Capstone Project for the American College of Physicians

FAMILY MEETINGS: - Quality Improvement Project

Harvir Singh Gambhir MD FACP
SUNY Upstate Medical University
750 E Adams Street, Syracuse, NY 13210

Introduction:

It is increasingly evident that effective communication between the healthcare team and patient as well as their caregivers is paramount. Effective communication ensures patient satisfaction and safety as part of high-quality care (2,6). The core concepts of patient and family centered care are dignity and respect, information sharing, inclusion of patients in care and decision making, and collaboration between patients, families, heath care providers and hospital leaders (3).

Family meetings often happen late in admission or at a critical decision point (2). Family meetings provide a structured platform for health care providers to share information about diagnosis, current medical management, prognosis and to discuss goals of care, planned procedures/surgeries, medications changes, to plan an effective and safe discharge disposition. The role of family meetings has been well studied in intensive care, palliative care and pediatrics (1,3). There is a paucity of literature in regards to the role of family meetings performed for general medicine floor patients admitted under the care of a hospitalist.

Typically, patients admitted to the hospitalist service receive care from the primary treating team, sub-specialty consulting physicians, nurses, physical and occupational therapists, social workers, case managers and pharmacists. In a teaching hospital, physicians at various levels of training are involved with the patients' care and they rotate on and off the team regularly. Along with the multiple changes in nursing staff during the day, a patient is exposed to multiple health care providers and this can lead to confusion regarding who they should discuss their care with. In turn, this complex milieu can lead to dissatisfaction (2).

Family meetings can be an effective strategy in closing this gap in communication by removing the element of uncertainty regarding whom to seek information. This in turn, can be associated with positive outcomes for patients, families, clinicians and health care systems. Family meetings should be planned in advance, happen in a timely manner and goal-oriented manner, involve key personnel involved in the patient's care and address issues that are of importance to the patient (2).

This quality improvement project was initiated to evaluate if scheduled family meetings can bridge the gap between clinical care and awareness of the patients regarding their disease process, medications, prognosis, and discharge in patients admitted under the hospitalist service in an academic tertiary-care hospital on the internal medicine service.

Review of Literature:

As Dr.Beliveau eloquently said, "Generally, the patient is better off when the family is involved." "That should be part of what we do as clinicians, particularly in the hospital, which is a tremendously stressful situation for most patients. It's really important to have an advocate for the patient who is sitting there at the bedside with them (8)."

Family meetings are an underutilized communication tool to address a patient's care plan in the hospital.
They tend to happen late in admission or at critical decision-making junctions. These critical junctions are most commonly related to critical illness, clinical decline of patients in intensive care unit to communicate the plan and goals of care. Patient and families might feel overwhelmed and are pressured to make difficult decisions in short time period and at the highest time of vulnerability. There is evidence that family meetings done proactively and in a structured fashion in the ICU setting to share information about patients' illness, medications, prognosis, disposition and to allow opportunity for the patients and families to ask questions and express their perspective about their illness reduce anxiety, depression and post-traumatic stress disorder in patients and families. Family meeting have also been shown to reduce time in ICU, allow for earlier withdrawal of care safely without patient suffering and result in demonstration of respect for the patient's dignity and feelings about their care (2,4,5).

In ICU settings, there are multiple health care providers at different levels and frequent turnover of staff which leads to hesitation from patients and families for whom to ask questions. There is evidence that patients would like to communicate with and get assistance directly from the primary service attending who can put it all together. The bedside nurses who often have the closest relationship with the patient and families are not also not always actively involved in the family meetings (2). They can, however, play an important role in these meetings in terms of recognizing the need for such meetings, whom to involve, and prepare patients on what to except and what questions to ask. Involvement of the bed side nurses thus would not only increase the quantity of family meetings but also quality of these meetings (2,5,6). Family meeting are interdisciplinary and more effective when at least primary attending/ICU attending, bedside nurse, and members from other disciplines are involved. In a complex, high intensity work-place like ICU, family meetings have proven effectiveness with a proactive approach (auto-triggers for family meeting), when conducted in a structured fashion, with a check list of topics for discussion, held within 72 hours of ICU admissions for patients predicted to have a length of stay of longer than 5 days, mortality risk calculator greater than 25 %, significant decline in functional status (2). Similarly, there is literature for early involvement of palliative care in ICU setting and requesting their assistance in conducting or supporting family meetings has proven beneficial for patients and their families. The ultimate goal of family

meeting is to have a two-way communication among the patients, families and all health care providers involved in care, these meetings can play a dynamic role in patients care and move the focus of care towards patient and family (1,2,3).

Hospitalists have emerged as a leading group in the medical field that is focused on the general medical care of hospitalized patients. Hospitalists are cost-effective and efficient providers of inpatient care by decreasing length of stay and overall reducing hospital expenses. Studies have shown that hospitalist spend 24 % of their time communicating with patients (7). Family meetings can be a platform and a strategy to improve patient-hospitalist communication and improve patient satisfaction to ensure patient safety and quality of care. On a review of literature, there is supporting evidence for an impactful role of family meetings in ICU, palliative care service and pediatrics service (2). However, the literature in the field of hospital medicine, especially regarding the role of family meetings conducted for patients admitted to the general medicine service is lacking.

Aims and Objective:

To evaluate by a survey if a family meeting implemented in complex patients admitted to general medicine floor in an academic tertiary hospital would improve understanding of their disease, management, planned surgery/procedure, medications and discharge process in patients and their families.

Methodology:

This quality improvement project included patients admitted on a single unit in the internal medicine service during my service time at SUNY Upstate Medical University, Syracuse, New York from October 2019 to February 2020.

