

Lee, Daniel J. An Analysis of Employee Engagement within the Heart and Lung Transplant and Pulmonary Research Department of the Baylor Scott and White Research Institute at Dallas, TX.

Master of Science (Clinical Research Management), November 2018.

## ABSTRACT

**Introduction:** Employee engagement is an important construct to measure, with positive employee engagement linked to favorable business outcomes such as increased customer satisfaction, increased productivity, and decreased employee turnover. Employees and interns of the Heart and Lung Transplant and Pulmonary Research Department at Baylor Scott and White Research Institute in Dallas, Texas participated in a survey study to gauge engagement levels and identify any process-improvement initiatives that could be implemented to create a better work environment.

**Methods:** An electronic survey was created to assess various engagement drivers. The survey was then administered to employees and interns to assess how well the department was engaging them; it also provided an opportunity for respondents to bring attention to any issues or concerns they had regarding the department.

**Results:** Due to the brevity of the survey, not all engagement drivers could be measured. However, the short length of the survey resulted in a high response rate. Results also showed the department scored high on all engagement drivers that were measured. The small sample size meant statistical analysis was limited to descriptive measures. Action items were also suggested to address the concerns brought to light by the respondents.

**Conclusion:** The engagement drivers measured in the Heart and Lung Transplant and Pulmonary Research Department of the Baylor Scott and White Research Institute in Dallas, Texas show the staff is positively engaged. However, a survey is only a “snap shot” of one moment in time. It is

therefore recommended that another survey be conducted after the action items discussed below have been implemented to measure the effects. Short surveys are ideal to get quick responses and a high participation rate. However, a longer, more thorough survey should also be created to gain further insight into all aspects of engagement of the research department. Further research into employee engagement could also be conducted by looking at such demographic factors as age, gender, and years employed at Baylor Scott and White Medical Center. Further research should also attempt to obtain a higher number of participants for greater generalizability and validity.

AN ANALYSIS OF EMPLOYEE ENGAGEMENT WITHIN THE HEART AND LUNG  
TRANSPLANT AND PULMONARY RESEARCH DEPARTMENT OF THE BAYLOR  
SCOTT AND WHITE RESEARCH INSTITUTE AT DALLAS, TX.

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An Analysis of Employee Engagement within the Heart and Lung Transplant and Pulmonary  
Research Department of the Baylor Scott and White Research Institute at Dallas, TX.

INTERNSHIP PRACTICUM REPORT

*Presented to the Graduate Council of the  
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Health Science Center at Fort Worth  
In Partial Fulfillment of the Requirements*

*For the Degree of*

MASTER OF SCIENCE

IN

CLINICAL RESEARCH MANAGEMENT

By

Daniel Lee

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## CHAPTER I.

### INTRODUCTION

The purpose of this practicum project was to examine employee engagement within the Heart and Lung Transplant and Pulmonary Research Department of Baylor Research Institute at Dallas, Texas. Through this examination, this project also sought to identify any inefficiencies or areas for improvement that employees encounter and to then propose possible process-improvement initiatives. Employee engagement is currently a popular topic of discussion in business, consulting, and human resources, as employee engagement has been shown to have a positive correlation with favorable business outcomes such as customer satisfaction, turnover, productivity, and profitability (Buckingham and Coffman, 1999). Engaged employees also view their work as more meaningful and valuable (Alexander, 2016). However, the concept of employee engagement is still fairly new and is often linked to or used synonymously with employee satisfaction (Harter, Schmidt, & Hayes, 2002). Indeed, even a standardized definition of employee engagement has yet to be agreed upon and varies according to which field of study it is being examined through. Do employees feel part of a team? Do they have a good working relationship with the manager? Do they feel valued? Do they find meaning behind their work? These are some of the drivers behind employee engagement this study sought to measure by utilizing a short, pulse survey given to the employees and interns of the Heart and Lung Transplant and Pulmonary Research Department of Baylor Research Institute at Dallas, Texas.

## CHAPTER II.

### BACKGROUND AND LITERATURE REVIEW

A review into the available literature addressing employee engagement presents an immediate challenge – ambiguity and a lack of a standardized definition of employee engagement. It is a concept that is easy to characterize; engagement is often characterized by what is measured, whether it may be employee satisfaction, emotional investment, or likelihood to refer a company as a good work place (Fuller and Shikaloff, 2017). However, definitions are more fluid and vary depending on the field of study, whether from an academic or business viewpoint.

Kahn (1990) was one of the first individuals to evaluate the concept of employee engagement, defining engagement as “the harnessing of organization members’ selves to their work roles.” According to Kahn (1990), engagement is evidenced when individuals invest themselves physically, cognitively, and emotionally into their work roles. But the credit for popularizing employee engagement in current literature is often given to Buckingham and Coffman’s book, *First, Break All the Rules* (1999), in which they summarize survey data of over 100,000 employees collected by the Gallup Organization. The Gallup Organization is a consulting firm that utilizes a 12-question survey known as the Gallup Q12 Index or Gallup Workplace Audit to measure employee engagement. In a subsequent study by Harter *et al.* (2002), the researchers referred to the Gallup Workplace Audit as a “satisfaction-engagement” measure and defined employee engagement as “the individual’s involvement and satisfaction with as well as enthusiasm for work.” In Towers Perrin’s *Global Workforce Study* (2007-2008), this consulting company defined engagement as “employees’ willingness and ability to contribute to company success.” Such definitions of employee engagement have led many

researchers and practitioners to debate whether engagement is a new construct or simply a rehash of currently existing concepts like employee satisfaction and organizational commitment. It has reached a point where metaphors such as “old wine in new bottles” and “an old lady in a new dress” have been utilized to describe the concept of employee engagement (Macey & Schneider, 2008; Schohot & Vigoda-Gadot, 2010). It is evident from the aforementioned definitions that they do not delve far enough to delineate engagement as a separate concept that needs to be studied.

So, what distinguishes employee engagement from employee satisfaction and organizational commitment? Employee satisfaction refers to a measurement of employees’ contentment or happiness with their jobs through factors such as compensation, work hours, and benefits (“Employee Satisfaction vs. Employee Engagement, 2012). Organizational commitment can be equated to an employee’s loyalty to an organization. Macey and Schneider (2008) agreed with Erickson’s (2005) viewpoint that engagement is above and beyond simple satisfaction with the employment arrangement or basic loyalty to the employer – characteristics that most companies have measured for many years. Engagement, in contrast, is about passion and commitment – the willingness to invest oneself and expend one’s discretionary effort to help the employer succeed. Macey and Schneider (2005) have also suggested that personality traits and disposition can define employee engagement, but for the purpose of this study, they will not be discussed further; these are variables that are related to the individual and not something that management has control over.

The next point that must be researched is the why behind employee engagement. Why is employee engagement an important construct to measure? Extensive research has shown advantages to an engaged workforce. It has been shown engaged employees find their work

meaningful (Alexander, 2016). Engagement has also been related to health and positive affect (Sonnentag, 2003). For organizations, Harter *et al.* (2002) has shown a connection between engagement and positive business outcomes such as productivity, profitability, and lower turnover. Research has also demonstrated engaged employees are more likely to recommend their company to others, perform better than their disengaged counterparts, and less likely to quit (Towers Perrin, 2007-2008). But perhaps the most significant implication to clinical research is patient safety. A disengaged employee's attention to detail may be lacking, resulting in incorrect readings or data entry. The constant turnover, the lack of continuity and consistency amongst trial research members can also be extremely detrimental to the quality of data and results. The impact can be immense because human lives are at stake; if data is skewed, the impact of the data may be skewed, and that in turn can affect patient health and safety.

Lastly, how is employee engagement measured? Reviews of academic and organizational literature demonstrate varying thoughts on the number and identity of engagement drivers (Bedarkar and Pandita, 2014). For example, Mani (2011) predicted four factors – employee welfare, empowerment, employee growth, and interpersonal relationships – as the drivers of engagement. Seijts and Crim's (2006) went so far as to identify “The Ten C's of Employee Engagement: Connect, Career, Clarity, Convey, Congratulate, Contribute, Control, Collaborate, Credibility, and Confidence.” Regardless of the number of drivers, it is apparent that the measured drivers of engagement are fluid and must be chosen based on an organization's needs.

It is evident from the current research that employee engagement is a multi-faceted topic that can be studied from various viewpoints. A thorough analysis must therefore have a clear definition and focus. For this analysis, engagement will be defined as “the extent to which

employees feel passionate about their jobs, are committed to the organization, and put discretionary effort into their work” (“What is Employee Satisfaction”, 2018).

## SPECIFIC AIM

Employee engagement is an important topic to address for any industry, rather it is very pertinent for the medical research field, especially in today’s research climate. There is currently a shortage of clinical research professionals, although the number and complexity of clinical trials have increased year after year (Miseta, 2016). Since the inception of Clinicaltrials.gov in 2000, the number of registered medical trials over time has increased exponentially from 2,119 at the end of 2000 to 286,555 trials as of October 10<sup>th</sup>, 2018. In 2018 alone, 24,123 new medical trials have been registered (“Trends, Charts, And Maps,” 2018). Medical trials have also increased in complexity, with phases I, II, and III of trials experiencing an increase in number of distinct and total procedures (Getz & Campo, 2017). It is imperative for clinical research sites and organizations to implement an effective system tasked with measuring employee engagement levels and identifying issues that may decrease employee productivity. Pulse surveys, so called because they gauge the “pulse” or sentiment of a work environment, can be distributed quickly to identify and address employee concerns.

**Primary Aim:** To identify inefficiencies or areas for improvement that employees encounter in their roles within the Baylor Scott and White Heart and Lung Transplant and Pulmonary Research Department in Dallas, Texas. Once any inefficiencies are identified, process-improvement strategies will be proposed.

**Secondary Aim:** To measure drivers of employee engagement in the Heart and Lung Transplant and Pulmonary Research Department to assist management in employee retention and employee satisfaction.

## SIGNIFICANCE

The study was designed to assist management of the Heart and Lung Transplant and Pulmonary Research Department in Dallas, Texas, to quickly gauge employee engagement, identify inefficiencies, and create process-improvement strategies. Utilizing a proactive strategy to identify issues will result in a more efficient department to help drive departmental goals; employees will become partners in improving their department. It was anticipated that the results of this study would also offer a better understanding of the need to view engagement as a distinct construct separate from employee satisfaction and organizational commitment.

## MATERIALS AND METHODS

This was a prospective study that utilized a pulse survey to gauge employee opinions and attitudes regarding department engagement drivers. The research study was approved by the Institutional Review Boards (IRB) of Baylor Scott & White Healthcare System, Dallas, TX and UNT Health Science Center, Fort Worth, TX.

### **A) Data Collection**

An electronic survey consisting of twenty questions was administered to all employees and interns of the Heart and Lung Transplant and Pulmonary Research department in Dallas, Texas, through SurveyMonkey.com. Employees were also given the option to submit a paper copy if they chose. The survey format consisted of nine mandatory questions to measure engagement

drivers; participants were asked to rank their answer on a 5 point Likert scale system — answers ranged from strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree and were given a numerical value of 1- 5. Each question was immediately followed by an optional open-ended question to allow participants to expand upon the topic at hand. Two mandatory, open-ended questions were also utilized at the end to let participants share their ideas on how the department could achieve its goals and what needed improvement. All responses were collected anonymously to protect the identity of the participants. Participants were given 3 weeks to complete the survey.

## **B) Survey**

The quantitative questions and the engagement drivers they measured were based on Seijts and Crim's (2006) "The Ten C's of Engagement." Due to the survey's brevity, not all drivers could be measured. After discussions with Dr. Ali Khan, the following questions and associated drivers were chosen for their pertinence to departmental goals:

### **I. Connect** – Managers should demonstrate they value their employees

- a. *Question 1: My manager values my feedback*
- b. *Question 3: Management has genuine interest in receiving, reviewing, and applying opinions and ideas from employees.*

### **II. Contribute** – Employees want to know their contributions to the organization's success are meaningful. They also want to know their opinions matter and are being heard.

- a. *Question 1: My manager values my feedback*
- b. *Question 15: My work gives me a sense of meaning and purpose*



III. **Control** – Employees value control over the flow and pace of their jobs.

Managers can facilitate opportunities for employees to exercise this control.

- a. *Question 3: Management has genuine interest in receiving, reviewing, and applying opinions and ideas from employees.*
- b. *Question 5: I have the resources, support, and tools necessary to accomplish my tasks in an efficient manner.*
- c. *Question 17: I feel my workload is manageable.*

IV. **Collaborate** – Leadership has created an environment that fosters teamwork, cooperation, and trust.

- a. *Question 7: I feel connected to my co-workers*
- b. *Question 9: My team inspires me to do my best work.*

V. **Career** – Leaders should provide challenging and meaningful work.

- a. *Question 11: My job effectively utilizes my strengths and skills*

VI. **Congratulate** – Employees should be recognized for their strong performance

- a. *Question 13: I feel valued at work.*

### **C) Population**

The population surveyed were all current employees and interns of the Heart and Lung Transplant and Pulmonary Research Department in Dallas, Texas.

### **D) Data Analysis**

Due to the limited sample size ( $N = 19$ ), data analysis was performed using descriptive measures.

