



Conway Chair Conversation

FROM INNOVATION TO DISSEMINATION

- Information about the new CNH Biodesign Program.
- Overview of what happens after creating an innovation with special emphasis on disseminating results including publication and other forms of dissemination.



The Biodesign Program

Sheikh Zayed Institute for Pediatric Surgical Innovation



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Managing Director Children's National Innovation Ventures

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Professor of Anesthesiology Pediatrics and Critical Care Medicine The George Washington University

The Biodesign Program

Funded by Innovation Venture, SZI & FDA Grant



Aims:

1. Educate clinicians about innovation methods and collect clinical problems that need attention.
2. Share CNH clinical needs with UMD bioengineering students and leverage promising capstone projects for further development in our Biodesign Program.
3. Develop novel and needed medical products intended for commercialization.

What is dissemination?

Dissemination is **the targeted distribution of information and intervention materials to a specific public health or clinical practice audience**. The intent is to spread knowledge and the associated evidence-based interventions. Dissemination occurs through a variety of channels, social contexts, and settings.



Dissemination
through the lens of
a designer/
entrepreneur...



What is marketing?

Marketing is **the activity, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.**



2016 Stanford Bvers Center for Bioscience



Salon.com



R&D/Manufacturing	FDA/Regulatory/IP	Clinical Studies/Early Customer Adoption	Commercial Launch
Iterative Prototyping	Biocompatibility/ Sterility	Product Evaluations	Free Samples
Engineering Drawings	Regulatory Report	Multi-Center Trials	Trade Shows
Patterns	Verification and Validation (V&V)	Value Analysis Assessments	Publishing in Trade Journals
Molds/Tooling	Intellectual Property Filing (Patent)	Publishing Studies in Journals/Poster Presentations	Sales/Licensing/Acquisition

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Dissemination
means...

sharing the story.

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What?

(the problem)

Dissemination
means...
sharing the story.

What?

(the problem)

Now What?

(new innovation)

Dissemination
means...
sharing the story.

What?

(the problem)

Now What?

(new innovation)

So What?

(making meaning from data)

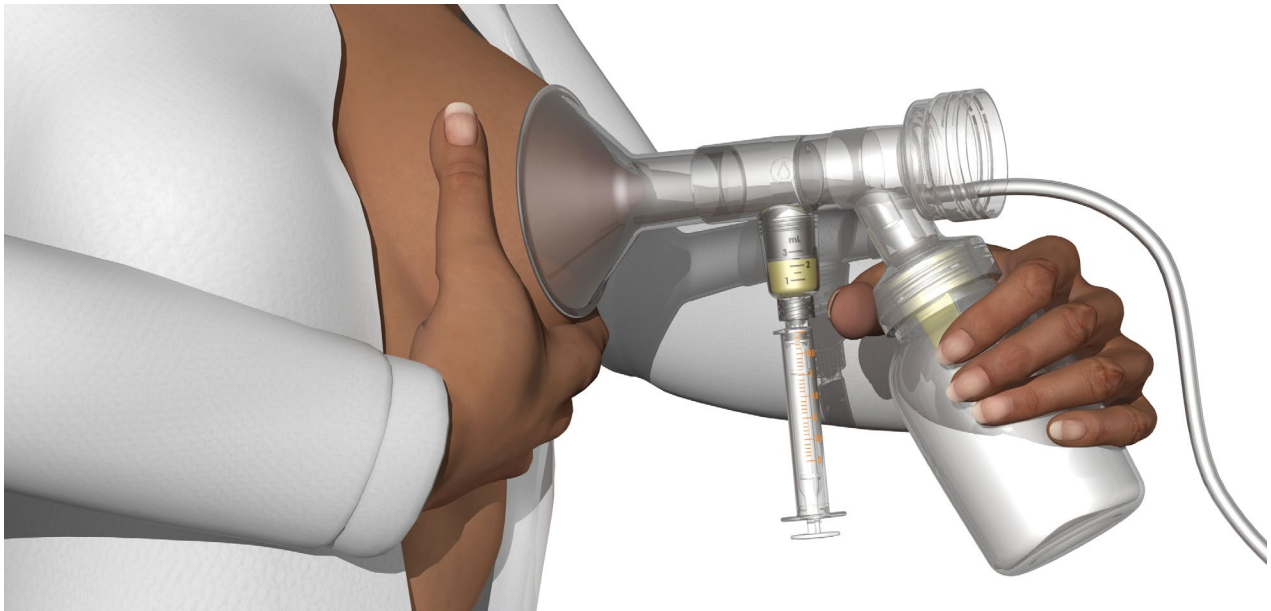


For me, meaning is created when we can translate knowledge into something tangible to help people live healthier lives.



Kangarobe

Primo-Lacto: A closed system for colostrum collection





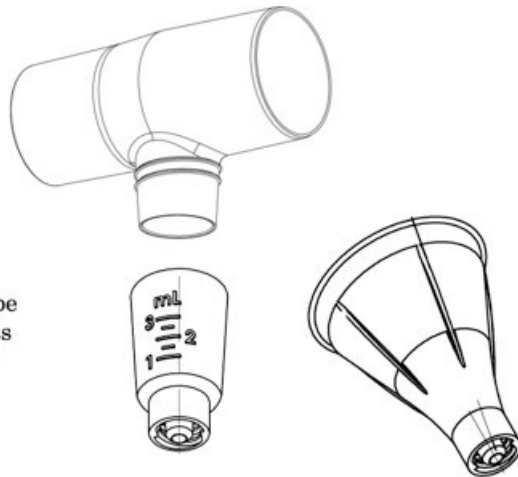
Clinical Need

Photos from Stanford School Of Medicine.
Early Hand-Expression Increases Later Milk Production, by Dr. Jane Morton MD.

There is a need to effectively collect colostrum in the first days of lactation and safely administer a mother's "liquid gold" to the neonate.

We have recently completed a clinical pilot study at three different hospitals:

Sharp Mary Birch in San Diego, CA, John Muir Hospital in Walnut Creek, CA, and Indiana Memorial Hospital in South Bend, IN. The most important critique from mothers, LCs and nurses has been that the connection between both the hand expression funnel and adapter cup must be more secure, as there were a few incidents where the cup detached from the adapter during a pumping session. Therefore I have added a threaded connection to ensure there is a tight fit.



