Using a Clinical Indicators Checklist to Determine Family Meeting Needs

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Abstract

Problem & Purpose

Patients admitted to the surgical intensive care unit (SICU) are critically ill and may be unable to participate in their care, passing the burden of decision-making onto their family. Family members often express dissatisfaction with the healthcare team communication, making it difficult for them to make informed decisions about their loved ones. Studies have shown implementing family meetings within 72 hours of ICU admission improves communication between family members and the healthcare team. This quality improvement project aimed to improve family satisfaction with the healthcare team communication by implementing interdisciplinary family meetings within 72 hours of SICU admission for families of patients who meet specific clinical indicators.

Methods

A checklist was developed based on the literature and input from the nurse educator, nurse manager, and medical director, to recognize specific clinical indicators with which a patient presents that likely require proactive communication from the healthcare team. The presence of at least one indicator prompted a response in which the dayshift nurse notified the unit social worker and SICU provider to initiate a family meeting within 72 hours of ICU admission. To determine a family member's level of satisfaction with the healthcare team communication, the SICU family liaison distributed the Family Satisfaction With Intensive Care Unit 24R (FS-ICU 24R) questionnaire after the patient was discharged from the SICU.

Results

There was a statistically significant increase in the completion of the clinical indicators checklists, X^2 (1, $n=964$) = 75.96, $p < 0.001$. The number of family meetings did not increase significantly from pre- to post-implementation. The Fisher exact test statistic value was .52. The result was not significant at $p < .05$. Fifteen families were updated at the bedside (46.9%). Questionnaires returned resulted in satisfaction scores of greater than 75%.

Conclusion

Using the clinical indicators checklist may have increased staff awareness for family meeting needs. However, conclusions could not be drawn from the relationship between family satisfaction and attendance at formal family meetings. Other methods of communication such as updates at the bedside and daily rounds may provide sufficient communication for families of patients who meet minimal clinical indicators.

Using a Clinical Indicators Checklist to Determine Family Meeting Needs

Patients admitted to the intensive care unit (ICU) are considered critically ill. Some are unable to participate in their own care and, as a result, suffer from physical, emotional, and psychological trauma during their journey to recovery (Huffines et al., 2013). Decision making then falls on family members, which may be difficult due to insufficient communication about treatment goals and the complexity of the patient's condition (Huffines et al., 2013). This results in worse outcomes for patients, families, and the healthcare system, including increased ICU and hospital length of stay (Huffines et al., 2013; White et al., 2018).

Guidelines from the American College of Critical-Care Medicine (ACCM) addressed patient and family-centered care to involve family in decision-making while accommodating and supporting them as caregivers (Davidson et al., 2017). Implementing family meetings within 72 hours of ICU admission has been shown to improve communication between family members and the healthcare team by providing the opportunity to address patient concerns with the family (Douglas, Daly, & Lipson, 2012; Gay, Pronovost, Bassett, & Nelson, 2009; Scheunemann, McDevitt, Carson & Hanson, 2011; Singer et al., 2016).

Interviews with the nurse manager, nursing staff, and social worker (SW) at a 24-bed surgical intensive care unit (SICU) in an urban academic hospital in Maryland, revealed families commonly reported feeling neglected in decision-making and the goals of care were unclear due to conflicting information presented by various healthcare providers.

A clinical indicators checklist was developed from evidence found in the literature and input from the DNP Project Team, and was used to determine family meeting needs in the SICU. This DNP project aimed to improve family satisfaction with the healthcare team communication

through the implementation of interdisciplinary family meetings within 72 hours of SICU admission.

Literature Review

The evidence in this literature review focused on the need for improving family satisfaction with the healthcare team communication through implementing family meetings within 72 hours of ICU admission.

Family Perception on Communication

Several decades of research revealed families of patients in the ICU consistently ranked communication as a primary concern (Gay et al., 2009; Piscitello, Parham, Huber, Seigler, & Parker 2019). Transcripts of family meeting audiotapes, surveys, and questionnaires revealed a strong relationship between clear communication by the healthcare team and family satisfaction (Gay et al., 2009; Nelson et al., 2009; Schwarzkopf et al., 2013). Responses from the Family Satisfaction in the ICU 24R (FS-ICU 24R) questionnaire revealed families did not fully comprehend the severity of the disease process of the patient due to the overwhelming and inconsistent information received from various teams involved in the patient's care (Clark et al., 2016; Schwarzkopf et al., 2013).

Implementation of Early Family Meetings

Early family meetings increase referrals to hospice, support timely withdrawal of life-sustaining interventions, limit unnecessary use of resources, and decrease confusion about treatment goals (Kodali et al., 2014; Nelson et al., 2009; Scheunemann et al., 2011). The American College of Critical-Care Medicine suggested family meetings be initiated prophylactically, meaning 24 to 48 hours after ICU admission, and scheduled regularly (Cypress, 2011). Other studies cited family meetings should be implemented within 72 hours of ICU

admission (Douglas et al., 2012; Gay et al., 2009; Piscitello et al., 2019; Scheunemann et al., 2011; Singer et al., 2016). The Transformation of the ICU (TICU) initiative recommended identifying a power of attorney within 48 hours and implementing a family meeting within 5 days of admission (Huffines et al., 2013; Nelson et al., 2009). Unfortunately, a national survey of ICU directors who support early implementation of family meetings reported only one third of meetings were conducted in a timely manner (Gay et al., 2009; Nelson et al., 2009).

Closing the Gap

Barriers in implementation include gathering the interdisciplinary team and family at a specified date and time, providers' limited time to conduct early and regular family meetings for all patients, and the lack of support from stakeholders (Gay et al., 2009; Nelson et al., 2009). Strategies in addressing barriers consist of setting goals for meetings, using daily goal sheets as reminders to address family meetings during rounds, and empowering nurses to participate in the family meeting process (Gay et al., 2009; Nelson et al., 2009). Providing a meeting time window, rather than a specific time, allowed for the flexibility of families and interdisciplinary team to attend the meetings (Huffines et al., 2013). Additionally, recognizing clinical indicators such as cardiac ischemia, sepsis, and prolonged hyperlactatemia early, would assist in scheduling a timelier family meeting (Huffines et al., 2013; Min et al., 2016).

Although studies have shown increases in family satisfaction due to the implementation of early family meetings, barriers continue to prevent timely meetings from being scheduled. Within months of implementing a clinical indicators checklist and providing a meeting time window for families and the healthcare team, some ICUs successfully implemented timely family meetings (Gay et al., 2009; Huffines et al., 2013; Min et al., 2016). See Table 1 for the Evidence Review Table.

Theoretical Framework

The theory of planned behavior (TPB), by social psychologist, Icek Ajzen, (1991), was developed in the 1980s. The TPB is a cognitive theory that defines behavioral intent as the commitment to performing desired behaviors (Ajzen, 1991). Ajzen (1991) predicted that desired actions are achieved through behavioral intention. Three other concepts--attitude towards the desired behavior, subjective norm, and perceived behavior, influenced behavioral intent (Ajzen, 1991). The relationship of these concepts is depicted in Appendix A.

