

Tracheoesophageal Prosthesis Insufflator

Computer Integrated Surgery II, Project 13

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April 11, 2013

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Overview

- Summary**
- Significance**
- Status of Deliverables**
- Updated Schedule**
- Status on Dependencies**
- Questions**

Summary

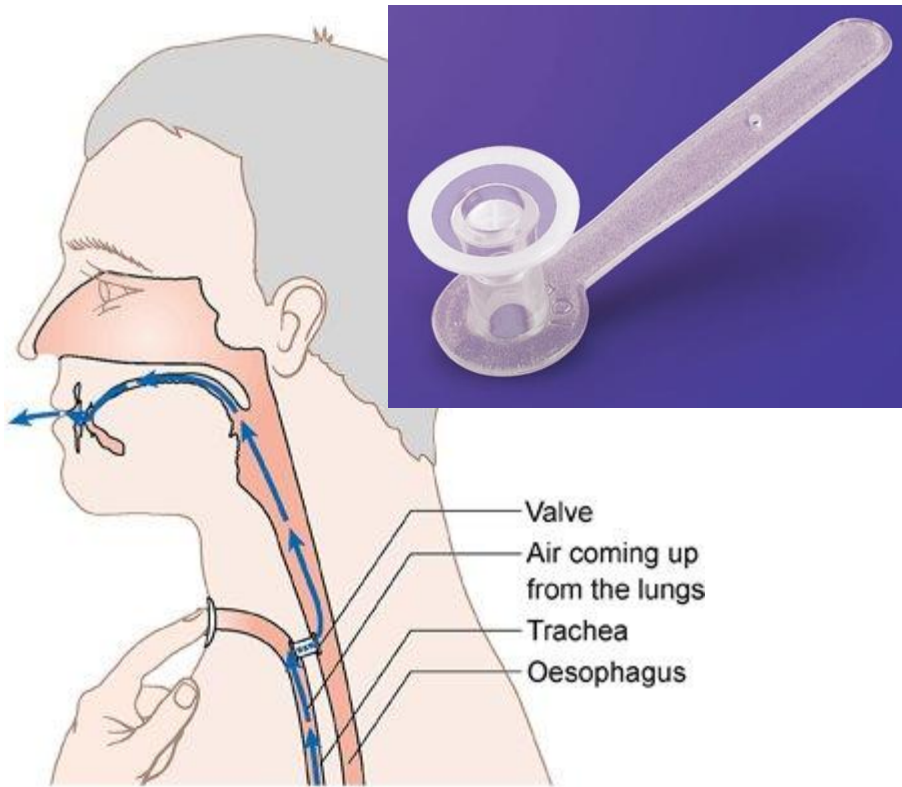
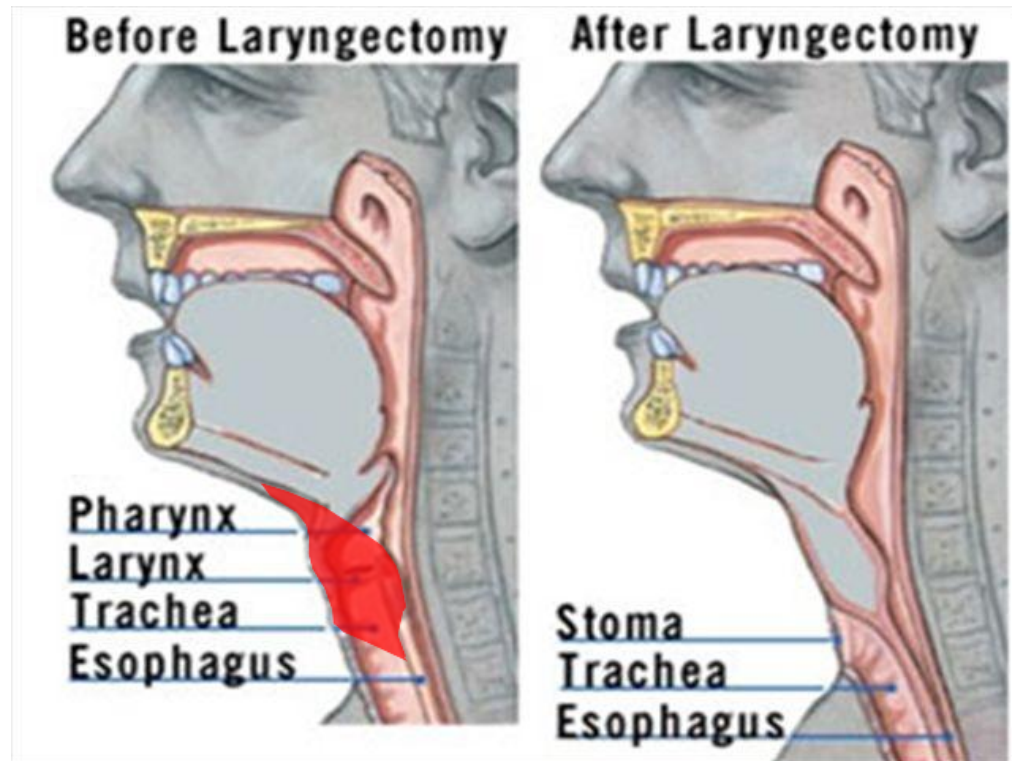