RESEARCH ARTICLE

A prospective clinical study of Primo-Lacto: A closed system for colostrum collection

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Abstract

Background

Colostrum is the first nutritional liquid that comes out of the breast during lactation. Colostrum collection can be challenging due to the small volume produced, and because breast pumps are not designed for colostrum collection. Besides pumping colostrum, the generally accepted practice is to use any available container to hand-express colostrum. Transfer between containers may lead to contamination, higher chance of infection and loss of colostrum. Our aim was to understand if a dedicated colostrum collection system (Primo-Lacto, Maternal Life, LLC, Palo Alto, CA) is more effective than standard hospital practice.

Methods

Mothers who delivered preterm infants < 34 weeks gestation and mothers with non-latching infants were approached within 24 hours of delivery. Surveys were distributed to participating patients (n = 67), and nurses or lactation consultants (n = 89). Mothers compared ease of use, their confidence level and satisfaction with the amount collected during standard practice vs. the colostrum collection system. Nurses or lactation consultants compared ease of use, differences in colostrum loss and time invested collecting. Quantitative data were analyzed using the Wilcoxon signed rank test and qualitative data were analyzed with grounded theory methods.

OPEN ACCESS

Citation: Kristensen-Cabrera AI, Sherman JP, Lee HC (2018) A prospective clinical study of Primo-Lacto: A closed system for colostrum collection. PLoS ONE 13(11): e0206854. <https://doi.org/10.1371/journal.pone.0206854>

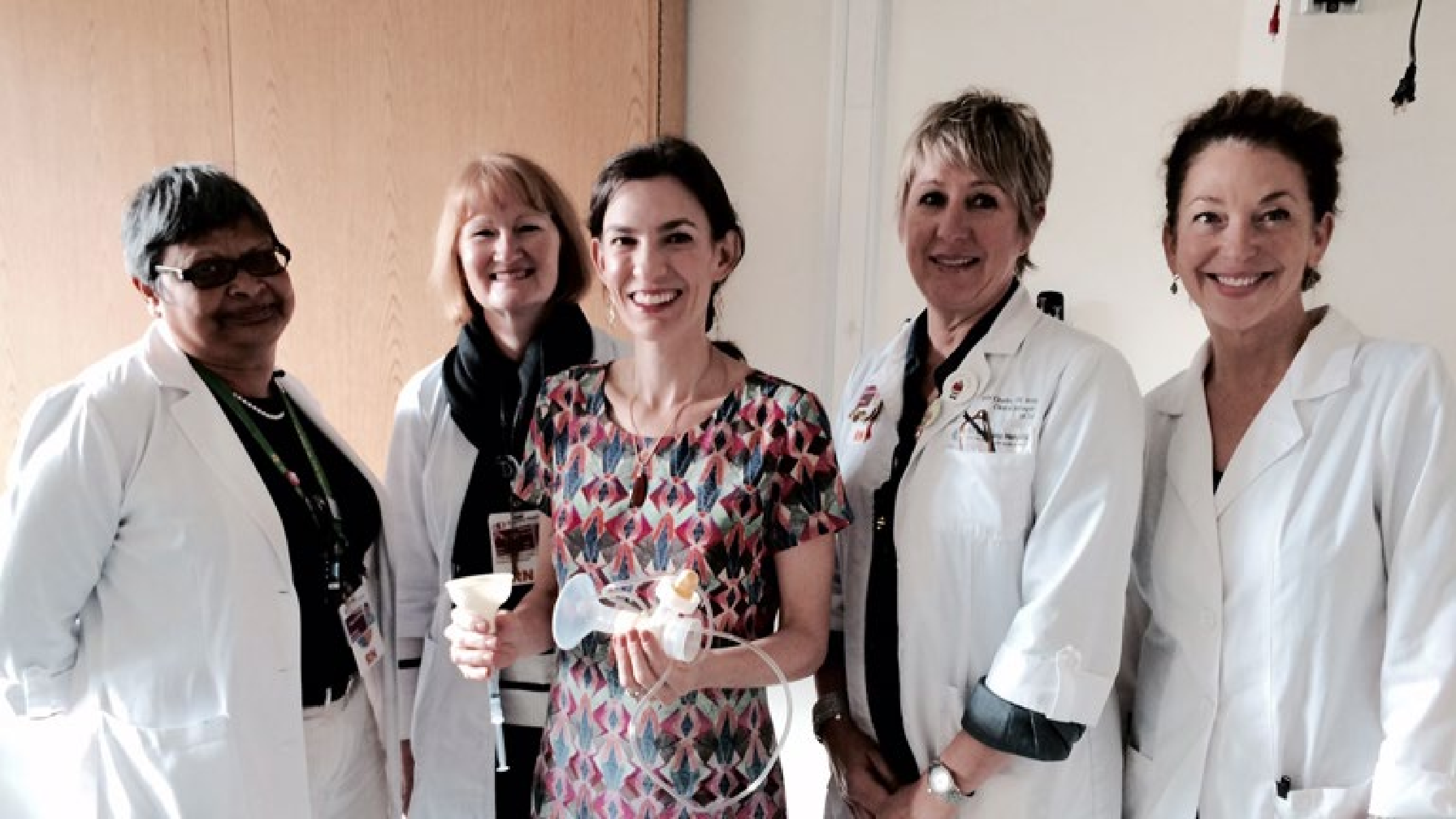
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Lansinoh.
Primo-Lacto®
 Colostrum Collection System

Designed to increase the volume of usable colostrum for neonates

The first closed system kit for colostrum collection & feeding. Designed to improve the experience for both healthcare professionals and patients.

- Connects directly to an oral feeding syringe
- Eliminates the need for multiple containers
- Multi-functional system for hand or pump expression
- Available for Medela® and Ameda® breast pump kits

Clinician Perspective Analysis
 In a study of 67 mothers with preterm infants ranging from 25 to 38 weeks gestational age, 87 clinician observations recorded the following results:

Reduce wasted colostrum*
 Healthcare providers estimated more than a 40% decrease in the amount of colostrum wasted when using the Primo-Lacto® for hand expression and a 30% decrease in the amount of colostrum wasted when using the Primo-Lacto® for pump expression.