Attitude is defined as the degree of favorability towards the desired behavior. A favorable attitude from stakeholders toward the implementation of early family meetings was more likely to gain support for successful implementation. Subjective norm referred to the social pressure to perform the desired behavior. Before implementation, the SICU scheduled family meetings after an acute event altered a patient's recovery course or after the family developed obvious distress about their loved one. Family dissatisfaction induced social pressure for the SICU to improve communication with families by proactively scheduling family meetings prior to an acute event. Perceived behavioral control referred to one's insight into the level of difficulty in performing the behavior. The overall perceived behavioral control to implement early family meetings would be difficult due to the presence of multiple barriers, such as time constraints in providers' schedules and stakeholders' attitudes that family meetings are not beneficial. Lastly, behavioral intent was measured by the number of family meetings implemented within 72 hours of ICU admission, which should have improved family satisfaction with healthcare team communication.

Methods

Setting and Population

This quality improvement project took place at a 24-bed SICU, located in an urban academic hospital in Maryland. The targeted population included families of patients who were admitted from October 1, 2019 to November 29, 2019. Inclusion criteria were families of patients who presented with at least one clinical indicator, such as cardiac arrest, elevated lactate, and sepsis. The study excluded families of patients who (a) clinically improved; (b) had transfer orders to a less critical unit, rehab, or home; and (c) declined a family meeting because they were already satisfied with the healthcare team communication.

Implementation Procedures

A daily checklist was developed based on evidence from the literature and input from the nurse educator, nurse manager, and medical director to recognize specific clinical indicators that would prompt the initiation of an early family meeting (see Appendix B). The dayshift nurses, charge nurses, and nurse champions were educated on how to use the checklist during staff meetings, one-on-one discussions, and through e-mail. Education and expectations on their roles were discussed one-on-one with the SW and family liaison (FL; see Appendix C).

The checklist was completed daily for every patient during the implementation period. The presence of at least one indicator prompted the dayshift nurse to notify the unit SW and SICU provider to initiate a family meeting. The unit FL distributed the FS-ICU 24R questionnaire to a family member after the patient was discharged from the SICU to determine their level of satisfaction with the healthcare team communication (see Appendix D). Completed questionnaires were returned to the unit secretary who placed them in an envelope for the FL to pick up, or submitted online through a Quick Response (QR) code. "Family" was loosely defined as the patient's decision maker to include both family and friends. Family meetings were defined as interdisciplinary meetings that occurred away from the bedside.

Measures Collected

Data from the clinical indicators checklists were collected weekly. Data points included the number of checklists completed daily, the presence of clinical indicators, the number of meetings conducted within 72-hours of ICU admission, and reasons for meetings not being scheduled (see Appendices E and F). The FS-ICU 24R questionnaires were collected as they were returned to the unit. The use of this questionnaire was granted permission via e-mail from the questionnaire's authors (see Appendix G).

Data Analysis

Descriptive analyses were generated to include the percentage of completed clinical indicators checklist, percentage of clinical indicators present, and percentage of family meetings occurring within 72 hours of ICU admission (see Appendices H and I). Checklist completion during the implementation period was analyzed using a chi-square statistic. The percentage of family meetings scheduled within 72 hours of ICU admission was compared pre- and post-implementation using Fisher's exact test. Questions from the FS-ICU 24R were scored on a 5-point Likert scale ranging from *very dissatisfied* to *completely satisfied*. The individual scores were recoded prior to data analysis to range from 0-100 (0=*very dissatisfied*, 25=*slightly dissatisfied*, 50= *mostly satisfied*, 75= *very satisfied*, and 100=*completely satisfied*). The total scores were calculated by averaging the available questions, provided the respondent answered at least 70% of the items from each subscale (Wall, Engelberg, Downey, Heyland, & Curtis, 2007).

Ethics and Human Subjects Protection

The University of Maryland Baltimore (UMB) Institutional Review Board (IRB) granted a Non-Human Subjects Research (NHSR) determination, after which the project site had no

additional ethical requirements. For data security and confidentiality, no patient identifiers were

used in the data collection. Consent was implied when families completed the questionnaire.

Results

During the 9-week implementation period, 170 patients were admitted to the SICU. Of

these patients, the clinical indicators checklist identified 32 patients whose family was eligible

for early family meetings. All patients included were predicted to stay in the ICU for over 72

hours (n = 32). The most common clinical indicators identified were the presence of sepsis (n =

7) and the use of at least two vasopressors (n = 7). Multiple indicators were identified in 43.8%

of patients (n = 14).

Daily checklist completion after the first week averaged 24.9%, despite the DNP project

leader presence on the unit to remind the nursing staff. Process changes in Week 3 included

placing reminders on the charge nurse computer and the assignment board in the multipurpose

room. Checklist completions minimally improved the following week (33.7%). In Week 5,

anonymous feedback forms were distributed to dayshift nurses to identify perceived barriers to

checklist completion. Feedback from the forms revealed nurses were too busy, needed

reminders, and some suggested night shift nurses should complete the checklists. After Week 5,

reminders were placed in all staff restrooms and on individual computer around the unit. After

this process change, the checklist completion increased to 73.9% by the last week of

implementation. By the end of the implementation period, the clinical indicators checklists

completed each day significantly increased, X^2 (1, $n = 964$) = 75.96, $p < .001$ (see Appendix J).

In a 5-week pre-implementation period, four out of 25 families attended a family meeting

(14.3%). During the implementation period, only seven out of 32 families participated in a

formal family meeting within 72 hours (21.9%). The Fisher exact test statistic value is .52. The

result is not significant at $p < .05$ for the number of family meetings pre- and post-implementation. The presence of a family meeting was documented on the clinical indicators checklist by the nurse. The accuracy of this information was verified with the SW and through chart review for documentation of family meetings.

The most common reason for family meetings not to occur within 72 hours was the provider's preference to provide bedside updates (n = 15). Despite the medical director's support in implementing early family meetings, there was a lack of support from specific surgical teams who preferred to update families at the bedside. The second most common reason was inadequate SW coverage during the weekends (n = 8). Only one family meeting was scheduled during the weekend by a covering SW. Unexpected circumstances caused a shortage in the hospital's SW staffing. Additionally, nurses did not consistently communicate with the unit SW about the need for family meetings, as discussions with the SW revealed some families were not approached about family meetings, despite the patient meeting a clinical indicator (see Appendix K for flowchart of this quality improvement project).

The FL approached 14 families after the patients were discharged from SICU to complete the FS-ICU 24 R questionnaires. Six questionnaires were returned (42.3%), and only one respondent attended a family meeting (16.6%). All questionnaires returned with total and individual question scores between 75% and 100%. According to the questionnaire, three of the family members (50%) reported having a family meeting, despite no formal meeting documented in the patient chart. The FL was unable to distribute the questionnaires to all the families due to families not being available during his daily rounds. The DNP project leader discussed with the FL to focus on families of patients who met clinical indicators.

