

Implementing a Bedside Liaison to Enhance Cardiac Rehab First Appointment Attendance

Jessica Larsen, RN, BSN

School of Nursing, Oregon Health and Science University

NURS 703B: DNP Project

Dr. MinKyoung Song

March 3, 2025

Abstract

Background Standard guidelines to increase cardiac rehab enrollment is laid out by governing entities but are not always followed in real-world practice. Increasing cardiac rehab enrollment by implementing automatic referrals and a bedside liaison during admission, will promote secondary prevention of subsequent heart events.

Aim This project aimed to implement a bedside liaison program, where liaisons visit patients at the bedside, prior to discharge, to 1) assess enrollment rates in cardiac rehab by aligning clinic practice with guidelines recommendations and 2) determine whether the bedside liaison visit influenced the patients' decision to attend the first cardiac rehab appointment.

Methods This project followed a two-step process. First, patients who were admitted to the hospital for a cardiac related event and had an active cardiac rehab referral were identified and visited by a cardiac rehab liaison inpatient. Second, the patient was surveyed at their first outpatient cardiac rehab appointment on the facilitators that influenced their decision to attend the appointment.

Results Of the 44 patients who were visited by the cardiac rehab liaison, 15 patients (approximately 34%) attended their first cardiac rehab appointment. Of the 15 patients who attended, eight patients identified the bedside liaison as a factor influencing their decision to attend the first appointment.

Conclusion This project demonstrated that implementing a formal liaison positively influenced patients' decision to attend cardiac rehab and showed potential to bring patients to cardiac rehab who would have otherwise not attended.

Problem Description

Approximately 20.5 million people in the United State lives with coronary artery disease (CAD) and one in four people dies from it (National Institute of Health, 2023; Brown et al., 2024). In the state of Oregon, nearly one in three people die from CAD, and in Multnomah County, the rate is 277 per 100,000 people, the highest among all counties in Oregon (Oregon Health Authority, 2021). In 2022, nearly 35,000 Oregonians were hospitalized for a CAD event, leading to a one-billion-dollar health care cost for the healthcare system (Oregon Health Authority, 2023). Among the 35,000 Oregonians affected, Multnomah County had the highest number of CAD-related hospitalizations, with nearly 25,000 patients discharged from the hospital with a primary diagnosis code related to cardiovascular disease, including CAD (Oregon Health Authority, 2023). This high number of CAD related hospitalizations is a significant clinical issue. Patients discharged from the hospital following their first CAD event are six times more likely to experience a second CAD event or death within the first year of discharge (Steen et al., 2022). The America College of Cardiology (ACC) calls for strict adherence to secondary prevention to prevent a future CAD event (Steen et al., 2022). Specifically, the ACC strongly recommends the use of cardiac rehabilitation (CR) after cardiovascular surgery and CAD event (Simon et al., 2018); however, it is relatively underutilized (Simon et al., 2018).

CR is a medically supervised exercise program that includes risk reduction education, psychosocial assessment and exercise prescriptions designed to increase functional status and alleviate cardiac symptoms. CR leads to a 58% reduction in one year mortality and 35% mortality reduction in 5 years (Simons et al., 2018).

Despite effectiveness and evidence-based recommendations, referral rates and program completion of CR vary between hospitals: Only 29% of Medicare beneficiaries 65+ with a CR

eligible diagnosis attended the first CR appointment and only 8% completed all 36 insurance-covered visits (Keteyian et al., 2022). Million Hearts calls for action to increase enrollment rates by implementing automatic referrals into the electronic health record and including a CR liaison to meet with patient's inpatient prior to discharge (Ades et al., 2017). Automatic referrals placed by the cardiologist in addition to a CR liaison to visit the patient prior to discharge and schedule the patient for their initial CR appointment has proven an increase in CR enrollment rate (Mathaia et al., 2023). At the clinic where this project takes place, patients who qualify for CR receive a referral to CR by their cardiologist. The current practice for patients (in the clinic where the current QI project was held) includes an automatic referral for CR but does not utilize a bedside liaison to educate the patient and schedule the patient for their first CR appointment. This project implemented a bedside liaison to visit the patient in the hospital prior to discharge to introduce the patient to CR and schedule their first outpatient CR appointment to increase enrollment rates.