Improved ease of use for professionals
 Designed to promote safer practice and convenience, minimize set-up time, and aid transition from colostrum collection to oral feeding of infant. Healthcare professionals reported a significant improvement in ease of use with the Primo-Lacto®.

Increased patient satisfaction levels
 Primo-Lacto® has a unique interface designed to ensure optimal colostrum collection for improved patient confidence & comfort. Patients reported a significant increase in satisfaction when using the Primo-Lacto®.

For more information, please contact Jamie Palla: jpalla@lansinoh.com or 443-822-3698

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35TH ANNUAL CONFERENCE
 SAVANNAH • 2019

Learning Center Schedule

Wednesday, October 9
 5:20 – 5:50 pm
Guardian™ Human Milk Warmer Improves Growth in Premature Infants
Sponsored by: Medela LLC
Presented by: Susan Bedwell DNP, APRN, CCNS-N

Thursday, October 10
 11:10 – 11:40 am
Lansinoh's Primo-Lacto® Colostrum Collection System
Sponsored by: Lansinoh
Presented by: Jamie Palla & Jules Sherman

11:50 am – 12:20 pm
Advances in Neonatal Care Writers Workshop
Presented by: Debra Brandon, CCNS, FAAN, PhD, RN

12:30 – 1 pm
Determinants of Gastrointestinal Inflammation in Very Low Birth Weight (VLBW) Infants*
Presented by: Katelyn M. Desorcy, RN, BSN

2:40 – 3:10 pm
Searching for Evidence: A Short and Sweet Synopsis
Presented by: Tiffany A. Moore, PhD, RN

Friday, Oct 11

Lansinoh.

Primo-Lacto
 Colostrum Collection System

Improve colostrum collection and feeding for neonates



CONNECT



EXPRESS



RELEASE

The Empathy Project



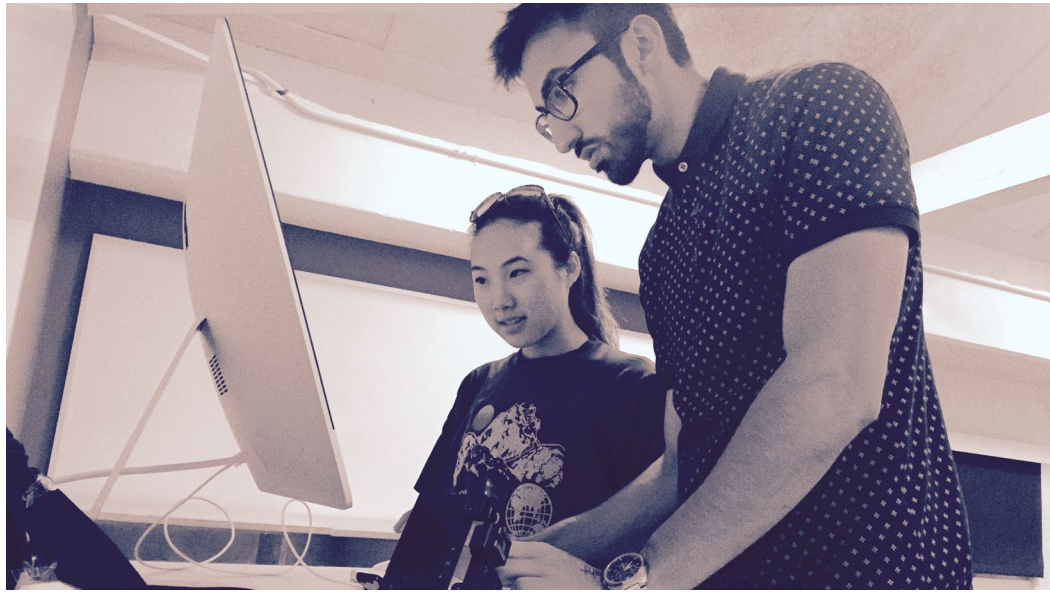
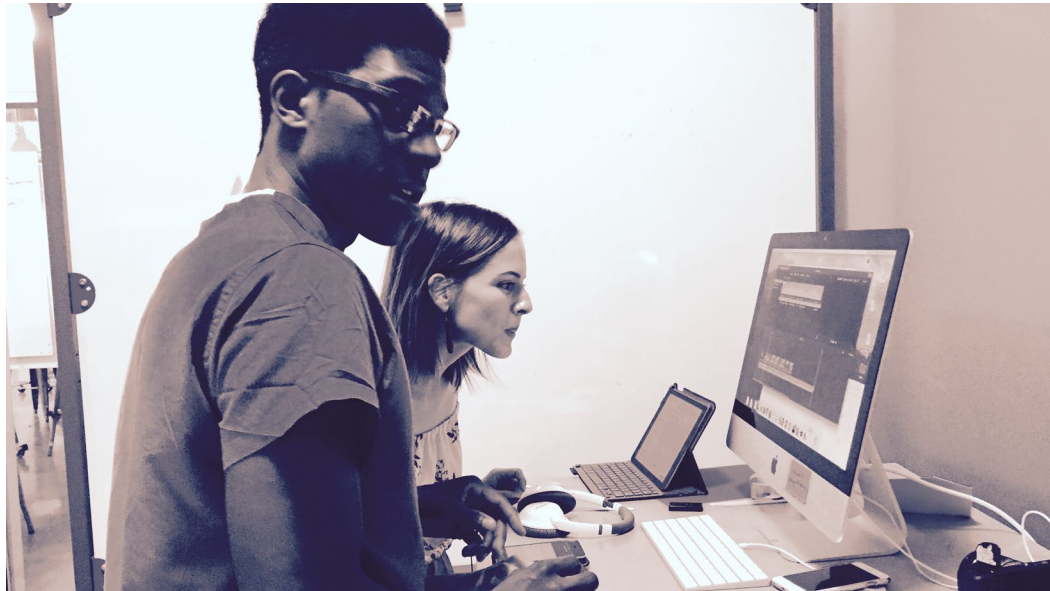
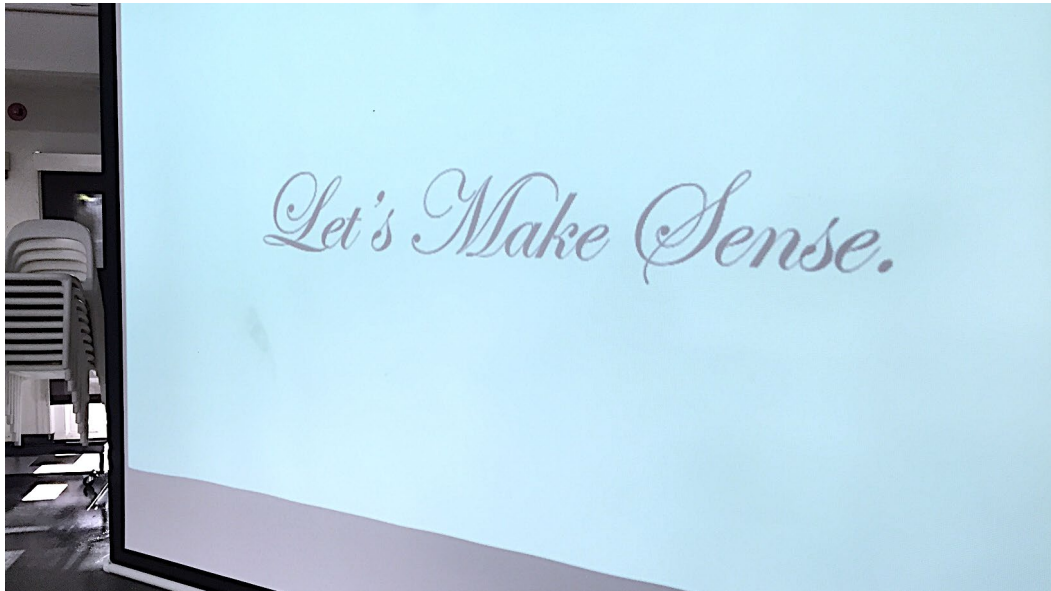
HASSO PLATTNER
Institute of Design at Stanford

