

Supplementary Digital Content #1

**Twelve Cases Illustrating Implementation Strategies and Consequences
of Participating in the Improving Heart Failure Outcomes (IHO) Study**

Case 1: OSF Saint Anthony Medical Center (Oak Lawn, IL)

Nursing Role Delineation to Improve Heart Failure Patient Education and Follow-Up

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Prior to the IHO Magnet research study, OSF Saint Anthony Medical Center (SAMC), a 254-bed level 1 trauma center, was already included as one of the facilities in the OSF Healthcare System working on the *Hospital to Home* (H₂H) project, aimed at reducing readmissions in patients with a heart failure (HF) diagnosis. The primary initiative included the development of specific HF education designed for patients with an overarching goal to decrease readmission of this particular population. Secondary implications and benefits included disease-specific training for all direct care RNs in the designated HF nursing unit. The unit is a 32-bed unit with a 35-member staff of RNs who work primarily 12-hour shifts.

As part of the IHO study, all RNs participated in an extensive on-line training focused on the pathophysiology of HF, symptom management, and the importance of using a teach-back method to insure patients have a clear understanding of the disease process. A pre- and post-test was included to determine baseline and post education knowledge.

At OSF Saint Anthony, the IHO study team determined that consistency in the delivery of patient education would help to ensure that all components of education were addressed. The cardiac rehab nurse team is comprised of 4 registered nurses (RNs). With the initiation of the Hospital to Home (H₂H) project, their patient population was expanded to include patients with a diagnosis of HF. A small core group of staff RNs on the HF unit reinforced the primary education that was completed by the cardiac rehabilitation (rehab) team. With a dedicated team, nursing minutes for initial and reinforced education of patients was significantly greater (mean =112.7; N=13) than the time spent by nurses in the combined all sites IHO study data (mean =82.68; N=443).

A daily unit huddle is held with numerous disciplines including the charge RN, pharmacy, social services, case management, palliative care, home health, dietary, the cardiovascular clinical nurse specialist (CNS), the nurse manager, cardiac rehabilitation (rehab), and a hospitalist. Within the shared vision measure, on the subscale of *strong multi-disciplinary climate*, the SAMC mean= 3.38 (N=13) was slightly higher than the subscale mean reported for all sites (mean=3.17 N=306), confirming the teamwork that is evident on the unit. Each patient is discussed and HF patients are reviewed in great detail. When patients were deemed appropriate for the study, the CNS or nurse manager approached the patient for consent. If consent was obtained, the cardiac rehab RNs then proceeded with education using the designated tools. Notable differences are also noted between SAMC and all sites combined data for the patients' HF self-care maintenance, management, and confidence at the 7 day interval. Higher results are reported in each respective category for SAMC.

The daily huddle continues and the focused HF education is still provided to all identified HF patients. Additionally, the cardiac rehab nurses were assigned to complete the 48-hour and 7-day follow-up

phone calls. A spreadsheet was developed and placed on a shared network drive to allow for easy access by all team members. Conversations regarding the follow-up phone calls occurred prior to discharge and helped to facilitate a successful call. Data show a mean of 0.93 (N=15) for this site as compared to all sites with mean score of 0.82 (N= 492) for the ability to reach a patient and to discuss care at 48 hours. In FY 2012, OSF Saint Anthony Medical Center admitted 419 patients with the principal diagnosis of HF. Patients receive the overall diagnosis of HF; however, the underlying cause is frequently a result of a group of complex chronic diseases. These diseases further determine a patient's diagnosis of diastolic or systolic dysfunction.

Through the IHO study and the *H2H* initiative patient education was standardized to ensure that patients receive the same HF information regardless of educator. Though this process has helped decrease variation, an issue remains in individualizing the education to the patient's cause of HF. Future plans are to develop education that is more directly related to the underlying cause of HF, in terms of diastolic or systolic dysfunction. The goal is to improve the patients' and families' understanding of their disease processes which may then decrease the risk of development of HF symptoms and re-hospitalization.

Case 2: University of Alabama at Birmingham Hospital

Improving Heart Failure Outcomes (IHO) at UAB Hospital

Connie White-Williams, PhD, RN, FAAN

The 18-bed cardiology floor, 6NW, at the University of Alabama at Birmingham (UAB) Hospital was the site for the Improving Heart Failure (HF) outcomes study. UAB Hospital is a large 1147-bed academic medical center and is located in the medical district of Birmingham, Alabama. Situated among major research centers and clinics, UAB Hospital provides patients with a complete range of primary and specialty care services, as well as the most up-to-date treatments and innovations in health care. The unit for the project employs 21 nurses, 9 patient care technicians, 2 secretaries, and has a nurse manager and nurse educator. A team of 7 nurses were the champions for the Improving Heart Failure Outcomes (IHO) study and worked with the Center for Nursing Excellence to complete the study requirements.

From the knowledge gained from this research, we realized we were lacking an evidence based HF education booklet for patients and families. With the support of cardiology administration and the university marketing department, a 23-page education booklet was designed and written, and made available in November 2011. This discharge booklet was a direct result of new information gained from the IHO study. Each HF patient is discharged with written information on understanding HF. The education booklet also supported standardizing discharge teaching to include the definition of HF,

symptoms of HF, diet, exercise, medications, weight control, sex and HF, when to call the health care provider, how to deal with stress and depression, smoking and alcohol use, and lifestyle changes. Over 95% of the patients love the new education booklet. Some of the comments include: "very well written," "easy to understand," and "can keep notes in it."

