Hello all,

This week our group focused on finishing our progress report. In our report, we identified multiple different solutions for the problem of treating subglottic stenosis. Based on our design specifications, which we discussed in our last weekly report, we compared the solutions to one another and decided on the solution we will pursue going forward. We also included the amount of money that we will be asking for from the BME department that is necessary to build the prototype. In our attached design notebook, we discuss of our designs. As we were working on the progress report some of the specifics of each design changed but the idea of each is the same. We will add the changes of the designs to the notebook in the next week.

Sincerely,

Kyle Sachdev, Brian Dallesasse, and Taylor Hughes

Project created on 06.09.2016 02:03.

Report for project Senior Design

Task created on 28.11.2016 14:47.

No due date

▤ Progress Report Meeting

Finalizing content of progress report. All team members present.

Task tags: *No tags*

✳ Design Discussion   Created by Brian on 28.11.2016 15:44.

-Power with Arduino - can just use a battery, Kyle used Arduino code over the summer so he's more acquainted

Design 1: Claw Structure -Linear actuator attachment to arduino to mechanically open & close the claw to expand & relax ($10-$15) --Concern about linear object fitting a circular object, slippage would likely occur ---fix: create divots in the claw for the actuator to fit into

Design 2: Balloon with Syringe Pump -Arduino attachment - DC Liquid Pump, Use 3.5mm silicon tubing ($10-$15) --can pump up to 2L/min -Problem: we can pump fluid into balloon, but how do we extract it back out during relaxation?

Design 3. Ring that expands/relaxes via screw ($10-$15) -Arduino Attachment: Rotating Motor that mechanically rotates screw --Downside: attaching a rotating motor to the device inside the trachea

Team preliminarily agrees the claw structure is hypothetically the most feasible. Will create Pugh chart to quantify and evaluate our prediction.

💬 Comments for result Design Discussion

No comments