Running Head: PATIENT EDUCATION AND NURSING DOCUMENTATION
Bedside Educational Tool: Improving Patient Education and Nursing Documentation
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Abstract

Background: The purpose of the Bedside Educational Tool (BET) project was to increase patient discharge knowledge by expanding Krames education selections recorded in the discharge and maintained in the Electronic Health Record (EHR).

Methods: A descriptive pre- post-comparison evidence-based improvement project was undertaken to determine if cueing with a collaborative patient point-of-care educational tool facilitated nurse-patient education and discharge documentation. To establish a baseline, chart audits of patients discharged from a 32-bed medical-surgical unit within a large 378 bed acute care hospital for a consecutive 18-day period was performed. Three instruments were used in this project 1) Bedside Educational Tool (BET), 2) Nurse Usability and Usefulness Survey, and the 3) Patients Discharge Record from the hospital. Implementation consisted of initiation of the BET sheet and nursing education regarding documentation of Krames selections. Audited discharge records compared the Krames education selections in the EHR from 101 pre-implementation charts to 129 post-implementation charts.

Results: All nurses on the pilot unit 41 (100%) participated in the implementation of the BET. 37 (90.24%) nurses on the unit participated in the BET project HealthStream education. EHR Krames educational documentation increased after implementing the BET tool by 96% and the number of Krames items selected per patient increased 229%. Nurses surveyed found the BET tool both easy to use and successful in the development of the collaborative patient-centered education.

Conclusions: In hospitalized patients, the introduction of a patient-nurse bedside education collaborative tool (BET) increased collaborative patient-centered education and the Krames education selections recorded in the discharge plan and the final EHR.

Keywords: Patient education, Krames education, discharge education, patient education tool, patient centered discharge education

Introduction

Patients are leaving the hospital earlier in the recovery process than ever before and many without record of receiving printed education or instruction in how to care for themselves post the acute settings. Patient-centered care envelops patient comprehension and awareness of their disease within "unique challenges given the complexity and rapid pace of clinical care" (A. E. Sommer, Golden, B. P., Peterson, J., Knoten, C. A., O'Hara, L., O'Leary, K.J., 2018, p. 2210).

Nurses on the pilot unit have acknowledged a gap in collaborative education with the patient and are on board to address the issue as found in the responses in the pre-implementation survey. Although nursing utilizes Krames patient education frequently, it was identified that 1) the Krames material provided to the patient was not viewable from nurse to nurse and shift to shift, and 2) Krames selections only displayed in the final record if the selections were made within the discharge plan of the electronic health record (EHR) versus from a link outside of the patient record that does not record in the EHR.

The purpose of the Bedside Educational Tool (BET) project was to increase the number of patients that received Krames education and increase Krames education selections recorded in the discharge and therefore maintained in the EHR for each patient. Krames are patient education HealthSheets created at the 6th-8th grade reading level that contain the latest evidence-based information and help practices meet regulations of the Joint Commission (Huang, 2006). The BET sheet encourages the educational collaboration between the patient or caregivers and the nurse at the bedside by providing a shift by shift visual que regarding education and discussion of additional concerns. Patient knowledge increases throughout the inpatient visit with utilization

of the BET sheet at the bedside in collaboration with the nursing staff. In reaction to the educational conversations at the bedside, nurses from all shifts are encouraged to add Krames selections into the Patient Instructions section of the discharge plan therefore building the Krames selection of educational content the patient will take upon discharge. This process of ongoing learning facilitates a smoother discharge process with increased shared educational responsibility amongst the nursing staff, care givers and patients.

Review of Literature

Themes of patient-nurse education literature focused on health literacy, communication, and patient satisfaction, including the use of structured tools and processes, teaching atmosphere and culture change, education empowerment and evidence-based practice interventions.

Health Literacy and Communication

Blakely (2018), performed a review discovering that nursing should utilize knowledge of the patient's health literacy to educate in a way that will be beneficial to the patient. Krames, the patient education material that is printed at discharge is created for the lay person, using simple language. During bedside education, nurses provide educational communication at the teaching/learning level tailored to the patient's personal characteristics. Patient educational materials should address "studies focused on patients learning and gaining new personal skills for health management" (Blakely, 2018, p. 14).

A 2016 study performed to discover communication differences between healthcare professionals noted that training using standardized communication tools can significantly improve learning outcomes (Foronda, MacWilliams, & McArthur, 2016). Although this study did not include patient educational communication, it reinforced the necessity to provide a training environment and maintain a consistent educational tool.

Structure Tools and Processes

A study utilizing a checklist for measurement of patient satisfaction concerning discharge planning was performed by Gabriel (2017). Although the results were not statistically significant, the checklist implemented was thought to encourage patient education throughout the inpatient visit and helped to avoid last minute discharge teaching (Gabriel, 2017). A systematic mixed studies review found that four themes emerged regarding education of general surgical patients; the quality of discharge education influences its comprehension, health care professionals' perceptions of their role in the delivery of discharge education to patients, patients' preferences for education delivery, and patients' participation in their self-care (Kang, Gillespie, Tobiano, & Chaboyer, 2018). Kang et al (2018) discovered that the quality, timing and frequency of the discharge education has an influence on the patient participation in the delivery of their own care after discharge. Comprehensive and adequate education with tool utilization was proven to empower patients leading to patient self-care knowledge (Kang, et al., 2018).