## RESULTS AND DISCUSSION

### A) Survey Participation

During the 3-week window in which the survey was open, 19 out of 21 current employees and interns responded to the survey, a response rate of 90.5% (Figure 1). 19 responses were submitted electronically through SurveyMonkey.com and 0 responses were submitted via paper format.

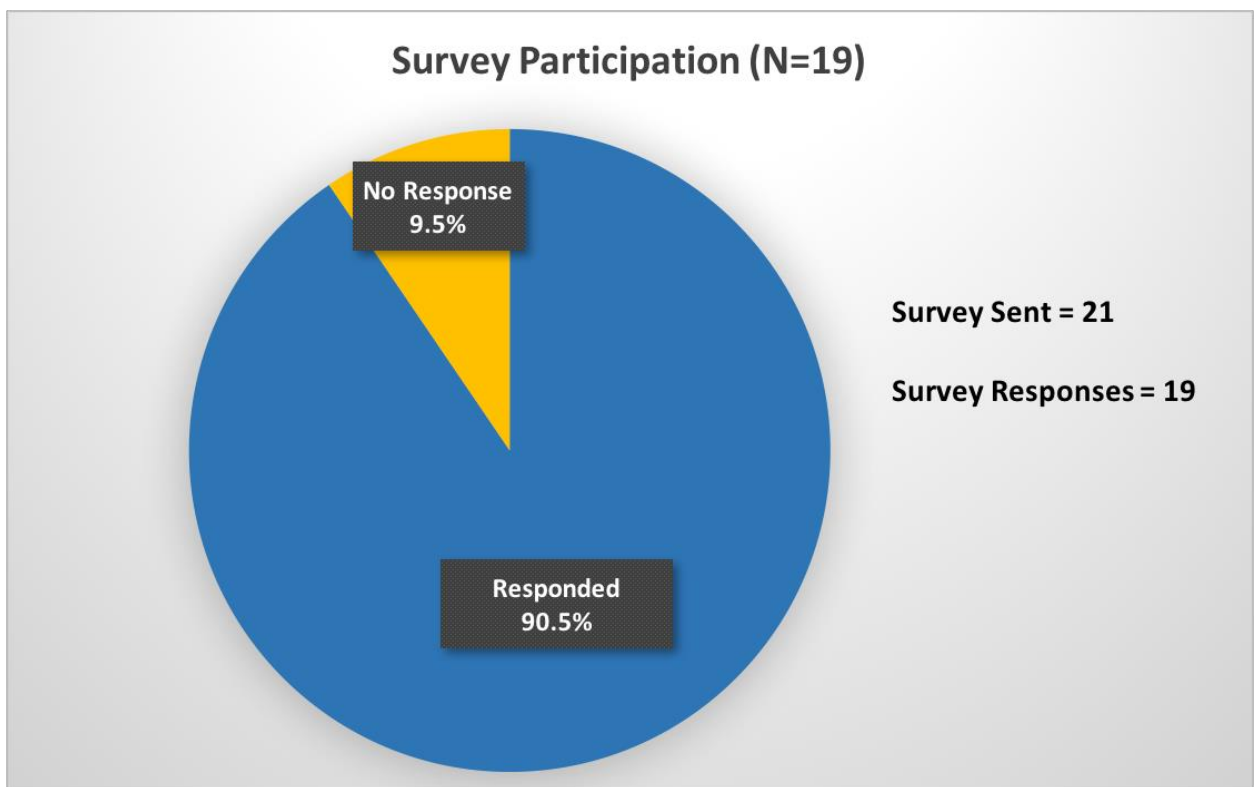


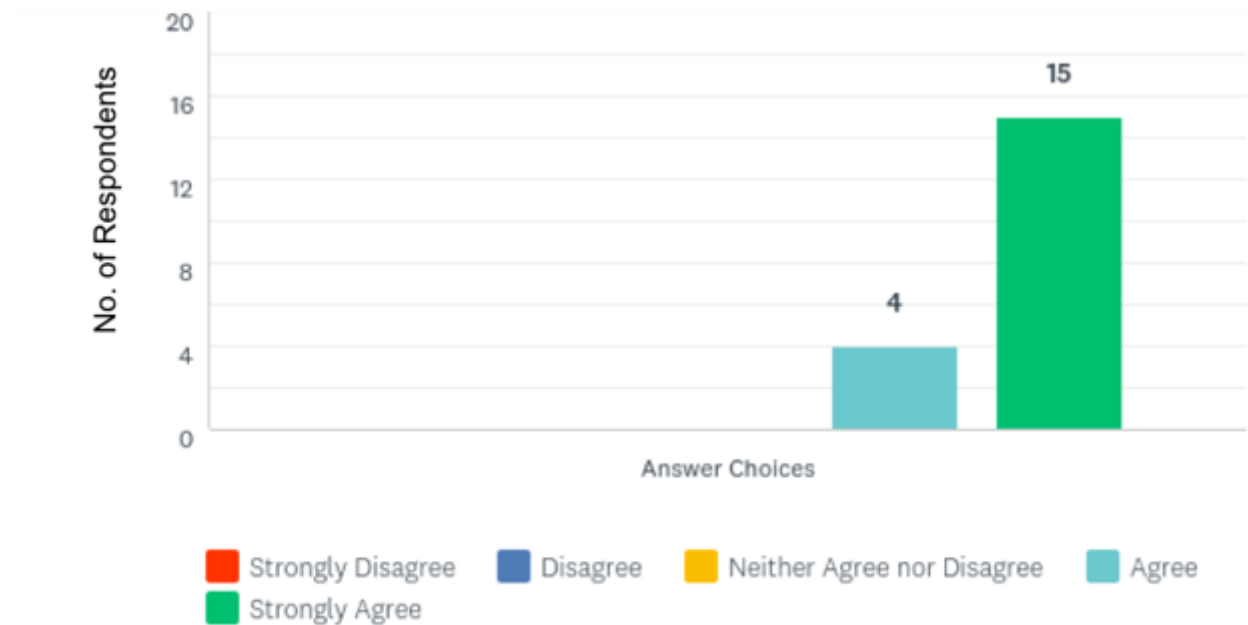
Figure 1: Survey Response Rate

### B) Results

Referencing the 5-point Likert scale, answers of 4 or 5 were considered positive, scores of 3 as neutral, and scores of 1 or 2 as negative. The frequency distributions for each quantitative question of the survey are shown in Figures 2a – 2i; each question had a mode of 4 or 5, corresponding to a positive response to each measured engagement driver.

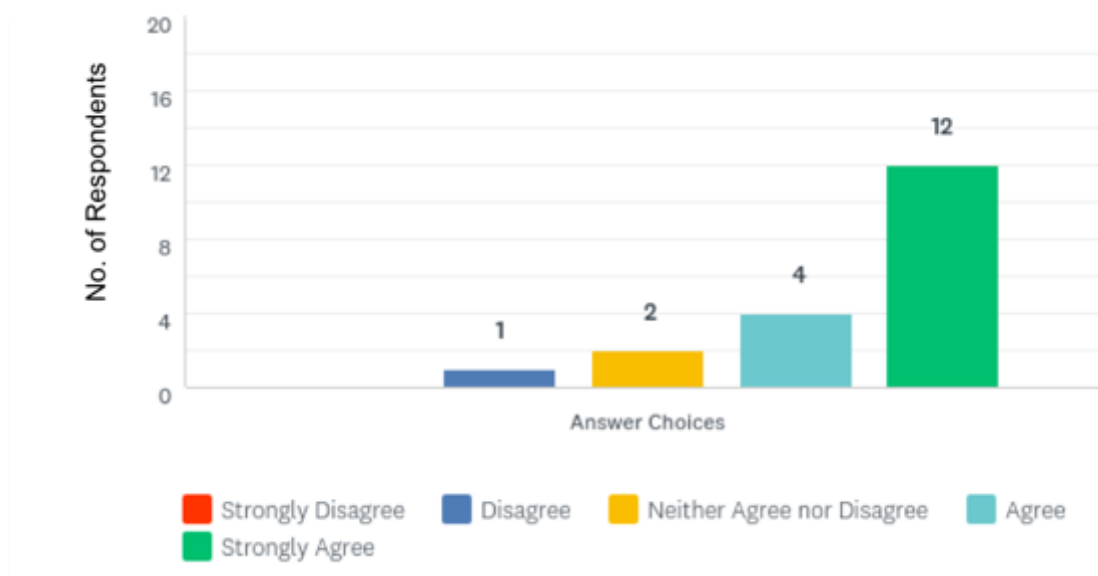
**Figure 2a:**

Q1 – My manager values my feedback.



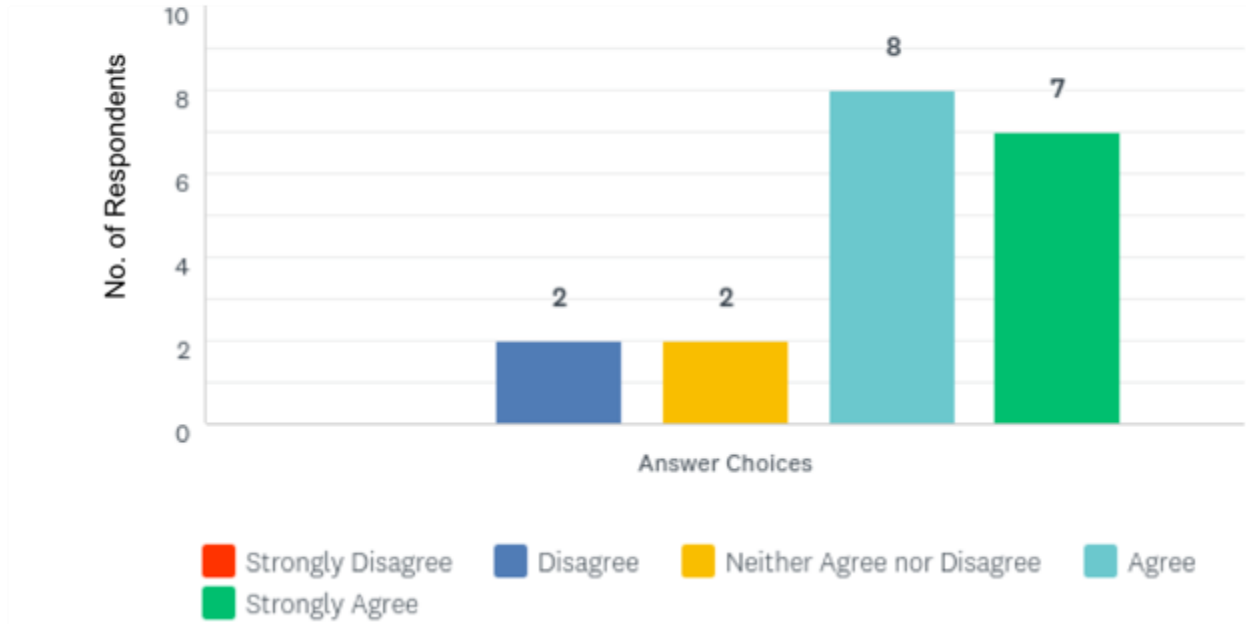
**Figure 2b:**

Q3 – Management has genuine interest in receiving, reviewing, and applying opinions and ideas from employees.



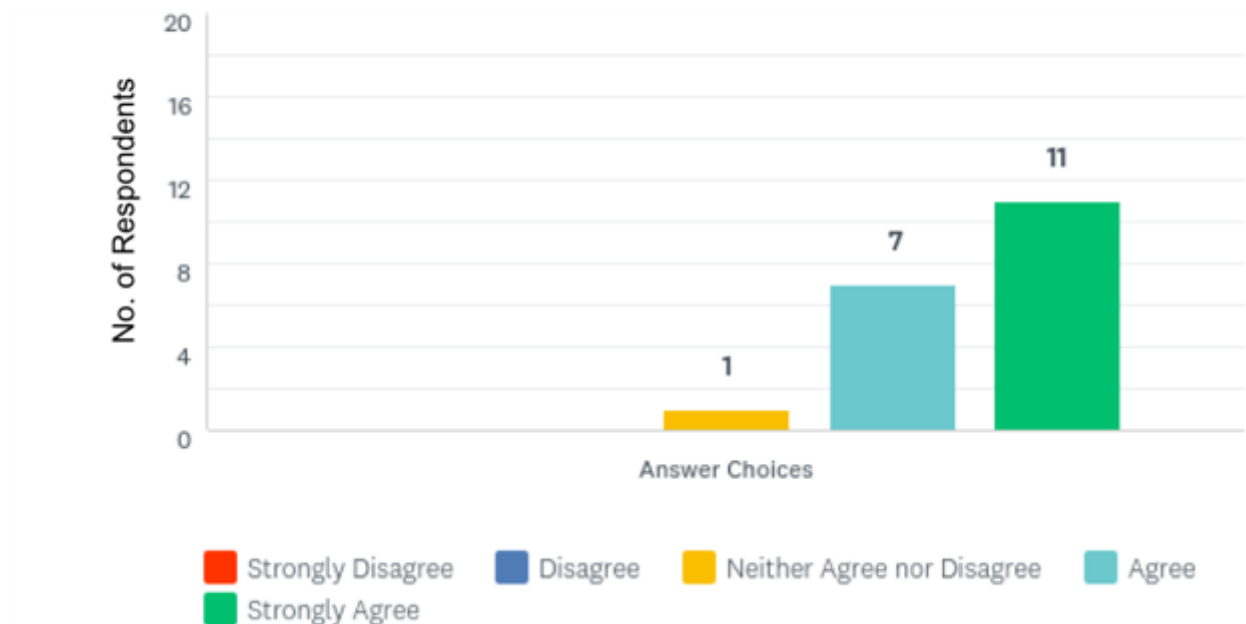
**Figure 2c:**

Q5 – I have the resources, support, and tools necessary to accomplish my tasks in an efficient manner.