Inclusion Criteria

All patients admitted to my internal medicine service with length of stay more than or equal to 5 days or with length of stay of 3 days including a weekend. Patients also needed to meet one of the following criteria to be included in the study:

A. Multiple Consults (more or equal to 2)
B. Planned procedure/surgery or if any procedure is cancelled/postponed
C. New diagnosis of cancer
D. ICU or subspecialty transfer (primary stay equal or more than 7 days)
E. Unable to discharge the patient for more than 5 days
F. New and long term dialysis
G. Initiation of a new long-term medication
H. Nursing home residents with no HCP or known code status and have LOS >5 day
I. Re-admissions for same complaint within 30 days
J. Non-verbal status

Control group or Pre-Family Meeting group: Defined as patients admitted to my service and who met the inclusion criteria during the time period of October to December 2019.

Intervention group or Post-Family Meeting group: Defined as patients admitted to my service and who met the inclusion criteria during the time period of January to February 2020.

In the control group, a survey (Survey 1) was conducted on day 6 of admission after a consent was taken. In the intervention group, the nursing supervisor was contacted by the attending physician on day 5 of admission for patients who met inclusion criteria and the family meeting was planned for day 6. With the help of the nursing supervisor, the charge nurse, social worker, the patient was updated about the bedside family meeting and time. If the patient wanted to include any family member or health care proxy, social worker contacted them to set up a time as per their availability. If family member or HCP could not be present in person, then an attempt was made to involve them over a phone call. During the family meeting, health care team included attending physician, bedside RN and other members from current health care team as applicable. Minimum 30 minutes were reserved for each family meeting. If the patient was unable to participate in decision making for their care, health care proxy or power of attorney or decision maker appointed was contacted to update them via phone and a consent was taken for survey before the family meeting was conducted.

During every family meeting, the healthcare team discussed the following aspects of care in a structured manner with the patient and their caregivers:

1. Reason for admission and current management.

2. Updates on investigations.
3. Consultation recommendations.
4. Plan for interventions including HD (as applicable).
5. Discharge plan.
6. New diagnosis related question.
7. New medication updated with duration, indication and side effects.
8. Rehabilitation status as applicable.
9. Follow up with PCP, Sub-specialties.
10. HCP/Code status addressed if appropriate.

Questions related to discharge were addressed as anticipated plans if discharge date was not in 1-2 days of proximity on the day of survey or family meeting conducted. Questions related to procedure/surgery was only applicable if patient was made nil per mouth overnight for procedure/surgery. PICC/CVC/Midline procedure were not included. Periodic education was provided to nursing supervisors and in charge RN about the family meeting project and its methods as well as goals. After the family meeting was conducted, nursing supervisor took a verbal consent for the survey and conducted the survey (Survey 2) with the patient and their caregivers.

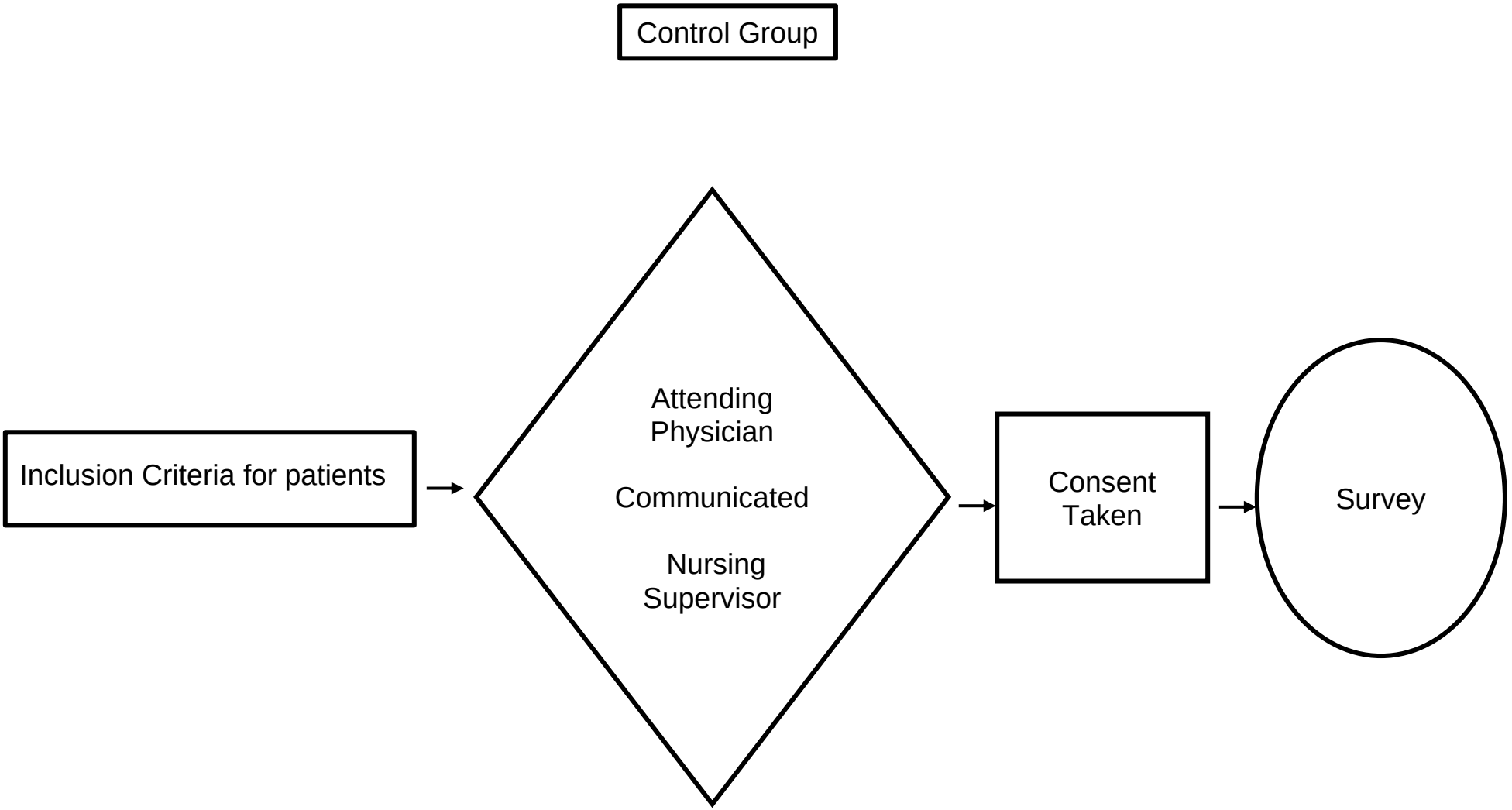
This Quality improvement project was reviewed and approved by Upstate Institutional Review Board(IRB).