Diagram showing a voice valve
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- Develop a portable insufflator that will drive air through the TEP so that patient can circumvent direct blockage of stoma

Significance



-Patients lose speech capability after total laryngectomy

--Speech restored via tracheoesophageal prosthesis (TEP)

-Operation by blocking of stoma can be inconvenient or tiresome

Deliverables: Status

CAD/Pad sketch of components

Rough prototype of insufflator

Minimum

Improved prototype with custom-built parts

Tested on voluntary patients

Portable, belt-worn

Expected

Polish into sell-able condition

World domination

Maximum

Deliverables: Status

CAD/Pad sketch of components: **In Progress/Done**

Rough prototype of insufflator: **In Progress**

Minimum

-CAD in progress

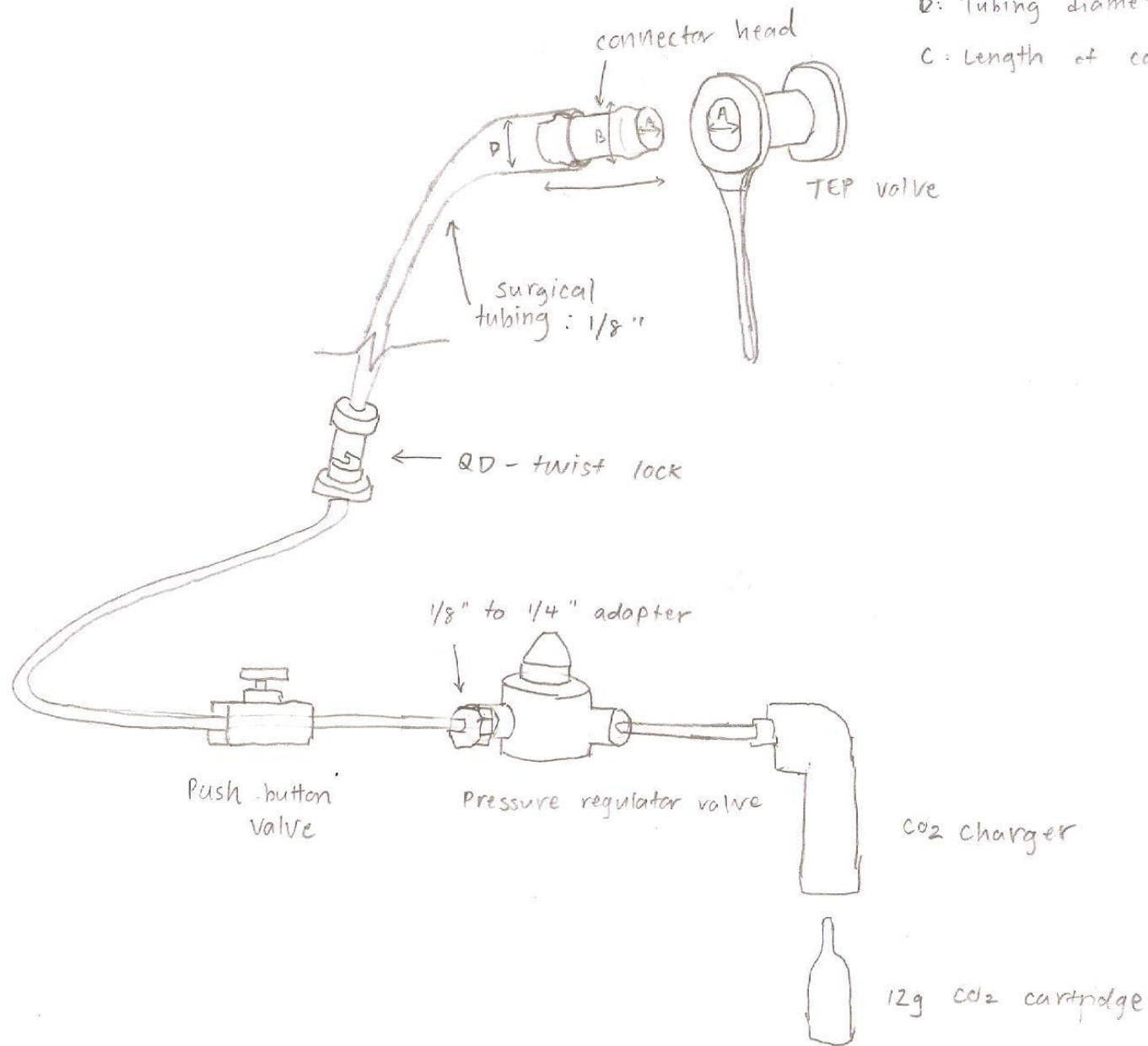
-Sketch: Next slide

-Prototype: Construction in progress, one part en route

- Safety detach, safety button
- Pressure measurement & adjustment

- secures into TEP
- But can be easily removed

D: Tubing diameter: matches A
 C: Length of connector



Deliverables: Status

Improved prototype with custom-built parts: **In Progress**

Tested on voluntary patients: **On Hold**

Portable, belt-worn: **Eliminated**

Expected

- Eliminate rough prototype. Get it right from the start.
- In discussion with Dr. Richmon for testing
- Make it portable in the first place.