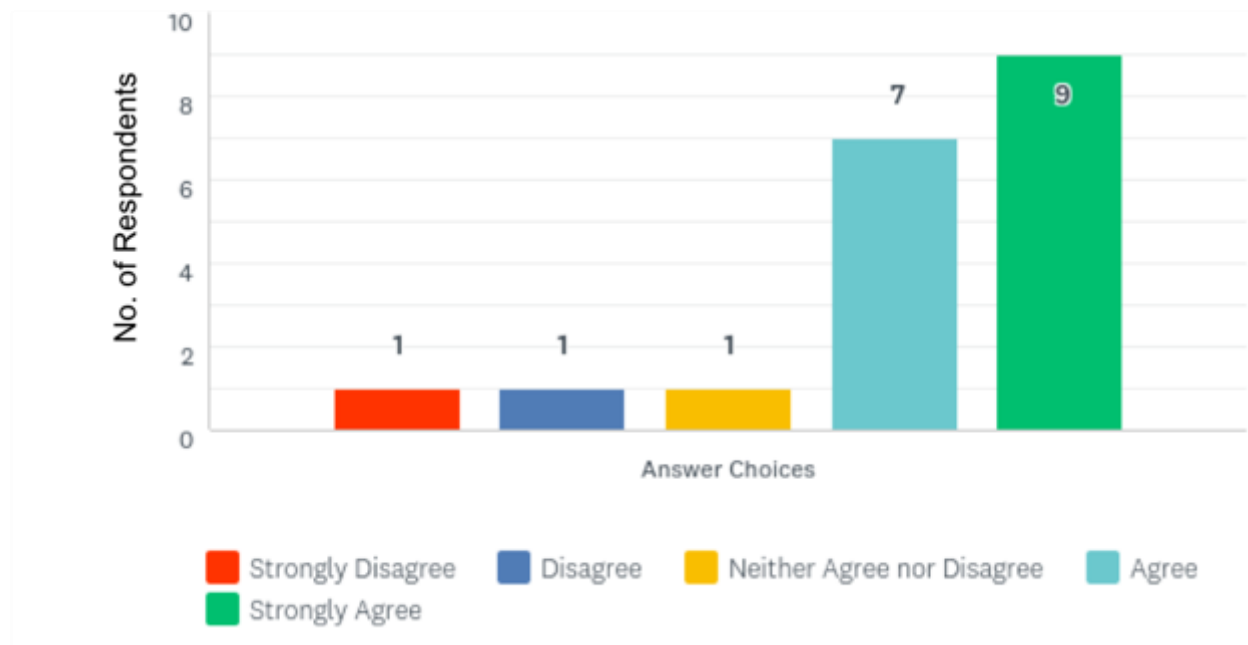
**Figure 2d:**

Q7 – I feel connected to my coworkers.



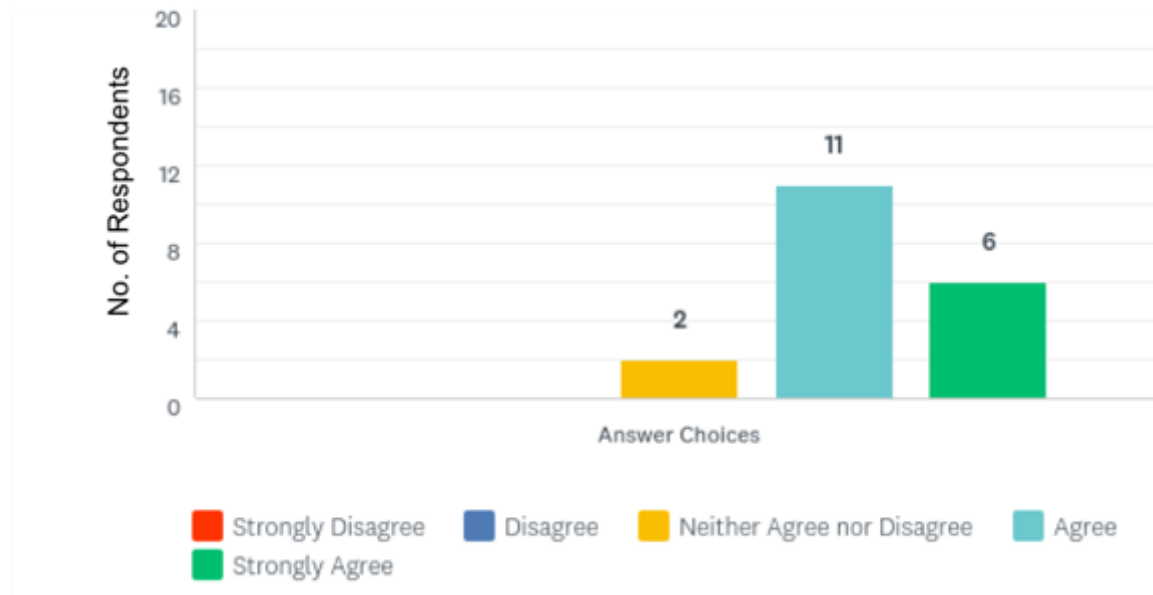
**Figure 2e:**

Q9 – My team inspires me to do my best work.

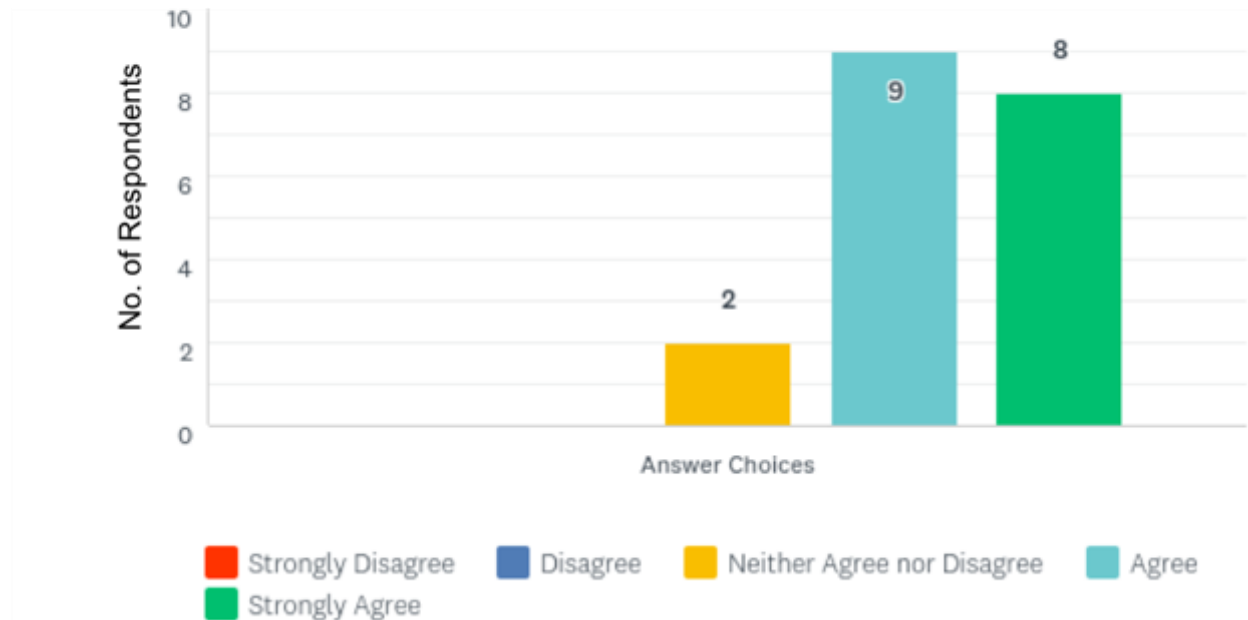


**Figure 2f:**

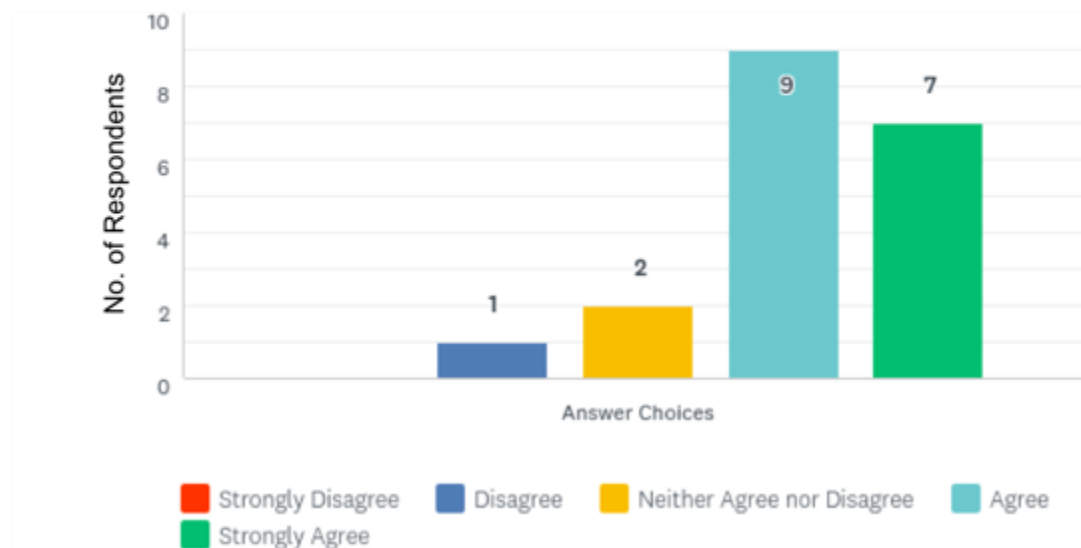
Q11 – My job effectively utilizes my strengths and skills.



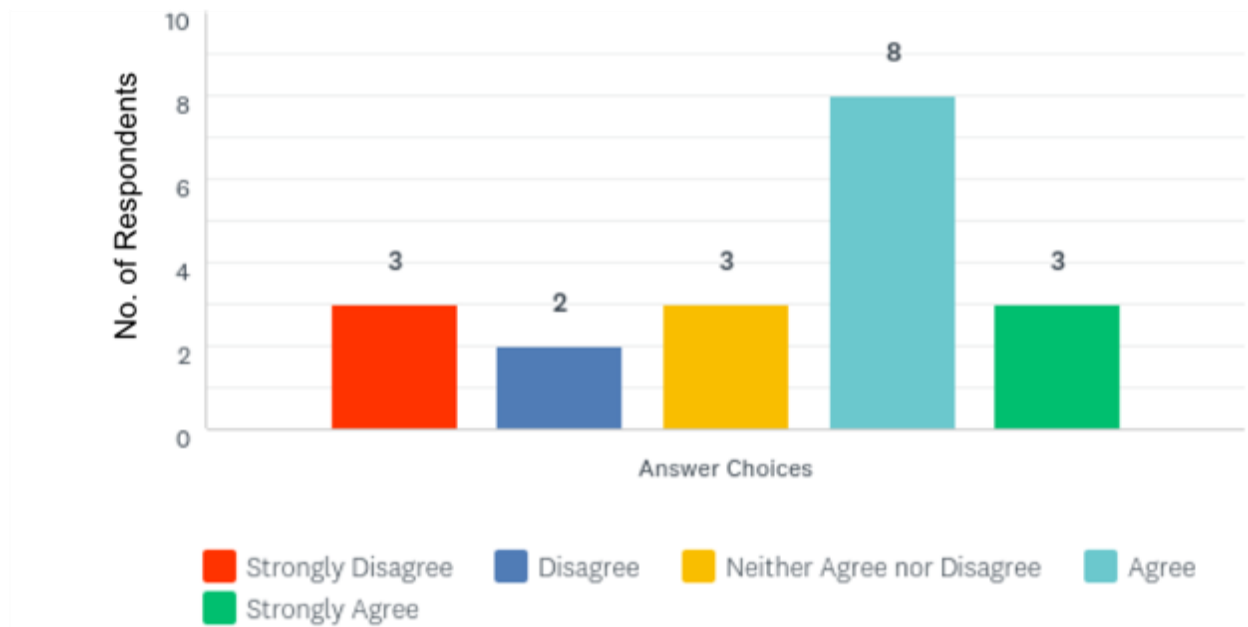
**Figure 2g:**  
Q13 – I feel valued at work.