In addition, due to the recognition of the IHO study, an annual HF education day was established. This day was held in February of 2011 and 2012, and had over 120 attendees. Presentations were given by HF cardiologists, dieticians, physical therapist, social workers, quality coordinators and nurses. Also, beginning this January 2013, the unit's nurse educator will be conducting an evidence-based practice project teaching nurses how to teach patients to weigh themselves. This project is a direct outcome of the nurses who inquired about current practice as part of the study. During the IHO study, nurses questioned the practice of how to teach HF patients to weigh themselves. Do you teach to call the health care providers if you gain 3 to 5 pounds or should you determine ideal body weight and call if you gain 4 pounds? Also, the nurses on the unit became dismayed when teaching patients to weigh themselves daily, but then had to discharge them knowing the patient did not have a scale to weigh themselves. The unit educator is submitting for an innovation grant sponsored by the hospital. This grant will provide the funds to purchase scales for patients. The grant will also provide education materials to teach nurses how to calculate ideal body weight, teach patients accordingly, and then provide a follow-up phone call to assess use of scales in managing their HF.

Finally, the nurses involved in the study gained a greater appreciation for the research process. All of the IHO nurse champions became IRB certified, attended a study orientation workshop, and learned about the challenges and successes of conducting research on a clinical unit. Indeed, participating in the IHO project has impacted the development of our nurses in numerous innovative facets.

Case 3: Middlesex Hospital (Middletown, CT)

Creative Strategies to Prepare Nurses for Participation in Research

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Middlesex Hospital's South 6 nursing team embraced the IHO study with energy and enthusiasm. Being a small 15-bed medical/telemetry unit in a community magnet hospital located in Central Connecticut with limited experience in conducting quantitative research, this team was ready and excited for the challenge. The Improving Heart Failure Outcomes (IHO) study presented a unique opportunity to engage nurses in a sophisticated research protocol and demonstrate meaningful outcomes for our patients. The innovations described here are focused on strategies for educating nurses to ensure that they have the information, skills and confidence in order to conduct the study protocol, improve the delivery of patient education during their daily practice and enhance our ability to prevent readmissions via an automated follow up system. The nursing leadership team which included the clinical nurse educator and nurse manager, collaborated with the Heart Failure (HF) care manager to develop creative ways in order to prepare nurses for their participation in this study. Many innovative strategies were employed.

Our educator utilized the department of education simulation lab to conduct several cases aimed at utilizing teach-back as an evidenced-based method for teaching patients about HF. RNs completed this case in the simulation environment in order to better utilize the method of teach back and increase their confidence and competence with educating their patients about key HF self-management information such as diet, medication knowledge, weight monitoring, when to call the doctor and when to follow up. In addition to simulation cases and information about teach back, the study protocol and HF education was posted in convenient locations on the unit so nurses would have access to it during their shift for review; i.e., bulletin areas, medication room, rest rooms and anywhere a registered nurse (RN) may have a moment to read were utilized. Email communication is a major form of information sharing at our hospital and RNs received key study information electronically as well as a link to a video where teach back is demonstrated.

Twenty-two RNs completed the teach-back simulation case offered 8 different times in preparation for the study. This was an invaluable exercise in improving efforts directed at patient education for all patients on South 6, not just HF patients. Electronic documentation was modified in our system to reflect the work that nurses accomplished in educating this specific population. A review of best practices around teaching HF patients as a result of study participation also uncovered the use of HF zones as evidence-based patient teaching tool and action plan for worsening HF symptoms. Teach back methodology and use of Heart Failure zones are both incorporated into the daily practice on South 6. As a result of the 48 hour follow up phone call conducted as part of the study, it became very apparent that several patients being discharged still had significant need for follow up by their physician that would have otherwise been not known. This included further monitoring—where in many cases, homecare initiated tele-monitoring services or additional medication management which if had gone undetected, may have resulted in another admission. This study was instrumental in bringing to light the need to

focus on reducing re-admissions, particularly in the HF population. This has become an organizational wide initiative to include a multi-disciplinary steering committee with several areas of focus. One major outcome of that committee so far is the implementation of an automated call-back system which contacts patients after discharge and provides referrals to RNs in the case where patients have the need for follow up. Additional effort in that committee will be focused on adapting discharge information to better meet the needs of our populations and the integration of best practices.

With teach-back methodology incorporated into daily practice, next steps may include a demonstration of its effectiveness by comparison to traditional methods. Other next steps will be to capture data on HF referrals made as a result of the automated calling system to determine number of potential readmissions avoided. Simulation will continue to be accessed as a valuable tool for educating nurses in communication, collaboration and patient education—as opposed to limited it to solely clinical-based topics.

Case 4: Saint Francis Hospital (Roslyn, NY)

Bridging the Gap Between Hospital and Home for Heart Failure Patients

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Participation in the Improved Heart Failure Outcomes (IHO) study was a natural fit for St. Francis Hospital the Heart Center®. The heart failure (HF) cohort unit, 2 East a medical surgical cardiac telemetry unit, provided the practice environment for the study. The unit fosters the clinical expertise of nurses in the care of patients with HF and nurtures a collegial partnership between clinical nurses, advanced practice nurses and physicians in the outpatient HF program. Through this partnership patients are able to move between the inpatient and outpatient setting seamlessly.

