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Riley Wehr

Brian Leader

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# MRI-guided Focused Ultrasound for Essential Tremor Business Review: Fleming Neuroscience Institute

Riley Wehr; Brian Leader  
Lehigh Valley Health Network, Allentown, Pennsylvania

## Background/ Introduction

- MRI-guided focused Ultrasound (MRgFUS) is a piece of technology that performs a procedure that commonly treats Essential Tremors (ET) and Parkinson's Disease. It is an incisionless, less invasive, and outpatient procedure that does not require anesthesia. MRgFUS is a counterpart of Deep Brain Stimulation (DBS) and may be more appealing to patients as a form of treatment for these conditions
- ET is a tremor of the hands/ arms that typically refrains the patient from performing tasks or actions. ET is one of the most common movement disorders. Parkinson's Disease is a resting tremor that is rigidity with bradykinesia experience. It is a highly prevalent condition.
- The purpose of implementing a business plan for the investment in this technology is to create a better understanding of the clinical value of this project.

## Objectives

Evaluate new business and clinical opportunities

Collaborate with other departments to develop a business plan against a set of criteria

Gain an understanding of the Fleming Neuroscience Institute and identify potential growth Initiatives, technological advancements, and clinical treatment options for neurological conditions

## Methods

- As an approach to meet my objectives, I had conducted industry as well as other facility research. This was necessary to create two sets of outlines. One outline was created using vendor provided clinical trials and information, and the second outline was created using my own sources and data collection.
- Clinical trials conducted to display the reduction of the affects of Essential Tremors and Parkinson's Disease was a large part of data collection
- Vast amounts of information we obtained were from vendor interaction. Meetings were held weekly or biweekly with the vendor via Webex. Questions that would arise between meetings would be asked. We received information such as Pro Forma estimates, coding/billing information, as well as installment and maintenance fees. We were able to take this information and share it with other departments to increase awareness about details of the MRgFUS technology.
- Research on options other than the MRI-guided Focused Ultrasound was also conducted. Options such as medication regiments and surgical.
- Collaboration with other departments such as billing, coding, and MRI assisted with our data collection as well.

## Regional Sites

- New York- Presbyterian Medical Center
- NYU Langone
- Northshore University Medical Center
- Mount Sinai
- UPenn
- Jersey Shore
- Hackensack Medical Center
- University of Maryland

\* 55 national Sites\*

## Vendor Pro Forma Estimates

- Capital Acquisition - \$2.2 Million
  - Disposable Procedure Kit - \$3,300 per capita
  - Annual Service Contract after 1 year - \$185k/yr
  - Site Prep Estimated - \$35-50k
  - Medicare Facility Reimbursement - \$12,388
  - Commercial Facility Reimbursement - \$18,582
  - Medicare Professional Fee - \$1,720
- \* Procedures done annually – 100-150\*

## Future Direction

Continue collaborating with other departments to move forward on the creation of a business plan

- The factors of reimbursement as well as patient volume in our facility require further detail analysis.
- Evaluate the coding distributions between pre-op, post-op, and operative. This will also give an estimate of the volume of patients.
- Determine whether we should upgrade our MRI machines to install Version 2 initially, or consider upgrading down the road