Available Knowledge

CR takes place in an outpatient setting with supervised exercise, individualized treatment plans to address functional ability, and education classes to address modifiable risk factors to prevent a second cardiac event (Simons et al., 2018). Patients typically start CR two to six weeks after they are discharged from the hospital. Patients meet with a nurse or exercise physiologist one on one at their first visit to set goals surrounding their exercise, nutrition, mental health and general wellbeing. The number of CR visits allowed is typically 36, dictated by insurance coverage. Patients are encouraged to attend two to three times a week. At each visit, patients are monitored on a three lead EKG monitor and follow an exercise plan developed by the exercise physiologist. Throughout the program, classes are offered in addition to exercise for patients to

attend. These include lifestyle modification, diet and nutrition, risk factor reduction, cardiac medication information, anatomy of the heart and stress and coping.

Previous literature has reported several barriers and facilitators exist to enroll patients in CR (Ades et al., 2017; Chindhy et al., 2020). Facilitators for initiating CR enrollment include automatic referral processes, bedside liaison to educate patients on CR, and early outpatient appointment scheduled before hospital discharge (Ades et al., 2017). Multiple studies support the efficacy of implementing automatic referrals combined with a CR liaison during the hospital admission (Grace et al., 2011; Gravely et al., 2024; Pirruccello et al., 2017; Sangani et al., 2022). Grace et al. (2011) completed a retrospective chart review to assess the effectiveness of four referral strategies: automatic referral, CR liaison at bedside inpatient, combination of both, or referral as usual. Patients who were referred to CR using the combination of both automatic referral and bedside liaison, resulted in a 70% enrollment rate compared a 29% enrollment rate for those who did not receive the intervention (Grace et al., 2011). Gravely et al. (2014) used Grace et al. (2011) study design to evaluate CR referral and enrollment for women, an under-referred population to CR, and found a 50% increase in referral and enrollment rates for patients who received both automatic referral and bedside liaison

Automatic referral systems paired with CR liaison proves to increase referral and enrollment in a variety of settings. Implementing automated referrals and involving a CR liaison at the bedside during hospitalization demonstrated significant benefits in a rural hospital system in Vermont, this approach achieved a referral rate at 98%, followed by a 60% participation rate (Frechette et al., 2019). Mathaia et al. (2023) implemented a similar strategy at a large urban university hospital, with the addition of the option to schedule the first appointment while in inpatient. This resulted in a 30% increase in referrals, an increase from a mean number of two

patients to five who are scheduled prior to discharge, and the mean number of patients who attended the first appointment increased from one to three (Mathaia et al., 2023).

A key aspect of the bedside liaison is educating the patient about CR, its benefits and why their cardiologist referred them for the program. Education about CR provided to patients at time of referral has a positive association with enrollment (Vanzella et al., 2024; Nusbicket et al., 2022). A systematic review by Vanzella et al. (2024) identified that patient education about the CR program increases enrollment rates. However, only one formal education platform was evaluated, where other education models included an informal conversation held by a healthcare professional promoting CR. This highlights the importance of assessing effectiveness of a formal CR liaison at bedside prior to discharge to increase enrollment rates.

Rationale

This project was guided by the Institute for Healthcare Improvement (IHI) Model for Improvement, a framework that involves repeated cycles of “Plan, Do, Study, Act” to guide quality improvement (Langley et al., 2009). Process changes are implemented, tested, and then refined based on feedback to optimize the intervention (Langley et al., 2009).

Current literature supports best practice leading to increased enrollment to CR and successful implementation involve: 1) automatic referral to CR at time of discharge and 2) bedside liaison from CR to educate the patient on CR and assist in referral coordination (Vanzella et al., 2024; Nusbicket et al., 2022). A root cause analysis (see **Appendix B**) identified that the current practice at this clinic includes automatic referral for CR but does not include a bedside liaison from CR. For hospitals that have existing automatic referral systems, and no CR liaison established, appropriate next steps to increase CR enrollment is to implement a CR

liaison to visit the patient prior to discharge and offer to schedule the patient for their first CR outpatient appointment (Ades et al., 2017).

Specific Aim

This project aimed to implement the CR bedside liaison, (in addition to the existing automatic referral systems), and assess its effectiveness by measuring the attendance rate of the first CR appointment following the visit. The goal was to achieve an estimate of the number of patients who received the bedside CR liaison intervention and attended the first appointment. For those who attended the first appointment, facilitators were identified to determine if the CR liaison visit was effective to attending the first appointment.

Methods

Context

This project took place in a regional heart and vascular center hospital in the suburban area in the state of Oregon. The inpatient cardiovascular unit (CVU) and the CR clinic are in the same 302 bed, non-profit hospital that is home to an additional 27 clinics. The CR building is located on the same floor as the outpatient cardiology clinic where patients receive care from their cardiologist, and one floor below the CVU, where the patients stayed during their cardiac related hospital stay. The CR clinic includes three exercise physiologists, two nurses and one administrative coordinator. This project was completed by a DNP- FNP student with the support of CR staff and CVU nurse manager.