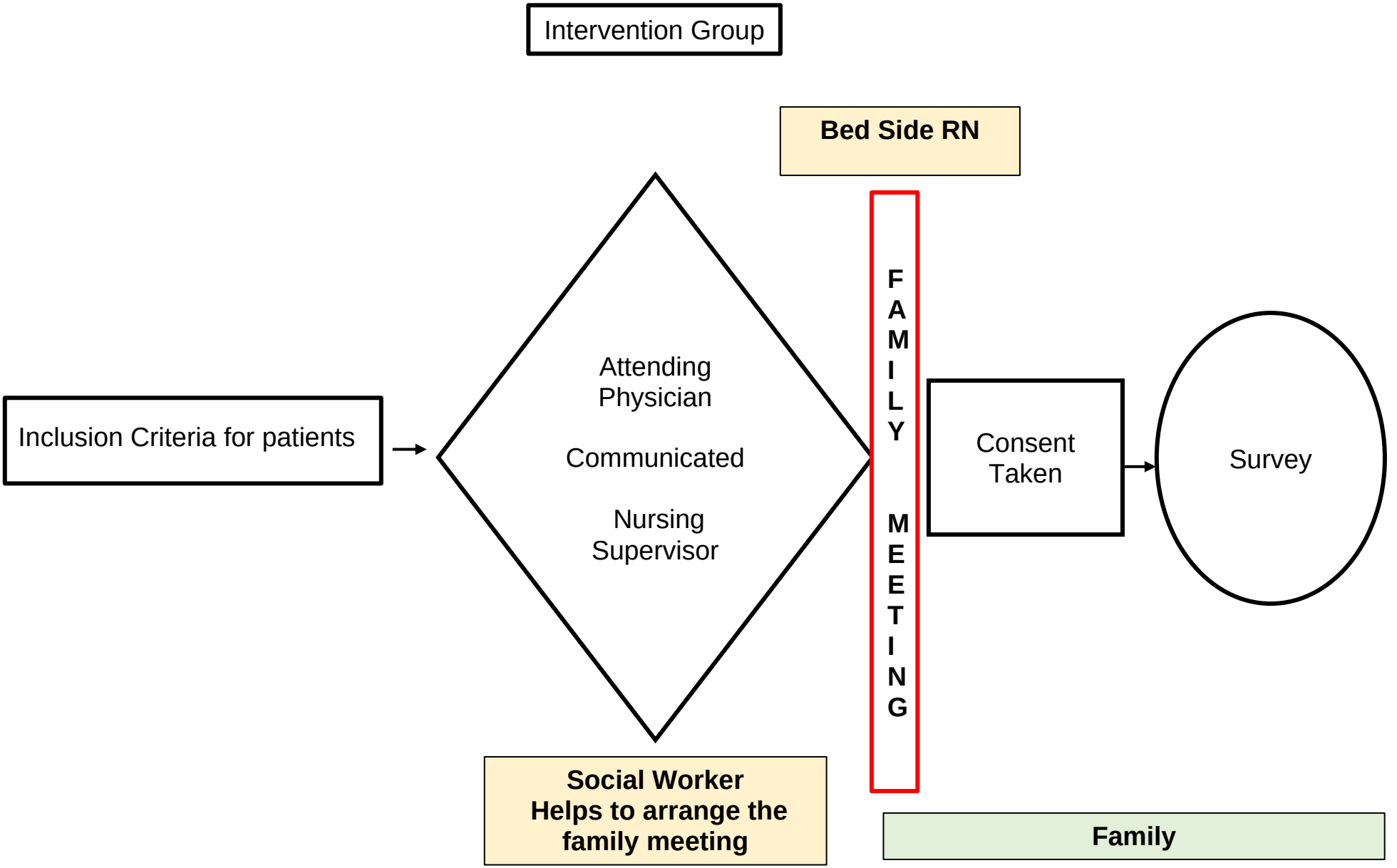
Survey 1: Control Group

1. How well do you understand your diagnosis?	Not at all	Somewhat	Maybe	Mostly	Completely
2. How well do you understand your treatment plan?	Not at all	Somewhat	Maybe	Mostly	Completely
3. How well do you understand your medications?	Not at all	Somewhat	Maybe	Mostly	Completely
4. How well do you understand any planned procedures, if applicable?	Not at all	Somewhat	Maybe	Mostly	Completely
5. Are you satisfied with your discharge plan (appointments, medications and follow up)?	Not at all	Somewhat	Maybe	Mostly	Completely
6. Do you feel the medical team (Attending physician and RN) addressed your concerns & questions?	Not at all	Somewhat	Maybe	Mostly	Completely
7. Would you like us to know anything else about the meeting?	Not at all	Somewhat	Maybe	Mostly	Completely