Participation in the IHO study strengthened and reinforced many of the HF focused patient interventions and nursing education in place at SFH. The hospital places a high priority on professional development and has consistently fostered a continuous learning environment. The standardized nursing education provided through the study enhanced the knowledge base of the clinical nurses and provided an opportunity to identify areas for further education.

Reduction of readmission rates for patients with HF is an important hospital strategic goal. Successful reduction strategies begin during hospitalization and are reinforced following discharge. Interventions in place at SFH include scheduling of follow up physician appointments no more than 2 weeks post discharge and contact via phone 24-48 hours post discharge. Communication tools used during the IHO study enhanced the ability of the clinical nurses to identify patient and family gaps in knowledge and to individualize patient education.

Two new initiatives evolved during participation in the IHO study, the establishment of a HF navigator role and an enhanced interdisciplinary patient education program. The HF navigator is a registered nurse (RN) with both a strong clinical background and care management expertise. This vital role bridges the gap between inpatient management and self/family care at home. Establishment of a professional relationship between the nurse navigator and the patient/family is a key factor in success of the program. Through utilization of a standardized assessment tool, the LACE index, the nurse navigator is able to predict a patient's risk for readmission. The tool considers the patient's length of stay, acuity upon admission, co-morbid conditions and the number of emergency room visits in the 6 months prior to the current admission. This index, an evidence-based tool, was evaluated and recommended for use by the SFH hospital interdisciplinary HF Readmission Committee. The nurse navigator completes the LACE index tool on all patients admitted with HF or patients identified during interdisciplinary care coordination rounds as having a history of HF. The clinical nurse, in collaboration with the interdisciplinary team formulates a plan of care with the patient and family. The LACE index scores have corresponding interventions for patient/family education concerning the management of HF. The tool further identifies barriers to a successful transition post discharge and recommendations to reduce the risk of readmission. The tool guides creation of an education plan specific to each patient.

Inspired by participation in the IHO study, the patient education program on the HF unit was expanded to include a series of 5 educational videos for patients, families and caregivers. The videos provide education on various components of HF including an explanation of the disease process, importance of taking medications as prescribed and recognition of symptoms to report to the physician. The videos also offer advice for living with HF including meal planning and exercise regimes.

The 2 East unit-based shared governance council in collaboration with the unit based clinical nurse specialist and nurse manager developed an innovative education program for patients and families. The program called “Ask the Pros”, occurs weekly on the unit and provides patients and families the opportunity to ask questions and seek guidance from a variety of unit based experts including; the pharmacist, nutritionist, physical therapist, and clinical nurse specialist. The program augments the standard patient education and the experts are available for individualized education outside the scheduled sessions.

Since enhancing and strengthening the interventions for HF patients, the readmission rate for patients admitted to SFH with HF has steadily declined from 17% in 2010, when the research study started to 16.7% in the 3rd quarter of 2012.

Participation in the IHO study engaged clinical nurses as novice nurse researchers. This experience cultivated and nourished a culture of clinical inquiry. Under the direction of the unit-based clinical nurse specialist the clinical nurses on 2 East have received SFH institutional review board approval to begin a unit-based research study. The project will determine if use of a HF patient friendly pathway for patient education will improve compliance with self-care measures post discharge. The patient friendly pathway is intended to provide the patient with the skills to manage their weight, select appropriate

food choices, and understand and comply with their medication regime. The study, started in January of 2013, and will engage clinical nurses in patient interviews, identification of learning needs, data collection, and patient education.

Promotion and development of nursing research is a key component to advancement of nursing practice. Nurses at SFH practice in an environment which supports autonomy, professional development and clinical inquiry. Nurses are encouraged to question, to seek resources and to determine the best plan for each patient situation. Clinical nurses at SFH will build upon the IHO multisite experience and continue to shape the future of nursing through application of evidenced based practice, research and development of new knowledge.

Case 5: Northwest Community Hospital (Arlington Heights, IL)

Innovations in Staffing to Improve Quality Outcomes and Prevent Readmission

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Northwest Community Hospital is located in Arlington Heights, a South West suburb of Chicago Illinois. With a capacity of 300 beds, we care for 1600 patients annually with a primary diagnosis of heart failure (HF) . A large majority of our HF population is covered under Medicare. The cardiology teams at our institution are in private practice. We have a designated 18-bed HF unit and a HF physician champion as well as a HF nurse practitioner who collaborate on the care of these patients. Direct Care staff rotate in and out of this unit. The nurse patient ratio is 1:4 or 1: 5.

HF patient discharges are comprehensive and can tie up the direct care staff nurse for a significant amount of time as the details are vital in order to prevent readmission to the hospital. With core measures and readmission rates for HF under tremendous scrutiny, there are several key points to assess at time of discharge. These include: a complete review of the medication instructions, dietary restrictions, weight management, when to call the doctor, and timely follow up. The HF education protocol must be completed prior to discharge.