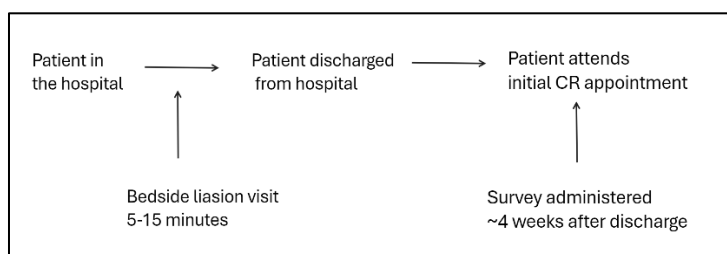
Intervention

A bedside liaison met with the patient prior to inpatient discharge to educate the patient. On Sunday evenings and Wednesday evenings, the DNP student identified patients with an

existing CR referral, currently admitted to the CVU for at least 24 hours, as eligible patients. Zero to two patients were identified twice a week for the intervention to be implemented.

Flow of the Quality Improvement Project Process

The cardiac rehab scheduler and cardiac rehab exercise physiologist used existing, standardized, pamphlets that describe CR as an aid to discuss CR at bedside with the patient (see **Appendix C**). The bedside conversation lasted approximately 5-15 minutes. If the patient was sleeping, or not in the room, the pamphlet was left at the patient's bedside, patients were not revisited due to time barriers of staff. Patients filled out a post-intervention survey (see **Appendix A**) within their first two weeks of attending CR to evaluate facilitators that contributed to attending the first CR appointment. The survey was either added to the intake packet for the first CR appointment or administered at a later CR appointment.



Study of the Intervention

First, patient data were extracted from Epic to identify eligible patients for the intervention. Excel was then used to track two key metrics: (1) the percentage of patients who received the intervention and enrolled in CR following the initial appointment, and (2) the percentage of patients who attended the initial CR appointment. The post intervention survey assessed if the CR liaison was a facilitator for attending the initial CR appointment.

Measures

First, the number of patients who received the CR liaison visit was recorded. Second, a post-intervention survey aimed at identifying factors that facilitated the first CR attendance and

gathering additional recommendations and comments was administered. Third, the number of patients who attended their first CR appointment was collected.

Analysis

The number/percentage of patients who received the intervention and completed the initial CR appointment were measured based on data collected in the Excel sheet. The post-intervention survey was collected using hard copy paper and data were entered into Qualtrics (<https://www.qualtrics.com/>). Responses to the survey are displayed in a stacked bar chart and pie chart (see **Figures 1 and 2**). Additionally, the percentage of patients who received the intervention and attended the first CR appointment are presented in the results section.

Ethical Considerations

Ethical considerations for this QI project include data management and protection of patient confidentiality. To protect the patient's health information, the data were collected using an anonymous survey that does not include any patient identifiers. Other ethical considerations include language and literacy barriers. Patients without English as their preferred language risk exclusion from the intervention due to the lack of an interpreter available at the clinic. It is important to note that transportation barriers, financial barriers, and other social determinants of health (e.g., health literacy) that might prevent patients from attending CR are not accounted for in this study, as those who did not attend the initial appointment were not surveyed. Patients who requested help completing the survey, were assisted by a staff member to review the survey.

Results

The intervention was implemented and data collected between July 20th and November 11th, 2024. Forty-four patients were visited by the CR liaison. Of the 44 patients, 15 (34%)

patients attended the first CR appointment. Of the 15 patients who received the intervention and attended the first CR appointment (93%), all subsequently enrolled in follow-up CR appointments. Of the 44 patients, nine patients (20%) did not have a conversation with the CR liaison but instead was only given the pamphlet due to reasons outlined in the discussion section.

In total, 15 patients have completed the post-intervention survey. The question “how helpful the visit at the bedside by a cardiac rehab member was while you were in the hospital to make your decision to come (today) received 14 responses, with one respondent not answering the question (see **Figure 2**). Fifty three percent of respondents (n=8) reported the bedside liaison visit was “extremely helpful,” 27% of patients (n=4) reported the visit as “somewhat helpful,” and 13% of patient (n=2) reported the visit as “neutral.” When asked to mark what factors influenced patients to attend the first cardiac rehab appointment, seven out of 15 patients (~46.7%) identified the visit by the cardiac rehab staff member as an influencing factor, and four patients (~26.7%) identified it as a top three contributing factor.