Survey 2: Intervention Group

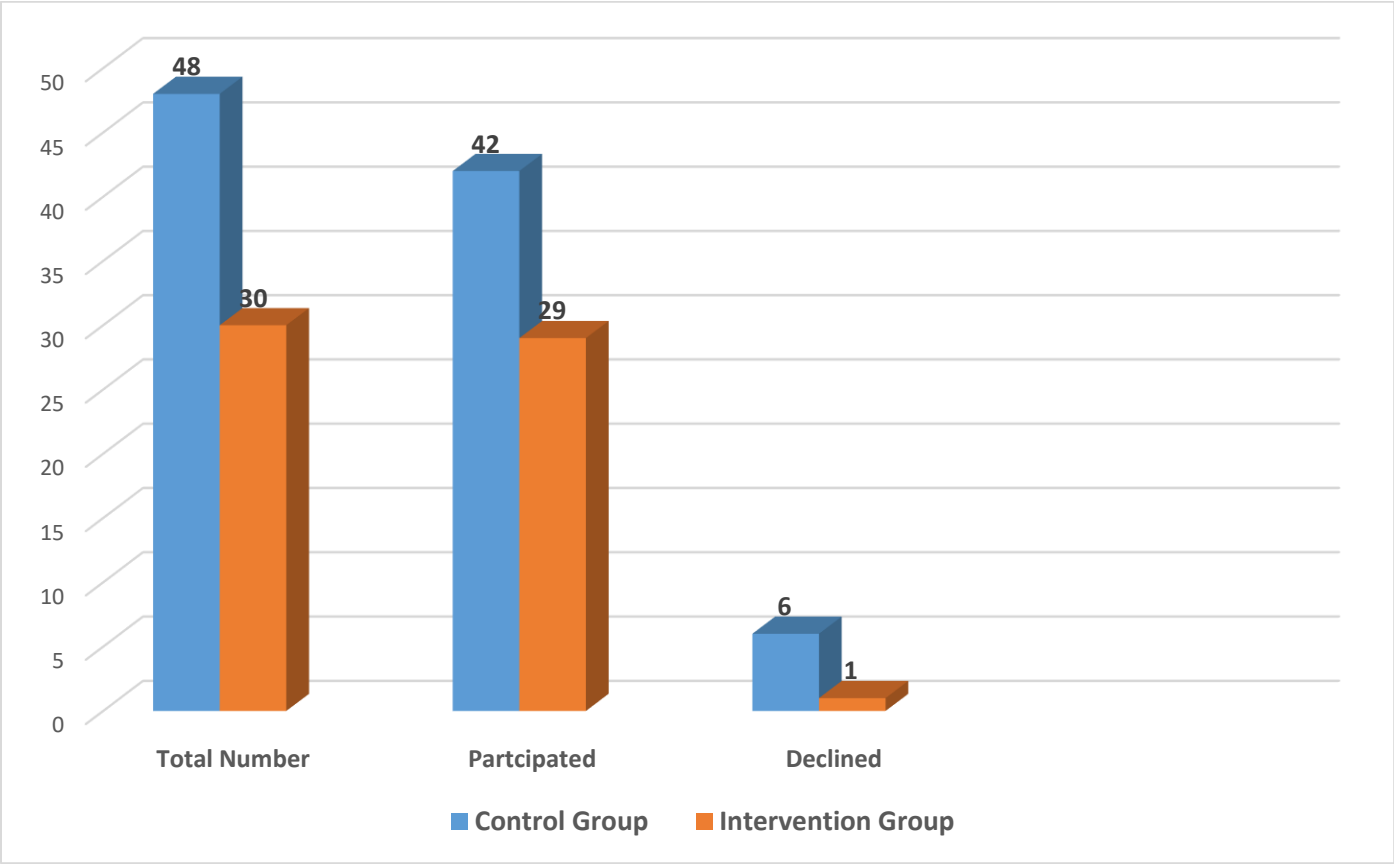
1. After the family meeting, how well do you understand your diagnosis?	Not at all	Somewhat	Maybe	Mostly	Completely
2. After the family meeting, how well do you understand your treatment plan?	Not at all	Somewhat	Maybe	Mostly	Completely
3. After the family meeting, how well do you understand your medications?	Not at all	Somewhat	Maybe	Mostly	Completely
4. After the family meeting, how well do you understand any planned procedures, if applicable?	Not at all	Somewhat	Maybe	Mostly	Completely
5. After the family meeting, are you satisfied with your discharge plan (appointments, medications and follow up)?	Not at all	Somewhat	Maybe	Mostly	Completely
6. After the family meeting, do you feel the medical team (Attending physician and RN) addressed your concerns & questions?	Not at all	Somewhat	Maybe	Mostly	Completely
7. Did the family meeting impact your hospital stay enough for you to recommend such meetings to be standard of care for other patients?	Not at all	Somewhat	Maybe	Mostly	Completely
8. Would you like us to know anything else about the meeting?					


Control Group
Inclusion Criteria for patients
Attending Physician
Communicated
Nursing Supervisor
Consent Taken
Survey


Intervention Group
Bed Side RN
Inclusion Criteria for patients
Attending Physician
Communicated
Nursing Supervisor
FAMILY MEETING
Consent Taken
Survey
Social Worker
Helps to arrange the family meeting
Family

Observation and Results:

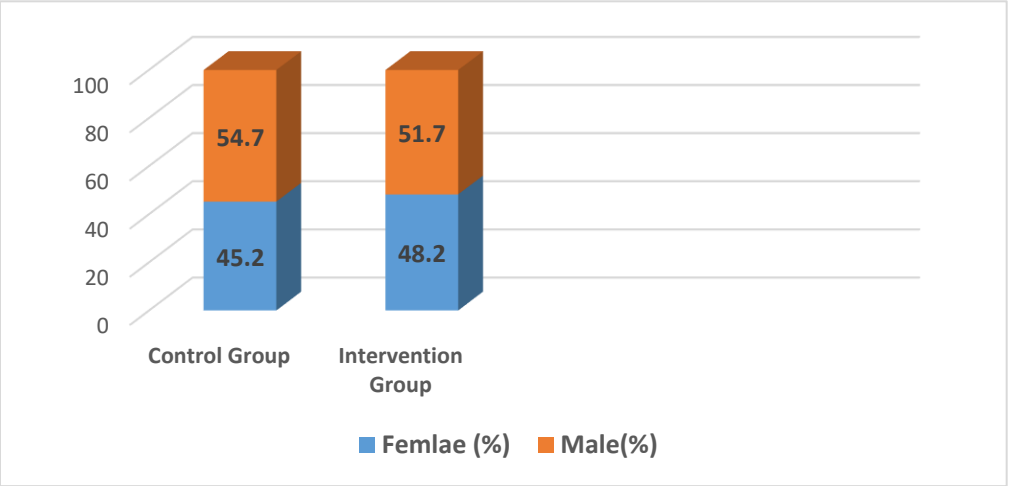
In the control group (Pre-Family Meeting group), 48 patients were offered the survey however 6 chose not to participate in the project. In the intervention group (Family Meeting group), 30 patients were offered the family meeting followed by the survey. Only 1 declined to participate.