Discussion

Although the number of clinical indicators checklists completed by the end of the implementation period increased significantly, the intended outcome of increasing the number of family meetings was not significant. Only 21.9% of families attended a family meeting within 72 hours of ICU admission, which was similar to the literature that only one third of family meetings were timely (Gay et al., 2009; Nelson et al., 2009).

Common barriers cited in the literature for implementing timely family meetings included difficulty in gathering everyone at a specified date and time, providers' busy schedule, and lack of support from stakeholders (Gay et al., 2009; Nelson et al., 2009). The most common barrier in translating the use of a checklist to scheduling family meetings in this DNP project was specific surgical team preference to update families at the bedside, possibly to their busy schedules. However, the surgical team members' decision to update patients at the bedside may be advantageous as families expressed their satisfaction through the questionnaires.

It was challenging to make a significant connection between the attendance of family meetings within 72 hours of ICU admission and family satisfaction with the healthcare team communication due to the poor questionnaire return rate and the small number of families included in the study. Questionnaire return rates in the literature ranged from 15% to 87% (Huffines et al., 2013; Pagnamenta et al., 2016). In one study, the questionnaires were mailed to families 3 weeks after the patient was discharged from the ICU, and another questionnaire was mailed as a reminder if one was not returned, resulting in a 72% questionnaire response rate (Jensen et al., 2017). Team members calling families to remind them to complete the questionnaires resulted in an 87% return rate (Jensen et al., 2017). The return rate for this project was 42.8% with no reminders to return the questionnaire.

The FL did not remind families during his rounds to reduce any concern for anonymity. However, there may have still been concern for anonymity as the questionnaires were returned to the secretary to place in an envelope. Authors of one study mailed the questionnaire with a prepaid envelope to be sent to an external company for secure data entry to maintain anonymity and confidentiality (Pagnamenta et al., 2016). The hiring of an external company and mailing of questionnaires were not considered due to financial constraints.

The results of this quality improvement project were limited by the small sample size, low questionnaire response rate, and the inability to compare questionnaire scores prior to implementation because the questionnaires were not linked to the patient during the pre-implementation period. Additionally, the questionnaire lacked validity in the measuring the intended outcome of family satisfaction with communication after a family meeting. The questionnaire tested family satisfaction with care and with decision-making but not specifically for communication. However, the SICU manager preferred the use of this questionnaire due to its measurement of the overall ICU satisfaction. We did not assess the quality of family meetings and what was discussed. Poor SW availability on the weekends may have caused missed opportunities to offer family meetings early on in the ICU stay.

This quality improvement project had some notable strengths. There was support from the nurses, medical director, nurse practitioner, SW, FL, nurse manager, and nurse educator. After a few weeks of comfort with their roles, the nurse champions were valuable with offering reminders, which facilitated the increase in completed checklists. The checklist allowed the healthcare team to identify patients whose family members may require prompt updates.

The SICU realized the value of this QI project and may consider using a modified and simpler checklist to identify families of patient who qualify for early family meetings. However,

they were not interested in continuing to distribute the FS-ICU 24R questionnaires due to the low

response rate, and to allow the FL to focus on his role in the SICU.

Conclusion

Completing the checklist did not increase the number of family meetings scheduled.

However, updating family at the bedside, during daily rounds, or though telephone calls may

also be sufficient methods of communication. The medical director, along with nurse leaders,

should discuss and negotiate with individual surgical teams about their preference in updating

families so the interdisciplinary team may all still be involved in discussions with the families.

In future projects aiming to measure family satisfaction with communication, a

questionnaire validated for this measure should be considered instead of the FS-ICU 24R.

Because the questionnaire return rate was low, recommendations include ensuring confidentiality

and anonymity by allowing families to return their questionnaires into a box on the unit. Another

option, if finances allow, is questionnaires could be mailed to the family member with a prepaid

envelope to increase the response rate.

For sustainability, the checklist could be simplified, and discussions could be made with

the medical director and nurse leaders about any clinical indicators that were not as relevant to

SICU patients. The checklist could be laminated for reuse and placed near or in the patient's

room so nurses will remember to use it. Additionally, nurse champions were vital in offering

reminders and leading the efforts and should continue to be used for future projects.

The checklist increased nurses' and providers' awareness and assisted them in identifying

those who may need family meetings or other methods of proactive communication. At this

time, the checklist is not generalizable as common indicators in the SICU may not translate to

other ICUs. Additionally, it has not been tested for validity.

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Table 1

Evidence Review Table

Author, Year	Study Objective/Intervention or Exposures Compared	Design	Sample (N)	Outcomes (how measured)	Results	Level and Quality Rating
Clark, Milner, Beck, & Mason, 2016	To implement measures for family satisfaction in the ICU. To assess feasibility of FS-ICU questionnaires to measure family satisfaction and make recommendations based on the results.	Descriptive survey design	40 families of patients in the ICU	FS-ICU to measure satisfaction with care and decision-making	Family satisfaction with care was 72.24%, with decision making was 72.03%. Families requested better communication, including directions and expectations from ICU staff.	6B
Cypress, 2011	To review research studies related to family conferences and its impact on optimizing patient care as well as risks and benefits	Systematic review of mixed studies	6 observational studies	Impact on communication during family conference from the family members. Family member's experience and emotional burden about end of life, family's satisfaction with end-of-life care and decision making	Communication behaviors increased family satisfaction during early family conferences. Allowing family members more opportunity to speak improves satisfaction. Early communication, family meetings and psychosocial support significantly improved family satisfaction.	5C
Davidson, Aslakson, Long,	To provide evidence-based guidelines for family-	Clinical practice guideline	238 qualitative	Impact on communication with	Routine conferences to be used in the	1B

Puntillo, Kross, Hart,…Curtis, 2017	centered care in the neonatal, pediatric, and adult ICU		studies	family members, family presence, support, consultations and ICU team members after implementation of various family-centered care interventions.	ICU to improve family satisfaction with communication and trust in clinicians and to reduce conflict between providers and family.	
Douglas, Daly, & Lipson, 2012	To examine how often quality of life (QOL) and treatment limitations were discussed in weekly family meetings for those with high risk of mortality and morbidity. Style and elements of communication such as what topics were discussed and providing empathy to families are as important as providing updated information to families in improving family satisfaction. Meetings were scheduled within 5 days or sooner, then weekly.	Descriptive observational study	5 intensive care units. 180 meetings with 116 family members of patients in ICU	Family meetings were audiotaped. Length of meetings, and length of time to discuss patient preferences, quality of life and treatment limitation.	QOL was discussed in 45% and treatment limitation in 23% of meetings. 12% of the time was spent providing emotionally supportive comments for the families.	6B
Gay, Pronovost, Bassett, & Nelson, 2014	To provide practical strategies and frameworks to overcome barriers in implementing family meetings in a timely manner.	Opinion of authorities	NA	NA	Several strategies based on some literature and some expert opinions include: Maximizing time efficiency of physicians by structuring set times for family meetings	7A

				to occur; using printed informational aids such as brochures and leaflets; educating physicians about reimbursement for time spent meeting with families; include family meetings in checklists, goal sheets and other reminder tools; engaging and empowering nurses in the family meeting process; involving other professionals such as social worker and pastoral care; providing positive reinforcement by rewarding the staff for meeting the goal, encouraging training in communication skills; identifying automatic triggers such as for patients with decline in functional status, and predicted longer length of ICU stay	