With this in mind, the flow nurse role was developed. A flow nurse is an RN that starts their shift at 11 AM with the sole intention of completing HF discharges. This unique staffing pattern allows a nurse to

spend uninterrupted time at the bedside to coordinate all aspects of care at time of discharge. The flow nurse addresses key points that have been discussed earlier but also makes cardiology follow-up appointments, assesses if the patient has a home scale in working order, and discusses the patient's plan to obtain new prescriptions. This is a patient as well as a direct care staff nurse satisfier on many levels. The data that is routinely collected suggests a positive impact with this new role. The core measure for "all discharge instructions" prior to the flow nurse role was 95% with an increase to 97.6% after this additional support was put in place. Our readmission rate went from 18.5 % for all cause readmission prior to the flow nurse role to 9.7% after initiation of this new process. With the flow nurse taking over the discharge process, the direct care staff nurse can continue to focus on their other patients and provide care in a timely manner. By utilizing a flow nurse to expedite discharges, patients are sent home sooner avoiding the ED congestion as patients are waiting for a bed on the HF unit.

This position alters the staffing matrix and requires an adjustment in the FTEs on the unit. The flow nurse currently starts their shift at 11 AM and helps with timely discharges until 3 PM when they go back into the regular staffing pattern and take their own team of inpatients. There is a possibility of expanding this role in the future to include an additional flow nurse that extends beyond the 3 PM shift change to assist with discharges that take place on the PM shift. There is also thought to expand this role to other diagnosis (pneumonia, and myocardial infarction) as there are other vulnerable core measure populations in our organization.

Case 6: Rex Healthcare (Raleigh, NC)

Facilitating Patient Self-care With Improved Weight Monitoring

Helene Zehnder, RN, MSN, NE-BC, PCCN

The Improving Heart Failure Outcomes (IHO) study was conducted at Rex Healthcare on 2 units that routinely care for HF patients, 3East and 3West. Five nurses were directly involved in data collection. One improvement in patient care that is a direct result of this study, is related to daily weights. We were providing education to our patients regarding the importance of daily weights before this study was conducted. This education included when the patient should be weighed at home (once daily, every morning after voiding and unclothed). It also included education to call the primary care provider if there is a weight gain of 3-5 pounds.

Our nurses believed that with this education, patients would go home and adhere to our instructions to weigh themselves daily and notify the physician regarding any significant increase in weight. Through this study, we learned that some patients did not own a scale and those who said they would purchase one after discharge did not often follow through with this purchase. We now provide a scale to each patient if they do not already have one at home. This is funded through our hospital foundation. We believe this has directly affected the 30 day readmission rate for heart failure patients at our hospital.

Assessments administered prior to discharge showed us that patients know they need to be weighed daily. They had the knowledge, but what we found during the 48 hour and 7 day post-discharge phone calls is that many of these patients were not weighing themselves because they did not have a scale at home.

Nurses were not consistently asking patients if they had a scale prior to this research study, but it became very clear that we needed to do so. After the 1st week of this study, we began asking patients if they had a scale at home. If the patient did not have a scale, the nurse provided information regarding where a scale could be purchased and the cost. Although patients said they would purchase a scale, we learned during the post-discharge phone calls that most had not done so. Some patients admitted they could not afford to purchase a scale during the post-discharge phone call although this information had not been shared with the nurses while they were hospitalized.

The 5 nurses in our research group discussed how we could assure patients were weighing themselves daily at home. Knowing the hospital would not be reimbursed through the Centers for Medicare and Medicaid for patients readmitted within 30 days after discharge, we believed daily weights were essential to prevent a severe exacerbation of HF. A decision was made to seek funding from our hospital foundation to provide a scale to each patient who said they did not have one at home. We do this regardless of the patient's ability to purchase their own scale. We believe it is essential for the patient to leave the hospital with a scale in hand.

One year after the completion of data collection at our hospital, we continue to give a scale to each of our HF patients who do not have one at home. We have an active Hospital to Home committee that

reviews readmission data. We are consistently below the national average for readmissions for HF patients.

Case 7: East Jefferson General Hospital (Metairie, LA)

Improving Heart Failure Outcomes Through Enhanced Patient Education

Nicole Jones, MN, RN-BC, APRN, ACNS-BC, CCNS

On the day we shipped our completed patient data to Maryland, we got to work. We did not need to wait for the data analysis to come back to make changes in our practice. We had already learned 2 important lessons about our heart failure (HF) patient population as a result of our participation in the Improving Heart Failure Outcomes (IHO) study. First, we were surprised to find out during our patient screening process that almost 1/3 of our HF patients (28%) had to be excluded from the study due to documentation of a cognitive deficit in the medical record. Second, we were startled when some of the patients who were enrolled in the IHO study answered the same HF knowledge question incorrectly on the pre- and post-test, even after 1-on-1 instruction by cardiac rehab and dietician experts, utilizing videos, discussion, and written materials.

Before the IHO study, we had considered the teach-back method for patient instruction, but decided against it. After the IHO study, the nurses on the study team felt that it was imperative that we begin immediately in order to provide consistent, frequent reinforcement of the expert education sessions. They felt that this would benefit patients with cognitive deficits, those with low health-literacy, and all patients who needed to hear our critical self-care messages more than once. An additional potential

benefit of teach-back would be the process of identifying, documenting, and including the key learner.

Once we recognized the volume of our HF patients with cognitive deficits, it became essential to identify who the key learner and primary caregiver were and include them in our educational efforts.