In terms of criteria met for inclusion, the distribution between the two groups was as follows:

Selection of patients	Control group	Intervention Group
Multiple Consults (>2)	20	12
New Long-Term Medications	11	8
New Diagnosis of Cancer	2	3
Nursing Home residents with no HCP/Code status	3	2
New & Long-Term HD	2	1
Re-admission for same complain within 30 days for the same reason	1	1
ICU Stay or Subspecialty transfer	1	1
Non-Verbal Status	1	1
Difficult in Placement to Rehabilitation	1	0
Surgery/Procedure Cancelled	0	0

Of the 42 patients who took the survey, 19 (45.2%) were female and 23 (54.7 %) were male. The age in this group ranged between 24 to 89 years. The mean age was 69 years. Of the 29 patients who participated in the family meeting project, 14 (48.2%) were female and 15 (51.7%) were male. The ages ranged from 24 to 87 years and the mean age was 65 years. Detailed age and gender distributions in the two groups were as follows:



Age(years)	Male		Female		Total		Total Percentage (%)	
	Control Group	Intervention Group	Control Group	Intervention Group	Control Group	Intervention Group	Control Group	Intervention Group
21-30	1	1	3	2	4	3	9.5	10.3
31-40	5	4	2	1	7	5	16.6	17.2
41-50	3	1	3	1	6	2	14.2	6.8
51-60	2	2	5	4	7	6	16.6	20.6
61-70	5	3	2	2	7	5	16.6	17.2
71-80	5	3	2	2	7	5	16.6	17.2
81-90	2	1	2	2	4	3	9.5	10.3
Total	23	15	19	14	42	29		

In terms of ethnicity, 30 (71.4%) patients were Caucasian, 9 (21.4%) were African American and 3 (7.1%) were of other ethnicity in the control group. In the Family Meeting group, 22 (75.8%) were Caucasians, 6 (20.6%) were African American and 1 (3.4%) belonged to other ethnicity.

The distribution of diseases in the two groups was as follows:

Disease/Clinical Conditions	**Control Group n (%)**	**Intervention Group n (%)**
Sepsis & Septic Shock	13(30.9%)	7(24.1%)
Pneumonia	5(11.9 %)	4(13.7%)
COPD	6(14.2%)	6(20.6%)
OSA	6(14.2%)	5(17.2%)
Respiratory Failure	14(33.3%)	8(27.5%)
Atrial Fibrillation	10(23.8%)	5(17.2%)
Hypertension	20(47.6%)	18(62%)
Hyperlipidemia	15(35.7%)	15(51.7%)
Diabetes Mellitus	14(33.3%)	14(48.2%)
Anemia(All types)	18(42.8%)	15(51.7%)
CHF	8(19%)	6(20.6%)
CAD	7(16.6%)	6(20.6%)
GIB	2(4.7%)	4(13.7%)
Cancer	11(26.1%)	7(24.1%)
Renal Failure	12(28.5%)	6(20.6%)
Bacteremia	7(16.6%)	5(17.2%)
Infectious Process	15(35.7%)	8(27.56%)
Hypothyroid	7(16.6%)	5(17.2%)
VTE	5(11.9%)	4(13.7%)
Acute Encephalopathy	6(14.2%)	3(10.3%)
Developmental Delay	3(7.1%)	2(6.8%)
Delirium	1(2.3%)	2(6.8%)
Dementia	1(2.3%)	2(6.8%)
Substance Use Disorder /Use	26(61.9%)	23(79.3%)
Hip Fracture	1(2.3%)	1(3.4%)
Spine Fracture	1(2.3%)	1(3.4%)
Acute Pancreatitis	2(4.7%)	1(3.4%)

Fall	2(4.7%)	2(6.8%)
Cirrhosis	2(4.7%)	2(6.8%)
Developmental Delay	1(2.3%)	1(3.4%)
Thrombocytopenia	6(14.2%)	7(24.1%)
Electrolyte Imbalance	30(71.4)	17(58.6%)

The number of consultations made in each group were as follows:

Consultation	**Control Group**	**Intervention Group**
Palliative	12	8
Infectious Disease	10	8
Surgery	9	5
GI	7	6
Nephrology	5	7
Cardiology	5	4
Pulmonary	5	2
Hematology/Oncology	4	3
Neurology	3	4
Medical ICU	3	4
Pain Service	3	2
Ophthalmology	2	0
Radiation/Oncology	2	4
Cardiac Thoracic Surgery	2	0
PMR	2	1
Addiction medicine	5	2
Psychiatry, Trauma, Urology, Endocrine, Geriatrics	1 each	1 each

The procedures performed in each group were as follows:

Procedure	**Control Group**	**Intervention Group**
ERCP	3	1
EGD	1	3
Colonoscopy	1	1
Tracheostomy	1	0
Paracentesis	2	2
ORIF for hip	1	1
Permanent catheter for Dialysis	1	1
CABG	1	0
Cardiac PCI	1	0