Gaining Patient Perspectives On Disease Through Storytelling

d. 
HASSO PLATTNER
Institute of Design at Stanford



Come be a part of a new pilot class! A maximum of 10 students will be selected. You will learn practical ethnography and video media skills while experiencing a “day in the life” of a patient. Your final group project will be a video that tells the story of a patient you have the opportunity to interview and shadow.







Gaining Perspectives on Patient and Family Disease Experiences by Storytelling

Hamsika Chandrasekar, MD; Seamus Harte, MFA; Jules Sherman, MFA; K. T. Park, MD; Henry C. Lee, MD

From the Stanford School of Medicine (Dr Chandrasekar), Palo Alto, Calif; Hasso Plattner Institute of Design (Mr Harte and Ms Sherman); Division of Pediatric Gastroenterology (Dr Park), Stanford School of Medicine; and Division of Neonatology (Dr Lee), Stanford School of Medicine, Stanford, Calif

The authors have no conflicts of interest to disclose.

Address correspondence to Henry C. Lee, MD, Division of Neonatology, Stanford School of Medicine, 1265 Welch Rd, Stanford, CA 94305 (e-mail: hlee@stanford.edu).

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KEYWORDS: empathy; storytelling; undergraduate medical education

ACADEMIC PEDIATRICS 2018;■■■:■■■-■■■

WHAT'S NEW?

A workshop on video storytelling of patients' lives enabled medical students to better understand disease experiences of patients and families.

BACKGROUND

EMPATHY IS A key element of patient–doctor relationships and can be defined as a multidimensional concept of perspective, compassion, and standing in a patient's shoes.¹ Prior studies have reported decline in medical students' empathy.^{2–4} Several factors may contribute to this trend, including long work hours, technology, and time limitations for patient interactions.⁴

Clinician educators have developed interventions in order to cultivate greater levels of student empathy. These include narrative and creative arts, training in communications skills, and empathy-focused training.⁵

We designed a workshop on storytelling for medical students in which the final project was “A Day in the Life…” patient video. One goal was to evaluate whether this storytelling experience helped students better understand and empathize with patients' lives outside the clinical setting.

EDUCATIONAL APPROACH AND INNOVATION

Because this was a pilot project, we invited students at any level to participate. Eight second-year medical students, 1 third-year student, and 2 fourth-year students participated in 1 of 2 cycles. Five patient families volunteered as subjects. Students and patient families were given gift cards as a token of appreciation for participating.

Each workshop cycle consisted of 3 in-class sessions over 2 weeks (Figure). Four teams consisted of 2 students, and 1 team had 3 students. Four of 5 patient families had a child

with inflammatory bowel disease. One family had an experience of surrogate parenthood and resulting preterm twins in the neonatal intensive care unit. In-class sessions consisted of instruction and assignments on these topics: creating stories within assigned constraints, story arc, and video/audio editing. Between sessions, students completed assignments designed to develop video design skills. They also met, interviewed, and recorded interactions with patients and families.

Separate focus groups were held for medical students and then for patients and families at the end of the project. The goal was to explore how patients and families felt about the experience, and how students felt this activity could supplement their training. Examples of questions included the following: 1) What was the most surprising outcome of this experience? 2) How did the students who interviewed you present your life and challenges? 3) How does a class like this potentially fit into medical school?

Focus groups were audiorecorded and transcribed. Dedoose 5.2.1 (SocioCultural Research Consultants, Los Angeles, Calif) was used to manage data and facilitate analysis. We used a form of thematic analysis for our approach.⁶ Two authors independently coded transcripts and then reviewed each other's coding and themes. Subsequent iterations were conducted until consensus was achieved. We did not seek respondent validation. This project was approved by the Stanford institutional review board.

RESULTS

Videos are available online (<http://www.redesignhealthcare.org/the-empathy-project/videos/>) under “Final student videos”. Seven students participated in the student focus group. Three families participated in focus group discussion. The remaining 2 families were interviewed separately.