The teach-back strategy was discussed and endorsed by our interdisciplinary HF Team and the cardiology division of the medical staff. A small group of staff nurses from our telemetry units, the telemetry nurse educator, and clinical nurse specialist (CNS) gathered with cardiac rehab, dietician, and quality experts. We looked at teach-back strategies from other hospitals and decided on the questions, correct answers, and a process to begin on paper while the electronic form was built in our electronic medical record (EMR). We educated nurses, dieticians, and cardiac rehab clinicians throughout our 3 telemetry units and critical care unit (CCU). During the staff education process, it was overwhelming to hear the positive comments from clinicians. When the nurses and other caregivers were able to hear the lessons we learned from the IHO study, they were all eager to do the best thing for our HF patients. The process was implemented in mid-October 2012.

Because we recently started teach-back, we only have 1 month of post-implementation readmission data. When the November 2012 readmission rates were sent to the team, the data analyst commented in his email that the HF readmission rate dropped so significantly that he had to rerun all of the readmission data for acute myocardial infarction, HF, and pneumonia patients just to make sure everything was accurate! When we compared the HF patients' 30-day all-cause readmission rate in November with the previous 12 months of data, there was an 81% decrease in readmission for all payers and an 82% decrease in readmission for traditional Medicare patients. It is our sincere hope that our practice change has contributed significantly to the decrease in readmissions. We will continue to

monitor our readmission rates for subsequent months in order to fully evaluate the effect of teach-back on this metric.

What we can say with certainty is that the change in nursing engagement in the patient education process is palpable. Nurses have always been encouraged to reinforce and supplement the expert patient education sessions provided by cardiac rehab and dietician staff. Before the nurse survey phase of the IHO study started, we revised our patient education materials and trained our nursing staff with the materials provided by the IHO study team, as did the other sites. Our staff expressed appreciation for the information about HF patient education guidelines. Their written and verbal feedback indicated that this helped them to feel more confident in their practice and more likely to reinforce HF education. Implementation of the teach-back strategy after the study's conclusion has taken this confidence to another level. Use of the standardized teach-back questions along with correct answer criteria and documentation of the patient's knowledge on each previous shift has truly empowered nurses in their roles as HF patient educators. The nurses on the IHO study team have presented the outcomes of our participation in the IHO study, including the teach-back strategy, at our hospital's evidence-based practice showcase and a regional research day. Nurses and other allied health clinicians were eager to adapt the teach-back strategy to their clinical populations including psychiatry, medical-surgical nursing, and pulmonary rehab. It was included in some of the evaluations as the most important part of the day! Our participation in the IHO study and the implementation of teach-back has been cited by physician colleagues as a best practice within our organization's quality council and to our Joint Commission surveyors as a true improvement in patient care and outcomes.

Within the next month, the electronic version of our teach-back form will be going live in the EMR. Later this year, our electronic HF pathway will allow the interdisciplinary team to easily view the outcomes of

teach-back on each shift as part of the plan of care in the EMR. The team has already started to consider the next phase of teach-back. They are considering moving beyond the patient's knowledge of self-care behaviors and toward reinforcement of positive self-care attitudes and behavioral strategies to accomplish self-care after discharge. We have included more evidence related to the teach-back strategy in our HF continuing education offerings, and will be adding in our new, exciting outcomes this month. We plan to present the outcomes of our IHO experience during our HF Accreditation site visit next month. Implementation of the teach-back strategy has helped us work toward several quality goals through the American Heart Association's *Get With The Guidelines-Heart Failure* program, including 60 minutes of patient education during the hospitalization with a qualified HF educator.

We truly feel that our participation in the IHO study and the implementation of the teach-back method of patient education has improved our HF patients' outcomes, along with improving the practice of our interdisciplinary team.

Case 8: UPMC (University of Pittsburgh Medical Center) St. Margaret Hospital (Pittsburgh, PA)

Back to Basics: Nurse-Delivered Patient Education Really Does Make a Difference

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Stacey Allen, MSN, RN

At UPMC St. Margaret Hospital, the nurses of 3B were invited to participate in the Improving Heart Failure Outcomes (IHO) study. This acute care unit, the designated intensive care unit (ICU)/Intermediate Care step-down in-patient unit, is the center of MI, chronic obstructive pulmonary disease (COPD) exacerbation, atrial fibrillation, pneumonia and heart failure (HF) patient care at St. Margaret Hospital. 3B is a fast-paced 34-bed unit, and there were 42 nurses on staff in this unit at the time of the study.

Great time and care was taken to educate this exceptional group of nurses on the purpose and process of the study. Additionally, extensive step-by-step instructions were provided in order to ensure the proper completion of the “before HF education”, “during HF education”, and “prior to discharge” forms. Two of the “before heart failure education” forms, served in essence as a needs assessment and a point from which to begin education. This particular step in the patient education process is where our research study site’s exemplar begins. The responses that some of our patients provided to these baseline questions clearly demonstrated the knowledge gap that exists in not only newly diagnosed patients with HF, but in patients with longstanding HF as well. Just after this initial point of patient consent into the IHO study, these nurses observed the continued great need for patient education in

tackling HF as a chronic condition. It was at this point where these nurses saw the difference they can and do make in the level of success these patients experience after discharge from the hospital. Beyond the specifics of the particular study being conducted, nurses were charged with the great responsibility of reducing and correcting the knowledge deficit that exists in the HF patient population.

The realization of what an influence nurse-delivered education plays in the post-discharge self-management and quality of life in patients with HF had a definite impact on our nurses. These nurses experienced a sense of pride, purpose and accomplishment knowing that the time and knowledge they impart upon this patient population really does make a difference. To note in black and white the pre-education responses of patients versus what their post-education and post-discharge responses were was a tangible reflection of the importance and crucial nature of every nurse's calling as patient advocate and educator.