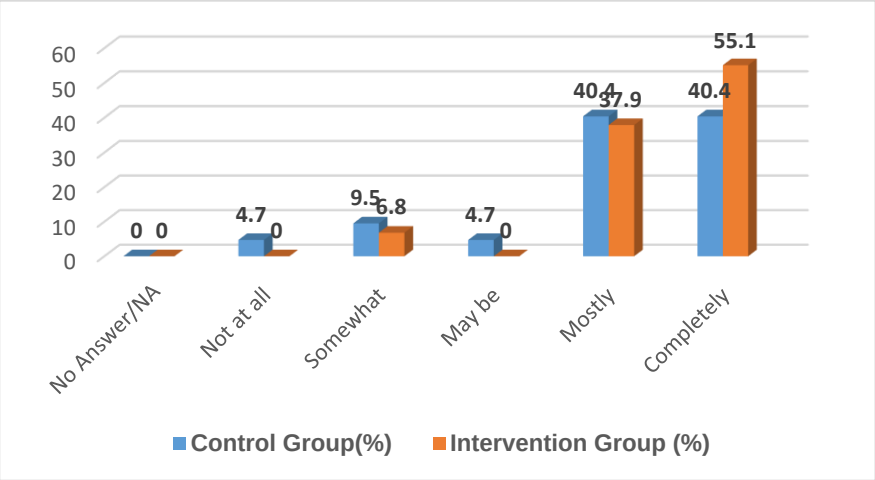
The disposition, average length of stay, severity of index, DRG and code status between the two groups were as follows:

Disposition	**Control Group**	**Intervention Group**
Home	19	13
Skilled Nursing Home/Rehabilitation	21	15
AMA	0	1
Morgue	2	0
Average Length of Stay	10.71	10.01
Severity of Index	3.153	3.291
DRG	2.7836	2.6131
Code Status		
Full	34	25
DNR/DNI	6	3
DNR	2	1

The survey results from each group were are as follows:

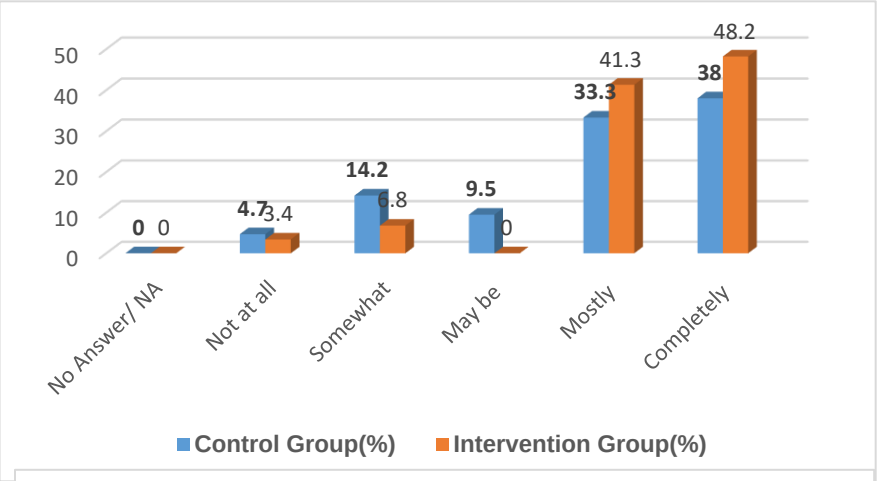
Question 1: How well do you understand your diagnosis?

Response	Control Group	Intervention Group
No answer/NA	0	0
Not at all	2(4.7%)	0
Somewhat	4(9.5%)	2(6.8%)
May be	2(4.7%)	0
Mostly	17(40.4%)	11(37.9%)
Completely	17(40.4%)	16(55.1%)



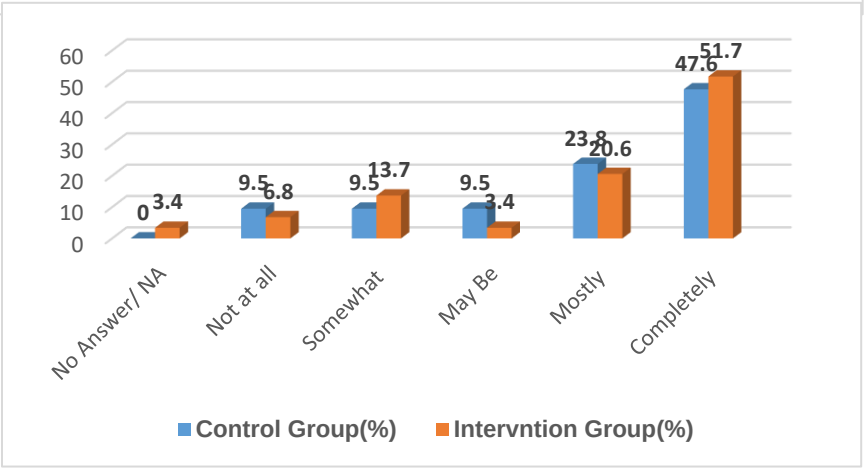
Question 2: How well do you understand your treatment plan?

Response	Control Group	Intervention Group
No answer/NA	0	0
Not at all	2(4.7%)	1(3.4%)
Somewhat	6(14.2%)	2(6.8%)
May be	4(9.5%)	0
Mostly	14(33.3.%)	12(41.3%)
Completely	16(38%)	14(48.2%)



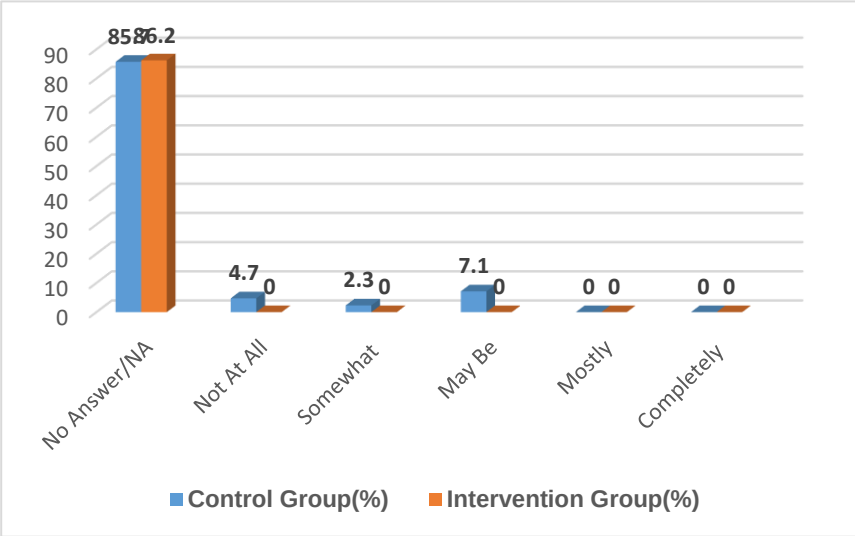
Question3: How well do you understand your medications?