REDESIGN HEALTHCARE

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Class Home | [Video Assignments](#) | [Inspiration](#) | [Class Photos](#) | [Participating Medical Students](#) | [Patient Issues](#) | [Instructor Details](#)

The Empathy Project 2017

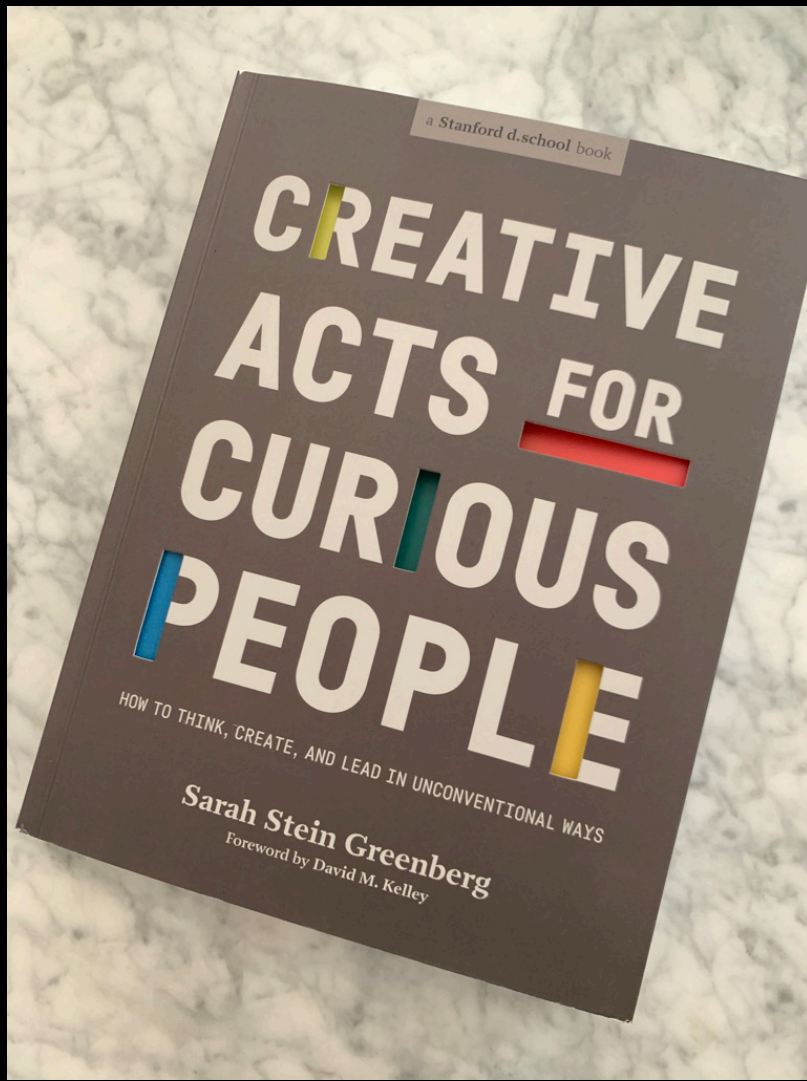
“Empathy isn't just something that happens to us – a meteor shower of synapses firing across the brain – it's also a choice we make: to pay attention, to extend ourselves. It's made of exertion, that dowdier cousin of impulse. Sometimes we care for another because we know we should, or because it's asked for, but this doesn't make our caring hollow. This confession of effort chafes against the notion that empathy should always rise unbidden, that genuine means the same thing as unwilled, that intentionality is the enemy of love. But I believe in intention and I believe in work. I believe in waking up in the middle of the night and packing our bags and leaving our worst selves for our better ones.” — [Leslie Jamison](#)

[Published Manuscript:](#)

[Gaining Perspectives on Patient and Family Disease Experiences by Storytelling](#)

Gaining Patient Perspectives On Disease Through Storytelling







Problem:

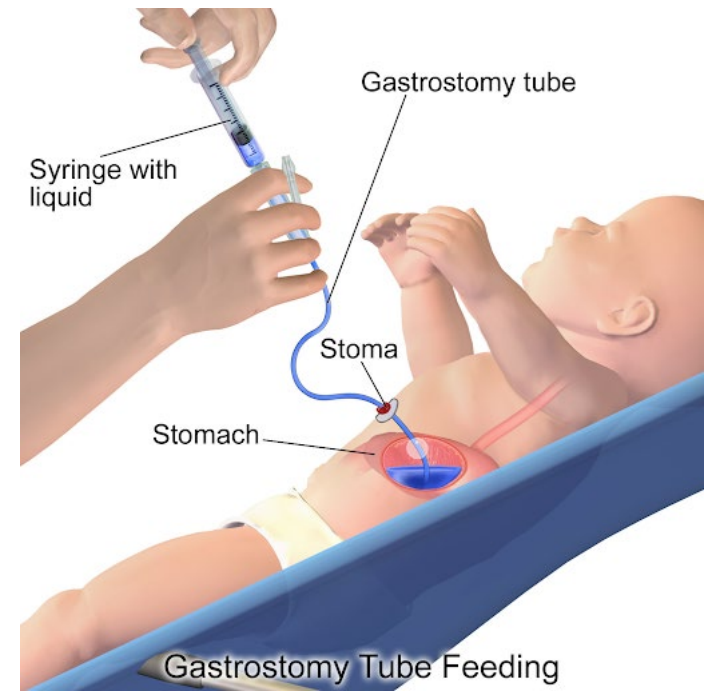
Disconnection of tubes/lines/drains may go unnoticed in pediatric or adult patients which can exacerbate their health condition and leading to longer hospital stays.