In a discovery involving staff and patient surveys on a 33-bed thoracic surgical unit, shifting the focus of discharge education from the time of discharge to a process throughout the patient visit increased the satisfaction in both nursing staff and patients (Rose & Haugen, 2010). It was found that communication is key in education and the lack of education throughout the patient visit often offset the discharge process (Rose & Haugen, 2010). In a quality improvement project utilizing re-admission data for a facility with one unit acting as a pilot, found in a two sample variance test, a significant difference between pre-intervention readmission rates and post-intervention re-admission rates (p=0.0100) and a 12.4% increase in HCAHPS scores (Ross, 2017) when a teach back method was implemented for educating stroke inpatients. Lastly, a pediatric facility initiated a process to increase post discharge care awareness and education

throughout the patient stay with a visual map posted on the wall in the patient room (Smith, Sachse, & Perry, 2018). Significant positive findings ensued and continued to grow as the process evolved and grew to include classes for the pediatric parents to engage in prior to discharge (Smith et al., 2018).

Utilizing the Calgary-Cambridge model, a 2015 study developed a tool to evaluate clinical teaching skills (J. Sommer et al., 2016). The teaching skills assessment tool was designed to be used between peers to assist clinicians in improving their patient education skills. It was discovered that clinicians teaching skills improved as the culture focused on teaching and that a relationship is developed between the clinician and patient during the teaching session (Sommer et al., 2016).

A systematic review regarding hospitalized patients' knowledge of care was conducted and found that "patient knowledge of all aspects of their hospitalization was poor and patients often overestimated their knowledge" (A. E. Sommer et al., 2018, p. 2210). It was found that the hospitalization afforded an opportunity to educate the patients with a focus on medication, diagnoses and plans of care (A. E. Sommer et al., 2018). Lastly, interventions performed by staff to increase patient comprehension generally improved patient knowledge (A. E. Sommer et al., 2018).

A structured educational teaching plan was developed for the clinical nurse specialist and the staff nurse to ensure the patient and family had absorbed comprehensive knowledge while hospitalized (Sy, 2016). In this process, staff nurses are empowered to educate the patient and family throughout the hospitalization and ensure that education is addressed and covered in a structured manner, thus relieving the overload of information presented at the time of discharge (Sy, 2016).

Patient Satisfaction

Cartwright (2017) implemented an evidence-based practice project to improve workflow processes regarding consistent patient education throughout the inpatient visit utilizing Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores as the metric of measure. HCAHPS is a patient satisfaction survey applied to adult inpatients required by the Centers for Medicare and Medicaid Services (CMS). Significant patient satisfaction increases were found post implementation of the process, as well as improved nurse confidence in ability to teach patients at the bedside as staff utilized the new process consistently (Cartwright, 2017).

Methods

The BET project applied a pre- post-comparison approach utilizing nursing surveys, elearning modules, educational flyers and patient discharge data focusing on the number of
Krames selections recorded in the patient discharge. Pre-implementation and postimplementation data were compared to reflect the change in nurse perception and ultimately the
difference in the amount of education provided to the patient recorded in the discharge.

Setting, Sample and Participants

The BET project was performed on a 32-bed medical surgical pilot unit within a large 378 acute care hospital, North Austin Medical Center. The nursing staff educational level consisted of 33% Associate degree, 57% BSN, and 10% MSN. Nursing experience on the unit consisted of 27% novice with less than 2 years, 47% with 2-5 years and 26% with greater than 5 years. The staff consisted of 67% day shift and 33% night shift. (See Appendix A for pre-implementation nursing survey). The facility medical surgical director, the pilot unit manager and the medical surgical educators were the leadership directly involved and supportive of the BET project.

Patients on the pilot unit ranged from eighteen years through to centenarians. Preimplementation data was gathered from over one-hundred discharges from the pilot unit over thirteen consecutive days. Post-implementation data was gathered from over one-hundred discharges over a period of seventeen consecutive days. The medical surgical patients on the pilot unit ranged in variety from elective surgery discharging home, to exacerbation of acute illness discharging to rehabilitation. Length of stay varied from hours, days, weeks and sometimes months.

Inclusion criteria for this study included all registered nurses on the pilot unit as well as all patients discharged from the unit during the data collection phases for both pre and post-implementation. Exclusion criteria included nurses that floated to the pilot unit during the implementation phase. Recruitment of registered nurses for the BET study participation was in large part due to the support of the pilot unit's leadership (i.e. director, manager and educators). With the support of the leadership, the study was implemented as a practice on the pilot unit.

The head of the institutional review board (IRB) at North Austin Medical Center was contacted regarding this evidence-based project. It was determined that this study does not require IRB approval and a letter stating this was obtained. (See Appendix B for letter).

Planning

Upon sporadic questioning of nurses, it was noted by the author that many nurses were not aware that they could enter Krames patient education selections into the discharge plan. With further examination it was also noted that the discharge final record contained few if any educational topics selected from Krames. This discovery lead the author to acquire pre-implementation data on discharged patients, including patient sex, age, if they were re-admitted within thirty days, the discharge disposition, if discharged from a different unit, if new

medications were prescribed at discharge, if Krames education was selected in the discharge, how many Krames education topics were selected in the discharge and which Krames topics were selected and included in the discharge. (See Appendix C for Pre-Implementation Discharge Data).

A nursing pre-implementation survey was created to gather data from the pilot unit nursing population. The nursing survey consisted of anonymous participation gathering data regarding: 1) the nursing perception of discharge education provided to patients on the pilot unit, 2) nursing demographics such as highest level of nursing education, nursing experience in years, and if day or night shift, 3) resources available and resources utilized on the unit for patient discharge education, and 4) the willingness of registered nurses to participate in increasing patient education received at discharge. There was also one open comment allowing nurses to express their feelings regarding the current process of patient education. (See Appendix A for Pre-Implementation Nursing Survey). The survey was created on Survey Monkey for ease of data collection. Responses to the survey questions were utilized to understand nursing practice and realize any potential barriers in participation.