Huffines, Johnson, Naranjo, Lisseaur, Fishel, Howes, …Smith, 2013	To develop and implement and evidence-based communication algorithm to include family meetings within 72-96 hours, providing information about POA, and advanced directives, and family resource folders to evaluate family satisfaction post-intervention	Pre-post design	72 family members of patients received family meetings	ICU Family Satisfaction survey were compared before and after implementing algorithm	Perception of teamwork between staff improved 3.38 vs 3.37, p = 0.046. Families felt they were able to participate in decision making more often 45% before intervention, 68% after, p = 0.009. Improvements on how often families thought they were supported, but was not significant. 60% before intervention and 75% after, p = 0.14.	4A
Jensen, Gerritsen, Koopmans, Downey, Engelberg, Curtis,…Ording 2017	To examine assessments of satisfaction with care in family members of patients in the ICU for over 48 hours using the euroFS-ICU	Qualitative study	1077 family members of 920 ICU patients participated	Satisfaction scores from the euroFS-ICU questionnaires	Response rate among family members who were approached was 72%. Ratings were "excellent" or "very good", scores of 58-86%. Highest ratings for concern were towards patients, management of agitation, emotional support of family.	6A
Kodali, Stametz, Bengier, Clarke, Layon, & Darer,	To determine whether family conferences increased family	Retrospective cohort study	457 patients' family members	Family satisfaction using The Family Satisfaction in the	55.6% response rate. Family satisfaction with decision	4B

2014	satisfaction than no family conferences				Intensive Care Unit Questionnaire24 (FS-ICU24)	making was significantly higher (83.6 vs 78.3, p = .02). No significant difference found in care satisfaction or overall satisfaction scores (84.2 vs 80.0, p = 0.1)	
Min, Lee, Park, Shin, Yoon, Park, & Cho, 2016	To improve communication and satisfaction with patients and family member and healthcare providers by developing family meetings.	Descriptive study	Eight family members of patients in the medical intensive care unit	Through discussion and observation of family meetings.	Through observation and discussion, meetings should be offered on demand to target specific, high-risk subgroups, including those with global cerebral ischemia after CPR, those close to death or unlikely to recover, and those with significant comorbidities. Seven out of eight family meetings were considered "successful". Families made decisions regarding withdrawing, continuing with active treatment or supportive care.	6B
Nelson, Puntillo, Pronovost, Walker,	To determine what patients and families define as high-quality palliative care in the	Qualitative study	15 patients and 33 family members of	Open-ended questions, scripted probes from a written	Effective, honest, consistent, timely communication was	6B

McAdam, Ilaoa, & Penrod, 2010	ICU		patients whose ICU length of stay was five days or longer	guide. Themes were communication, clinical decision-making, patient care, family care, interdisciplinary support and bereavement care for families of patients who died.	important to families and patients. Family meetings should be held proactively and frequently. Discussions should be made about patient preferences as soon as possible to determine what the patient wants in certain situations. Provide support for families for bereavement care was considered high-quality care in ICU.	
Nelson, Walker, Luhrs, Cortez, & Pronovost, 2009	Three specific tools were developed based on various studies, to promote a more successful implementation of family meetings in the ICU.	Opinion of authorities	N/A	N/A	Three tools: family meeting planner, family meeting guide, and family meeting documentation templates were developed to improve implementation of family meetings in the ICU. Some strategies include using standardized work processes such as checklists, implementing daily	7B

					goal forms enhance ICU team members' understanding of goals and decrease miscommunication. Other tools include strategies to target specific groups in need of family meetings, identifying the spokesperson, preparing family members for the meetings by giving them a clear agenda and to encourage them to write down concerns prior to meetings.	
Pagnamenta, Bruno, Gemperli, Chiesa, Previsdomini, Corti, …,Rothen, 2016	To improve family satisfaction with communication through the use of VALUE strategy, between healthcare professionals and patients' next of kin	Pre-post design	118 questionnaires returned	Level of family satisfaction using the FS-ICU 24R questionnaire	No significant improvement in family satisfaction after implementing the VALUE strategy, but also no decline in any individual family satisfaction item.	4B
Piscitello, Parham, Huber, Siegler, & Parker, 2019	To determine the time it takes for family meetings to be scheduled from ICU admission in the medical ICU and to assess the relationships between family meetings and	Prospective cohort study	131 patients	Number of family meetings held within 72 hours of ICU admission	Median time from admission to family meeting was 4 days. 46% of patients had a family meeting within 72 hours of admission. Patients	4A

					with family meeting within 72 hours of ICU admission were 30 times more likely to die within 72 hours.	
Scheunemann, McDevitt, Carson, & Hanson, 2011	To evaluate evidence supporting interventions to improve communication in the ICU between family and providers	Systematic review of randomized-controlled trials	21 studies	Posttraumatic stress 90 days after patient's death and measured depression and anxiety. Provider training and feedback rather than direct intervention with families. The outcome being measured was communication.	Printed information improves family comprehension. Evidence supporting regular, structured communication through family conferences, ethics consultation or palliative care consult which can reduce family distress and ICU length of stay. Communication-intensive palliative care within 30 hours of patient's transfer to ICU did not significantly change family-rated communication ($p = 0.09$), but improved nurse-rated communication ($p < 0.01$).	1B
Schwarzkopf, Behrend, Skupin, Westermann, Riedemann,	To assess family satisfaction in the ICU and areas for improvement using quantitative and	Prospective cohort study	215 family members for patients whose ICU stay was	FS-ICU questionnaire split up into care, decision making, and overall satisfaction.	Honesty of information given about patient condition ($p =$	4B

Pfeifer, …Hartog, 2013	qualitative analyses.		more than 48 hours.	In addition, three open-ended questions were used for qualitative data	0.033) and completeness (p = 0.004) differed significantly between nurses and providers. Frequency, availability, clarity and completeness of information were issues in satisfaction. Lack of privacy, delay of information was also a cause for decrease in satisfaction. Improvement is needed to provide family care and promote family participation.	
Singer, Ash, Ochotorena, Lorenz, Chong, Shreve, & Ahulwalia, 2016	To identify tools available to aid the conduct of family meetings in palliative, hospice, and intensive care unit settings. Tools were developed through literature review, expert consensus, survey data and conceptual frameworks.	Systematic review	16 studies identified. N = 8 meeting guides, n = 5 meeting planner, n = 4 documentation template, n = 2 meeting strategies, n = 2 decision aid/screener, n = 1 family checklist, n = 1 training	Various tools were identified which were used to aid in family meetings. No outcome was measured.	Meeting guides specified topics needed for the meeting agenda. It also included steps for evaluating causes of conflict during family meetings. Meeting planners suggested a premeeting among the care team to establish meeting goals and agenda. One was time-	1C

			module		defined in steps to be taken, such as identifying spokesperson and scheduling the meeting within 72 hours. Documentation templates included what was discussed, code status, problem list, etc. Decision aid/screeners included variables which would indicate the need for a family meeting such as predicted length of stay >5 days, predicted mortality >25%, irreversible change in functional status sufficient to return home, cardiac arrest, advanced malignancy, etc. Family checklist was developed by literature review to allow families to organize their thoughts, prepare questions and to maximize their time in family meetings.	