Response	Control Group	Intervention Group
No answer/NA	0	1(3.4%)
Not at all	4(9.5%)	2(6.8%)
Somewhat	4(9.5%)	4(13.7%)
May be	4(9.5.%)	1(3.4%)
Mostly	10(23.8.%)	6(20.6%)
Completely	20(47.6%)	16(51.7%)



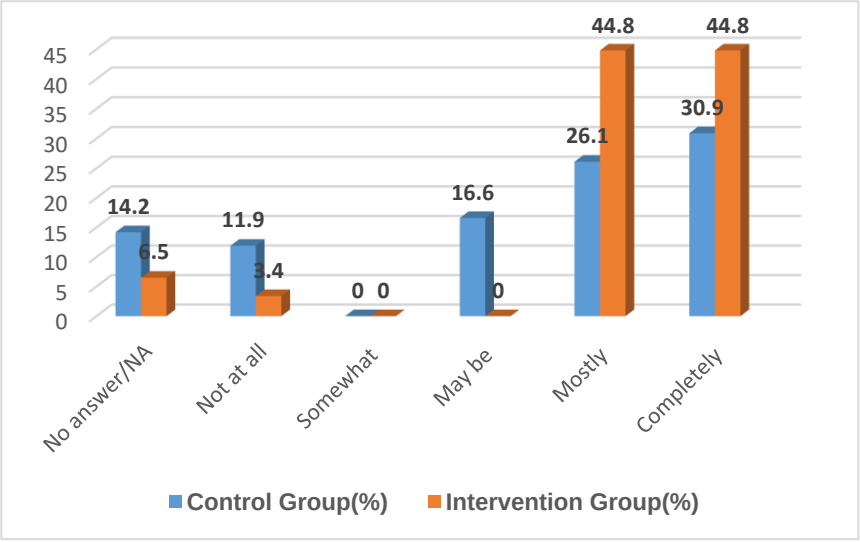
Question 4: How well do you understand your planned procedure (if applicable)?

Response	Control Group	Intervention Group
No answer/NA	36(85.7%)	25(86.2.%)
Not at all	2(4.7%)	0
Somewhat	1(2.3%)	4(13.7%)
May be	3(7.1%)	0
Mostly	0	0
Completely	0	0



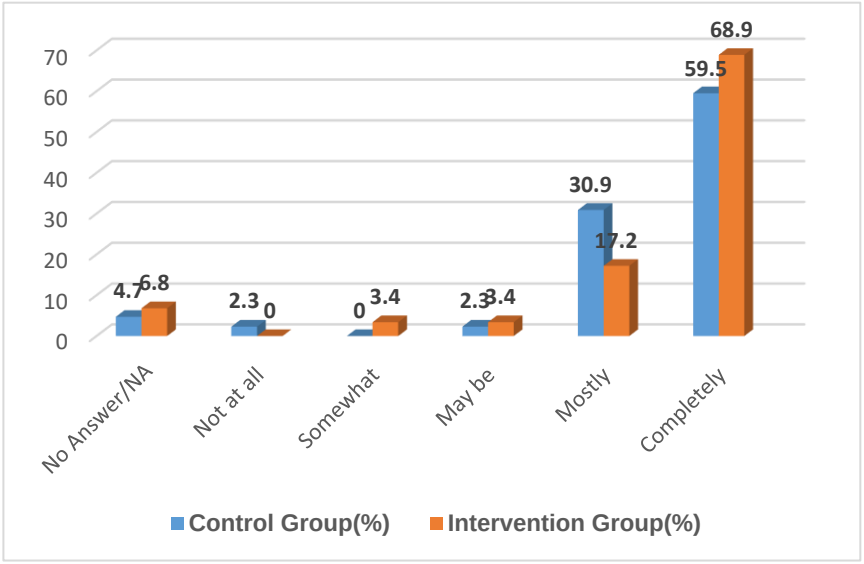
Question 5: Are you satisfied with your discharge plan (appointments, medications and follow up)?

Response	Control Group	Intervention Group
No answer/NA	6(14.2%)	2(6.5%)
Not at all	5(11.9%)	1(3.4%)
Somewhat	0	0
May be	7(16.6%)	0
Mostly	11(26.1.%)	13(44.8%)
Completely	13(30.9%)	13(44.8%)



Question 6: Do you feel medical team (attending and RN) addressed your concerns and questions?

Response	Control Group	Intervention Group
No answer/NA	2(4.7%)	2(6.8%)
Not at all	1(2.3%)	0
Somewhat	0	1(3.4%)
May be	1(2.3%)	1(3.4%)
Mostly	13(30.9%)	5(17.2%)
Completely	25(59.5%)	20(68.9%)



Question 7: Did the family meeting impact your hospital stay enough for you to recommend such meetings to be standard of care for other patients?

28 (96.5%) out of 29 patients answered completely and 1 (3.4%) patient answered not at all.

During the family meeting in post-family meeting group, the following results were observed

1. Average time for family meeting: 25 minutes (ranged from 15-30 minutes).
2. 25 family meeting were held bedside and 4 out of the patient's room in another room on the same geographic area.
3. In 25 family meeting held bedside, 10 family members/health care proxy were present bedside and 10 were on phone call. In 5 family meeting no family member was present as per the patient's decision.
4. 2 patients did not participate in family meeting due to their medical condition and they were held out of room with family member/ decision maker/power of attorney/ health care proxy.