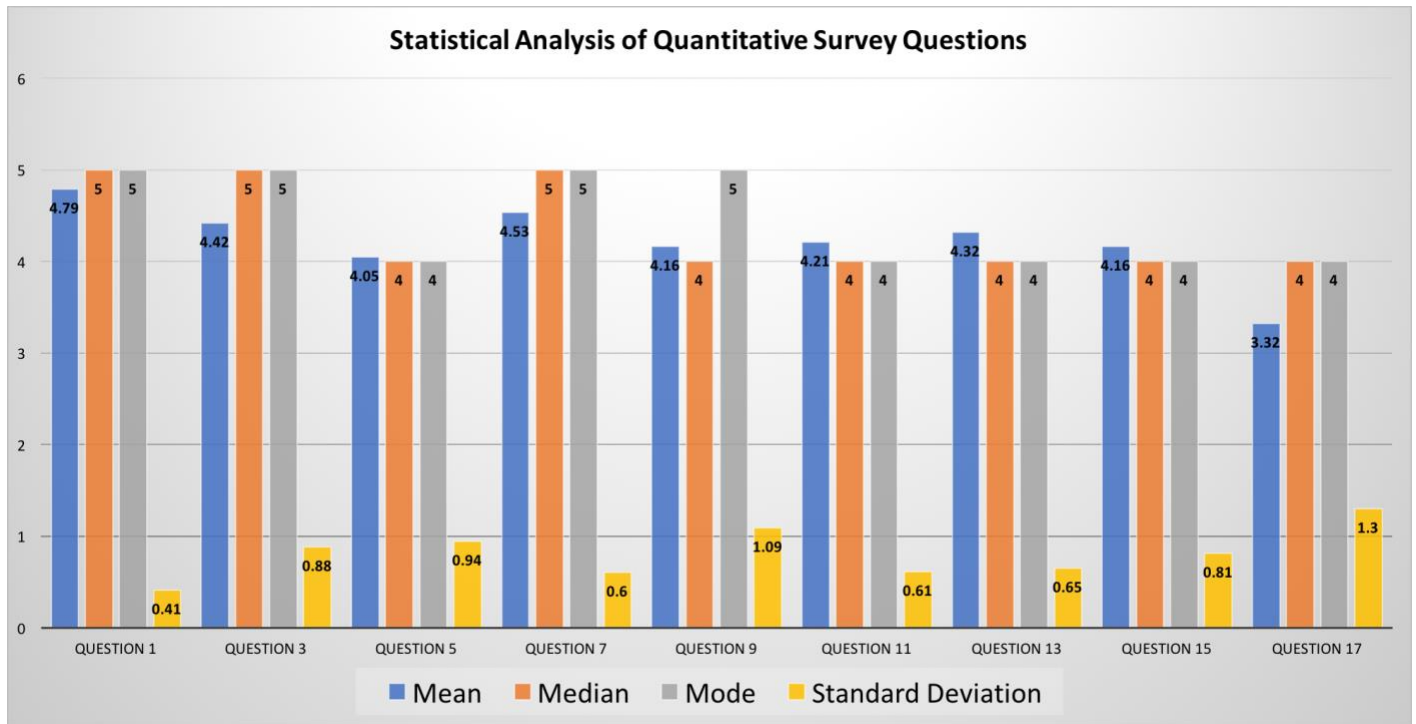
**Figure 2h:**  
Q15 – My work gives me a sense of meaning and purpose.



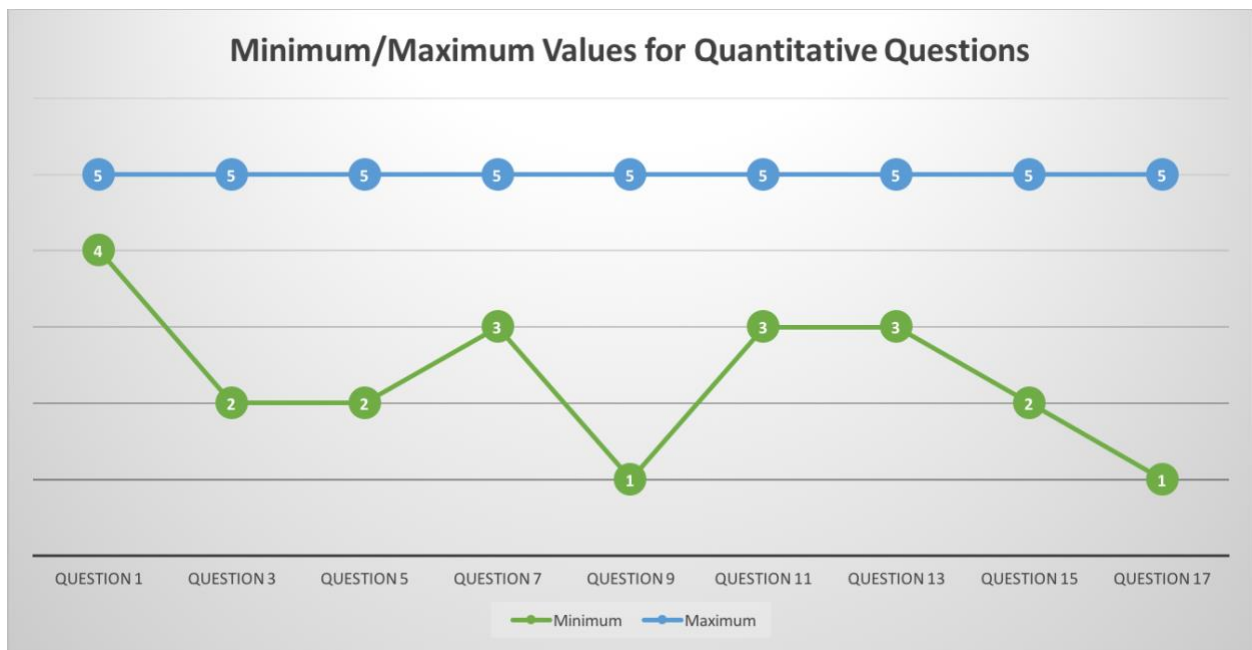
**Figure 2i:**  
Q17 – I feel my workload is manageable.



Analysis of the means also show that most drivers of employee engagement that were measured scored well, ranging from 4.05 – 4.79, with the exception of Question 17. Question 17, which examined work load, had the lowest mean at 3.32 (Figure 3). Analyzing the standard deviations, Questions 9 and 17 had the largest variation in answers where Question 9 pertained to teamwork and Question 17 pertained to work load (Figure 3). Indeed, Figure 4 shows these questions had responses on both ends of the spectrum from “strongly disagree” to “strongly agree.”



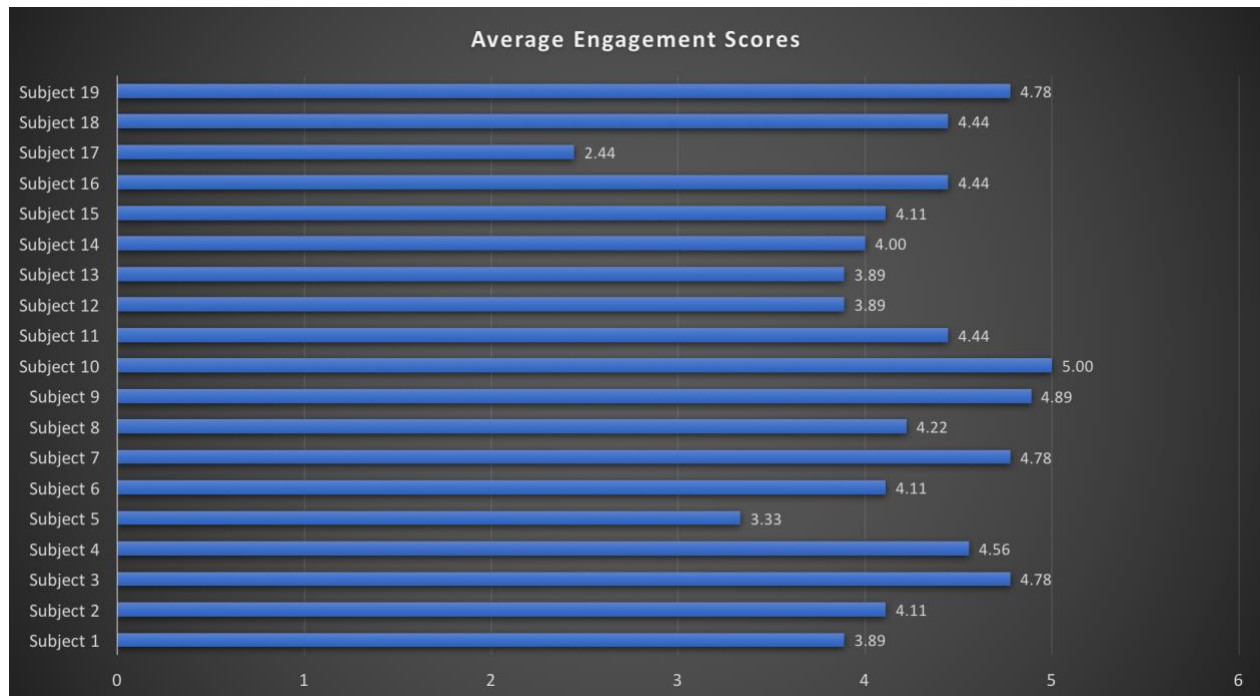
**Figure 3: Measures of Central Tendency**



**Figure 4: Range of Survey Answers**



Survey scores were then averaged to get an “engagement score” for individual participants. Results show a range of values from 2.44 – 5.00 (Figure 5). Subject 17 had the lowest engagement score of 2.44, while subject 10 had a perfect engagement score of 5.



**Figure 5: Engagement Scores**

The following figures below (Figures 6a – 6k) show the responses to the open-ended questions of the survey. These questions were utilized to allow participants to voice any concerns and opinions they had regarding the engagement driver at hand. The results from the Likert scale questions and the insights gained from their comments were analyzed with the help of mentors Dr. Ali Khan, Dr. Katalin Martits-Chalangari, and Horacio Martinez to investigate the potential reasons these concerns arose. Specifically, five concerns were addressed:

- 1) The suggestion for an EKG machine for the sole use of the Heart and Lung Transplant and Pulmonary Research Department.
- 2) Distribution of labor throughout the department.
- 3) The department was understaffed.

- 4) Engagement of standard-of-care team and other departments the research team collaborates with.
- 5) The low engagement scores recorded for Question 9: “My team inspires me to do my best work.”

**Q2 The following question is optional: - Do you have any comments or concerns regarding your manager's receptiveness to your feedback?**

Answered: 5 Skipped: 14

#	RESPONSES	DATE
1	Our manager, Ali, is always receptive to the opinions of his employees and seeks to implement solutions to the problems they bring to his attention.	9/12/2018 5:13 PM
2	All actively listens. He seeks opportunities that benefit everyone in the department. This department has needed a manager like him for a long time.	9/10/2018 5:05 PM
3	I feel that my manager is quite receptive to my feedback.	9/10/2018 9:07 AM
4	Manager is encourages feedback from staff and allows for open communication.	9/7/2018 4:05 PM
5	Ali is great at recognizing the strengths of individual team members and values their judgement.	9/7/2018 2:46 PM

**Figure 6a: Responses to Question 2**

**Q4 The following question is optional: - How can management improve implementing employees' ideas?**

Answered: 6 Skipped: 13

#	RESPONSES	DATE
1	Management has genuine interest in receiving opinions and ideas from employees but seems to not keep up with the idea or takes the idea on a whole different route compared to what was applicable in the beginning	9/21/2018 10:14 AM
2	I see no reasonable areas of improvement. He is extremely involved for such a diverse team.	9/12/2018 5:17 PM
3	Keep doing what you are doing.	9/10/2018 5:05 PM
4	Direct management has a genuine interest in receiving and reviewing ideas. The implementation often doesn't occur. However, being "heard" certainly goes along way with employee satisfaction.	9/10/2018 9:08 AM
5	-Distribution of labor needs to be highly improved: Only a select few are burdened with additional work, management needs not only to have the trust, but to treat everyone fairly and divide the work equally.	9/8/2018 6:23 PM
6	I do believe that our management accepts our viewpoints/comments/questions/concerns but does not necessarily help us apply any new ideas. I believe much of the time the groundwork is left to us to implement.	9/7/2018 2:49 PM

**Figure 6b: Responses to Question 4**

**Q6 The following question is optional: - What tools, support, or resources can management provide to help you excel at your job?**

Answered: 9 Skipped: 10

#	RESPONSES	DATE
1	There always seems to be something we learn about after the fact. We also don't have as much help in working with other departments. We seem to get other tasks rather than support and resources for what we need help with	9/21/2018 10:15 AM
2	We do okay, but we really are a bit understaffed and are spread pretty thin for our study load. We need FTE's, not just interns. Interns are great, but they are limited in what they are allowed to and are not coordinators or nurses. We need the staff with the expertise to manage large and complete study loads. Resources may be lacking, but we should be seeking to find a way to fix this.	9/12/2018 5:20 PM
3	We need more people.	9/10/2018 10:38 AM
4	No follow up response.	9/10/2018 9:09 AM
5	More information on clinical research education and seminars	9/9/2018 9:11 PM
6	Management does not have enough time to fully support employees (ex: A problem is presented to management and management presents ideas or comments, but expects the employee to resolve the situation completely by themselves, without the time needed from management to resolve hurdle).	9/8/2018 6:23 PM
7	Staff more coordinators in department	9/7/2018 4:05 PM
8	It would be great if we had our own EKG. I frequently have to hunt down the shared EKG after the Abdominal Research team uses it. It is also a bit old and finicky. A newer EKG with better electrical connections and smaller pads could knock a decent amount of time off of appointments and lead to fewer repeat tests.	9/7/2018 2:52 PM
9	It would be nice to have an actual functioning research clinic (if the right amount of patients were accrued) as well as a dedicated research physician for visits.	9/7/2018 2:50 PM