The BET sheet was constructed with a goal to spark conversation at the bedside between the registered nurse and the patient and/or caregiver. (See Appendix D for the BET sheet). BET sheets utilized the patient education resource on hand, Krames. Design of a simple, yet attention grabbing BET sheet was ideal. The nurse utilized the BET sheet to aid in bedside educational conversation, as well as selecting Krames education topics in the discharge plan for the patient. The BET sheet was designed to be user friendly, offering a human figure, front and back, to allow for pertinent markings when discussing items such as incisions and wounds. It also contained educational topic selections regarding various concerns the patient may have, a space

to fill in any procedures and additional space for other concerns not listed. The BET sheet was printed on bright yellow paper to enhance its visibility at the bedside. At the implementation of the study, every patient received a BET sheet upon admission, it was addressed by nursing on each shift caring for the patient throughout their visit, and then the sheet was be turned in to the authors office at the time of the patient discharge for auditing.

A power point was created providing the pilot unit one method of consistent education for all registered nurses. The power point included background theory as well as instruction on how to use the BET sheet and the anticipated outcomes from this study. The power point was assigned to all registered nurses on the pilot unit via the electronic learning system HealthStream, allowing for a familiar media to be utilized and a documented record system for module completions. (See Appendix E for the BET Study Power Point). From the power point, a flyer was created to post on the unit and distribute to nursing staff (appendix F). The flyer provided a statement of *why*, bulleted standards for actions to be taken every shift and expectations at the time of the patient discharge. A resource contact was also provided on the flyer.

Planning of the post-implementation data collection spreadsheet began at the time of the creation of the pre-implementation spreadsheet. The planning of the spreadsheet layout continued into the timeframe of implementation as information was gathered to allow for a more robust collection of information. Sections that were added into the post-implementation spreadsheet included the discharge dates, if the BET sheet was turned in or not, if the picture on the BET sheet was utilized, the items that were selected on the multiple choice section, any procedures that were free texted and any additional educational requests. (See appendix G for the Post-Implementation Discharge Data).

Resources required included access to the Meditech electronic health record (EHR), access to the discharge book on the pilot unit (recorded patients discharged and disposition with dates), access into HealthStream to construct the electronic learning module for the nursing staff with included record keeping, access to utilize iMobile to contact nursing staff, and acquiring bright yellow colored paper to print the BET sheets on. Challenges that were expected included staff push-back and lack of consistent BET process adoption. The use of random audits on current inpatients was utilized to view Krames selections in the discharge plan and address with the nurse on shift. Encouraging iMobile broadcasts, such as winning moments of great education examples were provided to staff. It was also expected that many of the BET sheets would not be returned to complete audits, but rather taken home by the patient, creating an incomplete audit record. The loss of data on the BET sheet was acceptable, as this study is focused on the patient-nurse conversation the BET will create, leading to increased Krames education selections recorded in the discharge plan.

Implementation

Lewin's Change Theory (Shaw & Carter, 2015), alternately referred to as ending, transitioning and beginning, was utilized as the guiding model allowing nursing to end previous methods of obtaining Krames education and adopt a new method of providing education in a manner that will remain in the final EHR. The implementation of the BET project first involved the support from leaders on the pilot unit, including the unit manager, director and educators. A review and understanding of the EHR and any patient education resource that are connected and utilized were investigated prior to project initiation.

Baseline data was obtained, including a chart review of 101 discharged patients on the pilot unit, consisting of discharged records with Krames education recorded in the discharge plan

and the number of Krames selections recorded within each EHR. Additional data collected from the baseline discharges included the patient sex, discharge disposition, if Krames was selected or not, and which Krames items were selected. Data regarding if new medications were prescribed at discharge were also collected as they may be useful in identifying opportunities to utilize Krames in the future.

The nursing survey link was sent to nursing staff on the pilot unit via personal and work email. Cell phone numbers were also obtained, and links were sent via text messages as well as providing an additional platform for survey access. Completions were monitored and nurses were reminded to complete the survey if they had not.

A power point education for nursing staff was uploaded into the electronic learning platform, HealthStream, for staff familiarity with the platform use and functionality. The power point was short (10 slides) and presented a clear presentation for why the new process adoption was important to the facility, the patient and the nurse. The power point revealed the steps necessary to execute the BET process. Screen shots were provided ensuring nursing was aware of the screens necessary to visit in Krames and in the EHR. Flyers, readily accessible for staff were placed in multiple locations on the pilot unit for reference.

A work breakdown structure (WBS) was used to readily organize and view tasks to be accomplished along with progress and due dates. Daily utilization of the WBS was preferred, however, for this study the WBS was referenced weekly by the author. The WBS assisted in tracking the collection of data and maintaining staff participation on the pilot unit by organizing a checklist. Data was collected and entered in the post-implementation spreadsheet from discharges of the prior day to ensure all discharges for that day were collected. (See appendix H for BET WBS).

The process of utilizing the BET sheet involved distribution to each patient upon admission within the admission packet accompanied by an explanation that the BET would be acknowledged by each nurse caring for the patient. Nursing reviewed any topics at the bedside and selected the appropriate topics in Krames within the electronic discharge plan allowing the selections to be recorded in the final EHR. The nurse and patient/caregiver/family were encouraged to write and draw on the BET sheet any topics of education discussed. During the study timeframe, the BET sheet was returned to the author for auditing purposes, but the patient may have also taken it home upon discharge.

