



Live Well + Cincinnati Children's

Collaborating since 2013



Agenda

Section 1: Introduction

Live Well Collaborative and our partners.

Section 2: Our Work

An overview of our partnership with Cincinnati Children's Hospital and the project work completed over the past eight years.

Section 3: Our Process

A high-level summary of our process and what your team can expect to get out of a semester experience with us.

Section 4: Case Studies

Sample projects that demonstrate Live Well's value for Cincinnati Children's Hospital.

Welcome to Live Well Collaborative

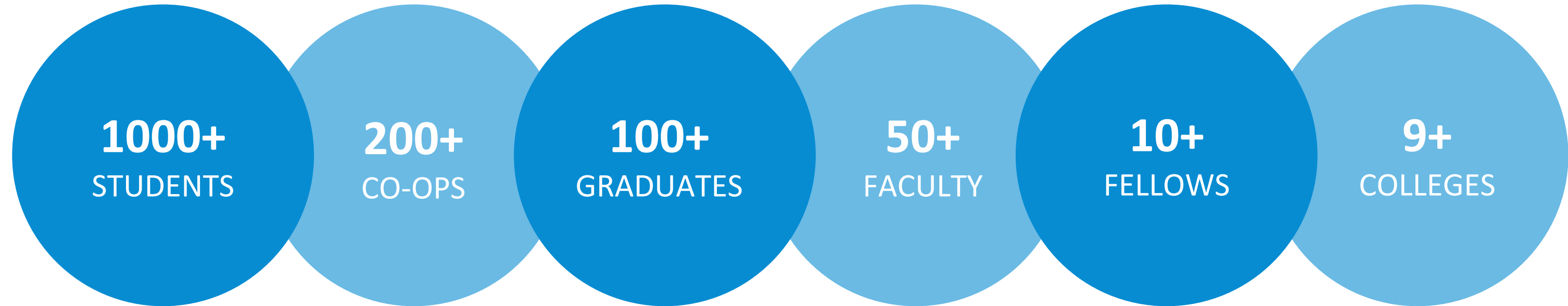
The Live Well Collaborative is a nonprofit founded in **2007** by the University of Cincinnati and P&G.

During 16-week semesters, Live Well Collaborative uses a validated **design thinking process** to translate user centered research into products and services that meet the needs of the end user.



It is a unique **academic-industry** innovation center that leverages the vitality and unbiased innovation capability of multi-disciplinary teams of UC faculty and students.

Who We Are



We are a design led, faculty advised, student driven, multi-disciplinary innovation incubator.

We tailor teams and deliverables to meet the clients' needs, from **upstream pipeline development** to **lean solutions**.

- + Our qualitative research is grounded in viability.
- + We have developed a diverse set of research tools that drive unique user insights.
- + Concepts are co-developed and tested with all stakeholders.

Our Partners

Live Well has worked with **over 18 corporate and institutional partners** since its creation in 2007.



Travel

Consumer Goods

Healthcare

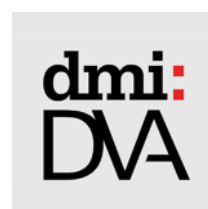
Recognition

ADL 1-2-3 Device

Cancer Blood Disease Institute
Dr. John Perentesis Dr. Christopher Dandoy



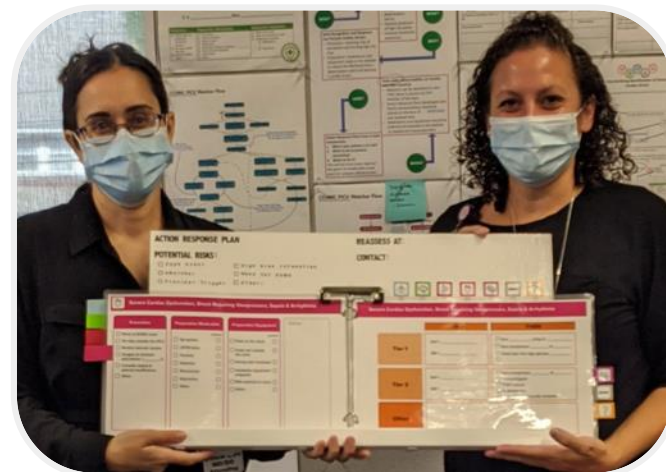
2020 Fast Company
Innovative Healthcare
Honorable Mention