The most common reported facilitator influencing patients’ decisions to attend the first CR appointment was full insurance coverage (12/15; 80%). It was also the most frequently reported top three contributing factor, with 6/15 (40%) patients reporting this. Three patients reported an affordable co-pay as a factor for attending the visit. Ten out of 15 patients (~67%) identified “my doctor told me to come” as a motivating factor for attending their first appointment. The following responses were equally reported as top 3 influencing factor by five responses each: “a family or friend encouraged me to come,” “the appointment time was scheduled at a convenient time,” “the hospital is close to my house,” and “my doctor told me to come” (see **Figure 1**).

Discussion

In summary, this project implemented a bedside liaison program in which liaisons visited patients at the bedside prior to discharge. It also identified facilitators for attending the first CR appointment at this hospital, a first of its kind in this clinic. Fewer patients who received the intervention attended the first CR appointment than anticipated despite previous literature showing the effectiveness of a bedside liaison. A potential explanation for this could be the population cared for at this hospital, if a provider directly discussed CR with the patient while they were admitted, or whether the patient was hospitalized for a planned cardiac surgery or an emergent one. However, patients identified instruction by their doctor to attend the visit as a main factor to attending the visit, which is a known factor in the literature (Grace et al., 2011; Gravely et al., 2024; Pirruccello et al., 2017; Sangani et al., 2022). Despite the influence of the CR liaison being lower than expected, this finding can be used to educate providers the importance of encouraging attendance of CR to their patients. This evaluation of the implementation emphasizes the impact of the concrete factors that influence patients' decisions to attend the visit such as the heavy influence of full insurance coverage, and lesser influential factors like hospital location and co-pays. Although crucial, these factors are unlikely to be modified by patients through their own efforts to partake in CR. It is important to note that this QI project identified factors, such as a bedside liaison visit and doctor recommendations, which are relatively more easily modifiable by patients or healthcare providers in this clinical setting. These findings emphasize key areas of future focus and opportunities for improvement.

Four limitations to this project were identified. First, patients who did not attend the first CR appointment were not re-scheduled. As a result, it is impossible to determine if the CR liaison was effective for these patients. We can speculate that less-modifiable factors (such as hospital location, co-pay), as listed above, may have outweighed their desire to attend the

appointment. Second, patients who were sleeping or not at the bedside had pamphlets left for them without a conversation, there is no way to measure if the patient interacted with the content or not. Third, due to the infrastructure of hospital data for CR referral and enrollment and no baseline rate to compare it to, it is impossible to know if a 36% attendance rate is an improvement or decline compared to the patients who did not receive the intervention. In the future, the clinic could implement a tracking system to track the CR referral and appointment completion, along with insurance status and diagnosis codes to identify which patient population could benefit from more explicit interventions. Finally, patients are often scheduled four to six weeks after their discharge from the hospital. This means it could be up to two months between the patient receiving the intervention, and the measurement of the intervention outcome. This poses a threat to data impacted by recall bias and potentially patients who were scheduled after data collection was complete, were missed. To address this limitation, the CR liaison conducted rounds at the same time on the same day and used the same pamphlet.

Conclusion

Overall, the findings of this project demonstrate that the bedside liaison intervention did impact patients to influence them to attend the first CR appointment, but it appears to be no more effective than a doctor's recommendation and insurance coverage. Our finding that 36% of patients who received the intervention attended the first appointment assessment serves as a baseline for evaluating further implementation effectiveness. As a result of this project, the CR clinic plans to incorporate daily rounding for inpatients eligible for CR into their daily clinic flow. We expect this will contribute to increased patient interactions, familiarize more patients and healthcare providers with CR, and eventually increase overall CR participation.