Outcomes were measured by comparing the pre-implementation data and post-implementation data in the areas of: Krames education given and the number of Krames education given. Post-implementation findings further consist of measurements of the BET sheet and its use, such as: if the BET was returned to the author, if the picture was utilized on the BET, the items selected on the BET, what procedures were free texted and any additional educational topics listed in the "other" category. Budget was not affected by the implementation of this study in terms of supplies. Supplies utilized included colored paper purchased by the author, an increase in copy paper utilized on the pilot unit as Krames educational selections were printed, also ink from the printer and copy machine.

Results

The data analysis yields the results presented in this section. Results are reported from the pre-implementation nursing survey, pre-implementation findings, nursing education of the BET study and post-implementation discoveries.

The nursing pre-implementation survey (appendix A) was electronically provided to nursing staff on the pilot unit via email with a link to Survey Monkey. The survey was open from

September 16, 2019 to September 27, 2019. Of 41 nurses on the pilot unit, 30 (n=30) completed the pre-implementation survey. Forty percent of nurses responded feeling patients do not receive most education until the day of discharge or at the time of discharge. Over three quarters of nurses replied no or maybe in response to every patient being prepared for discharge to adequately care for themselves. A combined 86% (46%= No, 40%=maybe) of nurses are uncertain that the patient has enough time to absorb and understand their discharge information. Only two nurses were not aware of patient specific education on the pilot unit, however all respondents selected a resource they use to provide education to patients (question was multiselect): verbal 96%, demonstration 73%, teach-back 46%, Krames 80%, Googled content 6%, provider specific material 66% and two respondents selected other. Two options in this multiselect question were not selected by the respondents, "I don't educate prior to discharge" and "I don't know of any patient education resources." One hundred percent of respondents agreed that they were willing to help institute a collaborative effort between nursing and the patients to increase patient education preparing them for discharge and care after discharge. The final multiple-choice question revealed that over 90% of nurses feel that increased nurse/patient educational interaction will also increase patient satisfaction. Question eleven was an open comment field (see appendix I for all responses to question eleven), not required, allowing the respondents to express their feelings on current processes of patient education (Figure 1 for open comment responses):

Figure 1. Responses to open comment

1	We are so focused on discharging patients within a 2-hour window and usually pushed to dc them as soon as orders are in, that it rushes out ability to actually sit down with patients to explain discharge instructions.
2	Needs more structure and instructions
3	Teaching is focused on getting patients home or "out," they are also focused on that goal. More attention to prevention and long-term health needs to be given and encouraged. Patients need to be evaluated for misconceptions about their condition before going home.
4	I always try to educate patient regarding discharge prior to time of discharge due to pressure to have patient leave within a 2-hour window from time discharge order is entered
5	It all comes to time management, but we should set as a goal to make time and teach the patient about discharge and plan of care since admission
6	I've discharged patients that we've taken care of before. Lately, they have been telling me that on previous discharges, they have not gotten as much information as I've given them, and they wish that they had. I've heard, "if only I'd known about" or "I wish they told me that last time." It's been pretty jarring.

Pre-implementation data yielded 101 discharged records from the pilot unit between the dates of August 18, 2019 and August 29, 2019. Fifty-four percent were female and 46% were male. Of the 101 discharges, 45% had Krames education selections recorded in the discharge plan with an average number of Krames selections at one item. Slightly more female (45%) discharges than males (43%) presented with recorded Krames in the discharge plan, however males averaged 1.39 Krames items in the discharge plan compared to an average of 0.811 items for the females. (See appendix J for Pre-Implementation Data Totals). Pictured in Figure 2 is the pre-implementation data for the total sample of discharges audited.

n=101		<u> </u>			Patients with		Avg. # of
% of Population	Average Age (yrs)		Disposition		New Meds Ordered at Discharge	Krames Edu Recorded at Discharge	Krames Selection recorded in Discharge
		Home	Home with Home Health	Other			
100%	57.99	75% (n=76)	8% (n=8)	17% (n=17)	57% (n=58)	45% (n=45)	1

Nurses on the pilot unit were asked to complete a computer based, ten slide HealthStream online learning module. The BET learning module was assigned on October 3, 2019 and marked with a due date of October 31, 2019. Completion results for the module were collected through November 4, 2019. Forty-one nurses on the pilot unit were assigned the module before the final collection date. On November 4th, thirty-seven of the forty-one nurses had completed the learning module, a 90.24% completion rate. October 7, 2019 was the first day of the BET implementation and the project concluded on October 24, 2019. Nursing that is newly hired to the pilot unit will continue to receive the BET HealthStream online learning module until October 31, 2020. See Figure 3 for HealthStream completion progress.

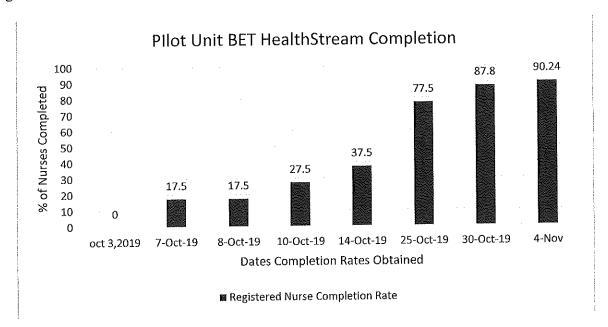


Figure 3. Pilot Unit BET HealthStream Completion

Post-implementation data yielded 129 pilot unit patient discharge records audited between the dates of October 7, 2019 and October 24, 2019. Females dominated the post-intervention data at 63% (n=81) with males at 37% (n=48). The overall average age of the discharged patient was 57.55 years old. The number of discharge records that contained Krames education selections reached 88% (n=114). Krames education topics were found in a higher percentage of the female discharge records (90%) than in the male discharge records (85%). However, the average number of Krames education selections in the discharge record for males was higher than that of the females, 3.6 to 3.1. The number of BET sheets returned to the author for auditing use and completion purposes was 27% for the entire sample. Figure 4 below reveals the total data sample (n=129) for post-implementation. (See appendix K for the Post-Implementation Data Totals).