**Figure 6c: Responses to Question 6**

**Q8 The following question is optional: - How can the department improve comradery?**

Answered: 4 Skipped: 15

#	RESPONSES	DATE
1	There needs to be some sort of delegation from management that shows us what we are responsible for. We seem to have to figure it out amongst ourselves which isn't very helpful when we see each other as peers and not have a specific leader.	9/21/2018 10:17 AM
2	I think our department is very interactive and truly cares for one another.	9/12/2018 5:20 PM
3	It seems to create itself. Forced activities are uncomfortable.	9/10/2018 9:10 AM
4	Doing an excellent job, already	9/7/2018 4:06 PM

**Figure 6d: Responses to Question 8**

**Q10 The following question is optional: - Do you have any comments or concerns regarding teamwork in your department?**

Answered: 4 Skipped: 15

#	RESPONSES	DATE
1	Our department's teamwork (despite the few that prefer to work alone) is one of my favorite parts of working here. During really tough seasons, it is even primarily what kept me from looking for other job opportunities.	9/12/2018 5:21 PM
2	We have great teamwork. We all are consistently willing to help eachother.	9/10/2018 5:06 PM
3	When I see and hear my co-workers doing their best, it inspires me to do the same.	9/10/2018 9:10 AM
4	The unequal distribution of labor creates an unsafe and negative work environment (ex: employee A has 6-7 studies and works 8< hours everyday, employee B has 2-3 studies and works 8 hours or less).	9/8/2018 6:27 PM

**Figure 6e: Responses to Question 10**

**Q12 The following questions are optional: - What are your strengths and weaknesses? - How can management help change your weaknesses into a strength?**

Answered: 3 Skipped: 16

#	RESPONSES	DATE
1	I feel that management does an excellent job using each individual for what they're best at.	9/12/2018 5:22 PM
2	I am a strong writer and editor. I am less comfortable interacting with patients. Management has somewhat reduced my interaction with patients per may request. However, patient interaction is still necessary and this helps me strengthen this area of my job.	9/10/2018 9:12 AM
3	More specialization within the department MIGHT be beneficial. Some coordinators are good with patients and not-so-good with data and binder upkeep. I also think having an individual or two from each pod that spends 3-10 hours/week on recruitment strategies could be beneficial.	9/7/2018 2:56 PM

**Figure 6f: Responses to Question 12**

**Q14 The following question is optional: - What can management do to improve this?**

Answered: 2 Skipped: 17

#	RESPONSES	DATE
1	Keep doing what you are doing.	9/10/2018 5:07 PM
2	No follow up response.	9/10/2018 9:12 AM

**Figure 6g: Responses to Question 14**



**Q16 The following question is optional: - What do you feel your impact is on the department?**

Answered: 3 Skipped: 16

#	RESPONSES	DATE
1	I feel I positively impact the department's financial gains, team morale, enrollment, retention, and reputation as a knowledgeable and professional research center.	9/12/2018 5:23 PM
2	Steadiness.	9/10/2018 9:13 AM
3	Half know their impact and half do not. Due to the overwhelming amount of work, stress, and pressure, it is very challenging and emotionally draining to understand the meaning and purpose of my job function.	9/8/2018 6:30 PM

**Figure 6h: Responses to Question 16**

**Q18 The following questions are optional: - What do you think of your workload? Are there any issues?**

Answered: 7 Skipped: 12

#	RESPONSES	DATE
1	I think we need more help. There are a lot of projects and studies going on with lots of moving pieces. It's hard to figure out what needs to be done and what's a priority. The little things seem to fall to the wayside and before you know it you are super behind in the little things.	9/21/2018 10:19 AM
2	I don't mean to sound self-inflated, but I don't think many people could manage the workload I have and do it well. I do drop the ball on some tasks due to my workload, and I hate that I'm the one that ends up looking irresponsible when this happens. We simply do not have enough staff to manage the onset of the new studies coming down the pipeline.	9/12/2018 5:24 PM
3	My workload is manageable. I have the opportunity help other co-workers is they need it.	9/10/2018 9:13 AM
4	I feel more staff is needed.	9/9/2018 9:13 PM
5	Consistently lagging behind, causing other departments stress or negative view of research and our department.	9/8/2018 6:31 PM
6	The workload changes constantly and there are times when it can be overwhelming but for the whole it is manageable	9/8/2018 8:57 AM
7	Barely manageable, but achievable. This department could benefit from more staff	9/7/2018 4:07 PM

**Figure 6i: Responses to Question 18**

## Q19 What steps can the team take to make the common goals of the department more achievable?

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	have more 1:1 meetings with the employees	9/27/2018 10:31 AM
2	Coming together as a team, talking out every issue and working with each other and not against each other.	9/21/2018 10:52 AM
3	Define what the common goals of the department are.	9/21/2018 10:19 AM
4	We need at least 2 more employees to help enter data and manage files so that we are caught up and up to date, organized across the board	9/21/2018 8:59 AM
5	Prioritize task to meet deadlines	9/20/2018 3:04 PM
6	This team is great at communication already and If we just keep doing communicate and support each other we are in great shape and set up for success	9/20/2018 2:51 PM
7	Continue to communicate effectively and continuous evaluation of team to identify strengths and weaknesses of team. Act upon change but build strong foundation of support and guidance	9/20/2018 2:36 PM
8	Maintain work balance between all employees	9/20/2018 2:21 PM
9	The whole team needs to do better about speaking up rather than just the ones that are proven leaders. We can't fix issues we aren't aware of, and I want every single person to feel valued and heard, and I want that to be echoed throughout our department and the BSW system as a whole.	9/12/2018 5:25 PM
10	BY ENROLLING MORE INTERNS	9/11/2018 10:05 AM
11	This is already being done, so keep doing it: Collaborate between management and staff to tailor individual and department goals based on individual employees' strengths and areas of growth opportunities.	9/10/2018 5:10 PM
12	I don't know.	9/10/2018 10:40 AM
13	Review the work loads of some employees and perhaps delegate to others.	9/10/2018 9:14 AM
14	I feel we do everything possible to make goals achievable.	9/9/2018 9:14 PM
15	Better distribution of labor for the staff to create a clean positive work environment. Better distribution or more aid to management so management can focus and give the necessary time to fully support employees.	9/8/2018 6:36 PM
16	Just continue to work together to reach those goals	9/8/2018 9:03 AM
17	Always keep communication open and honest	9/7/2018 4:07 PM
18	Hire more personnel.	9/7/2018 2:58 PM
19	I think our team already does a fantastic job at working together to ensure goals are met.	9/7/2018 2:52 PM

**Figure 6j: Responses to Question 19**

**Q20 What is a process or task you have noticed that decreases your productivity? Please also share your suggestions on how to improve it and, if possible, how to measure it.**

Answered: 19 Skipped: 0

#	RESPONSES	DATE
1	Some applications to enter data are very slow at times.	9/27/2018 10:35 AM
2	Not being a team player really stops me in my tracks, when one person need and want to say something relevant everyone need to listen and include that person input on things. The lead person is not the only voice heard.	9/21/2018 10:57 AM
3	Impromptu meetings that don't have an agenda or a clear goal. Decrease meetings that aren't productive	9/21/2018 10:20 AM
4	Losing staff that has not been replaced	9/21/2018 9:00 AM
5	No suggestions	9/20/2018 4:17 PM
6	Working in a large healthcare system has some benefits and challenges. One of the challenges is engaging SOC and know all the SOC team members and leadership structure when collaborating on a project since almost all our studies require interaction with SOC staff. If we can do a better job of identifying key teams and engage them more effective then we can have an over smoother and successful process.	9/20/2018 2:59 PM
7	Not one that I would care to discuss	9/20/2018 2:37 PM
8	High woroad ration on some employees compared to others	9/20/2018 2:22 PM
9	Our processes to schedule physician time for studies is really misaligned and requires more effort than it should. I also feel we have too many meetings, or that our current meetings should be more streamlined or efficient and lead by direct people who are confident enough to "table" certain discussions and keep the meeting moving along at a productive pace.	9/12/2018 5:28 PM
10	SOMETIMES YOU HAVE TO DO MANY TASKS AT THE SAME TIME, AND I OVERCAME THIS BY TIME MANAGEMENT	9/11/2018 10:06 AM
11	Waiting for lab results from central laboratories. Ideally, we will have access to the central lab's portal so we do not have to wait for faxed results.	9/10/2018 5:12 PM
12	Waiting for people to answer their emails	9/10/2018 10:40 AM
13	Attending meetings. More focused approach to meetings may help.	9/10/2018 9:17 AM
14	Screening. I feel there should be a Screening Pod developed where screening of all studies is rotated amongst all team members on a daily basis with some sort of quota.	9/9/2018 9:15 PM
15	Lack of communication and guidance: staff re-creating work, staff unclear on specific roles and positions, it is disorganized. Need clear, direct, and organized guidance and direction from management that is clearly vocalized or documented.	9/8/2018 6:40 PM
16	Running to the pharmacy several times a day, but no solution at this time.	9/8/2018 9:07 AM
17	Frequent meetings take time away from more productive activities.	9/7/2018 4:08 PM
18	1) Unplanned meetings that last >10 minutes can mess up workflow. I think it's important to weigh the cost in productivity against the cost of planning those meetings ahead of time. 2) Conflict resolution has a high initial time cost, but could increase group productivity overall. Certain members of the team who have issues working together often reduce efficiency by trying to do everything on their own or, in some situations, require a third member of the team to act as a messenger between them. That style of "teamwork" is inefficient.	9/7/2018 3:08 PM
19	N/A.	9/7/2018 2:52 PM

**Figure 6k: Responses to Question 20**

### **C) Discussion**

When asked what employee engagement entails, many could list off adjectives to describe an engaged employee such as hard-working, team-oriented, diligent, happy, or satisfied; however, they could not offer a concrete definition. Experts have argued the validity of employee engagement as a separate construct or if its existence is based solely on pre-existing concepts like employee satisfaction and organizational commitment (Macey and Schneider, 2008). This study viewed employee engagement as a separate construct from pre-existing concepts and defined it as “the extent to which employees feel passionate about their jobs, are committed to the organization, and put discretionary effort into their work” (What is Employee Satisfaction, 2018). Indeed, an employee that is merely satisfied with his/her income, work hours, and puts in the bare minimum of effort can be contrasted with an engaged employee that is passionate, committed, and goes beyond what is asked of them.

To that end, a short “pulse” survey consisting of 20 questions was utilized to measure several employee engagement drivers within the Heart and Lung Transplant and Pulmonary Research Department at Baylor in Dallas, Texas. A pulse survey was utilized versus a longer, more thorough survey for several reasons:

- A) A shorter survey was chosen due to the time limitation of the internship.
- B) Research has shown the average response rates of organizational studies that collected data from individuals was 52.7% (Baruch and Holtom, 2008).
- C) Researchers found longer surveys yielded fewer responses and more missing data (Stanton, Sinar, Balzar, & Smith, 2002). A low response rate may not be representative of the sample population.



Figure 1 shows the response rate was 90.5%, 37.8% higher than organizational study averages. The results reflect the positive effect of utilizing shorter surveys to increase response rates.

Examining the means (Figure 3) shows that all quantitative questions scored higher than 3.0, the value associated with “neither agree nor disagree,” and, thus, management is performing positively in the engagement drivers measured (Table 1). Experts argue as to the validity of calculating means for ordinal data – what does the average between “agree” and “strongly agree” imply? – but it still demonstrates important relationships (Sauro, 2016). For example, comparing means shows Question 17 (I feel my workload is manageable) had a lower score than Question 15 (I feel valued at work), not something apparent when comparing medians or modes (Figure 3). Further utilizing the open-ended Question 18 as follow-up, six respondents noted that workload can be overwhelming (Figure 6i). This concern in particular would be an area of focus, as discussed later in the paper. If modes are considered a better measure for Likert scale items, every quantitative question scored a 4 or 5, correlating to positive scores of “agree” and “strongly agree”, thus also showing that management is performing positively in the measured engagement drivers.

The mean engagement scores calculated for each respondent (Figure 5) are also promising. Eighteen of nineteen respondents had means higher than 3.0, the value associated with “neither agree nor disagree,” a rate of 95%. From the measured engagement drivers, 95% of respondents are engaged with their work. The lone respondent with a mean engagement score lower than 3.0 was subject 17 (Figure 5).

Analysis and discussion of the free-response answers with Dr. Ali Khan, Dr. Katalin Martits-Chalangari, and Horacio Martinez led to investigating the “why” behind participant concerns in the hopes of improving the department.

**I. Action Item: Obtaining an EKG machine for the Heart and Lung Transplant and Pulmonary Research Department.**

Investigations into the current EKG machine utilized by the department showed it is shared with the Abdominal Research Department and, therefore, requires coordinators to schedule patient visits based on the EKG machine availability. It was also found the EKG machine was an older unit and sometimes required multiple readings to obtain accurate results. Solutions that were presented were obtaining a new machine from the trial sponsor or discussing with the Biomed department (the department in charge of allocating medical equipment within the hospital) to receive a machine. A new EKG machine would decrease time spent searching for the machine shared with the Abdominal Research Department. A newer machine would also save patients time from repeated tests due to bad connections/leads.