Our nurses have been affected in a positive way as they see the direct result of their diligent work impacting patients' success and quality of life post-discharge from the acute care setting. Moving forward, the demonstration of patient and family knowledge gained through carefully planned, nurse-delivered education validates our current practice and makes evident to our nurses that their efforts truly do make a difference in the lives of the patients for whom the care. Both seasoned and novice nurses alike can receive inspiration and motivation to continue advocating for their patients when they observe the impact their knowledge and experience has on the education they deliver every day.

Case 9: Advocate Christ Medical Center (Oak Lawn, IL)

A Team Approach to Perfect Heart Failure Care

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Our medical center has a dedicated inpatient heart failure (HF) nursing team that is an exemplar because they act as a decentralized unit and treat patients with decompensated HF on all care units in the hospital. They identify HF patients upon admission and institute education throughout the hospitalization. One of the responsibilities of the team is to ensure an appropriate HF care plan at discharge by referral to the HF clinic for outpatient follow up, discharge home with HF home care services, or discharge to an extended care facility.

In October, 2009, a nurse from the HF team was afforded the opportunity to attend the ANCC National Magnet Conference in Louisville, Kentucky where the Improving Heart Failure Outcomes (IHO) multisite research opportunity was presented in a session attended by our chief nurse executive (CNE). Our performance measure results (97.1% for 2009) indicated that we were achieving excellence with the core measures for HF. Yet, we anticipated participation in the study would allow us to explore best nursing practices for HF care including readmission prevention strategies. The CNE supported our application to participate in the study and in April, 2010, we received the good news that our site had

been chosen to be included as one of the study sites for the IHO collaborative. The decentralized HF nursing team was chosen as the study team to conduct the IHO study at our medical center.

Administrative response and excitement was tremendous and their unwavering support ultimately contributed to our success.

In 2010 and 2011, our core measures for the HF bundle were 100% and the team achieved Gold Award status from the American Heart Association Get with the Guidelines (AHA GWTG) program. Participating in the IHO study gave us the opportunity to enhance processes for identification of patient learning needs and follow up, and to expand our use of post discharge phone calls. Use of an evidence-based assessment scale was invaluable in helping determine a patient's baseline knowledge as well as assessing retention of information before they were discharged. By identifying their educational needs, we were able to prioritize and individualize education provided to each study patient. Our HF nurses have informally incorporated a baseline knowledge assessment into their practice and are exploring a standard process incorporating the evidence-based assessment scale.

Our participation in the study also helped us to appreciate the benefit of repeat follow up phone calls for continuity of HF care and to minimize hospital readmission. Since participation in the study, resources have been allocated to include phone calls in the daily responsibility of the HF team. In 2012, phone calls were placed to patients discharged home at 2 days, 7 days, 14 days, and 21 days. In one of the phone calls a patient relayed her feeling very fatigued. Our nurse asked her to read back the list of medications that she was taking and it turned out that the patient was taking 2 Beta-blockers instead of 1. The HF nurse arranged for the patient to be seen in the physician office the next day so her medications could be modified. This story demonstrates the value of the phone call to identify potential care issues and to manage the coordination with the physician. In addition to the discharge phone calls,

we have developed a collaborative relationship with the extended care facilities utilizing advanced practice nurses to educate staff, assess patients, and coordinate timely treatment to avoid readmission.

Being part of the IHO study helped us realize that we are part of something larger than any individual or single organizational effort. Networking with the IHO participants we learned that administration and staff across the nation continue to work to consistently improve outcomes for the HF population.

On December 30, 2011, we enrolled our 30th patient for the IHO study. During the course of study participation the decentralized care team was reorganized provide specialized education and management for patients admitted with HF or acute myocardial infarction. The number of nurses doubled and an advanced practice nurse was added to the team. This enabled the team to incorporate new strategies for preventing readmission as outlined above. After receiving preliminary IHO study site results, our study group met to discuss how our program could be further enhanced based on the findings. Because the prevalence of depression was so high, we identified the need for improved processes related to depression in this population, such as routine screening and a protocol for referrals. In addition, the team intends to incorporate a standard educational needs assessment so they can continue to provide individualized patient centered education. Our next steps will include a stakeholder meeting with presentation of overview of the study, the instruments used, and our site results. The presentation will also review what we do at our site that was corroborated with the study and make recommendations for practice enhancement based on study findings.

Case 10: El Camino Hospital (Mountain View, CA)

Engaging Direct Care Nurses in the Appropriate Management of Our Heart Failure Patients

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El Camino Hospital is a not-for-profit organization with hospital campuses in Mountain View and Los Gatos, California. Our hospitals have served communities in the South San Francisco Bay Area for more than 50 years. We strive to provide superlative care by focusing on patients' needs, and by incorporating the latest proven medical technology. Our more than 1000 registered nurses (RNs) care for patients based on a professional practice model in which the patient is at the center of everything we do. As a Magnet® designated hospital since 2005, our strategies empower nurses to use critical thinking, research and innovation to drive initiatives resulting in evidence based practice, quality, and improvement in patient care. Participating in an American Nurses Credentialing Center (ANCC®) multi-site research project created an opportunity to transform health care through collaboration with leading nurse researchers and other Magnet hospitals across the United States. Our participation in the IHO project was generated by an increased awareness by staff nurses of the challenges in addressing our

heart failure (HF) population of approximately 350 patients per year and their educational needs.