					Lastly, the training module provided training for providers on how to address family meeting in palliative care.	
White, Angus, Shields, Buddadhumaruk, Pidro Paner,…,Arnold, 2018	To determine whether family support interventions will lessen surrogates' long-term burden of psychological symptoms, improve the quality of decision making and communication among healthcare team and family. The intervention include family meeting within 48 hours and every 5-7 days afterwards and nurses specifically trained in communication to support families, met with families every day.	Cluster-randomized trial	1420 patients from five ICUs	Surrogates' mean score from the Hospital Anxiety and Depression Scale (HADS) at 6 months, the Impact of Event Scale (IES), the Quality of Communication Scale (QOC)	No significant difference between the intervention group and the control group in the mean HADS score at 6 months or tie IES score. The mean QOC score was better in the intervention group than the control group. The LOS in the ICU was shorter in the intervention group than the control group.	2B

Rating System for Hierarchy of Evidence

Level of the Evidence	Type of the Evidence
I (1)	Evidence from systematic review, meta-analysis of randomized controlled trails (RCTs), or practice-guidelines based on systematic review of RCTs.
II (2)	Evidence obtained from well-designed RCT
III (3)	Evidence obtained from well-designed controlled trials without randomization
IV (4)	Evidence from well-designed case-control and cohort studies
V (5)	Evidence from systematic reviews of descriptive and qualitative studies

| VI (6) | Evidence from a single descriptive or qualitative study |
| VII (7) | Evidence from the opinion of authorities and/or reports of expert committees |

Melnyk, B.M. & Fineout-Overholt, E. (2014). *Evidence-based practice in nursing & healthcare: A guide to best practice* (3rd ed.). New York: Lippincott, Williams & Wilkins.

Rating Scale for Quality of Evidence

A: High – consistent results with sufficient sample, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific literature

B: Good – reasonably consistent results; sufficient sample, some control, with fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence

C: Low/major flaw – Little evidence with inconsistent results; insufficient sample size; conclusions cannot be drawn

Newhouse, R.P. (2006). Examining the support for evidence-based nursing practice. *Journal of Nursing Administration, 36*(7-8), 337-40.

Appendix A

Theory of Planned Behavior
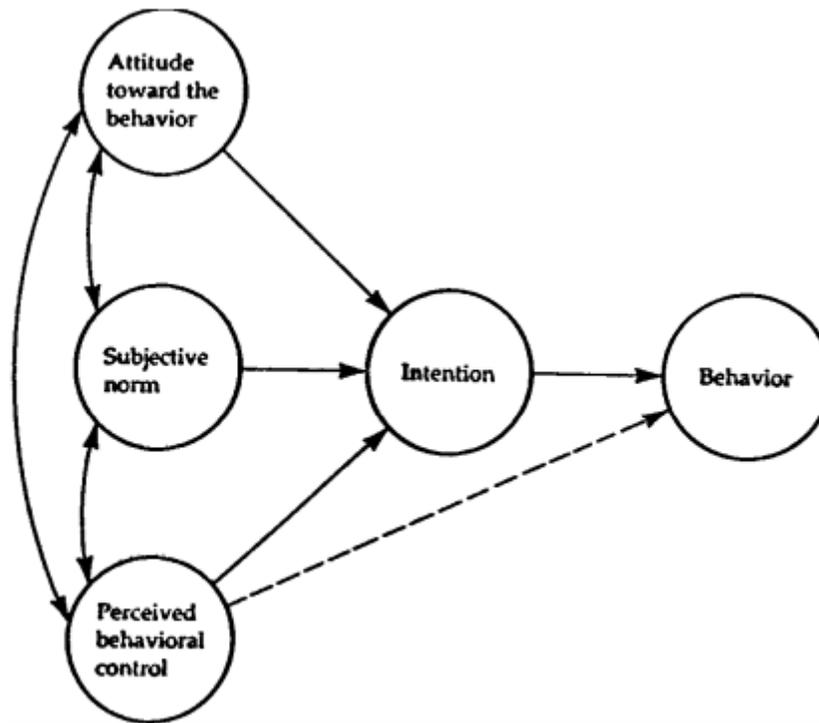
Adapted from "The Theory of Planned Behavior, by I. Ajzen, 1991, *Organizational Behavior and Human Decision Processes, Vol.*

50, p. 182. Copyright 1991 by Icek Ajzen.

Appendix B

CLINICAL INDICATORS FOR FAMILY MEETING WITHIN 72 HOURS

	S _/_	M _/_	T _/_	W _/_	T _/_	F _/_	S _/_
PREDICTED ICU STAY >72 HOURS							
≥ 2 VASOACTIVE DRUGS							
REINTUBATION							
CARDIAC ARREST							
CRRT, IF NOT PREVIOUSLY DEPENDENT ON HEMODIALYSIS							
≥ 6 BLOOD PRODUCTS GIVEN IN 24 HOURS							
SEPSIS (≥2: temp >38C or <36, HR >90, RR>20, paCo2 <32, WBC>12,000 or <4000)							
LACTATE ≥3 mmol/L x 24 HRS							
PSYCHOLOGICAL TRIGGERS BY PATIENT AND/OR FAMILY							
NO INDICATORS							
FAMILY MEETING SCHEDULED?							
FAMILY MEETING HELD?							