**II. Action Item: Address the distribution of labor throughout the department.**

Research into this concern showed research coordinators in the department had varying numbers of research studies. These studies were also in various phases of completion –from study start-up, to recent FDA approval, and to close-out phase. Every study also varied in the complexity of study protocol and the number of subject visits. It is easy to see how employees may feel the distribution of labor is unequal based on the various factors. As an example, one coordinator may have only 2 or 3 studies, but if his/her studies require a detailed and thorough screening process the hours spent on those studies may be equivalent to a coordinator with 5 – 6 studies. Discussions with the on-site mentors revealed a possible solution with the development of “smart sheets.” These sheets could be utilized by members of the Heart and Lung and Pulmonary Research Department to log the amount of time each task of their studies required.

This tool would allow the work done by each employee to be quantified, compared, and used by management to redistribute tasks or workforce to increase efficiency of the department.

**III. Action Item: Addressing concerns of an understaffed department.**

Forty-two percent of respondents noted they either did not feel their workload was manageable or answered this question neutrally. This concern aligned with Dr. Ali Khan's vision of growth and sustainability of the research department. Solutions that were discussed to alleviate this concern were increasing the number of full-time employees and also the number of research interns. Sufficient staff would concurrently address distribution of labor in the department and allow increased delegation of tasks, increase the number of studies the department could simultaneously manage, decrease subject screening times, and decrease query numbers.

**IV. Action Item: Engaging standard-of-care team and other departments the research team collaborates with.**

The Heart and Lung and Pulmonary Research Department relies on the collaboration and support of many other departments to successfully run their clinical trials. Standard-of-care (SOC) team members include the physicians, nurses, dieticians, therapists, schedulers, and patient care technicians in the heart failure clinic, the ICU, and telemetry floors that provide the medical care needed for the patients. There may often be a disconnect between standard-of-care team members and the research department that cause delays, missed tests, or general confusion, as a respondent noted; standard-of-care team members are vital to research staff conducting their research visits but may often not know what study is being conducted or why certain measurements and tests are being performed. This issue may also extend to other departments such as radiology, physical therapy, and surgery. To bridge this gap, a solution could be to

organize “lunch & learn” sessions with standard-of-care members and other employees the research department interacts with; these informative sessions would be an opportunity to present the exciting trials being conducted, the reasons behind the trials, and provide an opportunity for others to ask questions. The hope is such events will enhance engagement and communication between departments and possibly even the referral of eligible patients to be clinical trial subjects.

**V. Action Item: Address the low scores in Question 9: “My team inspires me to do my best work.”**

Results of the survey showed sixteen percent of respondents either scored this question negatively or neutrally. This stands in contrast to Question 7: “I feel connected to my coworkers,” which measured the same engagement driver, *collaborate*, in which one-hundred percent of respondents scored 3 or higher. Why is there a disconnect? Although employees may feel connected to their coworkers, perhaps they find inspiration and motivation for their work from another source. Perhaps acknowledgement of their achievements motivates people to do their best work. Or perhaps motivation is from within – many high achieving employees are self-motivators and may not need outside inspiration. It is an important characteristic to identify to maximize employees’ potentials. To address this, employees could be asked of their motivators in a subsequent follow-up engagement study or it could be incorporated into employees’ annual performance review meetings.

**Progress.**

**I.** For the EKG machine, Dr. Ali Khan researched the issue further with upper management and the Biomed department, and regrettably, a brand-new machine is prohibitively expensive. However, it was noted that obtaining a machine that had already been in use was relatively

simple and a request was submitted. Obtaining a new EKG machine from the sponsor would require anonymity to be sacrificed by the respondent to determine which study and which sponsor to approach. This solution was left as a possible topic of discussion for the next departmental meeting.

**II.** A new “smart sheet” has been developed and is currently being tested; research coordinators have been populating utilizing the tool to populate their tasks and hours. Utilization of this tool will allow the department to be proactive to increased workloads instead of reacting when coordinators feel overwhelmed. The survey results helped highlight the need for such a process to be implemented, as low perceptions of fairness in the workplace may lead to employee disengagement (Saks, 2006).

**III.** Dr. Ali Khan has had discussions with Baylor Scott and White management about growth and has placed requests to create new positions in the department for coordinators, nurses, and interns. The hope is the survey results will reinforce his justification for increased staff.

**IV.** The lunch & learn sessions are currently in the planning and logistical stages.

**V.** Discussions with Dr. Ali Khan have been held on distributing another survey once some of the actions items have been implemented; in that survey, a question to determine what motivates the employees would be implemented.

The importance of employee engagement can be seen through research that business experts and consulting firms have performed. Research into employee engagement has shown engaged employees correlate with positive business outcomes such as productivity, profitability, and decreased turnover (Harter *et al.*, 2002). Gallup (2013) has estimated employee disengagement costs US companies hundreds of billions of dollars per year in productivity; average costs for employee turnover have also been studied and show replacing an employee may cost anywhere from 5.8% to 213% of an employee's annual salary based on level of position (Boushey and Glynn, 2012). Disengaged employees within clinical research may also affect patient health and safety. With these factors and costs in mind, it is crucial for clinical research sites to keep employees actively engaged and have a process in place to measure this construct regularly.

#### **D) Limitations**

There are some limitations with this study. The small sample size limited the statistical tests that could be performed to strictly descriptive statistics. The limitation to only one department also prohibited the use of more in-depth statistical analysis. Due to the use of a shorter survey, not all engagement drivers could be measured; a future study may want to utilize an employee engagement survey that examines a larger number of engagement drivers. Lastly, the concerns brought by the respondents and proposed solutions may not have strong transferability to other departments, fields, or businesses.

#### **E) Conclusion**

Results show the Heart and Lung Transplant and Pulmonary Research Department of Baylor Research Institute in Dallas, Texas, scored positively in the engagement factors measured by the survey questions (Connect, Contribute, Control, Collaborate, Career, and Congratulate).

Although a short survey limited the number and extent of engagement drivers that could be measured, a short survey was ideal because it allowed for quicker responses and an improved response rate (Edwards *et al.*, 2009); indeed, the response rate of the survey in this study was 37.8% higher than organizational averages.

Although the survey was only a snap-shot of one point in time, it allowed employees to address issues they contend with and offered valuable insight on opportunities for improvement. Employee engagement is a fluid construct and, moving forward, another survey should be utilized to collect a point of reference comparison and to measure the success or failure of the action items implemented by the leaders of the department. It may also be prudent to measure other variables affecting engagement such as age, gender, and number of years with institution. Effective engagement strategies may not be a “one size fits all” proposition, but rather, may be more fruitful when tailored to the specific demographics of an organization’s workforce.

#### **F) Future Research**

For further research, recruiting more departments within Baylor Scott and White Hospital to participate in an engagement survey would allow for greater generalizability and validity by increasing the sample size and allowing points of comparison between departments. Do hospital staff members that interact daily with patients have higher levels of engagement than staff that work mainly behind computers? Does increasing the number of staff in a department affect engagement levels? How are Baby-Boomer engagement levels different than in Millennials? Expanding the study to include more participants and more departments opens a whole host of new questions about employee engagement that may have not been explored.





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## CHAPTER III.

### INTERNSHIP EXPERIENCE

#### **A) Internship Experience**

I was fortunate enough to conduct my 6-month internship within the Heart and Lung Transplant and Pulmonary Research Department of the Baylor Research Institute in Dallas, Texas. This research department is involved in a multitude of studies focused on heart failure, surgical implants/devices, and pulmonary diseases and consist of both sponsor and investigator initiated studies. They are nationally recognized for their work. What makes all this possible though are the people behind these studies - the staff working tirelessly to screen and enroll patients, conduct patient visits, navigate the maze of regulations, analyze results, and write abstracts and papers on the findings. One must also not forget the most important people behind clinical research, the selfless subjects themselves, without whose participation medical advancements would not occur.

Throughout the course of my internship I performed the duties of a clinical research coordinator as a member of the surgical pod. During my time, I assisted in various capacities on five trials. Initially, I was introduced to several research protocols and learned to assess their complexity and highlight pertinent information. I then learned how to conduct research visits – a few of the tasks required were obtaining informed consent, conducting patient surveys, overseeing 6-minute walk tests, and taking body measurements. I also learned to utilize the various computer programs used by research coordinators. As I became more comfortable with navigating the regular duties of a coordinator my tasks expanded to billing research charges,

screening patients for inclusion/exclusion criteria, and answering a variety of queries from the sponsors.

I have valued the experiences I've obtained interning as a research coordinator. It takes a coordinated team effort of both research and standard-of-care staff to successfully conduct any medical trial. The subjects participating in clinical trials deserve our gratitude for the valuable knowledge we obtain from their participation. I have gained valuable insight and acquired a breadth of new skills that I will utilize for either a career in clinical research or dentistry.

#### **B) Journal Entries**

Please refer to Appendix C for daily journal entries.

## APPENDICES

### Appendix A: IRB Outcome Letter



#### IRB Approval – Expedited Review of New Study

**To:** Daniel Lee

**Copy to:** Daniel Lee, Katalin Martits-Chalangari, MD

**Date:** August 22, 2018

**Re:** 018-588  
An Analysis of Employee Engagement within the Heart and Lung Transplant and Pulmonary Research and Clinical Oncology Research Departments of the Baylor Scott and White Research Institute at Dallas, TX  
Reference Number: 317704

Your new proposal was reviewed by a designated member of Baylor Scott & White Research IRB Red via expedited review.

This study was determined to be eligible for expedited review as it involves no greater than minimal risk to the subjects and fits into the following category from the 1998 approved list:

Category 5: Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for non-research purposes (such as medical treatment or diagnosis)

This review included the following components:

This review included the following components:			
Submission Components			
Form Name	Version	Outcome	
Review Response Submission Form	Version 3.0	Approved as Presented	
Initial Review Submission Packet	Version 1.3	Approved as Presented	
Study Application - Review by BSWRI IRB	Version 1.1	Approved as Presented	
Study Document			
Title	Version #	Version Date	Outcome
Survey questions	Version 1.1	07/30/2018	Approved
UNTHSC Research Proposal - Employee	Version 1.0	07/30/2018	Approved



Engagement (revised)			
Study Consent Form			
Title	Version #	Version Date	Outcome
Survey Cover Letter	Version 1.4	08/22/2018	Approved

Your submission has been approved. The approval period begins on 08/22/2018 and expires on 08/21/2019. Your next continuing review is scheduled for 06/21/2019.

This study is approved to be conducted at the following locations:  
Baylor University Medical Center, Main

The following individuals are approved as key study personnel (research team members & administrative support):  
Barnette, Amy, BS; Hall, Shelley A., MD; Lee, Daniel; Martits-Chalangari, Katalin, MD

Based on the information as provided in your application, the IRB has determined that this study qualifies for a waiver of documentation of informed consent in accordance with 45 CFR 46.117.

This means that while you are required to obtain consent, written documentation of such is not required. This should be done utilizing the IRB approved method as listed above. This is either a cover letter, telephone script or other specific tool as approved by the IRB.

All events that occur on this study including protocol deviations, serious adverse events, unanticipated problems involving risks to subjects/others, subject complaints or other similar events must be reported to the IRB in accordance with the respective policies.

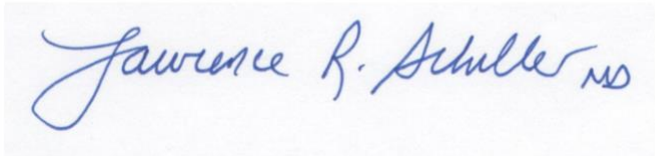
Remember that this study is approved to be conducted as presented. Any revisions to this proposal and/or any of the referenced documents must be approved by the IRB prior to being implemented. Additionally, if you wish to begin using any new documents, these must receive IRB approval prior to implementation of them in the study.

IRB approval may not be the final approval needed to begin the study. All contractual, financial or other administrative issues must be resolved through Baylor Scott & White Research Institute prior to beginning your study.

For Investigator Initiated studies that meet the requirements to be posted on [www.clinicaltrials.gov](http://www.clinicaltrials.gov); as Principal Investigator, it is your responsibility to ensure that your study is listed prior to enrolling the first subject. Instructions on fulfilling this requirement can be found in iRIS under the "Help" tab.

If you need additional assistance, please contact the IRB Specialist at 214-820-9692 (NTX) 254-771-4869 (CTX).

Sincerely,

A handwritten signature in blue ink that reads "Lawrence R. Schiller" followed by a stylized flourish.

Signature applied by Lawrence R. Schiller on 08/23/2018 11:24:54 AM CDT

## **Informed Consent Form**

Baylor Scott & White Health Research Institute

Baylor University Medical Center,

Dallas, TX

I am a researcher and student intern at Baylor University Medical Center and I am conducting a research project on employee engagement and work satisfaction and would appreciate you taking part in this project. This research project is intended to identify any inefficiencies or areas for improvement that employees encounter in their roles within the Baylor Scott and White Heart and Lung Transplant and Pulmonary Research or Clinical Oncology Research departments in Dallas, Texas. Once any inefficiencies are identified, solutions and metrics to measure improvement will be proposed. You have been selected to be in this research because you are a current employee or intern within the Clinical Oncology Research and Heart and Lung Transplant and Pulmonary Research departments at Baylor Scott and White Research Institute in Dallas, Texas.

All I am asking is that you complete a short survey that asks several questions about employee engagement and work satisfaction. This should only take about 30 minutes. If you choose to do so, two options will be provided – electronic or paper format.