Discussion:

The literature supports the importance of involving patients and their families in the patient's care by sharing their diagnosis, treatment plan, medications, details of procedures planned, disposition. Family meetings shift the focus of care to patient and their family. In this quality project, we explored if conducting family meeting on general medicine patients admitted under a hospitalist would lead to better understanding of patients' diagnosis, management, and disposition; and ultimately lead to improvement patient-hospitalist communication and patient satisfaction. There was an increase in percentage by 15%, 10.2% & 4.1% in complete understanding of patients' diagnosis, treatment plan and medications respectively. Family meetings were not able to address the concern or questions related to planned procedure or surgery, however the subset of patients requiring procedures was significantly small. There was increase in the percentage of patients in terms of comprehension of the discharge plan by 13.9%. Similarly, 9.8% more patients felt that their medical team (attending and RN) addressed their concerns and questions completely.

This project demonstrates the need for a proactive approach to conducting interdisciplinary, structured family meetings on general medicine floor patients. These meetings provided an opportunity for the treating team to communicate with their patients but at the same time provided an opportunity for the patients and their families to clarify their concerns.

Limitations:

The limitations of this quality project were the low number of patients enrolled were since it was conducted over a limited time period and on the service of a single attending. This project was also limited due to pandemic COVID-19 as the shift of all resources & communication were directed towards COVID-19. Although there was more involvement of families in discussion in patient's care, new patient's visitor restriction policies limited our ability to conduct bedside interdisciplinary meetings. The tele-video HIPPA complaint tool was attempted to be used for family meetings but with multiple members involved, limited resources and limited understanding of technology were all barriers. There was involvement of only one attending and his performance was compared in the control and intervention group so the results cannot be generalized.

Future and moving forward:

Involvement of multiple hospitalists in this oncoming PDSA cycles will allow a better understanding of the generalizability of these findings. We seek to study a larger sample of patients in the future. The questions pertaining to procedures and surgeries may need to be discussed at a separate avenue to better understand an impact of meetings since this represents a smaller subset of patients on the medicine services. In future, it would be an important factor to review if family meetings happened early in admissions reduced the length of stay although we observed the LOS was 0.70 days less in the intervention group, but definitive conclusions cannot be drawn with current data. It would be imperative to review of the impact of family meeting in different medical co-morbidities (using Diagnosis Related Group and Severity of index). We have multiple tools to evaluate patient experience and satisfaction like Press-Ganey Scores. Impact of such meetings on these evaluations should be looked into going forward.

With the relative paucity of data regarding the role of structured and scheduled family meetings in the general medicine setting, this pilot QI initiative provides impetus to study this area further. 96.5 % of patients in the intervention group felt family meetings should become a standard of care for patients admitted in the hospitals. This is a revealing statistic demonstrating the previously state need for further implementational studies in this field.

References:

1. Jacqueline C. Griffith, Margaret Brosnan, Kathleen Lacey, Sally Keeling, Tim J. Wilkinson. Family meetings- a qualitative exploration of improving care planning with older people and their families. British Geriatrics Society. 2004 September; 33(6): 577-581.
2. Elizabeth B. Gay, Peter J. Pronovost, Rick D. Bassett, Judith E. Nelson. The intensive care unit family meeting: Making it happen. J Crit Care. 2009 Dec;24(4): 629.e1-629.12.
3. Dennis Z. Kuo, Amy J. Houtrow, Polly Arango, Karen A. Kahlthau, Jeffrey M. Simmons, John M. Neff. Family Centered Care: Current Applications and Future Directions in Pediatric Health care. Matern Child Health J. 2012 Feb; 16(2): 297-305.
4. Ramona Joshi. An essential component of comprehensive palliative care. Can Fam Physician. 2013 Jun; 59(6): 637-639.
5. Wu Huixin, Ren Dianxu, Zinsmeiste Glen R., Zewe Gretchen E, Tuite Patricia K. Implementation of a Nurse-Led family meeting in a Neuroscience Intensive Care Unit. Dimensions of Critical Care Nursing. 2016 September/October; 35(5): 268-276.
6. David A Gruenewald, Michelle Gabriel, Dorothy Rizzo, Carol A, Luhrs. Improving Family meeting in Intensive-Quality improvement curriculum. Am J Crit Care. 2017 July; 26(4): 303-310.
7. Venkataraman Palabindala, Sohail Abdul Salim. Era of Hospitalists. J Community Hosp Intern Med Perspect.2018 Feb; 8(1): 16-20.
8. Alicia Gallegos. Patient centered care. Making time for family. ACP Hospitalist. 2018 October.

Abbreviations:

Abx: - Antibiotic
AC: - Anticoagulant
AMA: - Against medical advice
CABG: - Coronary Artery bypass
CAD: - Coronary Artery Disease
CHF: - Congestive Heart Failure
CVC: - Central Venous Catheter
DNR: - Do not resuscitate
DNI: - Do not intubate
DRG: - Diagnosis related group
HD: - Hemodialysis
EGD: - Endoscopy
ERCP: -Endoscopic Retrograde Cholangiopancreatography
GI: - Gastroenterology
GIB: - Gastrointestinal bleed
HCP: - Health care proxy
ICU: - Intensive care unit
ID: - Infectious disease
IRB:- Institutional Review Board
LOS: - Length of stay
MRSA: - Methicillin Resistant Staphylococcus Aureus
MSSA: - Methicillin Sensitive Staphylococcus Aureus
OSA: - Obstructive Sleep Apnea
ORIF:-Open reduction & Internal fixation
PCP: - Primary Care Provider
PCI: - Percutaneous Coronary Intervention
PICC- Peripheral inserted central catheter
PMR: - Physical & Medicine Rehabilitation
RN: - Registered Nurse
VTE: - Venous Thromboembolism