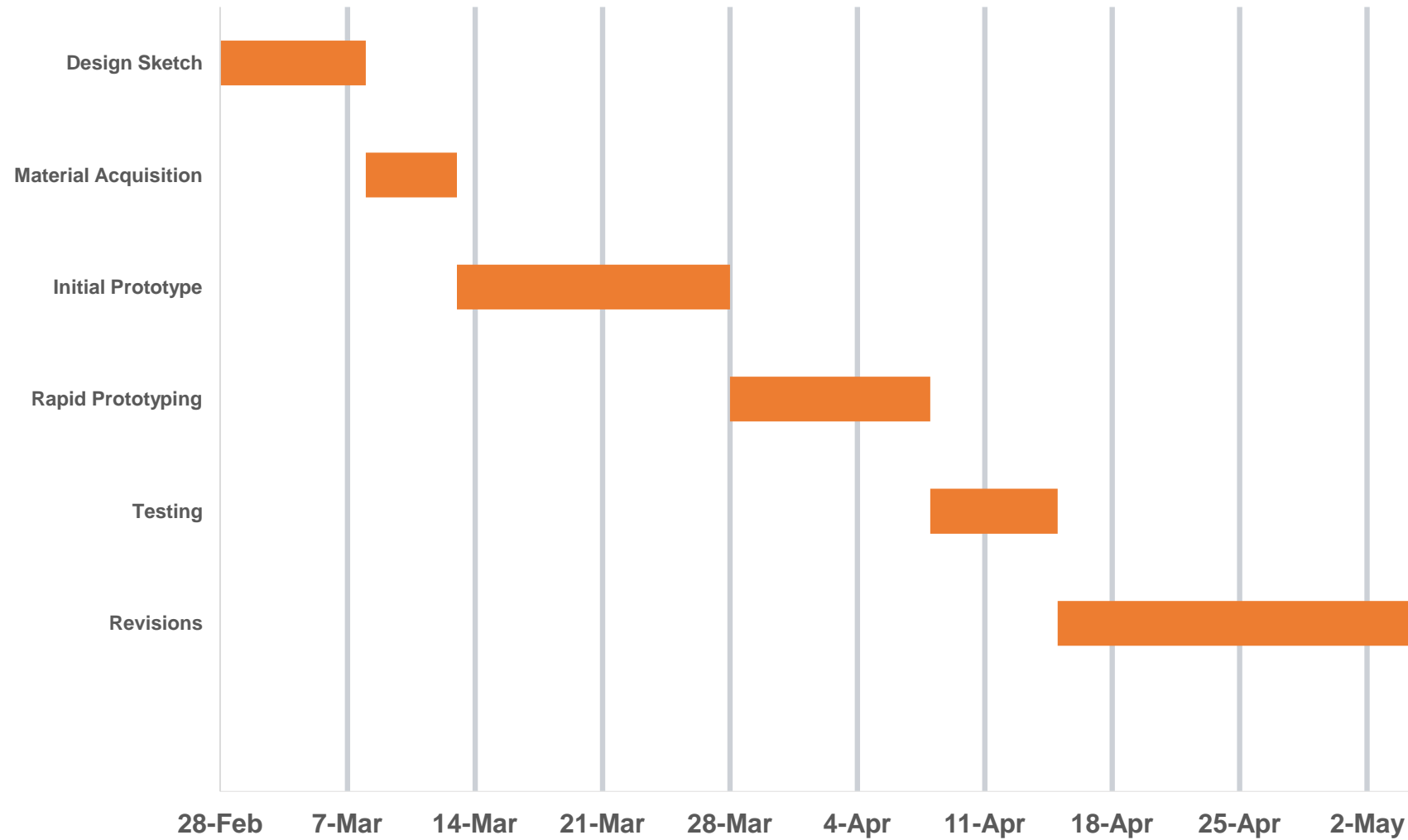
Deliverables: Status

Polish into sell-able condition: **Not Yet Met**

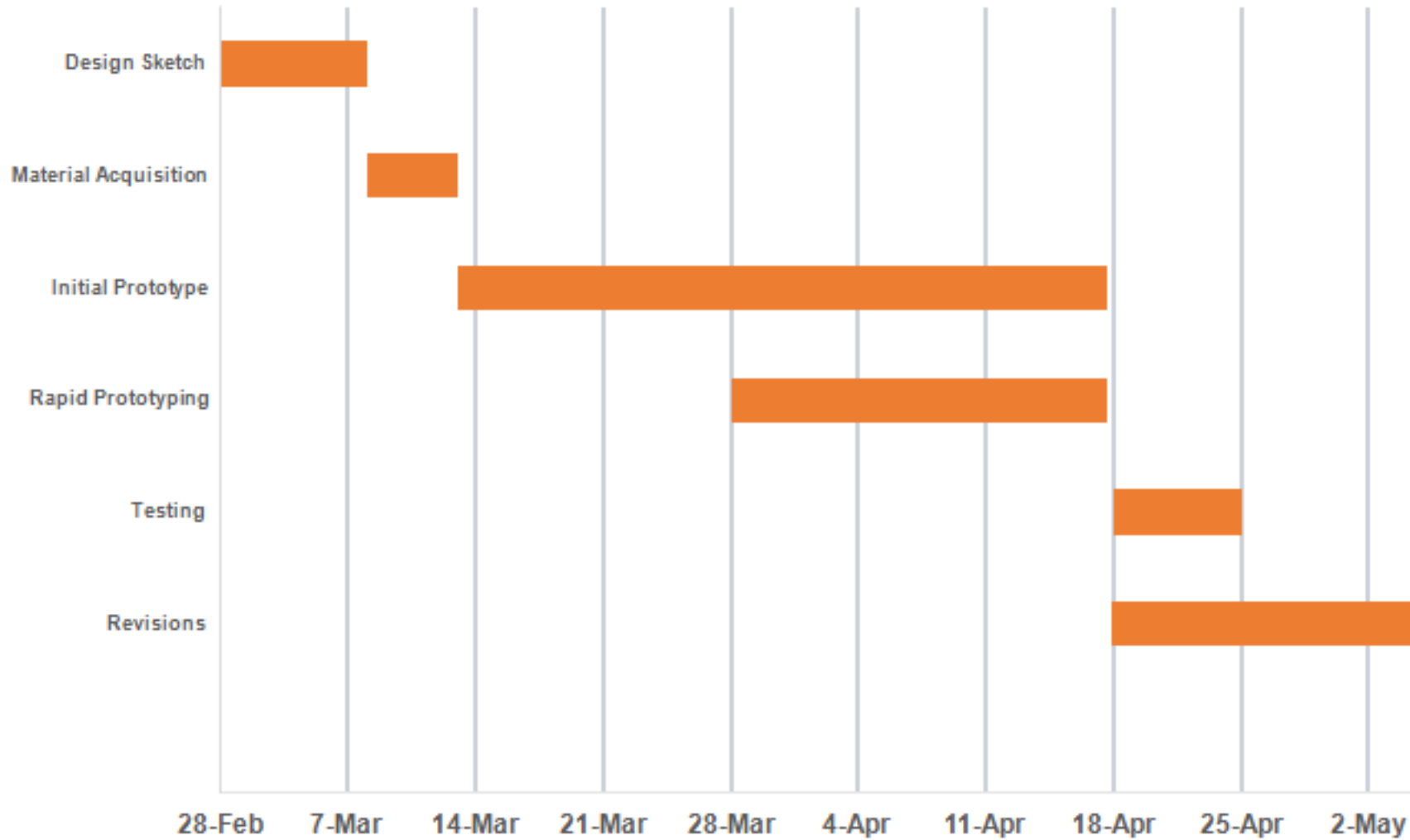
World domination: **Not Yet Met**

Maximum

Previous Schedule



Revised Schedule



Dependencies

Dependency	Reason for dependency	Impact	Resolution	Alternative
TEP device	Output tubing interface	No interface	Resolved	N/A
Rapid Prototyping	Costs, qualifications	Less streamlined design	Almost Resolved	Do without
Voluntary Patient testing	Ethics	Cannot test device	Considering Alternative	Perform on realistic model

Questions?

Be even more gentle.