1. You may complete the survey electronically. If you choose to use the electronic survey, please click the link below.
2. A secondary email will be sent to you shortly if you prefer the paper format. Download the attached document and fill out the paper survey. Once complete, please print it and drop it off in the labeled “survey drop-off” box in the supply room.

Please only fill out the survey once. Do not write your name on the survey. I do not need to know who you are. You can stop the survey at any time. Every effort will be made to protect your privacy and confidentiality. Your responses will be recorded anonymously. The results of this project will be used to identify any areas in need of improvement within the clinical research process, and to propose solutions in order to take proactive steps towards employee retention and productivity.

There are no risks or benefits to you for being in this study and you have the option to not complete the survey and not be in the study. By filling out the survey, you are saying that you are willing to be in the study.

If you have any questions about this project, please contact Daniel Lee at 214-865-1685. If you have any questions about your rights as a research subject, please contact the IRB Office at 214-820-2687.

Thank you for your interest in this project and I hope you will take a few minutes to complete this survey. Without the help of people like you, this important research would not be conducted.

## Appendix B: Employee Engagement Survey

### Employee Engagement Survey Questions

- Please select only **one** bubble for each mandatory question.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. My manager values my feedback.	①	②	③	④	⑤

[The following question is optional:](#)

[Do you have any comments or concerns regarding your manager's receptiveness to your feedback?](#) Click or tap here to answer

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
2. Management has genuine interest in receiving, reviewing, and applying opinions and ideas from employees.	①	②	③	④	⑤

[The following question is optional:](#)

[How can management improve implementing employees' ideas?](#) Click or tap here to answer

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<b>3.</b> I have the resources, support, and tools necessary to accomplish my tasks in an efficient manner.	①	②	③	④	⑤

[The following question is optional:](#)

What tools, support, or resources can management provide to help you excel at your job? Click or tap here to answer

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<b>4.</b> I feel connected to my coworkers.	①	②	③	④	⑤

[The following question is optional:](#)

How can the department improve comradery? Click or tap here to answer

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<b>5.</b> My team inspires me to do my best work.	①	②	③	④	⑤

[The following question is optional:](#)

[Do you have any comments or concerns regarding teamwork in your department?](#)

[Click or tap here to answer](#)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<b>6.</b> My job effectively utilizes my strengths and skills.	①	②	③	④	⑤

[The following questions are optional:](#)

[What are your strengths and weaknesses?](#)

[How can management help change your weaknesses into a strength?](#)

[Click or tap here to answer](#)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
7. I feel valued at work.	①	②	③	④	⑤

[The following question is optional:](#)

[What can management do to improve this?](#) Click or tap here to answer

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
8. My work gives me a sense of meaning and purpose.	①	②	③	④	⑤

[The following question is optional:](#)

[What do you feel your impact is on the department?](#) Click or tap here to answer



	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
9. I feel my workload is manageable.	①	②	③	④	⑤

[The following questions are optional:](#)

[What do you think of your workload? Are there any issues?](#) Click or tap here to answer

10. What steps can the team take to make the common goals of the department more achievable? Click or tap here to answer

10. What is a process or task you have noticed that decreases your productivity? Please also share your suggestions on how to improve it and, if possible, how to measure it.

[Click or tap here to answer](#)

## **Appendix C: Journal Entries**

5/29 – Today was my first day of the internship. Ali met me in the morning and we had a meeting regarding the internship, what I was expecting out of the internship, and who would be my mentors during the next 6 months. I met several staff members but a lot of the staff are currently on vacation. I was introduced to Amanda and Horacio, both of whom will help me during my onboarding process. Overall, it was a lot of information in one day but everyone has been helpful.

5/30 – Amanda showed me several floors in the hospital that are pertinent to our department including the 2<sup>nd</sup>, 7<sup>th</sup>, and 9<sup>th</sup> floors. I also spent time setting up my Outlook account, Skype account, and attempting to login to other programs I would need moving forward.

5/31 – I was introduced to Shane Blankenship today, another research coordinator. He gave me a couple research protocols for studies I will be involved with, Guide-HF and BIS. BIS tracks body changes in heart transplant patients and Guide-HF is a surgical implant study. A device is implanted into the pulmonary artery and takes blood pressure readings for patients' doctors to view. I also spent time with the I.T department to address my login issues.

6/1 – I spent time reading both the Guide-HF protocol and BIS protocol today. The Guide-HF protocol is dense with information. This study also has extensive inclusion/exclusion criteria. I spent time to research information on heart transplants, heart failure, and LVADs (left ventricular assist devices).

6/4 – Ali and I found out there were issues with my onboarding/clearance through Baylor. Until further notice, we decided it best if I stay home and complete any necessary work there so as not to get anyone in trouble. Although I was home, I spent more time researching LVADs specifically. Prior to this internship I did not know such medical devices existed. LVADs are

used both as destination therapy and bridge-to-transplant devices. I will be assisting with an LVAD study at Baylor, the Heartmate-3 device.

6/5 – I did further research into heart failure today. Although I will not specifically be helping the Heart Failure pod with their studies, the patients that require heart transplants or require LVADs have heart failure. I took this time to complete some of the following Citi Training certifications:

- Biomedical Research – Basic/Refresher
- Conflicts of Interest
- Essentials of Research Administration
- GCP for Clinical Trials with Investigational Drugs and Biologics
- GCP for Clinical Trials with Investigational Drugs and Medical Devices
- Informed Consent in Clinical Trials of Drugs and Biologics
- RCR Basic Course
- Research Misconduct
- Human Subjects Research

6/6 – I completed more Citi Training and researched heart transplants.

6/7-6/8 – I completed the remaining Citi Training and did more research on LVADs. I also looked into what types of research has been done on heart failure and LVADs to get an idea of what studies are currently being conducted at Baylor Research Institute. I'm having difficulty figuring out what type of thesis project I could do within the time frame of the internship and within the scope the IRBs will approve for a research intern.

6/11 – I was cleared to return to the research department today. Most of the staff have returned from vacation so I met more people. Horacio also returned from his research presentation in Washington D.C so I will be working closely with him since I have been assigned to the surgical pod. Christine Brooks is a registered nurse and is also part of the surgical pod. Horacio introduced me to the programs required to perform the tasks of the surgical pod. However, I still do not have access to Allscripts and Nuance.

6/12 – I am still having issues with access. It turns out the internship program at Baylor is currently run out of Central Texas even though the majority of interns are located in North Texas. Central Texas and North Texas have two separate accounts and this is causing delays for not only me but the other interns in the department. I filed away some paperwork for Heartmate-3 today. There are a lot of CRFs and source documentation that needs to be filed.

6/13 – Issues with access to programs is still ongoing. In the meantime, I've been filing more paperwork for Heartmate-3.

6/14 – Since access issues are ongoing, I spent much of today researching possible projects for my thesis. My committee meeting is just over a week away but I don't feel I've had much exposure to the studies that are being performed in the department. I'm currently looking to see if there is enough data in the department to see the reasons behind why patients that are eligible for medical trials decide to decline. I'll have to talk to more coordinators to see if data is available, but Horacio has stated he records the reasons why patients decline.

6/15 – I spoke with Shane today and he stated he remembered several patients that opted out of studies. It seems feasible that there may be a large enough population for such a study, but the reasons for declination may not be recorded. I think I will come up with several thesis proposals to present to the committee next week and they can help me decide how feasible each study is.

6/18 – After further discussion with the department, my original proposal to study the reasons and variables that patients opt out of participating in medical trials may not work. The concern is that there is not enough data – either there are not enough patients that decline studies, the reasons behind their decision may not be recorded, or their demographics may not be recorded. I'll have to do more research.

6/19 – Horacio introduced me to Mary Hart, a respiratory therapist that is part of the pulmonary pod. She has extensive experience writing research protocols and papers for investigator initiated studies. She mentioned she ran a 1-day camp last year for patients with COPD. During that camp, subjects exercise, learn breathing techniques, and have a Q&A session with respiratory specialists. She mentioned that last year, patients were very receptive to the Q&A session and it was evident many did not know the proper dosage or correct way to administer meds. A possible research project would be to analyze the impact of such a camp on patient compliance with their medication. However, the issue with this study is the timeline; the camp is run the first weekend of November, just prior to when thesis defenses take place.

6/20 – I did more research on possible thesis projects and another one I came up with is a process-improvement project for the department. This project would analyze employee engagement within the department to measure engagement levels and then to identify any areas for improvement in the department, if any. My initial research into literature seems fruitful, but the issue is the studies have examined engagement from so many various fields of study from psychology, business, human resources, etc. Literature review sends me down a rabbit hole of information

6/21 – I spent all day drafting my proposals for the committee meeting tomorrow. I will submit 3 projects and get feedback on which one would be most successful and feasible.

6/22 – Dr. Basha, Dr. Mathew, Ali, Katalin, and Horacio sat in on my committee meeting. The project with Mary was declined due to the complexity it may present with IRB approval and the timeline. The project looking at reasons patient decline participation in medical trials was declined due to the small amount of data that may be available. The engagement study was the most feasible and that will be my project moving forward. Along with Dr. Basha, Dr. Mathew, Ali, and Katalin, Horacio will also join my final committee.

6/25 – I spent the day researching the following topics for my project: employee retention, turnover in clinical research management, employee satisfaction, engagement, and surveys.

6/26 – I helped create subject binders for BIS and Heartmate-3. I also filed away CRFs and source documentation (if there's no documentation, then it never happened!). Continued doing literature review for my thesis.

6/27 – Entered patient visits into IRIS. Also created new patient profiles in IRIS. Continued literature review for my thesis.

6/28 – I entered more patient visits into IRIS. Lesia and I had training with Tina from Abbott, the field CRA, on the EDC portal Abbott utilizes for the Heartmate-3 study. Continued background and literature review for the thesis.

6/29 – I began familiarizing myself with the EDC portal. Training yesterday was beneficial, but without using the EDC myself, the training's helpfulness was limited. I filed more paperwork for Heartmate-3 and also some paperwork for BIS.

7/2 – Horacio gave me a tour of the other hospital towers and where to go to pick up chest x-rays and echocardiograms we order. We need to order these images on discs and send them to the sponsor. This is required for the chest x-ray and echocardiogram CRFs or else it creates a query,

which we are currently trying to decrease. Copies of the shipping label need to be created and filed into patient binders as “source” documentation.

7/3 – I shipped the chest x-rays and echocardiograms to the sponsor. I continued filing away the source documentation for the x-rays and echos and answering the queries.

7/5 – Spent more time down in clinic observing research visits. Helped Horacio measure and time the 6-minute walk test. Filed away paperwork

7/6 – I filed paperwork and entered more visits into IRIS. Also observed Horacio get informed consent from a patient, perhaps the most important step in clinical research.

7/9 – I spent a lot of time today researching literature on what to measure in an engagement study. Literature is split on how many factors or drivers to engagement there are and which questions to ask. I also filed away some paperwork.

7/10 – I continued my tasks of answering queries and updating IRIS. I made patient binders for the Heartmate-3 study and filed away documents for the study. I also started making patient binders for the Cell Free DNA pulmonary study. I lost email access today due arising from issues with merging my North Texas and Central Texas login IDs.

7/11 – I completed making patient binders for the Cell Free DNA pulmonary study. I’m still having issues obtaining access to many programs so I spent time talking with I.T. to address my problems. Lastly, the rest of the day was spent filing documents for the Heartmate-3 study.

7/12 – I shadowed Amanda to observe two follow-up appointments for the Veloxis study – this required filling their medications to ensure they would have enough until their next appointment, so I was introduced to the investigational pharmacy for the first time. I also had two meetings with Ali today -- the first meeting was with the other interns to get feedback on Baylor’s



internship program and ways they can improve it and the second meeting was to discuss the survey questions for my project.

7/13 – I called I.T. multiple times today to address my continued access issues to iRIS, Allscripts, Mybaylor research portal, and my Outlook account – I was told my accounts should be merged by Monday. I also continued processing x-rays and echos for Heartmate-3.

7/16 – Today was spent completing the task of processing and labeling discs for patients in the Heartmate 3 trial.

7/17 – Today I was introduced to screening patients for Heartmate-3 and BIS. BIS screening guidelines are pretty straightforward. Heartmate-3 screening was more involved and it was a long process. Much of the difficulty arose from not being familiar with where to look for the required screening information for each patient.

7/18 – Lesia and I were also given the task of screening for Guide-HF patients. This, by far, is the most daunting screening process out of the projects I'm involved with. Sharla gave us an abbreviated tutorial on how to screen for the study but when I attempted it on my own I had many questions. This screening process will take away valuable time to answer queries.

7/19 – I researched the best method to conduct a survey and which survey system to utilize. An electronic survey would be the quickest way but I believe providing a paper survey will also allow for an improved response rate. I tested out SurveyMonkey.com but they have a limit of 10 questions for free accounts. Any higher number of questions is blocked behind a pay wall.

7/20 – I spent the day responding to queries about the Heartmate 3 CAP trial in the EDC. There was a lot of information missing which required a lot of referencing to data in Allscripts and source documentation in binders. I also screened my first patient for the Guide-HF trial with the help of Sharla and Horacio.

7/23 – I continued to address sponsor queries for the Heartmate 3 CAP trial. I also continued to enter Echo data into case report forms.

7/24 – Most of the day was spent addressing sponsor queries for the Heartmate 3 CAP trial and Lesia and I have now gotten the query number below 900. I also entered echo data into CRF in the EDC. I also began entering XR information into the EDC. I am also going to submit my survey questions to Katelin and Horacio for review.