n=129								
% of Population	Average Age (yrs)		Disposition		Patients with New Meds Ordered at Discharge	Krames Edu Recorded in the Discharge	Avg. # of Krames Selections recorded in Discharge	# of BET Returned for Auditing
		Home	Home with Home Health	Other			(n=129)	
100%	57.55	74% (n=95)	10% (n=13)	16% (n=21)	59% (n=76)	88% (n=114)	3.29	27% (n=3

Figure 4. Post-Implementation Data: Total Sample

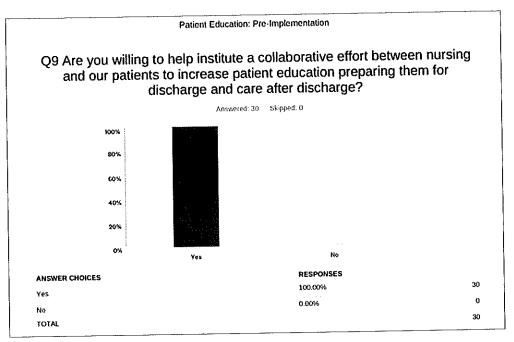
Discussion

The BET sheet served as a tool to enhance and encourage communication between the patient and caregiver with the nurse at the bedside throughout the patient visit with a goal of increasing Krames education selections that were placed in the discharge plan of the EHR, thus prompting the patient to receive more printed education to take home at the time of discharge. This pre- post-comparison evidence based project was prompted by nurse concern that patients were not receiving Krames printed education at discharge and minimal to none was found recorded in the discharge plan of the EHR. There are multiple methods utilized to prompt an increase in patient educational communication at the bedside in preparation for discharge. As discovered in this study and represented by Sommer et.al. (2018), any intervention method instituted to improve patient education or increase patient education, is generally perceived successful.

The findings of the BET study support and reveal that patient centered education, encouraged by the BET sheet at the bedside, involving both nurse and patient communication can lead to an increase in Krames education selections recorded in the discharge plan and in the final record. The brightly colored BET sheet is visually easy to locate in a patient room and was easily utilized. Nursing education utilizing the electronic online HealthStream learning module provided a successful method of educating nursing staff on the pilot unit regarding the "why" for

this study initiative. The pre-implementation survey provided nurses on the pilot unit an anonymous method of communicating their feelings regarding current processes and revealed a willingness to take part in a change of process. Nurses were also able to enter in a comment in the free comment question regarding their personal opinions related to patient education and the discharge process.

Figure 5. Question nine from pre-implementation nurse survey



Thirty nurses that participated in the pre-implementation survey out of forty-one nurses on the pilot unit, unanimously responded affirmative to willingness to help institute a collaborative effort between nursing and the patients to increase patient education (see Figure 5). The majority of nurses on the pilot unit hold a bachelor's degree or higher and have been a nurse for five years or less (See appendix A). The training and experience of the nurses on the pilot unit is lacking in skill and knowledge that a nurse of greater than five years is able to draw on and educate patients in an efficient and targeted manner. A greater number of dayshift nurses participated in the survey compare to night nurses, 20:10 possibly creating a bias toward some

survey responses as dayshift nurses are primarily responsible for discharging patients and ensuring the discharge is safe. In promoting the survey as non-mandatory, yet anonymous, staff were able to answer questions related to patient discharge education and it was found that the minority feel that the patients are prepared and well-educated regarding discharge education. The vast majority of nurses utilize verbal education techniques and 80% (n=24) utilize Krames printed education when educating patients. However, through this study, it was identified that nursing was not selecting the Krames education materials from within the discharge plan therefore the educational section of the discharge plans was sparsely populated with content in the final EHR. Once this was explained to nursing via multiple communication methods utilizing communication by way of one-on-one education, huddle announcements, email and iMobile broadcasts, Krames education was selected more consistently from within the discharge plan.

Like the survey, the electronic online HealthStream learning module regarding the BET and the study process, was not mandatory for staff to complete. Nearly 100% of nurses on the pilot unit completed the BET learning module within a months' time, concurrently as the study was in progress. The high completion rate could be due partly to mandatory modules that were due within the same timeframe and within HealthStream.

The pre-implementation data totals (see appendix J) yielded a fairly even ratio of females to males, whereas the post-implementation data totals (see appendix K) was comprised of more females 63% (n=81) to males 37% (n=48). In both the pre and post implementation data totals, it was noted that females more often than males had Krames selections in the discharge plan, however, the males were provided more Krames selections than females when selections were made. Between pre-implementation and post-implementation total data, a staggering increase from 45% to 88% of discharged patients had Krames education selections recorded in the

discharge plan, a 96% increase. The average number of Krames education selections also increased dramatically from 1 Krames selection in the discharge plan, to an average of 3.29 post implementation, a 229% increase. The BET sheets were often taken home with patients at discharge making true auditing of the use of the BET sheets difficult. Additional data were collected in regard to the Krames educational topic selections on both the BET sheets and in the discharge plan. Patient age and discharge disposition was also collected during discharge audits.