Participating in a forum where rigorous outcomes could be tracked from a larger number of research subjects was a promising adventure to pursue. Initially, we formed a nurse study group to promote the HF education for nurses and oversee the study to ensure the identification of eligible HF patients for data collection and follow-up. In both the education phase and the data collection phase, nurses were engaged in the planning and implementation of this project. This provided the groundwork that resulted in unexpected but valuable outcomes for our hospital.

Over the data collection period, 165 patients were evaluated for study participation. On the basis of inclusion/exclusion criteria, only 13 were eligible for the study, 6 began the complicated data collection but only 3 completed the entire process before release. Therefore the primary IHO study outcome analysis for our hospital was not what we had anticipated. However, the project resulted in important findings for our institution and the patients we serve:

1. Higher awareness of HF. Direct care nurses had the opportunity to be involved and participated in all stages of the study, resulting in higher awareness regarding patient outcomes specific to HF. Active involvement in activities, such as patient referral, screening, consenting and data collection allowed nurses to refine their understanding of the increased needs of HF patients at discharge.

2. Better understanding of our HF patient population. Through the study group and interactions between it and nurses in the units, this project identified the broader HF population we serve: we refined and validated our understanding of who comprised the heart failure patients in our facility. Specifically, our HF patients were frail and more likely to:

- Be non-English speaking

- Be cognitively and/or physically unable or unwilling to complete the complex and lengthy data collection activities
- Be transferred to skilled nursing facilities
- Have complex issues related to the transfer and continuity of care

3. Engagement and support from nurses in developing alternative approaches. This collaborative evaluation and synthesis of data from our hospital prompted nurses , from unit-level to management , to work together to:

- Understand more fully our HF patients and where they are transferred after release from our facility
- Develop targeted strategies appropriate for continuity of care and coordination with skilled nursing facilities to minimize risk of readmission

Thus, we achieved the first goal of the IHO study, to raise the awareness of nurses about measurable HF outcomes and the increased need for additional resources required in order to impact the outcomes and actually meet the unique needs of our HF patient population beyond their hospital stay. As a result of our IHO study activities, nurses came to a consensus that the majority of our HF patients needed a different approach besides usual standard of care they were already providing. Although, participation in the IHO study did not directly improve HF outcomes, by sharing lessons learned from the study experience, it did generate nurse enthusiasm, momentum and buy-in for continued participation in our next steps.

Our plans included:

- Recruitment of a HF clinical nurse specialist (CNS) to coordinate a team to focus on HF patient care in the hospital, preparation for discharge, and follow up monitoring via discharge phone calls. This was accomplished as the need was validated during the study period.
- Ongoing education of all nurses caring for HF patients on the evaluation of post-discharge needs.
- Educating nursing staff to utilize a teach-back method of key HF content. Nurse participation in HF education offerings increased by over 50% compared to the initiation period of the IHO project.
- Establishing an intensive coordination between our facility and skilled nursing facilities to assist with continuity of care.
- Monitoring readmissions in order to identify further opportunities for improved care transitions.

Direct care nursing practice at El Camino Hospital has changed as a result of participation in the IHO project in ways we did not anticipate. Collaboration by nurses in the further understanding of our HF patients has resulted in a nurse-developed plan that includes patients who will be discharged to the community. More importantly, however, we have developed a targeted plan for the follow-up of the most vulnerable and frail of our HF patients, who both comprise the majority of patients with HF and are at most risk of readmission.

Our gratitude to the many dedicated members of our collaborative team: telemetry unit 3B clinical staff.

Case 11: Penn State Milton S. Hershey Medical Center (Hershey, PA)

Validating Heart Failure Self-Care Education: the Overlooked “Soft” Measure

Mary Louise Osevala, MSN, CCNS, ANP-BC

In a university based hospital setting, the heart failure (HF) patient can likely be under the care of several providers during a single admission. With attending physicians changing service, resident rotations, and multiple interdisciplinary interactions, it is easy to understand how education related to HF self-care can be dismissed or under-valued.

In our institution, 2 advance practice nurses (APNs) on the HF team provide a consistent link during transition to home or extended care facility. Beginning with a HF transitional consult, the APN offers 1-on-1 didactic interviews addressing educational needs, identifying barriers to success in HF self-care and offering recommendations for evidence-based medications and treatments for HF. As an extension to the staff nurse's education on HF self-care, the APN is thus poised to provide the follow up within 7 days in the outpatient clinic for continued reinforcement of strategies for HF self-care. Additionally, a telephone review of discharge instructions within a few days after discharge provides additional support for the newly transitioned patient.

The opportunity to participate in the Improving Heart Failure Outcomes (IHO) nursing research project brought together the nursing unit that was selected, (an intermediate heart and vascular unit) with the

APNs in HF transitional care. The goal of validating education in the total care of the HF patient was a mutual, enthusiastic target for both parties. With an excellent, eager staff of registered nurses, the IHO study raised awareness on more than content delivery of information to the patient.