7/25 – I submitted my questions to Katalin and Horacio and they provided great feedback on how to reword some questions and to add additional ones. I also spent more time entering Echo and XR information into the EDC for Heartmate 3 CAP patients. The device-studies team also had a meeting to discuss the current state of studies and how to work as a team – we discussed the large amount of work and which tasks to delegate to whom. I’m still familiarizing myself with the EDC and IRIS programs, so I will continue to lower the amount of queries. I’m going to continue shadowing Horacio when conducting study visits so that I will be able to conduct them on my own.

7/26 – I was trained briefly on billing for Heartmate-3 CAP visits. There was also a BIS patient that had his 6-month visit today that I assisted with. The second half of the day was finalizing my questions and submitting them to Ali so he could review it with Laura, the manager of the Oncology Research Department.

7/27 – In the morning, there was a new BIS patient that needed his baseline measurements and 6-minute walk test performed – patient is not currently on the transplant list but I believe will be up for review soon. I was also able to talk to a staff member within the dental clinic of the transplant center and obtained contact information for the director of the dental clinic. In the afternoon, the

heart/lung/pulmonary department cleaned and organized the shared work-room. Patient visits were also entered into Iris.

7/30 – I submitted my proposal to the Baylor IRB for approval with the assistance of Katalin. I then entered more patients' echo information into the EDC for Heartmate 3 CAP.

7/31 – I began the morning screening patients for the Guide-HF study. However, there are many inclusion/exclusion criteria and it took awhile to screen them – I still have many questions for Christine about screening. In the meantime, I continued to enter echo data into the EDC for Heartmate 3 CAP. The issue with entering echo data is finding a trail of missing information that then needs also needs to be entered, so it's a long process that is not straightforward. I was given more paperwork that needs to be entered into Iris but I would like more training regarding billing before I enter that information.

8/1 – The morning started with a surgical pod meeting. We again discussed the roles we would play to tackle all the upcoming patient visits and data entry. I brought attention to the need of additional training to address the pending queries – ideally, training on entering a complete visit into the EDC so Lesia and I become familiar with each CRF and what information is required. Horacio and I then had a training session on submitting protocol deviations into the EDC for Heartmate-3. There was also a weekly Heart Failure departmental research meeting with Dr. Hall where all the present studies and any issues were discussed. Lastly, several department members met with Ali and Sharla to discuss the survey she has created to address physician/research department engagement.

8/2 – Training with Horacio on billing for Heartmate-3 was more in-depth; afterwards I answered billing inquiries from Kathleen and Zondria. I still need to complete EDC entry and

filing for the Xrays. Also attended my first selection committee for heart transplants. A committee comprised of doctors, nurses, dieticians, and social workers discuss potential heart transplant patients. It was a very interesting experience.

8/3 – Katalin also heard from the IRB regarding my study and they want further clarification on SurveyMonkey – I will try to complete the survey on SurveyMonkey and present it to her on Monday.

8/6– Time was spent looking up different survey services. SurveyMonkey, unfortunately, has a 10 question limit for the free version. Google also has a service but it's not very user friendly. I will look for more options. I may just have to pay for the survey service. Ali stated he will continue to reach out to Laura regarding her participation in the employee engagement survey.

8/7 – I spent much of the day processing the paperwork that has built up that I received from Horacio. I needed to complete the entry into Iris and notify the billing department what charges were for research and what was standard of care. In the afternoon, the devices pod had a training session on EDC – specifically, we were trained on entering a full baseline visit. I was also trained on creating research account numbers for new patients.

8/8 – There was a BIS patient that had a follow-up visit this morning. I was trained on measuring proper arm length and mid-arm circumference, grip strength, and triceps skin-fold measurements. However, the triceps skin-fold measurement seems a bit ambiguous so I'll need more training on it. I also conducted my first 6 minute walk test. The rest of the day was spent doing administrative work, processing more patient visits and billing into Iris.

8/9 – Katalin got back to me regarding my IRB submission – they wanted to verify the Informed Consent Waiver would be present prior to the survey being given to participants so I added it to the email that's sent out to all participants and as the first page of the actual survey. They also

wanted to know how anonymity would be preserved for participants using the paper survey – an enclosed drop-off box will be placed either in the break room or copier room so they can drop off their surveys.

8/10 – I answered billing queries from Leslie in the morning – I think there is still some confusion in the pod in regards to what is billed as research and what is billed as standard of care. Specifically, there seems to be confusion regarding the BNP and cholesterol. I also spent time cleaning up my paper survey and making it more functional – I added buttons the participants can select in the Lickert scale but need to figure out how to restrict it to only one answer choice. Unfortunately, all the survey options limit what's available under a free account. So I went ahead and paid for SurveyMonkey.com so that my survey can be longer than 10 questions. I went ahead and submitted it to Ali and Katalin for any feedback on the functionality and looks.

8/13 – I had an urgent family matter and could not go to the office. However, I attempted to download a Microsoft Word modification to limit the bubble choices on the survey and it kept resulting in errors. I haven't been able to find a solution yet. I also did some research for my paper; employee engagement/satisfaction is an immense HR topic and consists of so many different fields of study such as psychology, sociology, management, and human resource development.

8/14 – Conducted more research for my thesis.

8/15 – Answered queries and filed CRFs. Tried to clean up disc mailing log.

8/16 – Answered queries and entered baseline data. Lesia and I will both help conduct BIS visit because we do not have enough individual experience to gather all necessary data.

8/17 – Empty pod today. Entered Iris visits. Updated BIS visits – patient status. Helped Amanda conduct an inpatient visit for Heartmate-3 since all surgical coordinators were out.

8/20 – Helped conduct Baseline visit and consent for Heartmate-3 CAP. Also learned to make packet for visit. Visited Lesia in the hospital. Entered re-consent data into spreadsheet and Iris visits.

8/21 – Out of office sick

8/22 – Filed CRF. Re-consented HM3 CAP patient. Created research account number for 2 Heartmate 3 CAP patients.

8/23 – Research account number emails were sent. Billing emails sent. Financial document signed for my project. Shadowed Horacio on my first Corvia patient follow-up. Filed a bunch of lab documents in patient binders. Received Baylor IRB approval.

8/24 – It's looking like the survey will be limited to the Heart and Lung Transplant and Pulmonary Department and not the Oncology Research Department. Created a drop-off box for anyone that wants to utilize the paper survey.

8/27 – The engagement survey was sent out today. It will be open for 3 weeks to increase participation rates. Continued normal coordinator duties of billing, Iris, and answering queries.

8/28 – Out of office sick.

8/29 – While answering queries, noticed the number of queries related to missing echocardiograms. Created a new list of echocardiograms that need to be burned onto discs and sent to the sponsor. Emailed several chest x-rays to the sponsor.

8/30 – Sent out more billing emails to Kathleen. Answered Heartmate-3 queries. Updated Iris visits.

8/31 – Placed a ticket with I.T. to get duplicate patient profiles in Iris removed. Continued answering queries for Heartmate-3. Sent more chest x-rays to the sponsor.

9/4 – Had a meeting with Ali today to review the preliminary results of the survey thus far. The department has scored well in the measured engagement drivers. The open-ended questions provided interesting results. Many respondents felt the department was understaffed; Ali stated he had discussed with upper management about expanding the department with more employees and interns. The results will be sent to Katalin and Horacio once the survey has closed.

9/5 – The surgical department had a conference call with Alejandra to discuss correctly filling out certain CRFs. She's noticed queries being flagged due to these inconsistencies. Continued my coordinator duties of billing, Iris, and updating master spreadsheets for BIS and Heartmate-3.

9/6 – Continued daily coordinator tasks

9/7 – Out of office.

9/10 – The survey was closed. Total respondents were 19 out of a total of 21, a response rate of 90.5%. This is higher than average response rates of organizational surveys. However, I have reservations due to the small sample size. Continued my duties of billing, Iris, and updating master spreadsheets.

9/11 – I had a discussion with Tariq regarding statistical analysis for my results. Due to the small sample size, he stated I could only perform descriptive analyses. Studies I found with similar surveys were able to perform inferential tests, but I believe that's due to them having multiple groups to compare. I also went ahead and planned a meeting with Ali, Horacio, and Katalin to discuss the survey results.

9/12 – I focused mainly on billing today. I received many consolidated inpatient billing charges from Kathleen which require a lot of time to review and cross check against the orders placed in Allscripts.

9/13 – Today was again mainly spent on verifying billing orders that Kathleen sent yesterday. There were several patients that were discharged from the hospital around the same time.

9/14 – I continued with my normal coordinator duties today.

9/17 – Spent time obtaining more sources for the background and literature review section of the paper. Also began editing the sections of the paper I’ve already written.

9/18 – Had a meeting with my on-site mentors to review the results of the survey. Discussed action items that could be created to address the concerns mentioned by the respondents. As previously mentioned, Ali has already had discussions with upper management to hire new employees and interns for the department. Ali has also looked into getting an EKG machine for the department that would be for the sole use of the HLTP department. Katalin and Ali also mentioned they are in the midst of drafting a “smart sheet” to track coordinator hours spent on tasks for their respective studies. This will give a better sense of how busy coordinators are and allow Ali to help overburdened coordinators. Lastly, lunch&learn sessions were suggested to better engage standard-of-care staff.

9/19 – Began creating the graphs and tables for the Results section of my paper. Also began drafting the Discussion section.

9/20 – Continued working on the results section. Originally created a pie chart yesterday but decided a bar chart would work better. I also updated Iris visits for Heartmate-3 and BIS.



9/21 – I continued working on the Discussion section of my thesis. Continued my regular research coordinator duties.

9/24–9/28 – Due to flooding over the weekend in my neighborhood, I spent time away from the office to clean and organize after the incident.

10/1 – Due to missing work last week, I had a lot of tasks to catch up on. Went through the email backlog and processed some billing emails. Also entered patient visits and Heartmate-3 reconsents into Iris. There was also a lot of paperwork that needed to be filed.

10/2 – Continued to catch up on tasks that built up over the past week. Filed away most of the paperwork that was left on my desk.

10/3 – Horacio asked me to input new subject information into a Baylor database that notifies us when one of our research subjects is admitted to the hospital. This allows us to visit them in the hospital to conduct a research visit if their hospitalization falls within one of their research visit windows – performed this task for both BIS and Heartmate-3. Continued answering queries.

10/4 – Did research into measures of central tendency – there seems to be debate on which measure is appropriate for ordinal data. Will have to justify the reasons on which I used. Continued answering queries today.

10/5 – Spent most of the day answering queries, sending chest x-rays to the sponsor, and sent some billing emails to Kathleen.

10/8 – I have a deadline with Dr. Mathew to send the introduction, background & literature review, specific aim, significance, and material & methods by the end of the week. I'm having difficulty writing the background & literature review just due to the vast scope of the sources I found. Spent the day working on my paper.

10/9 – I sent some chest x-rays to the sponsor to clear up a couple queries but spent the rest of the day editing my paper.

10/10 – Worked on billing today. Billing for Heartmate-3 is fully caught up, both inpatient and outpatient. Spent the remainder of the day working on my paper.

10/11 – Continued to work on my paper today. There wasn't much to do regarding my coordinator tasks.

10/12 – Continued making final edits to my paper before I sent it out to Dr. Mathew. I also sent some chest x-rays to the sponsor and spent time filing away paperwork.

10/15 – I had to work on my Results and Discussion sections for my paper before sending it off today to Dr. Mathew for review. I do not have as many tasks to perform as a research coordinator. Since my internship is ending soon, the rest of the surgical pod will be performing the tasks I was given. However, I told them I will continue to do billing, Iris, and sending out echos and xrays for now. I'm no longer assisting Horacio with research visits.

10/16 – Received feedback from Dr. Mathew for the first sections I sent him. It had some errors that I corrected. I also need to expand the background & literature section, include a section on the survey, and include the statistical analysis I'll be using. Will need to send him the edits by the end of the week.

10/17 – Sent several chest x-rays in the morning. Spent the rest of the day editing my paper.

10/18 – Continued editing my paper and finding more relevant sources.

10/19 – We received word from the sponsor that Heartmate-3 has received FDA approval for destination therapy. This means we no longer have to enroll new subjects; subjects currently enrolled will be followed until completion date. Moving forward, every patient will be receiving an off-the-shelf unit instead of a unit considered experimental. This translates to a lot less work

for us because we no longer have to screen and enroll patients or bill and review inpatient charges. I'm sure the sponsor will now be urging us to decrease the number of queries as soon as possible.

10/22 – I sent some chest x-rays and billing for a couple patients. I also assisted Shane in making lab kits for one of his heart failure studies. Other than that, this week will be devoted to my thesis project.

10/23 – I filed away some papers in the morning and then continued to work on my thesis project today

10/24 – I received Dr. Mathew's corrections for my results/discussion section. Inserting some of the graphs into Word created odd characters when Dr. Mathew tried to download my paper. I'll have to look into the formatting of the graphs.

10/25 – Today I asked my committee for an extension on the paper. Defense is 2 weeks away! Having issues with the formatting of my paper when I add my journal entries – the appendix and journal entries keep getting cut off or disappear.

10/26 – Continued finalizing my paper. Received comments from Horacio, Katalin, and Ali regarding my paper and will try to incorporate them into my final draft.