2019 dmi:
Design Value Award
Honorable Mention

PICU Awareness

Pediatrics
Dr. Maya Dewan



2021 Fast Company
Innovative Healthcare
Honorable Mention

Resources for SCD Patients

Comprehensive Sickle Cell Center
Dr. Charles Quinn Lynette Fenchel, APRN



2021 dmi:
Design Value Award
Third Place

Palliative Care Journey Map

Palliative Care
Dr. Rachel Thienprayoon



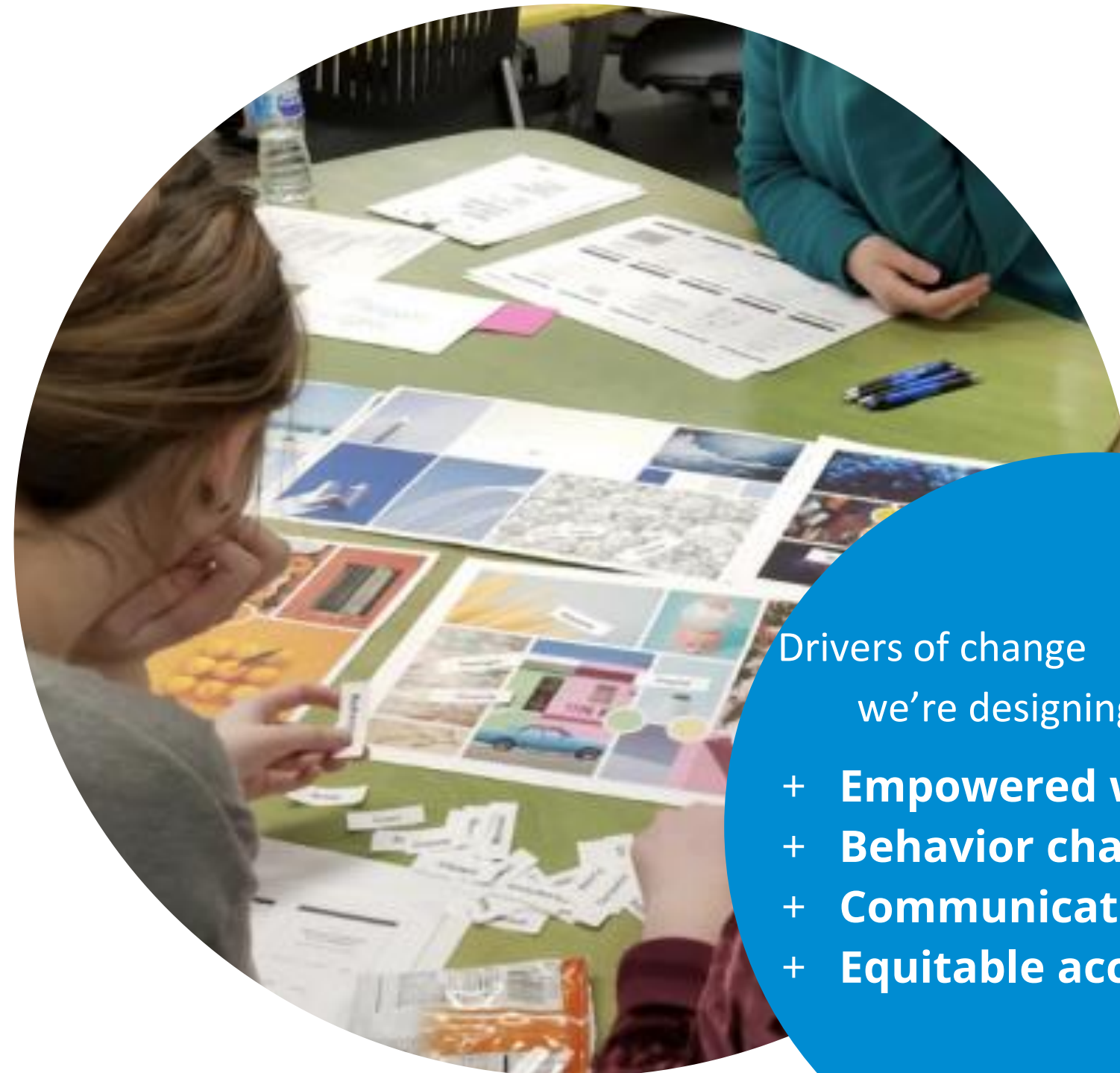
2021 Fast Company
Innovative Healthcare
Finalist

Our Collaborative Work

Let's Tackle These Challenges Together

As the future of healthcare shifts towards **value-based, human centered medicine**, Live Well can help Children's teams to understand the intricacies behind their complex and behavior-based challenges.

By working collaboratively together, we can continue to design products and services that **create ecosystems of wellness for patients, parents, and clinical members.**



Drivers of change

we're designing for:

- + **Empowered wellbeing**
- + **Behavior change**
- + **Communication Approaches**
- + **Equitable access**

We're Bringing . . .



Multi-Disciplinary Teams

Our teams are design led, faculty advised, and comprised of students across design, engineering, and business based on your specific project needs. This brings **holistic problem solving** to any challenge the team is faced with.

A Fresh Perspective

Student thinking brings a fresh perspective that **defies old ways of thinking**. This brings your team new insights and novel approaches and solutions to the challenge you face.

User Centered Design Thinking

The user is at the core of every decision we make. We make sure to test our concepts with all stakeholders so that the final refined solution is **implementable and effective**.

You're Getting . . .



A Collaborative Co-Design Experience

Your team is an integral part of our process. You bring valuable insights and information and in return you'll **experience the design thinking process firsthand.**

Qualitative Research with a fresh perspective

Our team develops **qualitative research tools designed to drive insights** to the challenges you are trying to understand.

Testable Solutions in 16 Weeks

Our project teams operate in 16-week sprints, bringing your team **clarity on the scope of the problem** with a testable product/service concept in a fraction of the time.