If family meetings did NOT OCCUR, enter corresponding number on last row:

1. Family refused, not ready

2. Family lives too far

3. Family declined, satisfied with communication

4. Provider's busy schedule

5. Provider prefers to update families at the bedside

6. Conflicting schedules of all parties

7. No meeting space

8. No SW available to schedule on weekend

9. Other:

Circle ONE:
Transferred
Discharge
Passed Away

If patient has ≥1 clinical indicator, first ask family if they would like a meeting. If yes, then please contact Lauren, SW, and notify SICU team for family meeting

Figure 2. Clinical indicators checklist

Appendix C

Lessen Plan for Nurses, Social Worker and Family Liaison

Lesson Plan for Dayshift Nurses

I. Learning objectives:
    a. The bedside nurse will understand indicators for family meetings as provided on the bedside checklist.
    b. The bedside nurse will understand how to utilize the bedside checklist during rounds.
    c. The bedside nurse will understand how to initiate the process of scheduling a family meeting.
II. Content Outline:
    a. Problem statement: In the last few months, the SICU has received an increasing number of complaints from families due to their dissatisfaction from insufficient communication provided by the healthcare team. Families commonly report that goals of care are unclear and conflict of information exists between consulting teams and the ICU team. Implementing family meetings within 72 hours of ICU admission will allow consulting teams, the ICU disciplinary team, social worker (SW), nurses and others involved in the patients' care, to provide information and answer questions that family members have. By providing information early and in a consistent way, there will be an increase in family satisfaction with multidisciplinary team communication.
    b. During this DNP project, nurses will be provided with a checklist of objective clinical indicators, which indicate that a family meeting should be scheduled. These clinical indicators will be easily assessable outside of each patient's room in the alcove. All day shift nurses will utilize this checklist prior to start of daily rounds. If any of the items are checked, there should be a discussion with the SW to implement a family meeting during rounds. Checklists will be collected every Sunday by DNP project leader. After a patient is discharged, please circle whether a patient is transferred, discharged or passed away. DO NOT DISCARD THE CHECKLIST. RETURN TO FOLDER IN THE MULTIPURPOSE ROOM.
        i.   Example 1: A patient was admitted from the OR. Shortly after arrival, patient becomes hypotensive, requiring levophed and vasopressin. Patient should be flagged to SW and SICU team for family meeting.
        ii. Example 2: A patient has transfer orders (past 72 hours of admission), but develops fever >38, tachycardia, and elevated lactate for over 24 hours. Patient should be flagged for a family meeting.
III. Method of Instruction

    a. Charge nurses and nursing champions will be educated in the first week of September, 2019.

    b. Charge nurses will educate other staff during the September staff meeting.

    c. Nursing champions will educate nurses who were not present in the September staff meeting through 1:1 education.

    d. Day shift charge nurses will remind day shift nurses to utilize bedside checklist at daily morning huddles at 0700 during implementation period.

IV. Time Spent

    a. 10 minutes for education and demonstration

V. Method of Evaluation

    a. Teach-back

    b. Sign in sheet

Education for Social Worker

I. Learning objectives:

    a. The social worker will work with nurses to initiate family meetings once a patient meets an indicator on the bedside checklist.

    b. The social worker will collect data related to family meetings.

II. Content outline:

    a. As the bedside nurse flags each patient who meets the indicators, they will notify the SW to coordinate a family meeting with the interdisciplinary teams involved in the patient's care as soon as possible (within 72 hours of admission or 72 hours of first clinical indicator).

    b. It is important to document as fully as possible the data for family meetings so that we can identify the possible barriers for scheduling of early family meetings.

    c. The DNP project leader will collect the data from the SW once a week and enter into Excel spreadsheet for the DNP project.

III. Method of instruction:

    a. The DNP project leader will educate the SW in September 2019 which data is needed for collection.

IV. Time spent:

    a. Education is less than 10 minutes.

V. Method of evaluation:

    a. Instruction and return demonstration

Education for Family Liaison

I. Learning objectives:

     a. The family liaison will understand his duties in distributing and collecting family satisfaction questionnaires.

II. Content outline:

     a. The family liaison will work closely with the SW, bedside nurses, and DNP project leader to generate a list of patients from which he is to distribute and collect family satisfaction questionnaires. This will include all patients discharged from the ICU, including those who did not have a family meeting. This list will be updated daily.

     b. The family liaison will work closely with the SW to keep track and follow-up with families during the patient's stay in the hospital to obtain family satisfaction questionnaires.

     c. Once family satisfaction questionnaires are collected, they will be placed in a locked cabinet for the DNP project leader to analyze data.

          i. Completed online surveys will be sent to the SICU Survey Monkey account managed by a senior clinical nurse. She will notify the DNP project leader of any questionnaires that have been submitted.

III. Method of instruction:

     a. The DNP project leader will provide one-on-one instruction to the family liaison.

IV. Time spent:

     a. Education will take less than ten minutes

V. Method of evaluation:

     a. Instruction and return demonstration

Appendix D

Family Satisfaction With ICU 24R (FS-ICU 24R) Questionnaire

Dear family/friends,

Your family member was recently a patient at the Surgical Intensive Care Unit (SICU).

Please take a moment to tell us what we did well and what we can do to make our ICU better for future families like you. We understand that there were many doctors, nurses and other staff involved in caring for your family member. We know that there are exceptions, but we are interested in your **overall assessment** of the quality of care we delivered. We understand that this may be a very difficult time for you and your family members. We would appreciate you taking the time to provide us with your opinion.

Please keep in mind that your loved one will also receive a hospital survey after they are discharged from the hospital. This survey is separate from the hospital survey and should **only** be based on your experience in the ICU. This survey should be completed by the family of the patient only.

Please be assured that all responses are confidential. The doctors and nurses who looked after your family member will not be able to identify your responses.

We appreciate your opinions,
Surgical Intensive Care Unit

Your questionnaire number is _____

If you would like to complete the survey online, use this link or QR code:

https://www.surveymonkey.com/r/UMMCSICUFamSatSurvey

Thank you for your participation!

Please place this completed survey into the envelope and leave it at the front desk with the secretary. We will have our staff pick up the surveys for your convenience if your family is still in the hospital.

PART 1: SATISFACTION WITH CARE

Please check one box that best reflects your views. If the question does not apply to your family member's stay then check the 'not applicable' box (N/A).

	1	2	3	4	5	6
	Very Dissatisfied	Slightly Dissatisfied	Mostly Satisfied	Very Satisfied	Completely Satisfied	N/A
HOW DID WE TREAT YOUR FAMILY MEMBER (THE PATIENT)? HOW SATISFIED ARE YOU WITH…						
1. **Concern and Caring by ICU Staff:** The courtesy, respect and compassion **your family member (the patient)** was given	☐	☐	☐	☐	☐	☐
2. **Symptom Management:** How well the ICU staff assessed and treated you family member's symptoms?						
a. How well the ICU staff assessed and treated your family member's <u>pain</u>.	☐	☐	☐	☐	☐	☐
b. How well the ICU staff assessed and treated your family member's <u>breathlessness.</u>	☐	☐	☐	☐	☐	☐
c. How well the ICU staff assessed and treated your family member's <u>agitation.</u>	☐	☐	☐	☐	☐	☐
HOW DID WE TREAT YOU? HOW SATISFIED ARE YOU WITH…						
3. **Consideration of your needs?** How well the ICU staff showed an interest in **your** needs	☐	☐	☐	☐	☐	☐
4. **Emotional Support?** How well did the ICU staff provide emotional support to **you**.	☐	☐	☐	☐	☐	☐
5. **Co-ordination of care?** The teamwork of all the ICU staff who took care of your family member.	☐	☐	☐	☐	☐	☐
6. **Concern and Caring by ICU staff?** The courtesy, respect and compassion **you** were given.	☐	☐	☐	☐	☐	☐

How are we doing?