References

- Ades, P. A., Keteyian, S. J., Wright, J. S., Hamm, L. F., Lui, K., Newlin, K., Shepard, D. S., & Thomas, R. J. (2017). Increasing cardiac rehabilitation participation from 20% to 70%: A road map from the million hearts cardiac rehabilitation collaborative. *Mayo Clinic Proceedings*, 92(2), 234–242. <https://doi.org/10.1016/j.mayocp.2016.10.014>
- Brown, J. C., Gerhardt, T. E., & Kwon, E. (2024). Risk factors for coronary artery disease. In StatPearls. *StatPearls Publishing*. <http://www.ncbi.nlm.nih.gov/books/NBK554410/>
- Chindhy, S., Taub, P. R., Lavie, C. J., & Shen, J. (2020). Current challenges in cardiac rehabilitation: strategies to overcome social factors and attendance barriers. *Expert review of cardiovascular therapy*, 18(11), 777–789. <https://doi-org.liboff.ohsu.edu/10.1080/14779072.2020.1816464>
- Frechette, K. M., Conley, S. M., Tang, A., & Welch, T. D. (2019). Cardiac rehabilitation in a rural setting: Optimization of referral and participation rates. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(1), E4. <https://doi.org/10.1097/HCR.0000000000000386>
- Geiser, M. R. (2022). *Assessing facilitators and barriers to enrolling in cardiac rehab*. [Masters Capstone Experience, University of Nebraska Medical Center]. https://digitalcommons.unmc.edu/cgi/viewcontent.cgi?article=1197&context=coph_slce
- Grace, S. L., Russell, K. L., Reid, R. D., Oh, P., Anand, S., Rush, J., Williamson, K., Gupta, M., Alter, D. A., Stewart, D. E., & Cardiac Rehabilitation Care Continuity Through Automatic Referral Evaluation (CRCARE) Investigators. (2011). Effect of cardiac rehabilitation referral strategies on utilization rates: a prospective, controlled study. *Archives of internal medicine*, 171(3), 235–241. <https://doi-org.liboff.ohsu.edu/10.1001/archinternmed.2010.501>

- Gravely, S., Anand, S. S., Stewart, D. E., & Grace, S. L. (2014). Effect of referral strategies on access to cardiac rehabilitation among women. *European Journal of Preventive Cardiology*, *21*(8), 1018–1025. <https://doi.org/10.1177/2047487313482280>
- Keteyian, S. J., Jackson, S. L., Chang, A., Brawner, C. A., Wall, H. K., Forman, D. E., Sukul, D., Ritchey, M. D., & Sperling, L. S. (2022). Tracking cardiac rehabilitation utilization in Medicare beneficiaries: 2017 update. *Journal of cardiopulmonary rehabilitation and prevention*, *42*(4), 235–245. <https://doi-org.liboff.ohsu.edu/10.1097/HCR.0000000000000675>
- Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (2nd edition). San Francisco: Jossey-Bass Publishers; 2009.
- Nusbickel, A. J., Randall, M. H., Plasschaert, J. M., Brown, M. P., Anderson, R. D., Arnaoutakis, G. J., Massoomi, M. R., Shah, K. B., Jeng, E. I., Beaver, T. M., & Keeley, E. C. (2022). Cardiac rehabilitation referral after transcatheter aortic valve replacement. *Critical pathways in cardiology*, *21*(4), 162–164. <https://doi-org.liboff.ohsu.edu/10.1097/HPC.0000000000000302>
- Oregon Health Authority (2021). CDC heart disease or stroke deaths mapping tool. Oregon Health Authority. <https://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/CHRONICDISEASE/DATAREPORTS/Pages/Heart-Disease-and-Stoke-Deaths.aspx>
- Oregon Health Authority. (2023). *Oregon hospital discharge data (EDD)*. Health Care and Chronic Illness. <https://app.powerbigov.us/view?r=eyJrIjoiMWIyNWZhZmUtNTM0OS00ZmQ4LTkwMmQtZD>

kzMjYwMDNlZTZmIiwidCI6IjY1OGU2M2U4LTlkMzktNDk5Yy04ZjQ4LTEzYWRjOTQ1M
mY0YyJ9

Oregon Health Authority. (2023). *Oregon hospital discharge data by county (EDD)*. Health Care and Chronic Illness.

<https://app.powerbigov.us/view?r=eyJrIjoiMWIyNWZhZmUtNTM0OS00ZmQ4LTkwMmQtZDkzMjYwMDNlZTZmIiwidCI6IjY1OGU2M2U4LTlkMzktNDk5Yy04ZjQ4LTEzYWRjOTQ1MmY0YyJ9>

National Institute of Health (2023). *What is coronary artery disease*. National Heart, Lung, and Blood Institute. <https://www-nhlbi-nih-gov.liboff.ohsu.edu/health/coronary-heart-disease>

Pirruccello, J. P., Traynor, K. C., Natarajan, P., Brown, C., Hidrue, M. K., Rosenfield, K. A.,

Kathiresan, S., & Wasfy, J. H. (2017). An electronic cardiac rehabilitation referral system increases cardiac rehabilitation referrals. *Coronary artery disease*, 28(4), 342–345. <https://doi-org.liboff.ohsu.edu/10.1097/MCA.0000000000000491>

Simon, M., Korn, K., Cho, L., Blackburn, G. G., & Raymond, C. (2018). Cardiac rehabilitation: A class 1 recommendation. *Cleveland Clinic Journal of Medicine*, 85(7), 551–558.

