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## **Remote Cardiac Device Monitoring: Process Proposal**

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### Abstract

The purpose of this project is to evaluate an alternative solution for the current process of obtaining data from patients with implanted cardiac devices. The cardiology physicians have been frustrated by our partnership with an external organization to monitor and report information obtained through remote monitoring. Ideally the staff would be clinic employees who would work directly with the patients and physicians to obtain the information necessary for high quality patient care and be accountable to the standards set by our practice. This would be a significant process change that was evaluated from a financial standpoint to demonstrate a positive return on investment if implemented. The project also addressed the staffing challenges that make a vendor partnership necessary by creating a training program to ensure adequate staffing with the appropriate skill set to implement the proposed change. The goal is to create a process that will provide financially sustainable, high quality patient care for patients by creating an opportunity for learning a desirable and in-demand skill set.

*Keywords: process improvement, quality, financial benefit*

## **Section 1: Introduction to your Capstone Project**

### **Inspiration**

The inspiration for this project was frustration with a process that felt inefficient and was not cost effective in an environment where financial waste is detrimental to the organization. My conversations with patients, physicians and staff regarding lack of quality, accountability and the inefficient workflow they experienced made it increasingly difficult to approve the monthly invoice for our outsourced service. I was determined to propose a solution that addressed their concerns and would gain support from the organization leadership by demonstrating a positive revenue stream.

### **Project summary**

I began the process of creating my proposal by understanding what a process would look like for the stakeholders involved if it met their expectations of quality and efficiency. The takeaway from my investigation phase was that outsourcing the service limited our ability to control the output and the workflow. I enlisted the expertise of the clinical staff to generate a list of necessary skills to perform the work currently completed by vendor staff. While they prepared their input I partnered with our finance department to evaluate the revenue potential of the billable service as well as the cost of training and employing staff. I presented the findings to my leadership who indicated the financial benefit would justify a process change. With the knowledge that the change was supported I compiled the information gathered by the clinical experts and created a training program that could be implemented in conjunction with an existing program aimed at addressing a shortage of medical assistants available to hire. The final version of the proposed training curriculum was the product of several revisions as we developed the best chronology for the information to be shared, received input from the coding department to

ensure we would capture the expected revenue and added information based on physician (end users) feedback.

## **Section 2: Elements coming together**

### **Innovative Approach**

The nature of the project brought together multiple perspectives of the current problem. Patients, physicians, staff and the final decision makers all provided input that was incorporated in the final proposal. The central stakeholder is the patient, our aim is to provide the best quality care and make the billing process less confusing. The simple choice is to continue working with a vendor or to perform the work internally. The bigger question for us was how to create a patient centered experience using internal staff and manage the volume of work that would be created. After demonstrating financial sustainability we approached how by addressing the current barrier.

### **Emotional Intelligence**

I work in health care because I am motivated by working toward safe and efficient patient care. The project aligned with my core values of ethics; providing the best outcome for the most people, lifelong learning and investing in the development of people I interact with. I had to maintain consideration of my audience throughout the process to make sure I was delivering the appropriate message, both when discussing desired outcomes and when receiving feedback. For example, the physicians do not care about billing and coding in general, but revenue will be necessary to maintain the program, and finance is not knowledgeable enough about clinical practice to have input into training elements for new staff. I drew on emotional intelligence to navigate the variety of audiences I encountered while developing the proposal.

I believe this project creates value to nearly everyone involved. Physicians will have input and control over the information they receive which will have a positive impact on patient care decisions. There will be a financial benefit to the organization which will allow for further technology investment which will also improve patient care and experience. The part I am most excited about is the opportunity that will be created for staff who are motivated to learn a skill that will advance their knowledge and value to our organization. Advancement opportunities improve employee engagement and happy employees focus on their mission of quality patient care.