Your Opinions about your Family Member's ICU stay

	1	2	3	4	5	6
	Very Dissatisfied	Slightly Dissatisfied	Mostly Satisfied	Very Satisfied	Completely Satisfied	N/A
THE ICU STAFF: HOW SATISFIED ARE YOU WITH…						
7. **Skill and Competence of ICU Nurses?** How well the nurses cared for your family member.	☐	☐	☐	☐	☐	☐
8. **Frequency of Communication with ICU Nurses?** How often nurses communicated to you about your family member's condition	☐	☐	☐	☐	☐	☐
9. **Skill and Competence of ICU Doctors (All Doctors including residents)?** How well doctors cared for your family members	☐	☐	☐	☐	☐	☐
THE WAITING ROOM						
10. How satisfied are you with the atmosphere (mood) in the ICU waiting room?	☐	☐	☐	☐	☐	☐
THE ICU						
11. How satisfied are you with the atmosphere (mood) of the ICU?	☐	☐	☐	☐	☐	☐
12. How satisfied are you with your participation in daily rounds?	☐	☐	☐	☐	☐	☐
13. How satisfied are you with your participation in the care of your critically ill family member?	☐	☐	☐	☐	☐	☐
14. Some people want everything done for their health problems while others do not want a lot done. How satisfied were you with the LEVEL *or amount* of health care you family member received in the ICU?	☐	☐	☐	☐	☐	☐

How are we doing?
Your Opinions about your Family Member's ICU stay

PART 2: FAMILY SATISFACTION WITH DECISION-MAKING AROUND CARE OF CRITICALLY ILL PATIENTS

INSTRUCTIONS FOR FAMILY OF CRITICALLY ILL PATIENTS

This part of the questionnaire is designed to measure how you feel about YOUR involvement in decisions related to your family member's health care. In the Intensive Care Unit (ICU), your family may have received care from different people. We would like you to think about all the care your family received when you are answering the questions.

PLEASE CHECK ONE BOX THAT BEST DESCRIBES YOUR FEELINGS

	1	2	3	4	5	6
INFORMATION NEEDS How satisfied are you with…	Very Dissatisfied	Slightly Dissatisfied	Mostly Satisfied	Very Satisfied	Completely Satisfied	N/A
15. **Frequency of Communication with ICU Doctors?** How often doctors communicated with you about your family member's condition.	☐	☐	☐	☐	☐	☐
16. **Ease of getting information?** Willingness of ICU staff to answer your questions.	☐	☐	☐	☐	☐	☐
17. **Understanding of Information?** How well ICU staff provided you with explanations that you understood.	☐	☐	☐	☐	☐	☐
18. **Honesty of Information?** The honesty of information provided to you about your family member's condition.	☐	☐	☐	☐	☐	☐
19. **Completeness of Information?** How well ICU staff informed you what was happening to your family member and why things were being done.	☐	☐	☐	☐	☐	☐
20. **Consistency of Information?** The consistency of information provided to you about your family member's condition (Did you get a similar story from the doctor, nurse, etc.)	☐	☐	☐	☐	☐	☐

How are we doing?
Your Opinions about your Family Member's ICU stay

PROCESS OF MAKING DECISIONS

During your family member's stay in the ICU, many important decisions were made regarding the health care she or he received. From the following questions, pick **one** answer from each of the following set of ideas that best matches your views:

21. **How included or excluded did you feel in the decision making process?**
    a.   1 I felt very excluded
    b.   2 I felt somewhat excluded
    c.   3 I felt neither included nor excluded from the decision-making process
    d.   4 I felt someone included
    e.   5 I felt very included

22. **How supported did you feel during the decision making process?**
    a.   1 I felt totally overwhelmed
    b.   2 I felt slightly overwhelmed
    c.   3 I felt neither overwhelmed nor supported
    d.   4 I felt supported
    e.   5 I felt very supported

23. **Did you feel you had control over the care of your family member?**
    a.   1 I felt really out of control and that the health care system took over and dictated the care my family member received
    b.   2 I felt somewhat out of control and that the healthcare system took over and dictated the care my family member received
    c.   3 I felt neither in control or out of control
    d.   4 I felt I had some control over the care my family member received
    e.   5 I felt that I had good control over the care of my family member received

24. **When making decisions, did you have adequate time to have your concerns addressed and questions answered?**
    a.   1 The time I had was definitely inadequate
    b.   2 The time I had was slightly inadequate
    c.   3 The time I had was adequate
    d.   4 The time I had was more than adequate
    e.   5 I had substantial time

How are we doing?
Your Opinions about your Family Member's ICU stay

If your family member died during the ICU stay, please answer the following questions (25-27). If your family member did not die please skip to question 28.

25. **Which of the following best describes your views?**
    a.   1 I felt my family member's life was prolonged unnecessarily
    b.   2 I felt my family member's life was slightly prolonged unnecessarily
    c.   3 I felt my family member's life was neither prolonged nor shortened unnecessarily
    d.   4 I felt my family member's life was slightly shortened unnecessarily
    e.   5 I felt my family member's life was shortened unnecessarily

26. **During the final hours of your family member's life, which of the following best describes your views:**
    a.   1 I felt that he/she was very uncomfortable
    b.   2 I felt that he/she was slightly uncomfortable
    c.   3 I felt that he/she was mostly comfortable
    d.   4 I felt that he/she was very comfortable
    e.   5 I felt that he/she was totally comfortable

27. **During the last few hours before your family member's death, which of the following best describes your views:**
    a.   1 I felt very abandoned by the health care team
    b.   2 I felt abandoned by the health care team
    c.   3 I felt neither abandoned nor supported by the health care team
    d.   4 I felt supported by the health care team
    e.   5 I felt very supported by the health care team

DETERMINING FAMILY MEETING NEEDS

How are we doing?
Your Opinions about your Family Member's ICU stay

28. Do you have any suggestions on how to make care provided in the ICU better?
    _____
    _____
    _____
    _____

29. Do you have any comments on things we did well?
    _____
    _____
    _____
    _____

30. Do you have any suggestions on how we could improve the ICU experience for you and your family member?
    _____
    _____
    _____
    _____

We would like to thank you for your participation and your opinions. Your participation and honest feedback will help us to improve the patient care experience.