<https://doi.org/10.3949/ccjm.85a.17037>

Steen, D. L., Khan, I., Andrade, K., Koumas, A., & Giugliano, R. P. (2022). Event rates and risk factors for recurrent cardiovascular events and mortality in a contemporary post acute coronary syndrome population representing 239,234 patients during 2005 to 2018 in the United States. *Journal of the American Heart Association*, 11(9), e022198.

<https://doi.org/10.1161/JAHA.121.022198>

Appendix A: Survey

Post-intervention Survey for Patients Who Attend the First CR Appointment

Thank you for your participation in this survey. This survey aims to assess whether the visit by cardiac rehab staff while you were recently hospitalized impacted your decision to attend your cardiac rehab appointment.

Place an 'X' in the box if this helped you to decide to come to your appointment today (Select all that apply)		Mark the TOP Three Factors
Then, please mark the TOP three factors that were the <u>most helpful</u> in getting you to come to your appointment today.	Place "X" here	
The hospital is close to my house.		
My insurance fully covered it.		
My co-pay was affordable (if your insurance does not fully cover it).		
I have transportation to my appointment(s).		
My doctor told me to come.		
The visit by the cardiac rehab staff while I was in the hospital.		
I had a family member or friend encourage me to come.		
The appointment was scheduled at a convenient time for me.		
I want to learn more about my heart condition.		
Other (Please specify): _____		

Geiser, M. R. (2022). *Assessing facilitators and barriers to enrolling in cardiac rehab*. [Masters Capstone Experience, University of Nebraska Medical Center].

Please mark on the scale how helpful the visit at the bedside by a cardiac rehab staff member while you were in the hospital was in making your decision to come today?

Extremely helpful	Somewhat helpful	Neutral (neither helpful nor unhelpful)	Somewhat unhelpful	Extremely unhelpful
-------------------	------------------	---	--------------------	---------------------

Do you have any suggestions to help us improve the visit you had from the CR staff while you were in the hospital, to encourage attendance to cardiac rehab? Please share your thoughts.

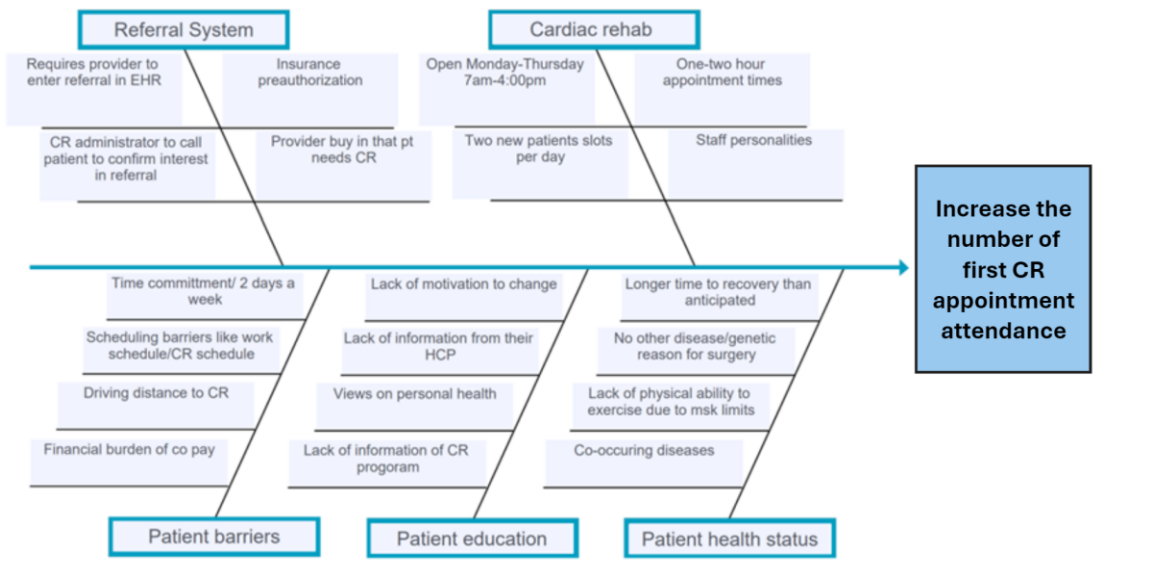
Appendix B: Cause and Effect Diagram

Template: Cause and Effect Diagram

Team: Jesse Larsen

Project: Implementing Bedside Liaison to Increase Initial CR Appointment Attendance

- 1) Input the effect you'd like to influence.
- 2) Input categories of causes for the effect (or keep the classic five).
- 3) Input causes within each category.