The Results

Project results range according to the initial design challenge. Each project team is specifically selected based on the capabilities needed for your project. A high-level breakdown of our potential capabilities across the projects we've completed with Children's is below:



UX/UI Web Design



UX/UI App Design



Animation Video



Graphic Print Design



Physical Product



System/Service



Extended Reality



Spatial/Interior



Fabric/Fashion



In collaboration with:

- Comprehensive Sickle Cell Center
- Cancer and Blood Disease Institute
- Pediatric Primary Care Center
- The Heart Institute
- Behavioral Medicine
- Transition Medicine
- Patient Services



A Few Project Highlights



Educational Video Library

Cancer and Blood Disease Institute

15 animated videos with more than 70,000 views.



Foster Care iCareGuide

Behavioral Medicine

Clinically tested in a study with 151 patients. The majority of adolescents reported that the iCareGuide was somewhat (46%) or very helpful (42%).



Anesthesia Induction Redesign

Pediatrics

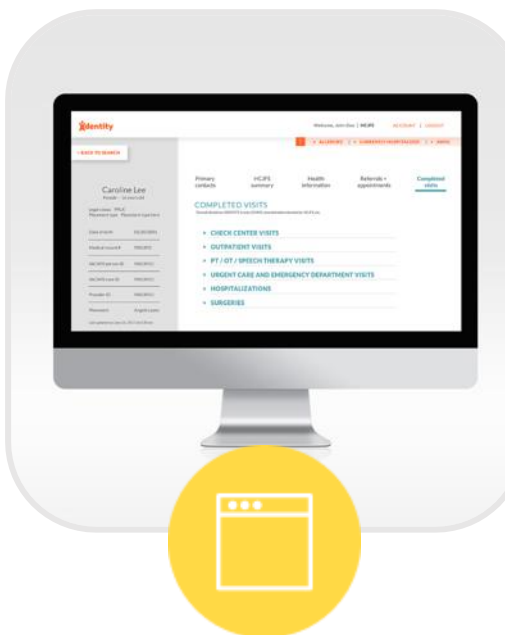
Currently being tested across 4 Children's Hospitals nationwide. Commercialization discussions in progress.



ADL 1-2-3 Device

Cancer and Blood Disease Institute

2020 Innovation Health Projects Honorable Mention by Fast Company and 2019 DMI Value award winner.



IDENTITY Portal

Behavioral Medicine

The pilot system launched April 9, 2018, with 66 child protection caseworkers and 5 clinicians. Commercialization discussions in progress.



iTransition

Sickle Cell

Milestone cards are being used in clinic to develop age-appropriate goals for transition.

What our Partners are saying:



About Continued Work with Us:

“I enjoy bringing the project back because even though I learned a lot in the [first] semester with you all, [you] have the expertise. . . I am furiously writing notes and thinking, ‘Why didn’t I think of that?!?’”

Dr. Abby Hess, APRN, DNP

About Patient Centered Design:

“[Live Well] makes sure that the patient voice is the center of the work.”

Dr. Lori Crosby, PsyD

About Empowering Patients:

“Live Well educates the patients and that education empowers them to not only be recipients of care but partners in care.”

Dr. John Perentesis, MD, FAAP

About Getting Started:

[Live Well Collaborative] helped us brainstorm and create our first material for patients and families. They were an excellent starting point for helping us get to where we are today with our education materials. Great experience!”

Lauren Smyth

About Inclusive Care:

“Live Well allows us to account for diversity and make sure that care is inclusive.”

Dr. John Perentesis, MD, FAAP

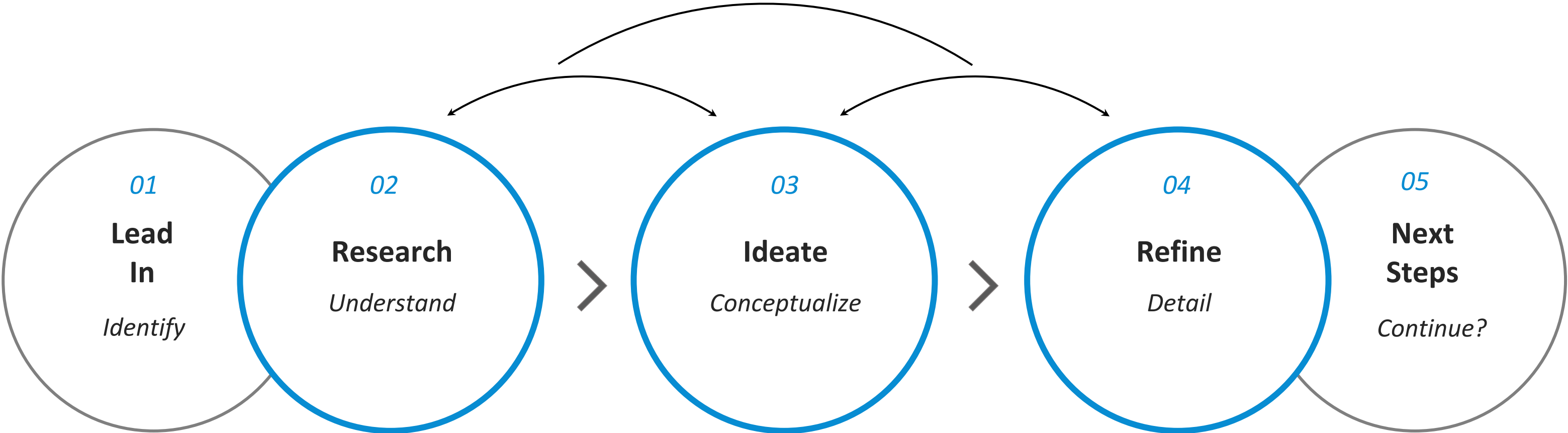
About Our Unique Perspective:

“I love working with [Live Well Collaborative.] The designers bring such a unique and human perspective to our challenges and problems. I’m thrilled to keep working with the group.”

Dr. Rachel Thienprayoon, MD, MSCS

Our Process

Our Co-creation Process



Planning

Studio Duration
16 Weeks

Continue?

The Breakdown

Lead In

01

- + Begins a semester ahead of your project start date.
- + Co-develop the scope and objectives of the project that determine the deliverables.

What to expect:

- **Design 101 Workshop**
Understand the design thinking process and frame your project opportunity.
- **Expectation Setting**
Define project goals and set expectations for the project and trajectory.
- **Project Brief Co-Development**
Alignment on deliverables and 16-week timeframe.

Case Studies

ADL 1-2-3 Device

Cancer and Blood Diseases Institute

Dr. John Perentesis, MD, FAAP

Dr. Christopher Dandoy, MD, MSc

2016 Spring - 2017 Summer



The Need

- + Infection prevention is a high priority.
- + CBDI patients are at an increased risk of BSI's due to weakened immune systems.
- + Infections lead to prolonged hospitalization, extensive antibiotic treatment, increased risk of mortality, and higher cost of care.

Our Approach

- + Evaluated existing ADL sticker chart system.
- + Determined automated process encouraged patients to be responsible for their own ADLs .
- + Physical device was developed that allowed patients to effortlessly collect and log points, while also engaging the caregiver.

ADL 1-2-3 Device



Two Generations of ADL 1-2-3

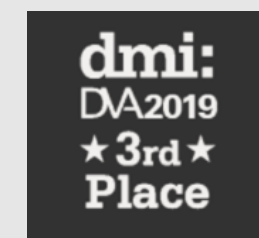
- + Stand-alone physical device
- + Mobile app that can be accessed on tablet/phone

Patient + Family Value

- + Goal oriented platform encourages patient adherence
- + Fostering infection prevention behaviors improve patient outcomes

Clinician Value

- + Automates burdensome tasks to improve efficiency
- + Enhanced ability to spread and reliably sustain patient and family engagement and self-management.

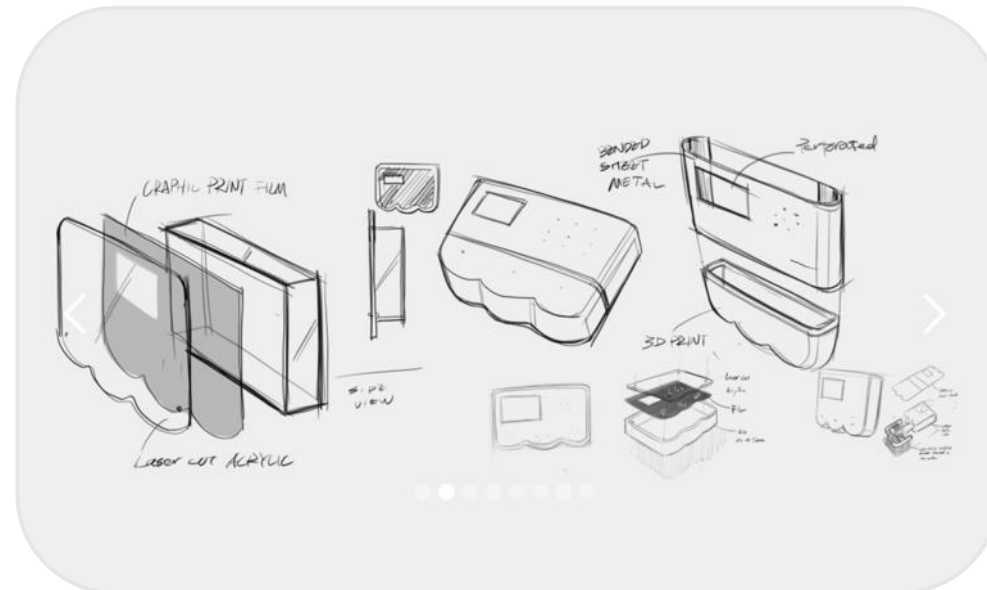


2019 DMI Design Value Award Winner

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2020 Innovative Health Projects Honorable Mention

The ADL 1-2-3 device was developed over the course of 5 semesters.