The BET project concluded that the nurses on the pilot unit transitioned from a process of printing Krames from outside the EHR, to learning to document Krames educational selection from within the discharge plan within the EHR while utilizing a BET sheet to involve the patient in Krames education selections at the bedside thus increasing the amount of education topics selected, and now adopting the BET process on the unit to assist with increased communication opportunities with patients and caregivers. The BET process, along with the education of the nursing staff has greatly increased the educational opportunities for learners on the pilot unit.

Future research utilizing the BET sheet and the process implemented with the BET study include comparing Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores pre-BET to post-BET, and if there is a desirable affect on 30-day readmission rates.

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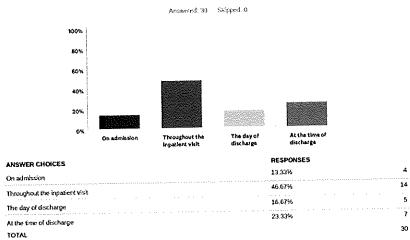
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Appendix A

Pre-Implementation Nursing Survey

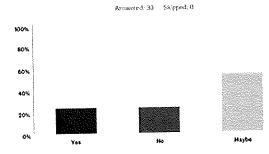
Patient Education: Pre-Implementation

Q1 At what time do you feel patients receive the most education (printed, verbal, demonstrated etc.)?



Patient Education: Pre-Implementation

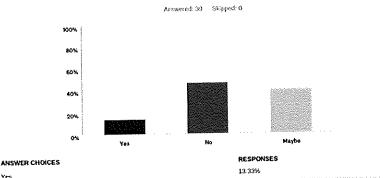
Q2 Do you feel every patient has been prepared for discharge to adequately care for themselves with the information provided at discharge?



ANSWER CHOICES	RESPONSES	
	23.33%	7
Yes	23.33%	7
No	2.3.370	
N. S.	53.33%	16
Maybe		30
TOTAL		

Patient Education: Pre-Implementation

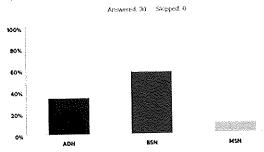
Q3 Do you feel patients have enough time to absorb and understand their discharge information?



ANSWER CHOICES	RESPONSES	
	13.33%	4
	46.67%	14
No	40.00%	12
Maybe	40 ,0070	30
TOTAL		3.7

Patient Education: Pre-Implementation

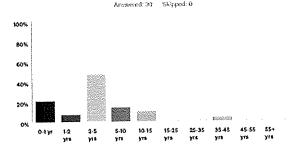
Q4 What is your highest level of nursing education?



ANSWER CHOICES	RESPONSES 33,33%	10
BSN	56.67% 10.00%	17 3
TOTAL		30

Patient Education: Pre-Implementation

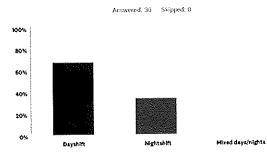
Q5 How long have you been a nurse?



ANSWER CHOICES	RESPONSES	
0-1 yr	20,00%	6
1.2 srs	6,67%	2
2.5	46.67%	14
5.10 we	13.33%	4
10.15 000	10.00%	3
** OF	0,00%	U
25-35 vis	0.99%	0
35-45 yrs	3.33%	1
45-55 yrs	0.00%	0
55+ yrs	0.00%	Ó
TOTAL.		30

Patient Education: Pre-Implementation

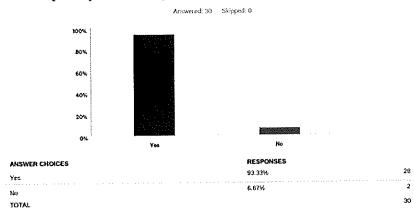
Q6 What shift do you currently work?



ANSWER CHOICES	RESPONSES	
Danizhiñ	66.67%	20
, sa	33.33%	10
Nightshift	0.00%	
Mixed days/rights	0.U/%	_
TOTAL		30

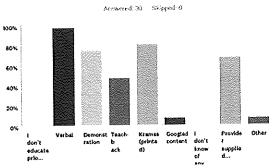
Patient Education: Pre-Implementation

Q7 Are you aware of patient specific education on your unit?



Patient Education: Pre-Implementation

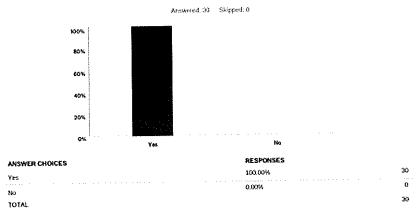
Q8 If you educate patients at discharge and/or prior, what resources do you use?



ANSWER CHOICES	RESPONSES	
I don't educate prior to discharge	0.00%	o
Company and the Company and Co	96.67%	29
Verbal .	73.33%	22
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Yeach back		
Krames (printed)	80.00%	24
Counted corduct	6,67%	
Figure has a reference with a reference in the second seco	0.00%	IJ
Provider supplied specific material	66.67%	20
The second secon	6.67%	2
Other Total Respondents: 30		

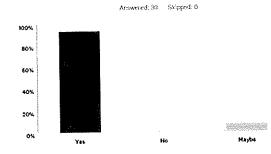
Patient Education: Pre-Implementation

Q9 Are you willing to help institute a collaborative effort between nursing and our patients to increase patient education preparing them for discharge and care after discharge?



Patient Education: Pre-Implementation

Q10 Do you feel that increased nurse/patient educational interaction will increase patient satisfaction?



ANSWER CHOICES	RESPONSES	
No.	93.32%	28
	0.0054	O
No	6.67%	2
Wayte	50077	30
TOTAL		•

Appendix B

IRB Letter

StDavid's | North Austin Medical Center

To: Katic David

From: Jayne King, Director of Cardiology,

NAMC Research

RE: Capstone project September 11, 2019

Dear Katic,

I have reviewed the abstract from your project "Bedside Education Tool". This project does not require IRB approval.