Negative Outcomes:

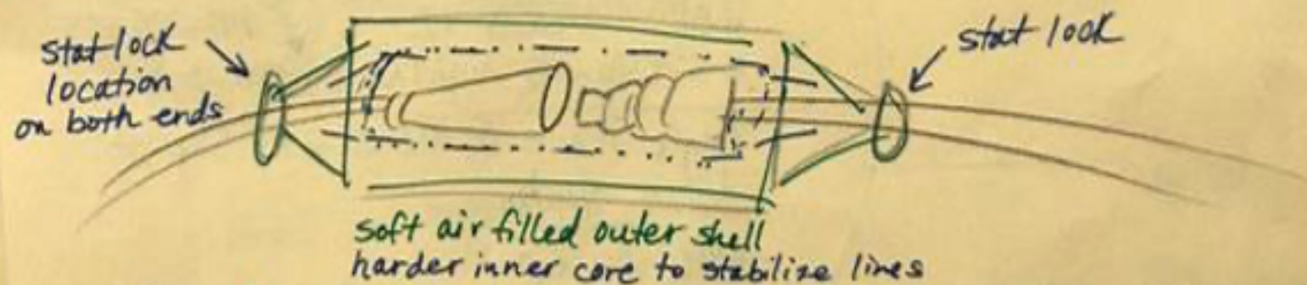
- Bloodstream infections
- Inaccurate I/O
- Inaccurate drain
- Leaked IV fluids
- Leaked IV medications

Need Statement:

A way to secure and prevent disconnections between a patient and life-saving fluids, nutrition, and antibiotics in order to reduce infections, and hospital stay.



- Offer different sizes - Central lines connections/drainage tubes
- Hard inner core to protect tube connections
- Surrounded by an air filled outer shell, soft
- Back side would have the ability to be adhered to patient
 - Duoderm-like adhesive allowing skin to breathe... OR...
- Possibly use a grip lock/stat lock-like device on either end of the tube.

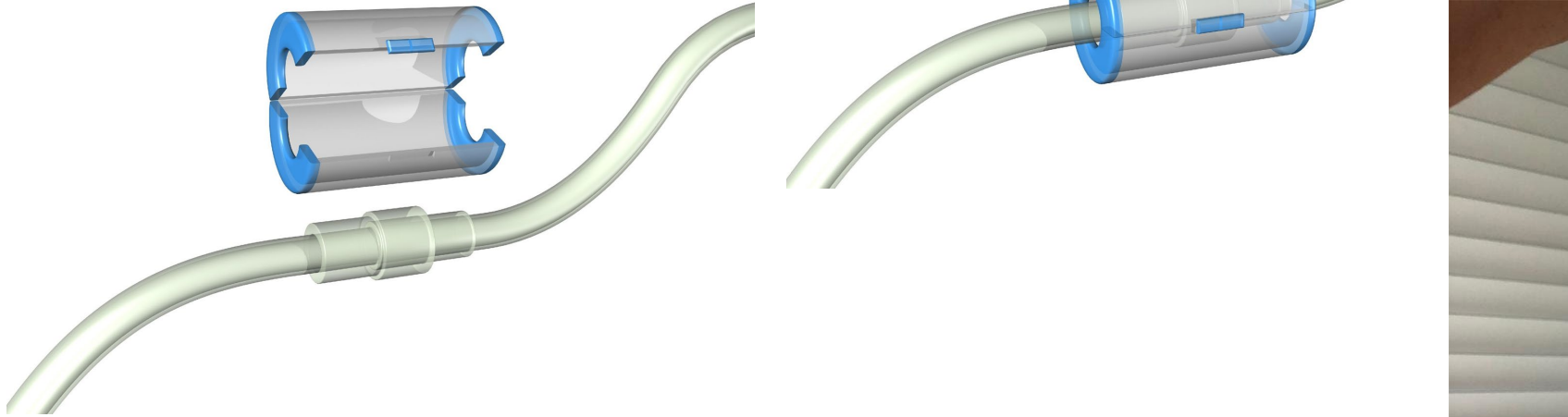


- Duoderm

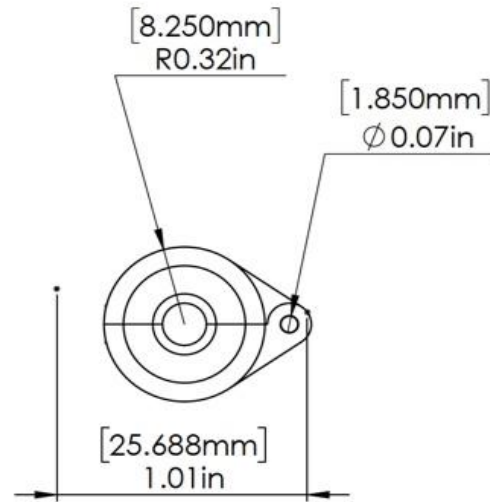
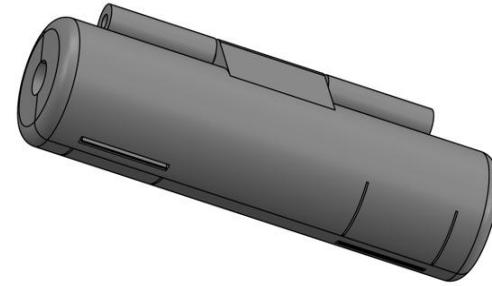
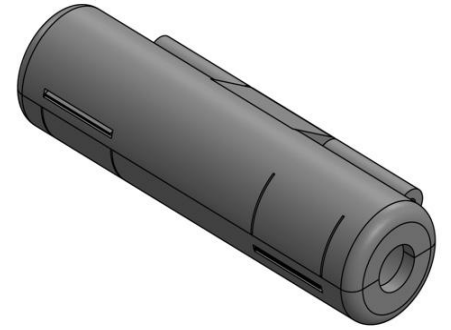
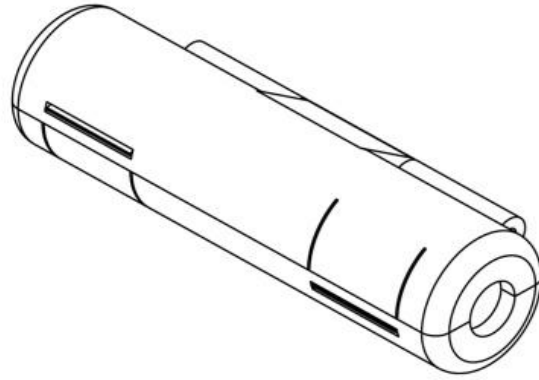
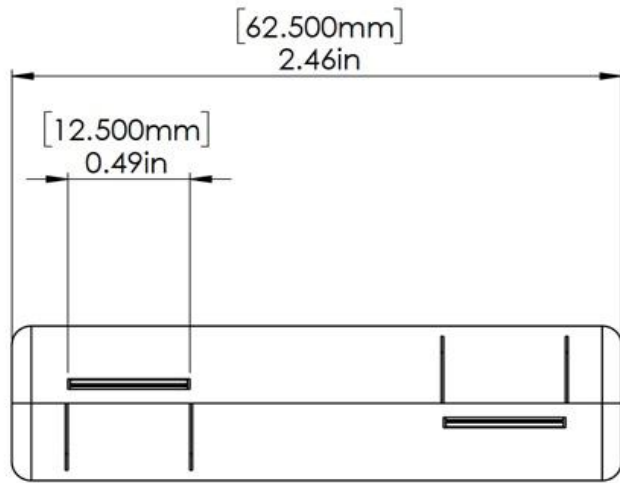
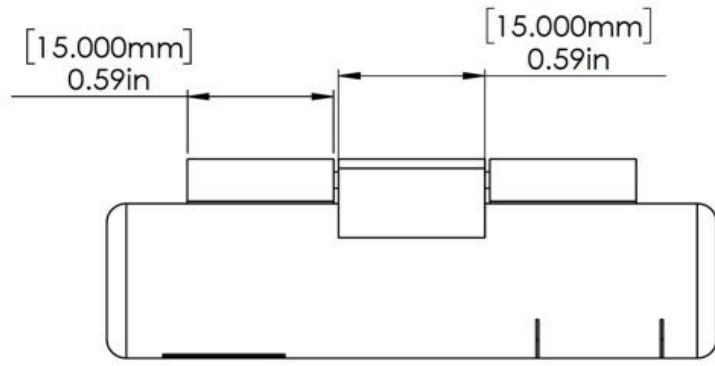
Connector Protector initial concept sketch by, Lori Irvin, BSN, RN, CPN