Improved communication about the readiness for discharge opened discussions between the patient, families, and nursing staff; identifying barriers that may have not been obvious without this collaboration. Nuances regarding medication understanding, affordability of medications were referred for assistance to the pharmacist and if possible through social work. Misunderstandings of low sodium diets led to revamping of educational materials. It is not unusual for a staff nurse to ask one of the APNs how a patient is doing once discharged to home or offering additional insight to some difficulties the patient may have offered to the nurse that interferes with adhering to the treatment plan.

Besides an electronic physician discharge checklist that targets the *Get with the Guidelines for HF* variables, some of the HF pre-discharge questions utilized in the IHO study will likely be considered as part of the routine discharge for HF patients. The pre-discharge checklist creates a consciousness that provokes action by the patient and the provider in securing a safe transition to home. The collective participation in the education of the HF patient is showing glimmers of recognition for what it is; more than a core measure for reimbursement, but as integral as evidence-based medications for improving outcomes for our patients.

A nursing grand rounds on attitude related to HF education is forthcoming, looking at our professional and personal biases we bring to the table as well as the attitudes of the adult learner patient. Bridging our teaching styles with learning styles promises to be a new avenue of research to enhance HF self-care.

Case 12: Hudson Valley Hospital Center (Cortlandt Manor, NY)

Protected Patient Time: The “Sit Down” Approach

Kathy Widas RN, BSN, MPA

The study unit, a 31-bed telemetry unit in a small community hospital, provided the laboratory to explore ways of connecting with patients. As the principal investigator (PI) for the site and a study team member, I provided the study patient with the survey questionnaire(s). The majority of the patients and even family members present when the study patient completed the survey(s) profusely thanked the researchers for the education provided. While we did not provide any education, nor did we help them fill out their surveys by providing answers to the survey questions, this expressed gratitude was an almost universal phenomenon. If the study patient did not have their reading glasses, he/she might ask to have the questions read to them and the nurse researcher would mark answers. At the completion of our sessions the patient and/or family members would state how they never knew something, and this session had enabled them to learn more about their disease process and how grateful they were to have the education. This sense of gratitude persisted beyond the hospital stay, as when the patient received two post discharge phone calls from us, they would again express thanks for the education provided; and if their families were present in the background they would voice their appreciation as well!

This really seemed paradoxical, as it was the patient who helped the study unit complete the research project by completing the survey(s). While we were the survey agents, we were not allowed nor did we provide anything that we considered formal education. The other study team members reported the same outcomes of very grateful patient/families for all the education they perceived the study team provided throughout the hospital experience and with the post discharge follow-up

The impact of this exemplar was the presence we had with both patient and family. We were there only for that patient. We had no patient assignment nor were we interrupted in our monitoring the patient as completed the surveys/questionnaires. We would make an appointment for the survey(s) to be completed with the patient, we arrived promptly as scheduled and ask again if that was a good time. We always positioned ourselves in a chair at eye level with the patient. The non-verbal message was clear: I am here for you, just you. If necessary, we gave time frames as to when we would check back in to see if the patient had questions about how the survey scales worked or how to fill out the surveys.

I witnessed that in our busy work day the nurse is most often in and out of patient rooms with an increased quantity but not necessarily increased quality. Disruptions from others in the nurse's planned delivery of care routine are rampant. Nurses are sought out even when they are providing care in patient rooms to answer all the pressing needs or concerns from everyone throughout the hospital on their shifts. It appears that only the nurse at the point of care can field questions and provide answers to other department/units. Regardless of the activity that nurse was engaged in, he/she was the one needed to take report, transfer or discharge a patient whose family member has just arrived or an ambulance ready for transport to a waiting destination. The nurse may be needed by physician(s) and other providers at a particular moment, for such tasks as taking a critical value(s), or orders, to receive calls for/ give medications, and general requests that are time sensitive for so many other things.

These constant distractions and interruptions experienced as the diligent nurse attempts to be present to her/his patients can translate into patient's perception of not truly being respected, nor are they able to process what they are being educated on. If the perception is that the nurse is not educating, this could impact on patient's satisfaction with nursing as reported in the unit patient experience surveys. During the study period, we saw no impact on publically reported patient experience scores in the area of "education received from the nurse." This is not consistent with our anecdotal information from our congestive heart failure (CHF) patient population. What if the process used "protected patient time" were universally applied to all patients? One must ask, would there be an improvement? Would an investment of "protected time" for the nurse be worth it? What would be the return on investment? Would the improved patient experience scores support this innovation by increasing our reimbursement for services?

In this study, the study team members had protected time, free from demands and or interruptions from others to focus on the patient. The study patient and family members perceived the nurse researcher as providing education.

Even with the best intentions the nurses time with his/her patient is not protected time. We found that the connection we made with the study subjects influenced their perceptions. Based on these initial results, we will look through our shared governance unit councils for ways to positively impact the connection made through the nurse patient relationship. Working collaboratively, we could establish the patient's room as a protective patient zone. We may establish criteria, perhaps similar to triage scales, to promote protected patient time. It is critical to patient satisfaction and safety to have the nurse remain at the patient's side until the tasks/education at hand is complete and keep interruptions/distractions to a minimum. Further steps would involve separating out patients with CHF

who had received protected patient time with the nurse out from the patient experience data to see if this made a difference.

To provide even greater evidence on the impact on safety of protected patient time, our hospital has engaged in a study of distractions and interruptions. With the addition of this knowledge we will be in an ideal position to seek ways to enable the patient and nurse to make the vital connection and be able to communicate freely that will assist them in improving patient safety and well-being for life. This is what it means to care.