Appendix E: Survey Results

Figure 1

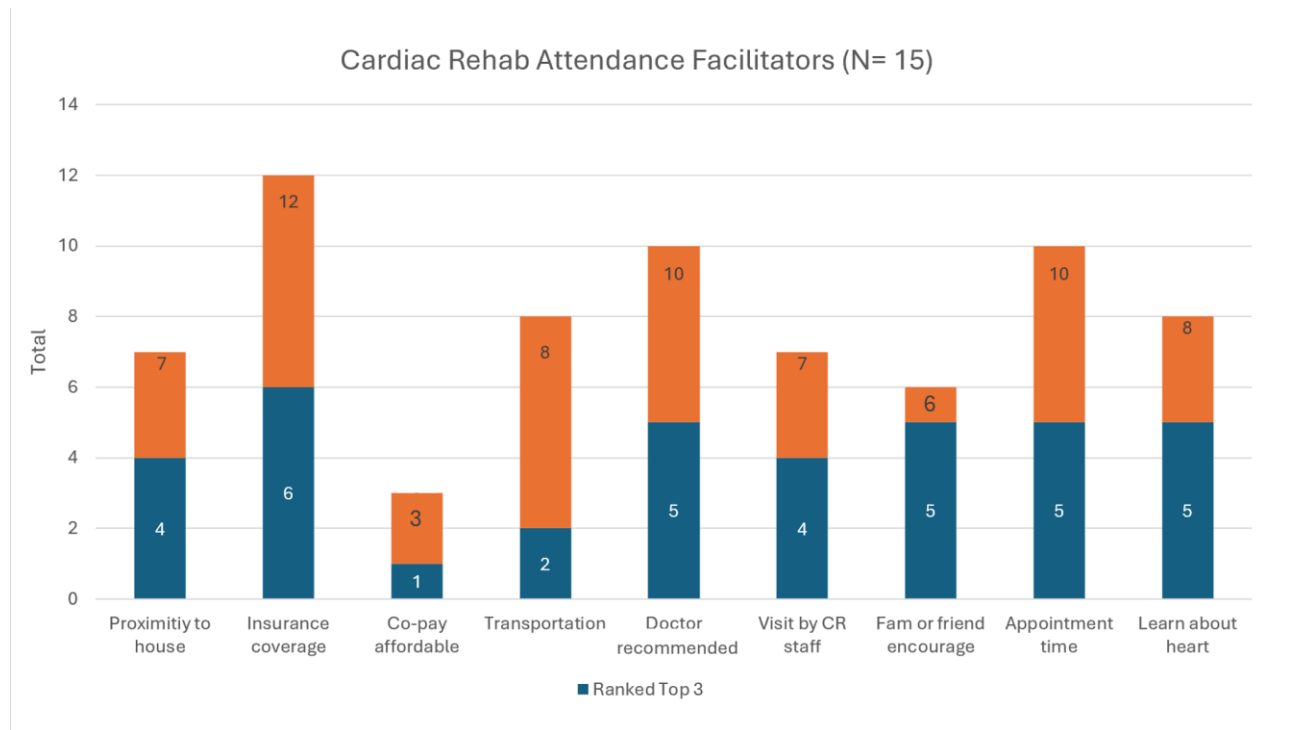
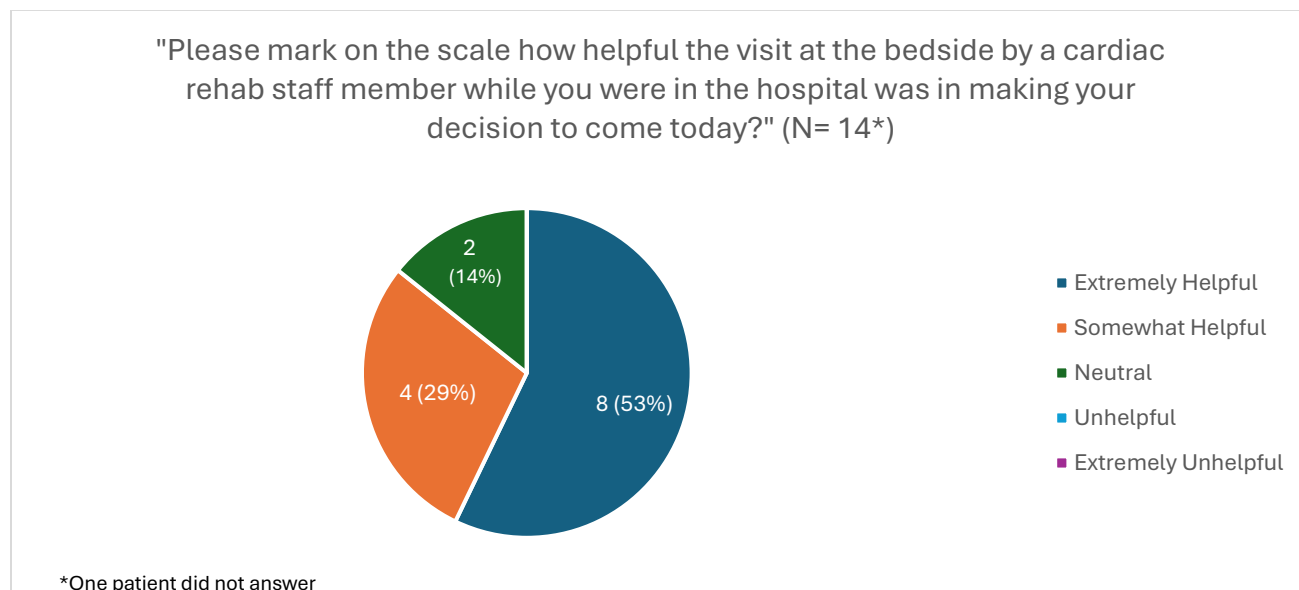