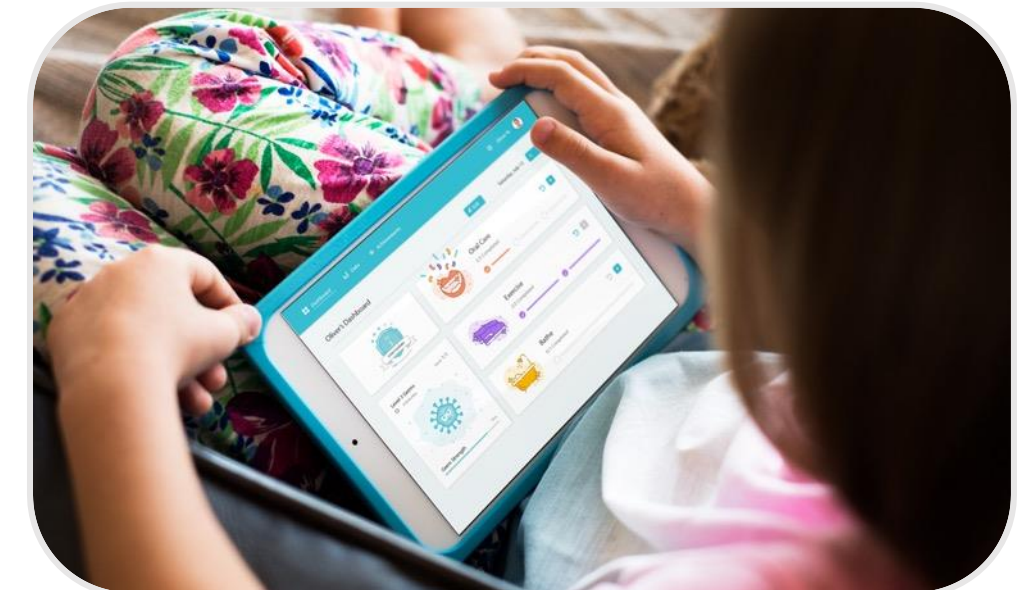
Sketching

Teams use sketching as a way to explore concepts and visually communicate their ideas before moving into developing physical prototypes that can be used for user testing.



Physical Prototyping

After extensive research and concept testing, teams are able to develop functional prototypes that can be handed off to your team for use in further, more comprehensive research or testing.



Design for Implementation

After multiple semesters of work, our team can work with your team to understand what design changes need to be made so that the solution can be implemented improve or compliment existing workflows.

ADL 1-2-3 Device

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Development of an automated device to support ADL 1-2-3 adherence, along with the theme of “Infection Prevention is a Team Sport,” has fostered an environment of co-production with patients and families in an effort to achieve unified team goals aimed fostering infection prevention behaviors to improve patient outcomes.

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Victoria Hickey RN, MSN

CBDI Video Library

Dr. John Perentesis, MD, FAAP

Summer 2015 - Spring 2019



The Need

- + Oncology patients and their families are frequently overwhelmed, confused, and uncertain about their future after getting a cancer diagnosis.
- + Complex concepts can be difficult to understand when explained only using text, further compounding current health literacy concerns, and negatively impacting shared decision-making.

Our Approach

- + We've created a series of animated videos that empower patients and families and families to make informed decisions.

CBDI Video Library

[See Full Project >>](#)

Each animated video contained in the library addresses a specific topic, combining a visual and verbal storytelling to explain complicated subjects and answer important questions such as, “What is Leukemia?”, “How Might Cancer Treatment Affect My Nutrition?”, “What is Proton Therapy?”, and “How Can I Preserve My Fertility?”.