"Connector Protectors"

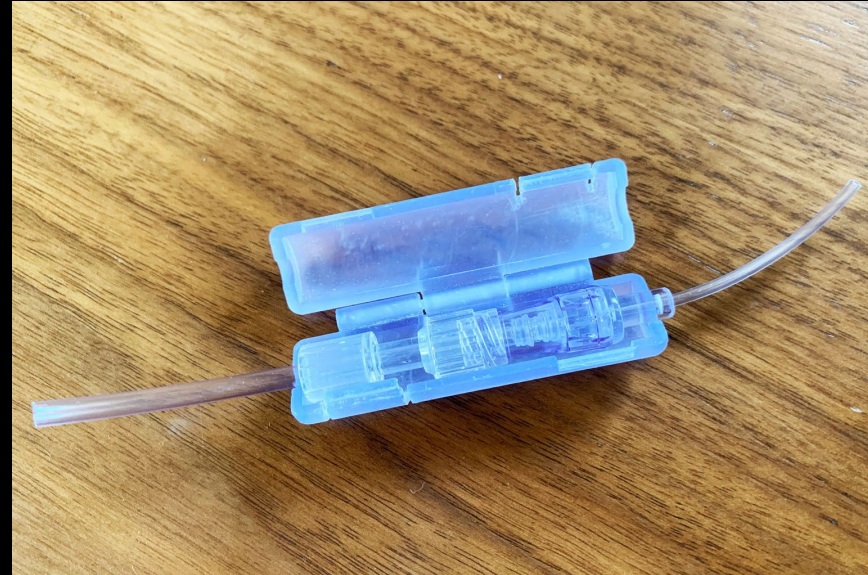
1. Tamper proof connections that can only be opened by nurses
2. Have a clear window for easy visualization of the site



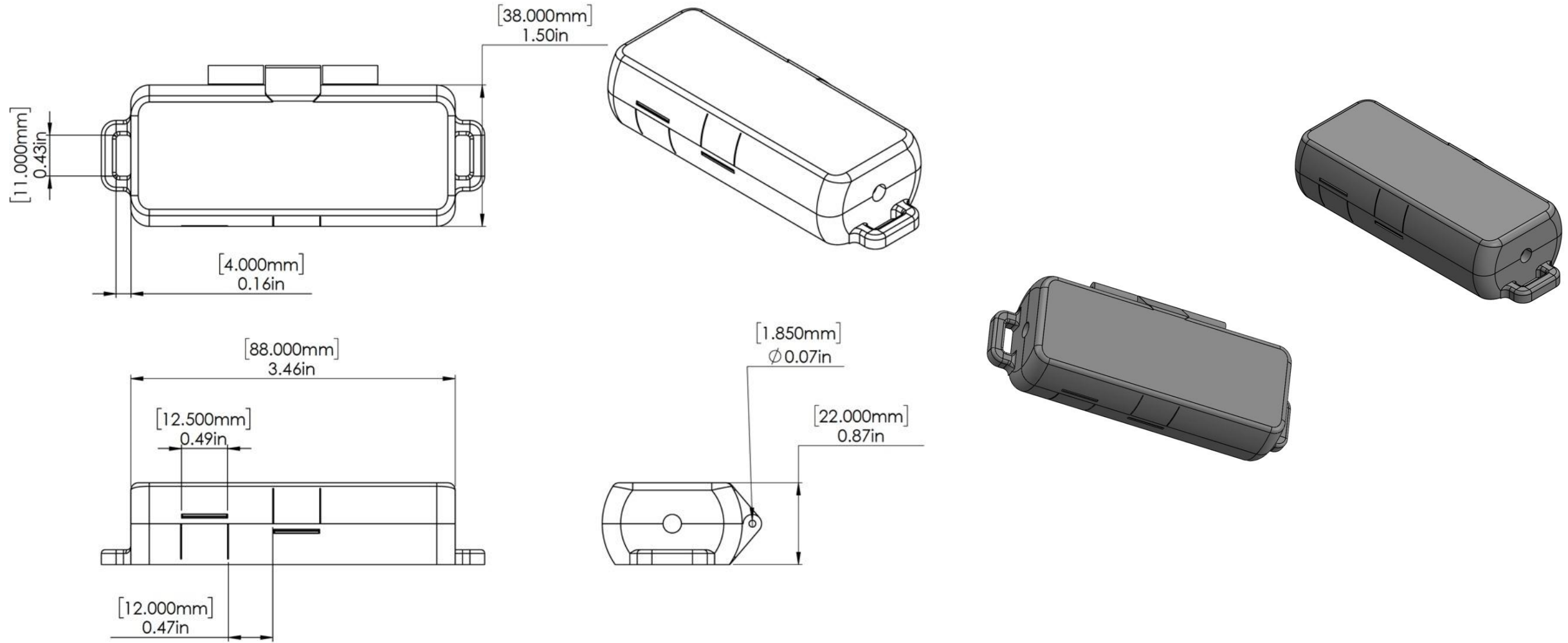
IV Line Connector Protector Prototype-Iteration 4



