	5 (21%)	
Vital signs or timed RN assessment (e.g. RASS, GCS)	7 (29%)	7 (50%)
Procedures, Support device adjustment	3 (13%)	1 (7%)
Pain management, patient turns, toileting	10 (42%)	2 (14%)

Table 3

Patient descriptions of the medical intensive care unit at night

<p>Noise</p> <ul style="list-style-type: none">• “MICU is always noisy... It is in a hospital, of course people are coming in and out very often.” (patient, 6001)• “The noise is tremendous up here...the alarms going off and beeps going off.” (patient, 6007)• “It was calm at night in the MICU. It was normal I guess for a hospital to be noisy. I don’t think it was loud.” (patient, 6012) <p>In-room Interruptions</p> <ul style="list-style-type: none">• “There are a lot of things going on at night. Well, that’s why you’re in the MICU because you’re in trouble.” (patient, 6007)• “They (staff) were there all the time.” (patient, 6001)• “My blood is drawn every three hours.” (patient, 6013)• “I felt at ease. I felt secure at night and I felt everybody was taking care of my needs to the best of their ability...not a lot of commotion, just a very soothing community.” (patient, 6005)
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Table 4

Surrogate descriptions regarding sleep in the medical intensive care unit

Sleep	
•	"I believe he slept good. I think maybe some nights when he was more comfortable, he slept better. But generally, he slept good." (surrogate, 6012)
•	"He (the patient) was sleeping fine because he had medication to calm him down...he was sleeping most of the time, even during the day." (surrogate, 6002)
•	"I don't think you can help patients sleep better except for giving them a strong sleeping pill." (surrogate, 6011)

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Table 5

Clinical staff descriptions of the medical intensive care unit at night

<p>General impression</p> <ul style="list-style-type: none"> • “It is a very hectic environment. It can get very noisy. That’s an unfortunate aspect of it; you know with the alarms going off So it is a stressful environment.” (staff, 7002) • The telemetry monitors are on; we are doing tests, throughout the night. We are doing blood work, x-rays, sometimes CT scans. We have patients being admitted, patients being discharged.” (staff, 7001) <p>Noise</p> <ul style="list-style-type: none"> • “It is a pretty loud place, noise outside the room is a big problem; bells and alarms and noise inside the room like IV pumps, their bells, their alarms.”(staff, 7006) • “Loud. It’s loud because of the monitors. We have to have the monitors on to make sure that the patients are fine so alarms are constantly going off. Noise, a lot of noise” (staff, 7010) • “It’s quieter at night because there’s less people, and the lights are lower level than in the daytime and it is quieter because there’s less conversation but it’s still quite active at nighttime.” (staff, 7004) <p>In-room interruptions</p> <ul style="list-style-type: none"> • We (respiratory therapists) are doing airway care so we wake them up when we suction or clean, you know, do oral care, and the same with the nurses, or if we have to stick them for any reason we are waking them up...there is a lot of interruption.” (staff, 7004) • “A lot of things going on at night. Maybe from like midnight on you are ...checking labs, [or] whether the patient is alert and oriented or whether or not they’re vented and things like that.” (staff, 7025) <p>Light</p> <ul style="list-style-type: none"> • “It’s definitely a well lit up unit. I don’t think the curtains helps much”. (staff, 7009) • “Number one factor is the light in the environment. The MICU usually operates 24/7 and the fact that the lights are on has an impact on our sleep cycles” (staff, 7011) <p>Workflow</p> <ul style="list-style-type: none"> • “It’s fluctuating... There’s nothing ever the same. It’s always going to change. You’re always going to have crashing patients. You’re always going to have a busy night or a slow night, There’s nothing stable” (staff, 7013) • “It (night environment) varies. It could be crazy and it could be manageable, not crazy. So a crazy night, you’ll be in and out of your patient’s room because if they’re sick, they need more attention. If they’re stable, we let them sleep as much as we could.” (staff, 7016)

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Table 6

Suggestions by clinical staff regarding sleep improvement

<p>Reschedule and Clustering of Care</p> <ul style="list-style-type: none">• “I think you can change the timing of AM labs. I don’t think they really need their blood drawn at 1:00 am.” (staff, 7007)• “I think we can reschedule medications a little bit overnight, maybe we don’t need to assess the ventilators so frequently overnight. Blood gases should be drawn if there’s a clinical need and we should not just do random blood gas in the middle of the night just to check, unless there’s a clinical change in the patients. The same goes with scanning.” (staff, 7004)• “You can work really well with some nurses and doctors to try to have a specific hands-on time where a patients need a specific medication at a special time and respiratory can go in there at time and the physician can go in there at that time” (staff, 7002)• “Definitely cluster the care. We should try to go into the patient’s room together to do all of our tasks.” (staff, 7004)• “Trying to get everything done in the beginning of the nightshift I think is huge. Trying to get their baths and everything done early so that you are not waking them up at 3, 4 in the morning to bathe them.” (staff, 7018) <p>Staff education</p> <ul style="list-style-type: none">• “First we have to educate the staff about the importance of sleep because you could have the quiet kit but if you don’t know the importance of sleep you are less likely to use it...so I think training and education is the best to provide better sleep for the patient” (staff, 7017)• “I think it would require explaining to us why it’s important, using data. And then giving suggestions about when it would be most important to be done and how we can kind of circumvent the problems that it would create” (staff, 7012)

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