Figure 2



Appendix F: Letter of Support

Letter of Support from Clinical Agency

Date: 5/6/2024

Dear Jessica Larsen

This letter confirms that I, Audrey Brown, allow Jessica Larsen (OHSU Doctor of Nursing Practice Student) access to complete her DNP Final Project at our clinical site. The project will take place from approximately May 2024 to November 2024.

This letter summarizes the core elements of the project proposal, already reviewed by the DNP Project Preceptor and clinical liaison (if applicable):

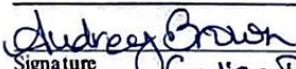
- **Project Site(s):** Cardiovascular Unit, Cardiovascular Rehabilitation, Unit 10123 SE Market St, Portland, OR 97216
- **Project Plan:** Use the following guidance to describe your project in a brief paragraph.
 - **Identified Clinical Problem:** Cardiac rehab is a class one recommendation by the American Heart Association but has a 5-20% participation rate by eligible patients. The gold standard for cardiac rehab enrollment includes automatic referral process paired with a cardiac rehab liaison at bedside prior to discharge. Adventist Health currently adheres to automatic referral processes but does not use a bedside liaison to increase cardiac rehab enrollment.
 - **Rationale:** Previous data and literature has shown successful increase in enrollment after implementing similar interventions.
 - **Specific Aims:** Increase cardiac rehab enrollment in patients with recent MI/stent placement by 50% by October 2024.
 - **Methods/Interventions/Measures:** A exercise physiologist or administrator will meet with patients at the bedside prior to discharge to introduce cardiac rehab and provide a prescheduled appointment. Effectiveness will be measured by 1.) Completion of the first cardiac rehab appointment, 2.) Enrollment in cardiac rehab.
 - **Data Management:** Data will be collected using an Excel data set on an encrypted computer. Patients MRN, diagnosis code, acceptance of scheduled appointment, completion of first appointment, and enrollment will be collected. In addition, patients will be surveyed to assess barriers and facilitators to completing the first appointment to validate the intervention. Reporting data will be de-identified.
 - **Site(s) Support:** This site will allow access to patient data and personnel to complete the intervention.
 - **Other:** N/A

During the project implementation and evaluation, Jessica Larsen will provide regular updates and communicate any necessary changes to the DNP Project Preceptor.

Our organization looks forward to working with this student to complete their DNP project. If we have any concerns related to this project, we will contact Jessica Larsen and Dr. MinKyung Song (student's DNP Project Chairperson).

Regards,

 DNP Project Preceptor (Name, Job Title, Email, Phone): _____

Signature  Audrey Brown	Date Signed 5/20/24
Cardiac Rehab Administrator At Portland	

Appendix G: IRB Determination



IRB MEMO

Research Integrity Office

3181 SW Sam Jackson Park Road - L106RI
Portland, OR 97239-3098
(503)494-7887 irb@ohsu.edu

NOT HUMAN RESEARCH

August 8, 2024

Dear Investigator:

On 8/8/2024, the IRB reviewed the following submission:

Title of Study:	Implementing a Bedside Liaison to Increase First Appointment Attendance at Cardiac Rehabilitation (A QI project)
Investigator:	MinKyoung Song
IRB ID:	STUDY00027518
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the [HIPAA and Research website](#) and the [Information Privacy and Security website](#) for more information.

Sincerely,

The OHSU IRB Office