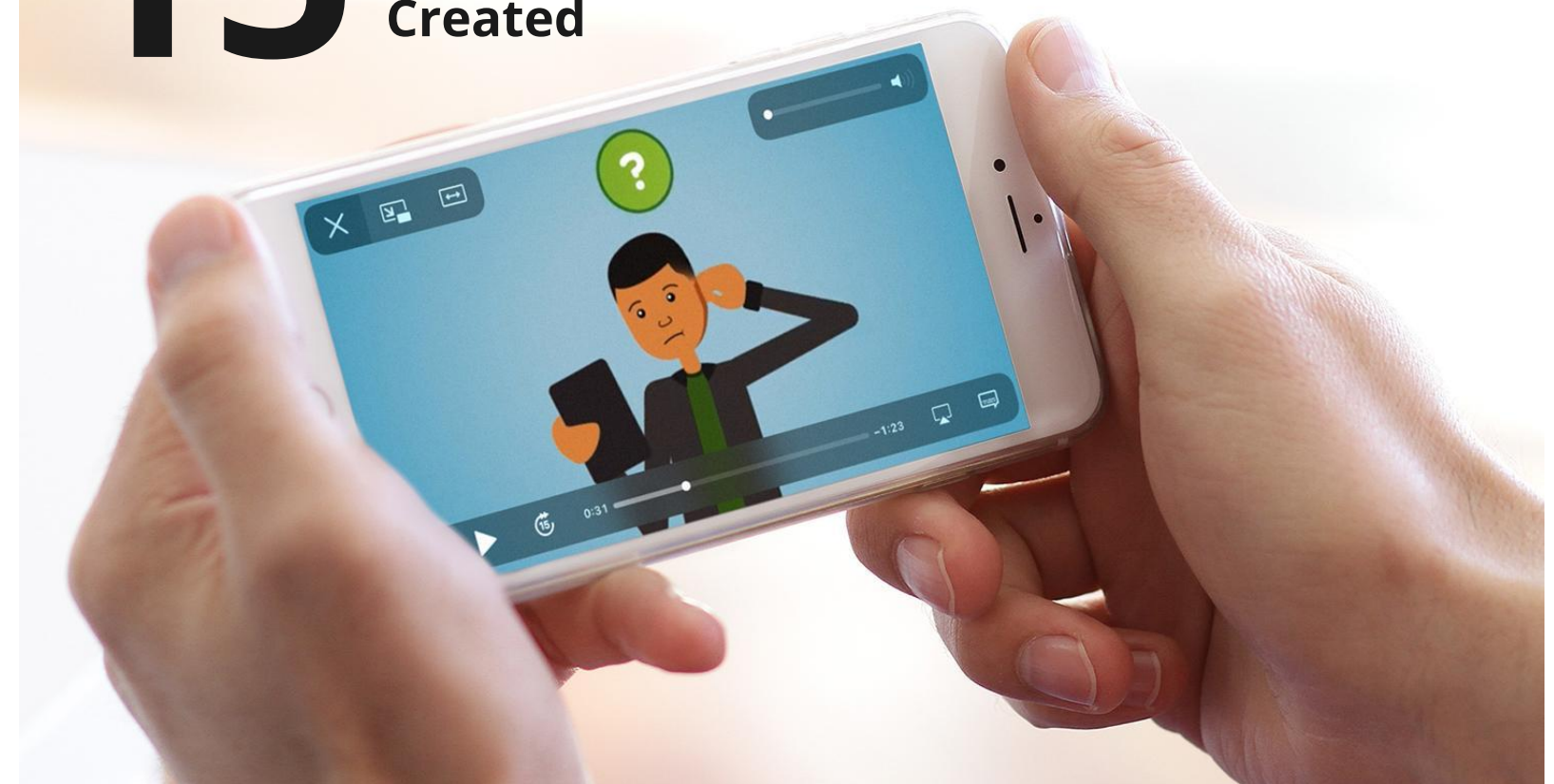
Patient + Family Value

- + Improved health literacy
- + Empowered decision making
- + Self-advocacy skills

Clinician Value

- + Improved health literacy and patient independence
- + Encourages shared decision making
- + Consistent knowledge sharing that improves communication