### **Creative Thinking**

The majority of my creativity came in the investigation phase of the project. My creative type is analytical, result oriented and likes to think deeply about a problem or solution, as a result this project enhanced my personal perception of my creative capabilities. Taking time to understand the business and clinical circumstances that led to the decision to outsource remote monitoring were important to the proposal and improved my ability to speak to the importance of internal development of the resources required. This was a broad view of a large problem rather than an attempt to fix part of the problem for the short term. I believe this project is unique because the majority of cardiology practices are either outsourcing remote monitoring or not offering the service at all. Working for a small, independent hospital group allowed me to appeal to the decision makers in the organization who value ideas that support our goal of remaining independent when many similar size organizations are being taken over by large systems.

### **Your Innovative Solution**

Many organizations, including ours have turned to outsourcing or do not provide remote monitoring due to a lack of qualified staff to manage the volume. My project proposed an

internal training program that will allow our organization to keep pace with advancing technology in a way that improves patient care, engages employees and generates a positive revenue stream. The approach to the project was innovative because I did not focus on how to meet the immediate need of the department, but focused on how we could improve upon the process and create a plan that would allow for growth. I know that we will continue to see an increase in the number of patients with devices, but there will also continue to be advancements in what information those devices are able to provide. By creating an internal process to train a qualified workforce we will have a framework in place that will allow us to use information to advance patient care.

### **Section 3: Results**

I received positive feedback from the team that will decide if the proposal can move from idea to reality. I am excited for the opportunities it will create for the cardiac rhythm department. The measurable benefits of the project are a demonstration of a positive cash flow if the plan were to be implemented. This is a benefit to the organization as well as patients. Increased revenue allows for staffing levels and technology investment that improves patient experience. The staff education plan and competency evaluation is a quantitative outcome that ensures we have trained staff to support the work as well as succession plans for staff turnover and/or volume growth requiring additional resources. My project did not include implementing the revised workflow, therefore the stakeholders who benefited most from the work were me, because I was learning and evaluating throughout the process. The staff who perform the in-clinic device monitoring and function as the pass through for the vendor and the physicians because they were directly involved in the proposal. And the physicians because they felt that

their concerns were validated and their input was requested in mapping the training plan for staff that would support them.

#### **Section 4: Conclusion**

As I began the project I had a pretty good idea that there would be a financial benefit which ended up being validated by the value analysis that is required for a proposed process change in the organization I work for. I received the support that I needed from the executive leadership team that will be essential to moving the plan forward. The challenge of putting together the training material was a technical learning opportunity for me, but it also allowed me to work closely with the education and coding department to ensure our training was comprehensive and followed best practice. Working closely with other departments helped me understand new elements of the healthcare industry, build my professional network and share the importance and potential of a well designed remote device monitoring program with those departments. We had nurses from the education department ask to spend time in the clinic observing the technology and gaining an understanding of the data collected by implanted devices to assist physicians in medical decisions.

The results that surprised me most were not the final product or the feedback from my leadership and were not measurable at the time of project conclusion. The team that I worked with talked about the improved feeling of job satisfaction that came with the idea of progress and improving a workflow that has caused frustration. They talked about feeling hopeful for better quality and excited about sharing their knowledge. While I was discussing the plan with other clinic managers after a meeting last week they said there were people in their clinics that would take advantage of training because they were not challenged in their current position. When I reflect on the environment of healthcare over the last few years and the number of people who



have left the industry, I hope that this proposal will be implemented and perhaps help retain some great caregivers.

I am happy with the outcome and the approach I selected. There are definitely opportunities to look at the challenge differently. The current trend is outsourcing, however, I feel that will shift as the economics of healthcare continues to erode. I also thought about the impact of having a training program at the local community college or integrated into the vocational track high school curriculum as an alternative to on the job training. Someday those might be good options, but today our experts are current employees and the best option with our current resources is internal training. The project allowed me to use my strengths as a creative problem solver in a methodical way that created a sense of hope and accomplishment. I feel like I honored my values of integrity, lifelong learning and helping people reach their potential while proposing a solution that benefits patients, staff and the organization I work for.

### **Section 5: References**

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## **Section 6: Appendix**

[Value Analysis Document](#)

[Cardiac Device Technologist Curriculum](#)

[Cardiac Device Technologist Competency](#)

[Vocabulary List](#)

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