Appendix E

Audit Tool for Daily Clinical Indicators Checklist Completion

Date	Number of Completed the Checklists	Total Number of Patients	Percentage
10/1/2019	20	24	83.3
10/2/2019			
10/3/2019			
10/4/2019			
10/5/2019			
10/6/2019			
10/7/2019			
10/8/2019			
10/9/2019			
10/10/2019			
10/11/2019			
10/12/2019			
10/13/2019			

Appendix F

Excel Spreadsheet Used for Documentation of Family Meetings

Patient ID	Clinical Indicators	Family Meeting Scheduled	Family Meeting Held	Family Meeting Date	Reason for no family meeting	Family Meeting within 72 hours	Patient Disposition
Ex: 001234	Sustained lactate levels ³3 mmol/L >24 hours	Yes	Yes	10/3/2019	N/A-Family Meeting Held or Not Needed	Yes	Transferred

Appendix G

Permission to Use the Family Satisfaction With the Intensive Care Unit 24R Questionnaire

Christina Heng <heng1@umaryland.edu>   Wed, May 8, 9:37 AM (3 days ago)
to dkh2, froeses

Good morning Mr. Heyland and Ms. Froese,

My name is Christina Heng and I am a nurse practitioner student at the University of Maryland School of Nursing. I am planning on implementing a project involving early family meetings to increase family satisfaction in communication with the Intensive Care team in October of this year. I am writing to request to use the FS-ICU 24 for my project to assess the improvement with communication with implementation of family meetings.

In addition, I would like to request to modify the demographics section by adding the following question: **During the patient's stay at the ICU, did you attend a family**

meeting? Yes   No

            If no, then please specify reason:

I greatly appreciate it and I am look forward to hearing from you.

...

Daren Heyland   Wed, May 8, 11:12 AM (3 days ago)
to Daniel, me, froeses@kgh.kari.net, Daren

Hi Christina
Yes, you have my permission.
We have just launched our new website, www.fsicu.com and revised our questionnaire. So make sure you are using the current version found on our website. You can modify the demographics form as you wish.
Best regards
Daren

Appendix H

Excel Spreadsheet Used for Converting FS-ICU 24R Scores

	Question Number	Score	Converted Score				
Care	1	5	100				
	2	4	75				
	3	3	50				
	4	2	25			**Care Total**	7.142857
	5	1	0				
	6		0				
	7		0				
	8		0				
	9		0				
	10		0				
	11		0				
	12		0				
	13		0				
Decision-making	14		0			**DM total**	0
	15		0				
	16		0				
	17		0				
	18		0				
	19		0				
	20		0				
	21		0				
	22		0				
	23		0				
	24		0				
						Total	4.166667

Appendix I

Excel Spreadsheet Used for Analyzing FS-ICU 24R Questions

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
							CARE SUBSCALE QUESTIONS									Avg Scor			DECISION-MAKING SUBSCALE QUESTIONS								Avg Sc	Total Sc
	Returned FS	1	2	3	4	5	6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	22	23	24		
	1	100	75	50	100	25	25	50	50	100	75	75	75	75	50	66.07143	50	75	75	75	75	100	25	25	25	25	55	60.5357
	2															#DIV/0!												
	3															#DIV/0!												
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Appendix J

Runchart for Clinical Indicators Checklist Completion
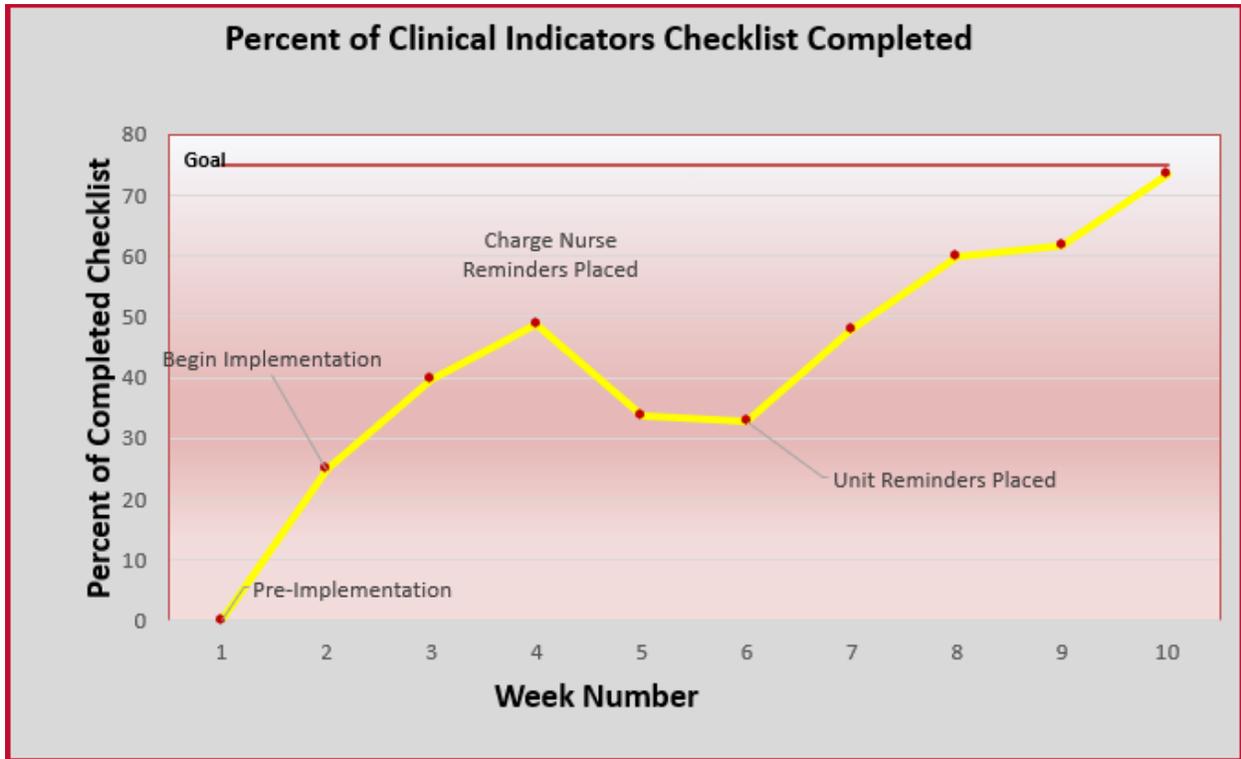
Appendix K

Flowchart for Quality Improvement Project

**Patients Admitted
Oct 1-Nov 29, 2019**

(n=170)

Patients Included

(n=32)

Predicted stay >72 hours *(n=32)*

Multiple indicators *(n=14)*

Sepsis *(n=7)*

>2 Vasopressors *(n=7)*

Pt/Fam psychological triggers *(n=4)*

CRRT *(n=3)*

Elevated lactate *(n=2)*

**Family Meetings
Held within 72 hours**

(n=7)

**Family Members
Approached with
Questionnaire**

(n=14)

**Questionnaires
returned**

(n=6)

**Family reported
having updates**

(n=3)

**Family attended
formal family
meeting**

(n=1)

Patients Excluded

(n=138)

No indicators *(n=102)*

Have transfer orders *(n=23)*

Died *(n= 2)*

Family already satisfied with communication *(n= 11)*

No/Late Family Meeting

(n=25)

**Provider preferred and
provided bedside updates**
(n=15)

Weekend SW unavailability *(n=8)*

Multiple reasons *(n=4)*

Family lives too far *(n=2)*

Family not ready *(n=2)*

Conflicting schedules of all parties *(n=2)*