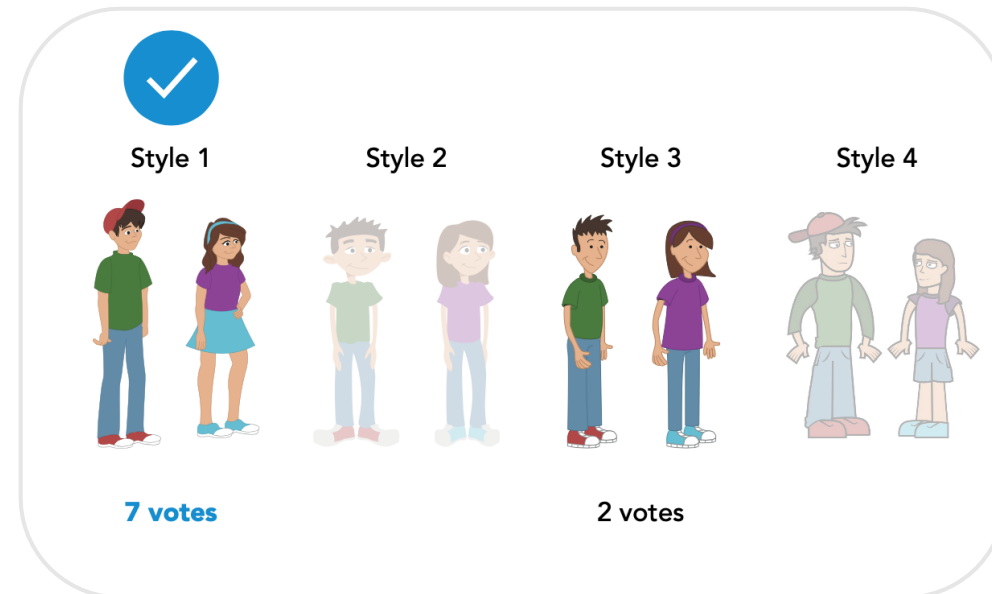
15 Videos Created



70K
Views

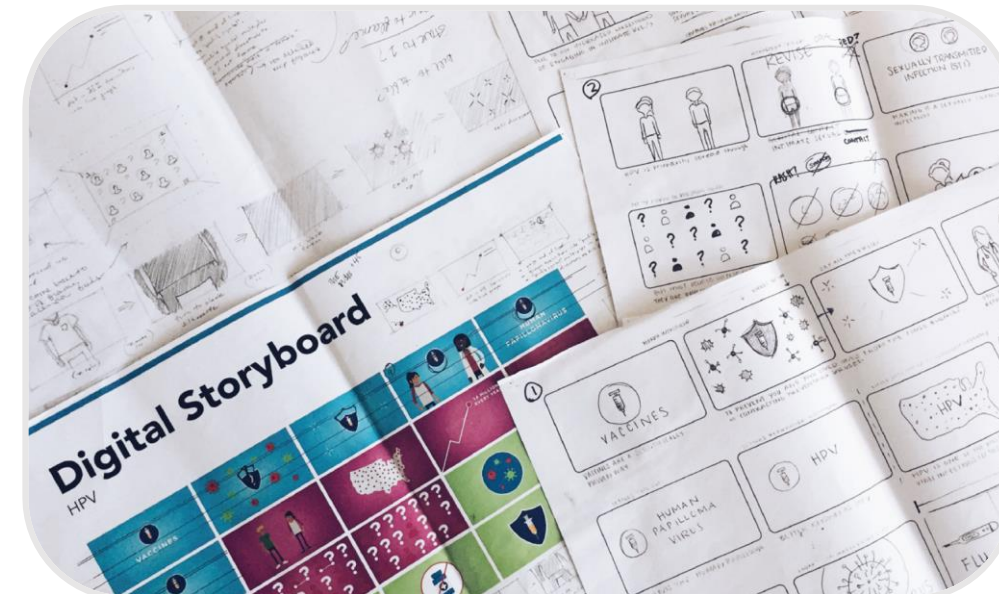
Residing online, the library allows patients and families to access information whenever they need it, from wherever they are.

The CBDI video library has been developed over the course of 12 semesters.



Developing a Visual Language

The team did multiple rounds of iteration and research to build a unique design style for CBDI animations.



Journey Map + Storyboarding

Primary research and interviews provide teams with the insight and information they need to design storytelling tools that educate and create empathy.



Scalable Across Topic Areas

A strong basis and established process means that future educational materials can be created for new topic areas as needs arise.

CBDI Video Library



Live Well educates the patients and that education empowers them to not only be recipients of care but partners in care.



Dr. John Perentesis, MD, FAAP

Anesthesia Induction App

Dr. Abby Hess, APRN, DNP
2017 Spring



The Need

- + Anesthesia inhalational induction (breathing gases through a mask to fall asleep for surgery) is a time of high stress and anxiety for children.
- + Research studies have demonstrated that high anxiety during induction is associated with poorer post-operative long-term outcomes

Our Approach

- + After mapping the anesthesia induction journey, we created a gamified application that positively distracts and engages children during the induction process.

Anesthesia Induction App



The app is a fun, interactive and sustainable method for providing distraction during the anesthesia induction process to help reduce stress and anxiety. Access to a tool like this helps reduce patient anxiety during the anesthesia process allowing for better care and an improvement in the patient's overall quality of their care journey. This patentable design can be used across different age groups and medical needs.

Patient + Family Value

- + Fun and interactive game
- + Reduces stress and anxiety

Clinician Value

- + Reduces patient anxiety
- + Facilitates patient engagement in the induction process

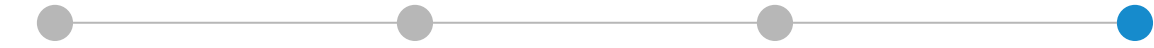
Additional Funding

- + Johnson & Johnson Nurses Innovate QuickFire Challenge
- + Cincinnati Children's Innovation Fund
- + State of Ohio, Ohio Development Services Agency Ohio Third Frontier, Grant Control No. TECG2019-0159.

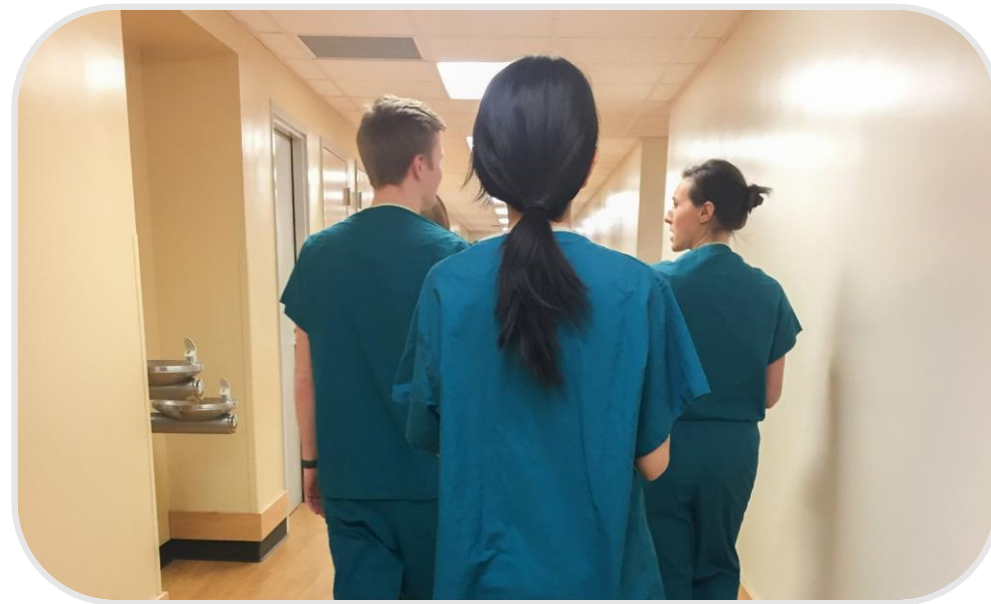


This project work won funding for further research and development through the Johnson & Johnson 2019 Nurses Innovate QuickFire Challenge.

