Research Scholars Poster Presentation

Coordinating and Improving the Quality of Care in Patients with Gastro Esophageal Reflux Disease (GERD)

Daniel Elmi

Scott Beman MD
Lehigh Valley Health Network, Scott.Beman@lvhn.org

Jennifer Macfarlan MPH
Lehigh Valley Health Network, jennifer.macfarlan@lvhn.org

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Daniel Elmi, Dr Scott Beman, MD, Jennifer MacFarlan, MPH
Department of Surgery
Lehigh Valley Health Network, Allentown, Pennsylvania

Introduction

- Gastroesophageal Reflux Disease (GERD) occurs when the acidic contents of the stomach travel back to the esophagus, causing irritation and damage to the lining of the esophagus.[1]

- In the United States, 20-40% of the general population suffer from GERD.[2]

- Patients suffering from GERD may develop serious complications such as Esophagitis, Esophageal Stricture, Barrett's Esophagus, and Esophageal Cancer if left untreated.[1]

Image 1: *Visual representation of GERD from Wikimedia Commons*

- At Lehigh Valley Health Network, the treatment of GERD and its complications involves a team of Clinicians, Gastroenterologists, and Surgeons.

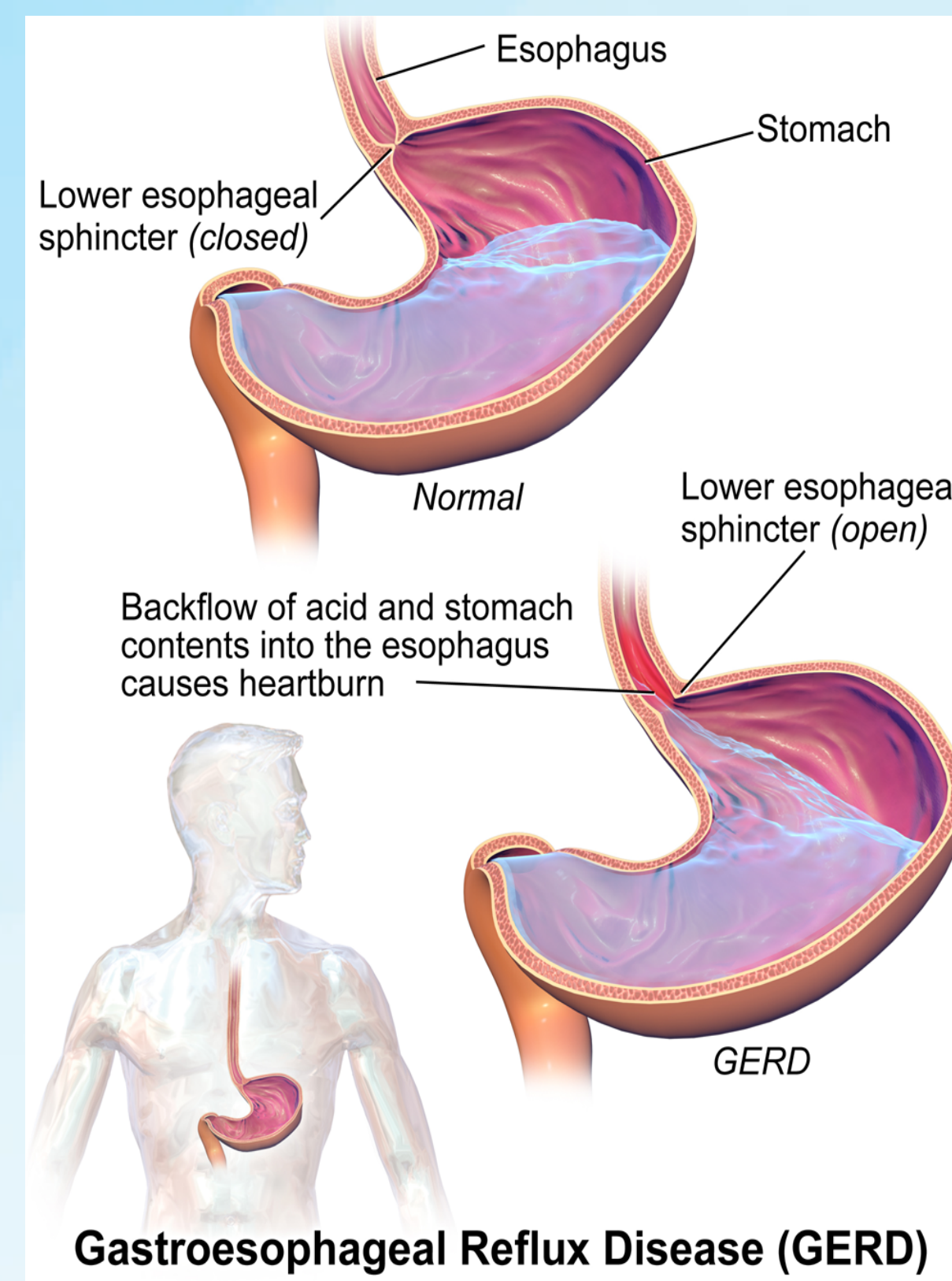## • Objectives

- The Acid Reflux Treatment Program was created in 2018, in order to **Coordinate and Improve the Quality of Care** by providing **Comprehensive Evaluations and Treatment Options for those suffering from GERD.**

- My role as the Summer Research Scholar was to **Create a Database to Collect and Store Patient Data** that will effectively be used to Improve Quality of Care.

REFERENCES
[1]Malfertheiner, P., and B. Hallerbäck. "Clinical Manifestations and Complications of Gastroesophageal Reflux Disease (GERD)." *International Journal of Clinical Practice*, vol. 59, no. 3, 2005, pp. 346–355., doi:10.1111/j.1742-1241.2005.00370.x.

[2] Cohen, Erica, et al. "GERD Symptoms in the General Population: Prevalence and Severity Versus Care-Seeking Patients." *Digestive Diseases and Sciences*, vol. 59, no. 10, 2014, pp. 2488–2496., doi:10.1007/s10620-014-3181-8.

Image 1: Blaus, Bruce. "Gastroesophageal Reflux Disease (GERD)." *Wikimedia Commons*, 10 Nov. 2015, commons.wikimedia.org/wiki/File:GERD.png.

• Methods

Excel Spreadsheet
- Created in 2018
- Tracked 16 Variables
- Tracked over 230 participating patients

Additional Targeted Variables
- Determined by Doctors involved in Acid Reflux Treatment Program

Data Dictionary Codebook
- Lists and Defines all Targeted Variables
- Template for REDCap Database

REDCap Database
- Where Patient Data will be collected
- More Practical than Excel
- Made up of Fields, corresponding to each Variable in the Codebook
- Fields organized into different Instruments

• Results

Data Dictionary Codebook

Figure 2: *Segment of Acid Reflux Treatment Program Data Dictionary Codebook*

- Displays the Name, Label, Unit, Type, and Format of each variable.
- 50+ Variables Included.
- More variables may be added.

REDCap Database

- 70+ Fields created.
- Branching Logic and Action Tags used to minimize repetitive/non-applicable Fields.
- Fields were Organized into 4 Instruments: Demographics, Work Up, Treatment, Follow Up.
- Data to be entered and stored individually by a navigator.

Figure 3: *Segment of Acid Reflux Treatment Program Database*

• Recommendations/Future Plans

- Set REDCap Spreadsheet into Production mode.

- Add/Revise variables as needed.

- Hire a Full-Time Navigator to enter data and maintain database.

- Analyze the data to individualize patient treatment and improve Quality of Care.

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