I wish you support on your journey.

Please let me know if I can be of any further assistance.

Sincerely,

Jayne King

12221 Megaz Espwy Noub Audio, TX 78758-24% TEL 512,XII-1009 sidavida.com

Appendix C

Pre-Implementation Discharge Data

Bedside Education Tool:
Pre-Implementation Audit
Katie David RN, BSN, CMSRN

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Bedside Education Tool:
Pre-Implementation Audit
Katie David RN, BSN, CMSRN

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Bedside Education Tool:
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Pre-Implementation Audit
Ketie David RN, BSN, CMSRN
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Appendix D

BET Sheet

BEDSIDE EDUCATION TOOL

What would you like to learn today?

Please mark the areas you would like to learn more about. Your nurse will review this form with you every shift. Additional material will be provided in your discharge packet regarding your selections.

☐ Parts of the body:	
Front	Back
Procedures:	

	Heart
	Teeth/Mouth
	Skin
	Diabetes/Blood Sugar
	Digestive System
	Infections
	Lab Tests
	Mental Health
	Medications
	Kidneys
	Brain & Spinal Cord
	Neurosurgery
	Food/Nutrition
□	Ob/Gyn
	Cancer/Oncology
	Eyes/Vision
	Bones & Joints
	Ears/Nose/Throat
□	Pain Management
	Rehab Exercises
	Feet
	Lungs/Breathing
	X-rays/Radiology
□	Rehabilitation
	Arthritis
	Stroke
	Reproductive System
	Other:
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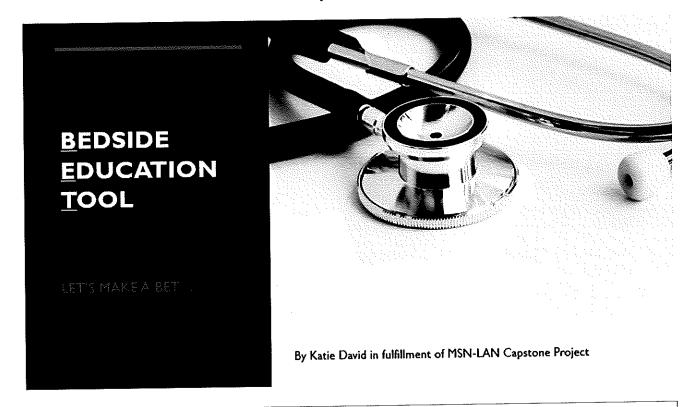
The Bedside Education Tool is designed to encourage & enhance educational opportunities between you and our nursing staff.

(Not part of the permanent record)

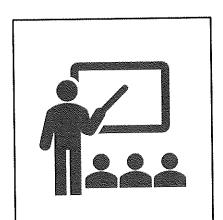
Patient Label Sticker

Appendix E

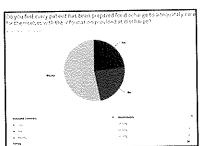
BET Study Power Point

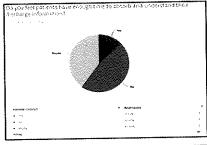


WHY IS Q-SHIFT BEDSIDE EDUCATION IMPORTANT?



- PATIENTS ARE DISCHARGING EARLIER IN THEIR RECOVERY PROCESS
- EDUCATION OCCURRING AT THE TIME OF DISCHARGE IS RUSHED & NOT RETAINED
- NURSES ARE EMPOWERED IN THE CARE PROVIDED TO THE PATIENT THROUGH EDUCATION
- INCREASED NURSE PATIENT COMMUNICATION & TRUST
- INCREASED HCAHPS SCORES AND DECREASED 30-DAY RE-ADMISSION RATES = HEALTHIER & HAPPIER PATIENTS!





WHAT CAN WE DO TO IMPROVE BEDSIDE EDUCATION?

- BRING EDUCATION
 BACK TO THE
 BEDSIDE
- EVERY SHIFT, EVERY NURSE
- NURSE GUIDANCE
- PATIENT CENTERED.
 "WHAT DOTHEY
 WANT TO LEARN"

By including Every Nurse, Every Shift, we are alleviating the overload of educational information provided at the time of discharge and day of discharge. This allows the patient to absorb information over time, process the information, ask questions, and receive different viewpoints and teaching styles from each nurse.

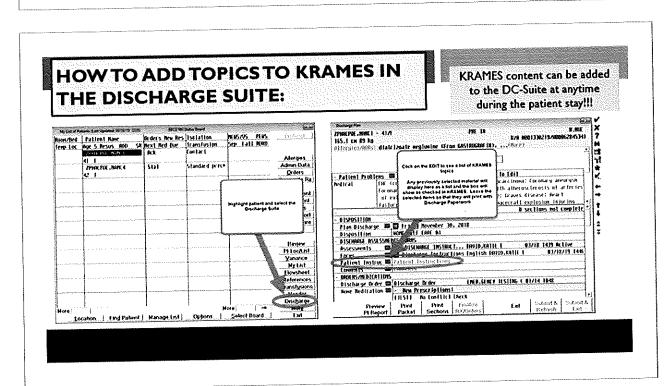
IMPLEMENTATION OF A BET

- PATIENT CENTERED
- ENCOURAGED BY NURSING Q-SHIFT
- EDUCATION PROVIDED BY NURSING
- INCREASED PRINTED KRAMES
 EDUCATION PROVIDED AT DISCHARGE

MAKE record you tile to learn today? Anose most the even your serviced to the cord most poor to the name of them to the first mind to the name of them to the first mind to the name of them to the first mind to the name of the mind to the name of the name of

HOW DO WE IMPLEMENT THE <u>BET</u>?