Anesthesia Induction App



The Anesthesia Induction app concept was designed in 1 semester and then further developed with outside partners. Currently in commercialization discussions.



Team Observations

Observation teams benefit from shadowing key stakeholders so that they can understand the current patient experience and staff workflow.



Explorative Ideation

A wide variety of concepts will be explored to ensure that the team is best meeting the needs of all stakeholders involved. This project resulted in both a physical toy and digital application prototype to test.



Testable Prototype

The final deliverable for the semester was a functional prototype that could be user tested with patients and taken to outside partners for further development.

Anesthesia Induction App



“ The traditional structure for an academic research project didn’t fit for this project, as the focus was on product design and commercialization. This made getting the project started somewhat challenging. We talked with multiple companies and initially couldn’t find an optimal partner for our development needs and budget. Once we decided to work with Live Well, the design phase was seamless! Live Well has continued to be a great resource as we’ve moved through subsequent development phases. ”

Dr. Abby V. Hess, APRN, DNP

iCareGuide I + II

CHECK Clinic

Dr. Mary Greiner, MD, MS

Dr. Sarah Beal, PhD

2014 Fall, 2015 Spring



The Need

- + Most post-transitioned youth, considered adults by Child Services, are uninformed about their healthcare.
- + They lack the knowledge to make educated decisions about their health, resulting in countless unnecessary emergency room visits.

The Result

- + An extensive healthcare guide with a self diagnosis chart and accompanying animated video were developed to improve health literacy.
- + The iCare2Check website was developed to complement this resource in a subsequent semester.



Two Outcomes

- + Healthcare guide with a self-diagnosis chart, indicating what levels of treatment are appropriate based on symptoms and levels of pain.
- + Animated video illustrating the uses and benefits of the guide.

Patient Value

- + Improves patient health literacy
- + Quick and accessible decision-making guide
- + Encourages personal responsibility for care

Clinician Value

- + Generates positive communication
- + Increases patient health literacy and informed decision making
- + Saves time and money by reducing uninformed decision making



151
Participant Study

Clinically tested in a study with 151 patients. The majority of adolescents reported that the iCareGuide was somewhat (46%) or very helpful (42%).

The iCare suite of tools was designed over the course of 2 semesters. The first focused on developing the iCareGuide and the second focused on designing the iCare2Check website.



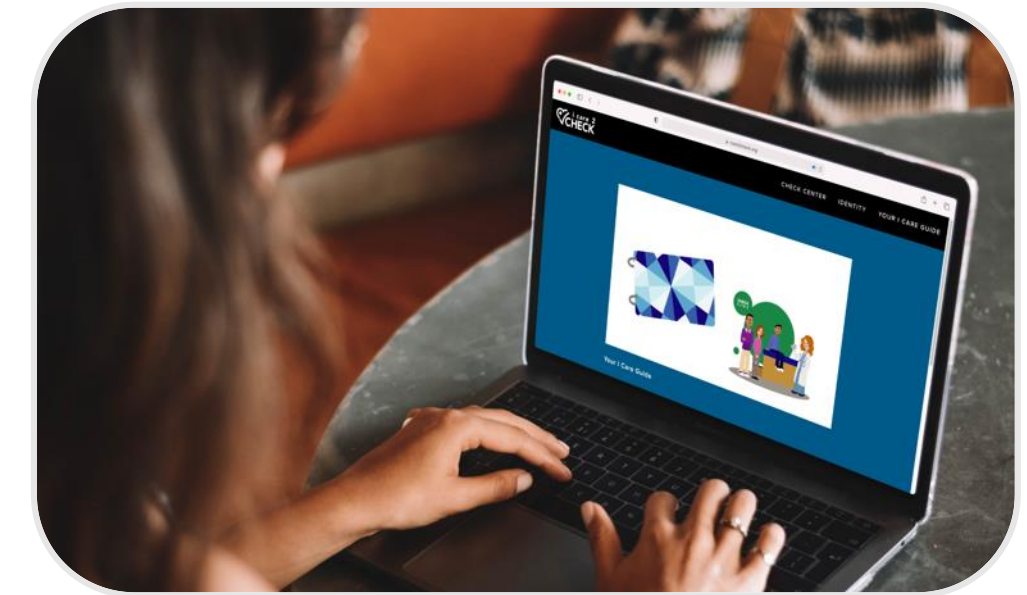
Iterative Design

Teams will test and refine concepts with stakeholders multiple times until they reach a solution that solves user needs.



Collecting Feedback

The team creates unique tools to collect concept specific feedback that they take forward into refinement.



Scalable Across Topic Areas

The iCareGuide serves as a strong framework and resource model for creating tools that improve health literacy.



Using design thinking takes the problems we are trying to solve and adds additional perspectives to focus on making the solutions empathetic and more accessible.



Dr. Mary Greiner, MD, MS

Thank you!