IV Line Connector Protector Prototype-Iteration 4

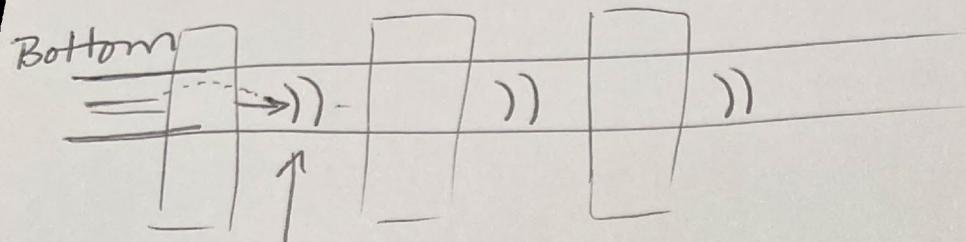


G-Tube Line Connector Protector Prototype-Iteration 4

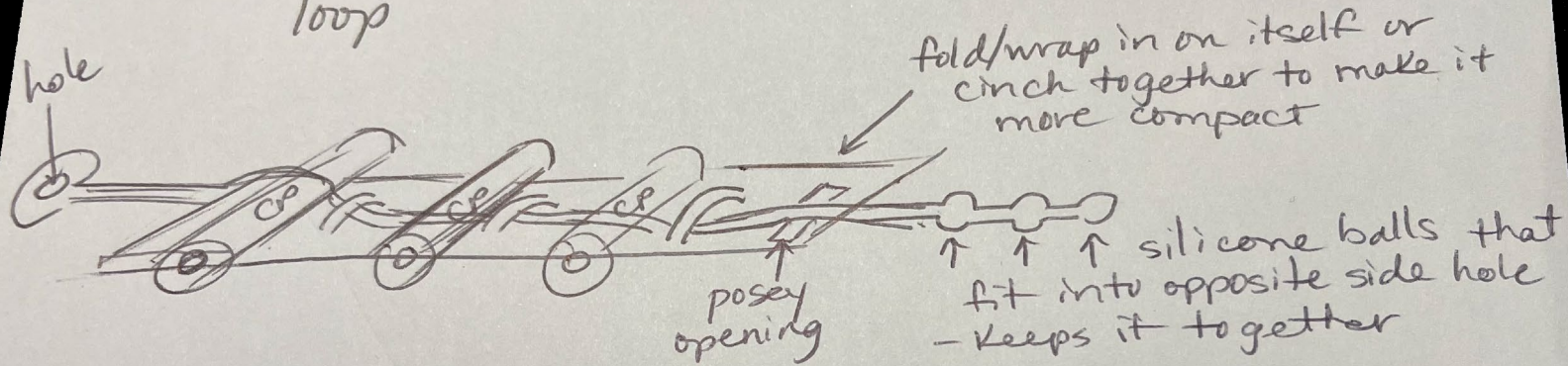


G-Tube Line Connector Protector Prototype-Iteration 4



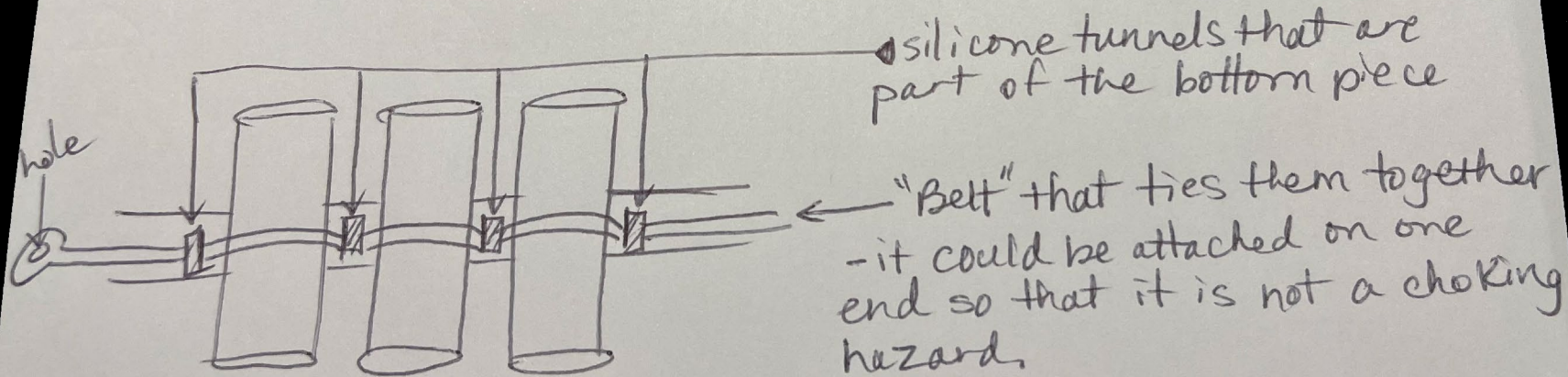


under
small
loop



fold/wrap in on itself or
cinch together to make it
more compact

↑ ↑ ↑ silicone balls that
fit into opposite side hole
- keeps it together



silicone tunnels that are
part of the bottom piece

"Belt" that ties them together
- it could be attached on one
end so that it is not a choking
hazard.

Triple IV Line Connector Protector Holder Concept