- 1. Every patient receives the brightly colored BET sheet
- 2. Educate patient about the $\mbox{BE}\bar{\mbox{T}}$ sheet on admission & Q-Shift
 - 1. BET sheet remains at the bedside
 - 2. The patient should indicate topics they would like to know more about
 - 3. The nurse should review topics the patient selects with the patient every shift
 - 4. The nurse should mark selections on the BET based on the discovery of patients needs during their stay
 - 5. The nurse educates the patient while in the room Q-shift on topics selected using various methods (verbal, teach-back, demonstration, etc.)
 - 6. The nurse makes selections in KRAMES in the Discharge Suite based on topics selected
 - This will allow the content to print with discharge material for the patient to take home



6-STEP PROCESS RE-CAP: At Admission: provide the BET and its purpose to patients & caregivers

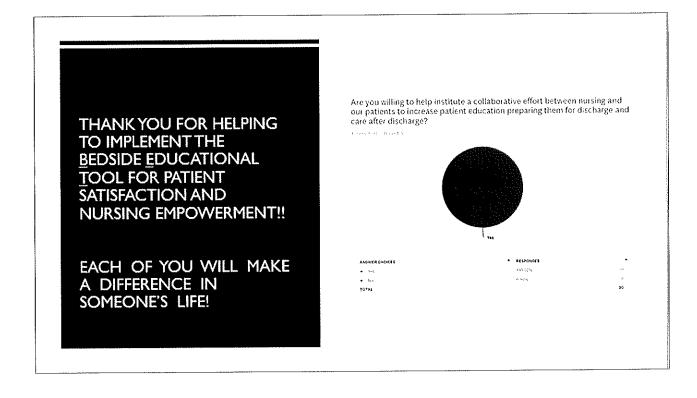
At Admission/throughout stay encourage patient to select items & nurses select items with the patient

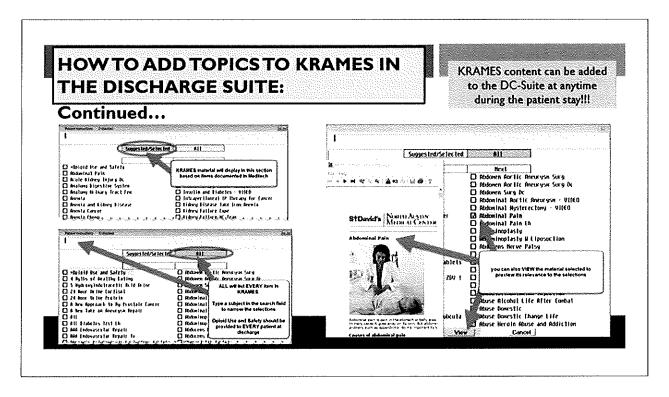
Q-shift: nursing discuses topics with patient to facilitate patient learning and material absorption

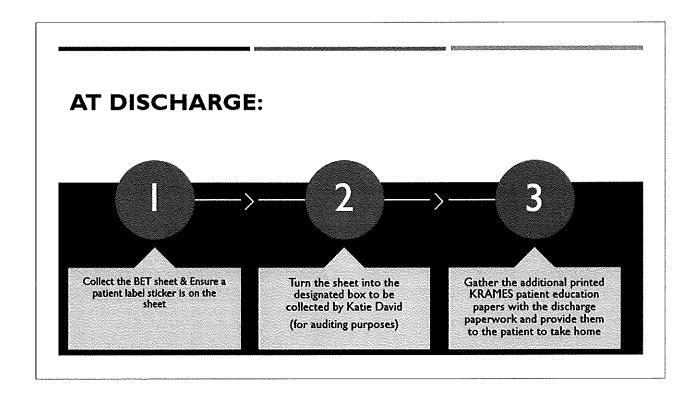
Q-shift: nursing adds KRAMES material to the Discharge Suite

At Discharge: collect the BET with a patient label & turn into designated box for Katie David

At Discharge: gather additional printed KRAMES education with Discharge Materials and provide to the patient







Appendix F

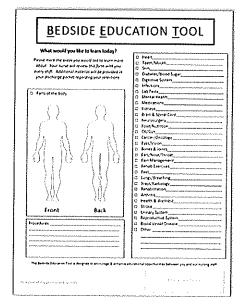
Bedside Education Tool Flyer

Bedside Education Tool

By including *Every Nurse*, *Every Shift*, we are alleviating the overload of educational information provided at the time of discharge and day of discharge. This allows the patient to absorb information over time, process the information, ask questions, and receive valuable, different viewpoints and teaching styles from each nurse.

Expectations O-Shift

- Every pt receives a BET on admission with explanation for its use
- Every Nurse on Every Shift reviews the BET with the pt
- Every Nurse provides at least verbal education exchange regarding topics on the tool that are selected by the pt
- Every Nurse is empowered to add topics to the BET based on the pt (dx, prognosis, lifestyle, wellness, etc.)
- Every Nurse adds Krames education discussed to the Discharge "Patient Instruction" section



For Questions/concerns, please contact Katte David you text or call

Discharge

- DC nurse collects the BET
 - Ensures pt label sticker is on it
 - Turn into designated box or Katie's desk
- Review the "Patient Instructions" content in the Discharge Suite
 - o Make additions as necessary
- Collect all Krames education when Discharge Paperwork is printed
 - Provide to the patient and explain it is printed content based on the education collaboration between them and nursing



Appendix G

Post-Implementation Discharge Data

